Intellian

t130W / t130Q

Installation and Operation User Guide

General Precautions

Before you use the antenna, make sure that you have read and understood all safety requirements.

	 THIS WAY UP Place the boxes/crates on the floor noting the direction of the arrow.
Y	 FRAGILE Since the Radome is fragile, handle it with care. Do not apply excessive pressure or shock. These may cause surface cracking or other damage.
	 DO NOT STACK Do not stack boxes/crates as there is a risk boxes/crates may fall and be damaged.
Ť	 KEEP DRY Always make sure the antenna is stored on a dried floor. The antenna can withstand ordinary rain. However it water resistance cannot be guaranteed if submerged. Keep the antenna in dried place for sufficient ventilation. Do not store the antenna wrapped in a tarp, tent, vinyl, and others.

* DO NOT SHIP VIA RAIL: Ensure not to ship any system via Rail.

* DO NOT STORE THE ANTENNA WRAPPED IN A TARP, TENT, VINYL, AND OTHERS:

To avoid damage to radome paint, do not use a cover on the radome. Using any type of cover may cause paint damage. Intellian radomes are designed to withstand exposure to rain, humidity, and sun/UV rays when assembled according to Intellian instructions, and when the supplied approved hardware and sealants are used. Under no circumstances should an Intellian radome be covered by any protective covering that adheres, bonds, or clings to the surface, whether by self-adhesion or tension.

Serial number of the product

This serial number will be required for the all troubleshooting or service inquiries.

Intellian

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Disclaimer

The information in this user manual is subject to change without prior notice through a product life cycle. A printed version of the user manual is periodically updated and may contain inaccuracies or omissions compared to the recent product information. The most up-to-date information is available on our website at https://www.intelliantech. com or in the supplied USB memory stick (if available in the component list).

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CERTIFICATIONS

CE & FCC Declaration of Conformity (DoC)

We, Intellian Technologies, Inc. located at 2F Dongik Bldg., 98 Nonhyun-dong, Kangnam-gu, Seoul 135-080, Korea declare under our sole responsibility that the product(s) described in the below to which this declaration relates is in conformity with the *requirements of the EU EMC Directive 89/336/EEC and FCC 47 CFR Part 15 Subpart B when the methods, as described in EN 60945: 2002, ANSI 63.4: 2003 and EN 60950-1:2006+A11:2009+A1:2010+A12:2011, respectively.*

Product Information:

Product Name(s):	Intellian t80, 85cm Ku-band Maritime TVRO Antenna System Intellian t100, 105cm Ku-band Maritime TVRO Antenna System Intellian t110, 105cm Ku-band Maritime TVRO Antenna System Intellian t130, 125cm Ku-band Maritime TVRO Antenna System
Model Number(s):	T3-9XXX, T3-10XXX, T3-11XXX, T3-13XXX

Supplementary Information:

Notified Body Involved:	SK Tech Co., Ltd.
(Testing Organization)	820-2, Wolmoon-Ri, Wabu-Up, Namyangju-Si, Kyunggi-Do, 473-905, Korea
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Authority: **Kevin Eom** Signature: / CTO, R&D 21st August, 2014 Date: Intellian Technologies USA, Inc. Intellian Technologies, Inc. Doc Number IT14-DC0821-02 EMEA & APAC Headquarters US Headquarters 9004 Research Drive 348-5 Chungho-Ri, Jinwi-Myeon Pyeongtaek-Si, Gyeonggi-Do, 451-862 Korea Irvine, CA 92618 USA Tel: + 82 31 379 1000 Tel: +1 949 727 4498

INTRODUCTION

Intellian t130W/t130Q Introduction

Intellian t130W/t130Q Features

Intellian t130W/t130Q Introduction

The t-series is designed completely in-house, 3-axis stabilized platform available both an Intellian exclusive WorldView[™] Low Noise Block down converter (LNB) module and General-purpose Universal Quad LNB.

The t-series offers recreational and commercial boaters to achieve a new level of satellite TV convenience, as well as unparalleled access to the greatest number of channels at sea.

The Intellian t130W is the TV antenna capable of operating in all global market without the need of changing the LNB unit inside of antenna's dome.

The Intellian t130Q has the European dedicated linear LNB and provides higher optimized gain for especially European waters.

Intellian's patented WRS (Wide Range Search) algorithm achieves fast signal acquisition and pioneering DBT (Dynamic Beam Tilting) technology makes keeping stable signal locking.

Designed to excel in all sea states and weather conditions, the t130W and t130Q are tested to industry-leading standards for vibration and resonance frequency as well as extreme.

Intellian t130W/t130Q Features

Global Satellite Services Compatibility

Intellian t130W provides the ultimate convenience to connect you up to thousands of Free TV, pay TV, Standard Definition, and high Definition programming all over the world with one LNB module which incorporates multi (8) LO frequencies.

Hands-Free WorldView[™] LNB Module for t130W

The Intellian WorldView[™] LNB module is built on the highest stability of ±25 kHz and capable of receiving multiband and multi-polarization satellite TV service around the globe. Therefore, users don't need to manually change the LNB inside the antenna dome each time the vessel crosses into a different satellite service region.

Universal Quad LNB Module for t130Q

The Universal Quad LNB module is optimized for European waters using by Dual Local Frequency (9.75GHz, 10.60GHz). It provides higher optimized gain for especially European water.

Intelligent Signal Distributor

The embedded Quattro Switching Module(QSM) intelligently distributes different tone signals to the correct ports on any legacy multi switches installed throughout the ship. No need for reconfiguring anything below deck apart from the ACU.

DVB-S2 Digital TV Reception

Some of the HD TV services have moved to DVB-S2 transmission formats and there will be more in the future. Thanks to Intellian's groundbreaking DVB-S2 digital TV technology, now boaters are able to enjoy their favorite Sat TV entertainment at sea, just like home.

Wide Elevation Range

The wide elevation range enables the antenna to have seamless signal reception while the vessel is traveling near the Equator or Polar Regions.

Global Satellite Library

The t130W includes the pre-programmed global satellite library which allows boaters to select the desired satellite while traveling from region to region. Once the satellite is selected the Worldview[™] LNB module will automatically switch to the corresponding local frequency to receive the signal.

The t130Q has its own optimized library for universal LNB (Local Frequency: 9.75GHz/10.6GHz).

Dedicated Management Ethernet Port

The Management Ethernet Port on the front of the ACU enables direct and simple network connection between a PC and the ACU. The management Port supports DHCP network connection by default, allowing automatic IP configurations and quick access to Intellian's remote management solution, the Aptus Web software.

Wireless Connectivity and Intellian App

The built-in Wi-Fi enables the ACU to be wirelessly connected and can be turned on or off. Any kind of wireless devices such as PCs, laptops, and smartphones can be used to connect to the ACU and monitor, control and change the settings of the system wirelessly. An Intellian App is available for download to access to the ACU via Wi-Fi and operate the antenna from iPhone, iPad or other network devices. iPhone and iPad are registered trademarks of Apple Inc.

Intellian Network Devices

Intellian Aptus Web enables connection to the antenna to monitor the real-time status of the connected system. This function provides users with the direct connection to sibling devices allowing an integrated control solution for linking multiple devices.

NOTE: The figures provided in this manual are based on the t130W model, but the functions and operation of the models (t130W, t130Q) are the same. The dedicated functions of the t130Q model is detailed separately.

INSTALLING THE ANTENNA

System Package

Antenna Unit Antenna Control Unit (ACU) Installation Kit

Planning the Installation

Selection of Antenna Installation Site System Cables Power Requirement Tools Required for Installation

Antenna Installation

Unpacking the Wooden Crate Antenna Dimensions Antenna Mounting Hole Pattern Preparing Antenna Supporting Pole Mounting the Radome Remove Antenna Shipping Brackets Installing the System Cables RF Cable Connections

System Package

The Intellian t130W/t130Q consists of two major units, an antenna assembly unit and the antenna control unit.

Antenna Unit

The antenna unit includes an antenna pedestal inside a radome assembly unit. The pedestal consists of the satellite antenna main dish and sub-reflector module with the WorldView[™] LNB module(t130W) or the Universal Quad LNB module(t130Q) mounted on a stabilized pedestal.

The Quattro Switching Module(QSM) can be changed to quad or quattro mode, making it compatible with all multiswitches.

The radome protects the antenna pedestal assembly unit from the severe marine environment.





WorldView[™] LNB module (For t130W model)



Universal Quad LNB module (For t130Q model)



Quattro Switching Module(QSM) (For t130W/t130Q model)

Antenna Control Unit (ACU)

The Antenna Control Unit (ACU) provides power to the antenna and controls various settings of the antenna. Additionally, VFD (Vacuum Fluorescent Display) allows for you to operate the ACU in the dark.



The functions of the ACU are as follows :

- System startup
- Change of target satellite
- Monitoring current status
- Setting antenna manual search
- Setting antenna set skew
- Setting antenna search parameter
- Setting antenna set parameters
- Executing antenna diagnosis
- Setting the satellite pair
- Edit satellite information
- Setting the region
- Finding transponders
- Setting the GPS and Gyrocompass
- System backup & restore
- Copy log and firmware upgrade through USB
- Supports Wi-Fi ACU operation
- Built-in web-based remote control management
- Front panel Management Ethernet port
- Installation settings

Installation Kit

Contains the items required for mounting the antenna unit and ACU to your vessel.



ACU	Q'ty	Description	Size	Remark
	5	Self-Tapping Screw	4 x 16	Table Mount Bracket
(A) Jama	10	Flat Head Screw	M4 x 12L	Rack Mount Bracket ACU
	5	Sems Bolt	M3 x 12L	Table Mount Bracket ACU

Other Components

Item	Image	Q'ty	Description		Size	Remark
1		2	ACU	Rack	-	ACU-19inch Rack
1 -	() I	2	Bracket	Table	-	ACU-Table
2		1	RG6 Cable (Optional)		30m	ACU to ANT
2		1	RG6 Cab	le	15m	ACILIta Pagaiwar
3		1	RG6 Cab	le	3m	ACO to neceiver
4	and the second	1	AC Power Cord (CEE7/7)		1.5m	ACU Power
5		1	PC Serial Cable		1.8m	ACU to PC

Item	Image	Q'ty	Description	Size	Remark
6	P	1	USB Cable (A-A)	1.8m	ACU to PC
7		2	Rubber Gland	RG6	Antenna Cables
8		5	Hex Socket Head Cap	M6 x 40L	Radome (Top-Bottom)
9	(5	Spring Washer	M6	Radome (Top-Bottom)
10	0	5	Flat Washer	M6	Radome (Top-Bottom)
11		1	WiFi Antenna	110mm	-
12	\bigcirc	1	User Manual	-	-
13	\bigcirc	1	Mounting Template	-	-
14	\bigcirc	1	USB Flash Drive	-	-

Planning the Installation

Selection of Antenna Installation Site

Install the antenna in accordance with the following procedures to ensure maximum performance of the antenna. The ideal antenna site should have a clear view of the horizon or satellite all around it. Please be sure there are no obstacles within 15° above the center of the antenna. Any obstacles can prevent the antenna from transmitting and receiving the satellite signal.

Do not install the antenna near by the radar especially on the same plane as the microwave radar transmissions as these will overload the antenna front-end circuits. It is recommended to position the antenna at least 4 feet (1.2m) above or below the level of the radar and minimum of 15 feet (4.6m) away from any high power short wave radars.

The mounting platform should be robust enough and not subject to excessive vibration. The movement of the antenna can be minimized by installing at the center of the vessel. For optimal performance of the antenna, it is not recommended to install on any corner of the vessel, where the movement of the vessel is the greatest. Install the bottom of the antenna parallel to the surface of the sea and fix tightly to the structure of the vessel.



System Cables

Before installing the system cables, you need to take the following points into consideration.

- All cables need to be well clamped and protected from physical damage and exposure to heat and humidity.
- A cable with an acute bend is should be avoid.
- Wherever a cable passes through an exposed bulkhead or deck head, a watertight gland or swan neck tube should be used.

RF Cables (Customer Supplied)

Due to signal losses across the length of the RF coax on L-Band, Intellian recommends the following 75 ohm coax cable types for standard system installations. For cables that run longer than 100 meters, please consult Intellian Technologies.

Run Length	Coaxial Cable Type		
Up to 35 meters	RG-6 or LMR-300-75		
Up to 60 meters	RG-11 or LMR-400-75		
Up to 100 meters	LMR-600-75		

Power Requirements

Intellian t130W/t130Q has been designed to work on a vessel's power supply rated at 110-220 V AC.

Gyrocompass / GPS Interface Cable (Customer supplied)

Туре	Multi-conductor, Shielded
Number of wires	2 conductors for NMEA 0183, 5 conductors for NMEA 2000

NMEA 0183 Connector

I	Pin	Signal	
	-	NMEA 0183 -	
	+	NMEA 0183 +	
_			UN 833

GPS Connector



ACU GPS In/Out Port D-Sub 9 pin Female

Pin	Signal
1	GND
2	GPS OUT +
5	GPS IN +

NMEA 2000 Connector



Male Connector



Female Connector

Pin	Signal	Pin	Signal
1	Shield	1	Shield
2	NET-S, (power supply positive, +V)	2	NET-S, (power supply positive, +V)
3	NET-C, (power supply common, -V)	3	NET-C, (power supply common, -V)
4	NET-H, (CAN-H)	4	NET-H, (CAN-H)
5	NET-L, (CAN-L)	5	NET-L, (CAN-L)

Tools Required for Installation



11 mm Spanner



13 mm Spanner



19 mm Spanner



5 mm Allen/Hex key



Cross Head Screwdriver



Flat Head Screwdriver

Antenna Installation

Unpacking the Wooden Crate

When uncrating the wooden crate, follow the procedures below.

1. Locate one of the side panels designed for fork lift. Detach this side panel by removing the fixing screw (1EA) and clips (8EA).

2. Remove the fixing screws (4EA) and clips (6EA) on the top panel. Detach the top panel by carefully pulling it as shown in the picture below.

CAUTION : The side brackets at the edge of the top panel secure the side panels and top panel in position. When pulling the top panel, ensure that the top panel doesn't fall on the radome.

3. Remove the fixing screws (5EA) from the remaining side panels, then detach the side panels with clips on.





WARNING: When lifting the antenna by using the lifting strap, ensure to disassemble the antenna and the pallet.

Antenna Dimensions

The method of installation and mounting of the antenna may vary with vessel design but the following procedures are applicable in most situations, and will result in a secure and effective installation. Confirm the height and diameter of the antenna before installing it.



Antenna Mounting Hole Pattern

Use the supplied mounting template when drilling mounting holes on the mast. The hole placement for the antenna must match the mounting hole pattern on the template.





WARNING: When reusing an existing mast, check the condition of holes on the mast and make sure those are proper to use compared to the hole locations and sizes printed on the mounting template.





Preparing Antenna Supporting Pole



WARNING: Ensure that cables have been run through watertight fittings to prevent water entry into the vessel when installation is completed.

Mounting the Radome

Bolt the radome base directly to the support pedestal. Make sure to use the Intellian supplied bolts from the accessory box when you mount the radome.



Remove Antenna Shipping Brackets

Open the radome's hatch and remove the shipping brackets from the pedestal. Using your hand, gently check that the antenna moves freely in azimuth, elevation, and cross level without hitting any areas of the interior of the radome.





NOTE: The model of picture is t130W, but the description is the same for both t130W and t130Q.



Warning: Please ensure that your Intellian system is ALWAYS powered ON upon leaving the dock. Failure to follow these instructions could result in damaging mechanical parts in the antenna and/or possibly void your warranty. Intellian strongly recommends to restrain the antenna pedestal properly while underway when power is removed from the antenna. The normal operating condition is to remain powered up at all times.

Installing the System Cables

The coax cables must be inserted through the cable strain relief(s) at the base of the radome. The cables must be routed from the antenna through the deck and through various ship spaces to the antenna control unit. When pulling the cables in place, avoid sharp bends, kinking, and the use of excessive force. After placement, seal the deck penetration glad and tie the cables securely in place.



NOTE: To prevent cable damage, first pass the RF cables through the cable entry apertures into the radome, then connect the RF cables to the cable connectors on the inside of the radome.

RF Cable Connections

Before installing the RF cable, ensure that the RF cable labeled with RF1 is properly connected between the antenna control unit and the power switch box. Connect the 4 RF cables to the RF connectors using an 11mm spanner. Ensure that the power switch is off during the installation period. When all the hardware and cables have been installed, turn on the power switch. After connecting the RF cables, adjust the cable length then fix the cables on the cable tie holders by using cable ties.

Inside Radome View



Cable connection of Power Switch Box



NOTE: There are 4 RF connectors on the power box. Be sure to connect each cable to its corresponding RF connectors.

INSTALLING THE ACU

Mounting the ACU

19" Rack Mount Type Table Mount Type ACU Dimensions Selection of ACU Installation Site

Connecting the System's Cables

Multi-Switch Connection Receivers Direct Connection Gyrocompass Connection Connecting the System without a Ship's Gyrocompass

PC to ACU Communication Setup

TCP/IP Connection Serial/USB Connection

Wi-Fi Connection

Setup Wi-Fi Connection Setting up the ACU in order to access Wi-Fi

Mounting the ACU

Intellian supplies two types of mounting methods (a)19" Rack Mount Type and (b) Table Mount Type to mount your ACU.



Figure 01. 19" Rack Mount Type

Rack Mount Type

- The ACU should be installed using the two supplied Rack Mounting Brackets which allow for a side 19" rack mounting configuration.
- Using the Flat Head screws supplied, attach the mounting brackets to the sides of the ACU.
- Place the ACU in the location where it is going to be installed.
- Connect the cables to the rear of the ACU.



Figure 02. Table Mount Type

Table Mount Type

- The ACU should be installed using the two supplied Table Mounting Brackets which allow for a top or bottom mounting configuration.
- Using the Sems Bolts supplied, attach the mounting brackets to the sides of the ACU.
- Place the ACU in the location where it is going to be installed.
- Using a pencil to mark the 4 hole positions (2 each side), and use the appropriate drill bit to screw down the brackets.
- Connect the cables to the rear of the ACU.

NOTE: Ensure that the cable's length is installed long enough in order to pull out the ACU from the rack.

ACU Dimensions



Figure 03. Dimension of ACU

Selection of ACU Installation Site

- The ACU should be installed below deck, in a location that is:
- Dry, cool, and ventilated.
- Easy accessible from your main TV viewing area.

Connecting the System's Cables

The t130W is capable of receiving multiband and multi-polarization satellite TV service around the globe using the Intellian WorldView[™] LNB module.

The t130Q is optimized for European waters using by Universal Quad LNB has two LO(9.75GHz, 10.6GHz) and the Universal Quad LNB module. It provides higher optimized gain for especially European water.

Multi-Switch Connection

When the receivers are connected to the antenna outputs through the **multi-switch**, set the Quattro Switching Module(QSM) to **Quattro** mode. Be sure to set to **Quattro** mode.

18V	13V	18V+22KHz	13V+22KHz
Horizontal Low	Vertical Low	Horizontal High	Vertical High

NOTE: Intellian recommends connecting cables per the following configuration. If you require a different configuration, contact the Intellian's service team for additional assistance.



Figure 04. Multi-Switch Connection Configuration

- Be sure to set the QSM to **Quattro** mode.
- Connect the RF cable from the ACU's RF1 connector on the power switch box located inside of the radome to the ANT. RF1 connector on the rear of the ACU.
- Connect the RF cable from the RECEIVER's connector on the rear of the ACU to the RF on the IRD through the Multi-switch as shown figure above.
- Connect the ship's gyro cable from the ship's gyro to the Ship's Gyro connector on the ACU.
- Connect the power cable from the AC power connector on the rear of the ACU to a power source at 110- 220 V AC.
- Press the POWER ON switch on the rear of the ACU to power on the antenna.

Receivers Direct Connection

When the **Receivers** are **directly** connected to the antenna outputs, set the Quattro Switching Module(QSM) to **Quad** mode. (Multi-switch is not used) Be sure to set to **Quad** mode.

When connecting more than 4 receivers, refer to the previous section "Multi-Switch Connection" for more details.



Figure 05. Receivers Direct Connection Configuration

- Be sure to set the QSM to **Quad** mode.
- Connect the RF cable from the ACU's RF1 connector on the power switch box located inside of the radome to the ANT. RF1 connector on the rear of the ACU.
- Connect the RF cable from the RECEIVER's connector on the rear of the ACU to the RF on the IRD.
- Connect the ship's gyro cable from the ship's gyro to the Ship's Gyro connector on the ACU.
- Connect the power cable from the AC power connector on the rear of the ACU to a power source at 110- 220 V AC.
- Press the POWER ON switch on the rear of the ACU to power on the antenna.
Gyrocompass Connection

For optimum satellite tracking, you must connect a Gyrocompass to the antenna system through the gyrocompass interface on the rear of the ACU. If the ship's gyrocompass output is other than NMEA 0183 and NMEA 2000 a separate purchase of an NMEA converter is required.

Recommended Cable

- NMEA 0183 Gyrocompass Interface Cable (Customer supplied)
- Connector Type: 2 conductors for NMEA 0183, 5 conductors for NMEA 2000
- NMEA heading sentence: xx HDT (4800 Baud, 8, N,1) If there is no HDT sentence then use HDM sentence instead.
- NMEA 2000 heading PGN Number = 127250 (Vessel Heading)



Figure 06. Gyrocompass Connection

Connecting the System without a Ship's Gyrocompass

For a vessel where the ship's gyrocompass is not installed or is difficult to be connected, the Intellian Gyro-Free satellite search function will be automatically enabled to allow the antenna to lock onto the desired satellite without requiring an external heading input.

The table below provides an example of the Gyro-Free satellite search algorithm. The Search 1 or Search 3 satellite search pattern will be triggered according to the existence of heading input and the setting of the heading device.

- Search 1: This mode is entered from Search 1 or Search 3. The antenna will search for the target satellite by turning its azimuth angle in CW(Clockwise) and CCW(Counter Clockwise) direction in a turn rotation until the antenna receives the lock signal from the receiver or the DVB(Digital Video Broadcasting) transponder of the target satellite is decoded by the antenna.
- **Search 3:** The antenna will search for the target satellite by turning its azimuth angle directly to the position calculated using the ship's heading input and lock onto the satellite.

	Setting of Head	Setting of Heading Device								
Existence of Heading Data	None	NMEA / NMEA 2000	Ground Test							
With Heading Data	Search 1	Search 3	Search 3							
Without Heading Data	Search 1	Search 1	Search 3							

Quick Setup Procedure

- Set the satellite with DVB transponder as the target satellite.
- Set "None" to the heading device.
- The antenna will search for the target satellite by turning its azimuth angle in CCW direction and lock onto the satellite signal until the antenna receives a lock signal from the receiver or the DVB transponder of the target satellite is decoded.
- Set the heading device as NMEA.
- Enter "Manual search" menu and touch "Function" key to save the current settings. Intellian ACU will automatically calculate and save the bow offset.
- Upload the real TARGET satellite pre-configured from the library.

PC to ACU Communication Setup

You can establish data communication between a PC and the ACU using one of the following methods.

TCP/IP Connection

Connection through Front Panel Management Port

This method is most recommended. The network is automatically configured by DHCP without the need of additional PC IP configuration.

Management
Ethernet Port1. Connect an Ethernet cable from a PC Ethernet port to the Management port
on the front of the ACU.

- 2. Network connection is established.
- 3. Use the following IP address to access Intellian Aptus® or Aptus Web page.
- 192.168.2.1 (Default)



Connection through Rear Panel Ethernet Port

This method requires separate IP configuration on a PC.

Ethernet Port

- 1. Connect an Ethernet cable from a PC Ethernet port to an available LAN port of a Switch/Hub.
- 2. Go to Control Panel > Network and Sharing Center > Change Adapter Settings and right-click on the Local Area Connection then click Properties
- 3. Select TCP/IPv4, then click Properties.
- 4. Change the network settings on a PC;
- IP: 192.168. 0.222 (Secondary: 10.10.1.2)
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.0.223 (Secondary: 10.10.1.1)
- 5. Use the following IP address to access Intellian Aptus[®] or Aptus Web page.
- Default: 192.168.0.223 (Secondary: 10.10.1.1)

Serial/USB Connection

Serial Connection	Connection through Serial Port
	 Connect a 9-pin Serial cable from the PC INTERFACE connector on the ACU to the 9-pin serial port on your PC.
	2. If there is not a 9-pin serial port on the PC, use a USB-Serial adapter.
USB Connection	Connection through USB Port There are two USB(USB-to-Serial) ports are available on the ACU. One is on the front and the other is on the rear.
	1. Connect a USB cable from a USB port on your PC to the USB port on the ACU.
	Note: The t130W and t130Q also support Wi-Fi connection between a PC and the ACU.

Wi-Fi Connection

Setup Wi-Fi Connection

- Setting up the ACU in order to access Wi-Fi
- Setting up the PC (AP Mode) in order to access Wi-Fi
- Remote Aptus Web Confirmation

Setting up the ACU in order to access Wi-Fi



1. Turning on the Wi-Fi switch

Turn on the switch on the back of the ACU, and 30 seconds after enabling the power supply, confirm if a red light appears on the switch.

Setting up the PC in order to access Wi-Fi

- 1. Setting up my computer's wireless IP address
 - Control Panel> Network and Sharing Center > Change Adapter Settings > Right click on the "Bluetooth Wireless Connection"> Click Properties

After selecting TCP/IPv4, click on the properties menu, then select "Obtain an IP address automatically."

General	Alternate Configuration				
You car this cap for the	n get IP settings assigned au ability. Otherwise, you need appropriate IP settings.	tomatically if I to ask your	your n networ	etwork s k admini	upports strator
() Ot	otain an IP address automati	cally			
- Us	e the following IP address:				
IP ac	ddress:				
Subr	net mask:				ji –
Defa	ult gateway;				5
() O	otain DNS server address au	tomatically			
O Us	se the following DNS server a	addresses:			
Prefe	erred DNS server;				
Alter	nate DNS server:				1
V	alidate settings, if changed,	upon exit		Adva	nced

2. To manually change the network settings, click on "Use the following IP address" and use the settings listed below.

Case #1

If iARM Module's IP is known The iARM module's default IP is 192.168.1.223

PC IP : 192.168.1.222 Subnet Mask : 255.255.255.0 GateWay : 192.168.1.223

Case #2

If iARM Module's IP is unknown The iARM module's secondary IP is 10.10.10.1

PC IP : 10.10.10.2 Subnet Mask : 255.255.255.0 GateWay : 10.10.10.1 3. Connect Wi-Fi in AP mode.

After clicking on the Windows Wireless Connection icon, click on intellian-TVRO (Default)

4. Enter the Network Security Key. Key: intellian1234 (Default)

🔮 Connect to a Net	work		X
Type the netwo	ork security key		
<u>S</u> ecurity key:	intellian1234		
		OK Ca	ancel

5. You can confirm the logo and version data by accessing http://192.168.1.223



Login by entering the ID / Password listed below. Username: intellian (Default) Password: 12345678 (Default)

6. When you login, make sure that all the data within every page is being displayed correctly.

OPERATING THE ACU

Introduction

Normal Mode

Startup Change of Target Satellite Monitoring Current Status

Setup Mode

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Antenna Settings

Setting Antenna Manual Search Setting POL. Angle Setting Antenna Search Parameter Setting Antenna Parameters Executing Antenna Diagnosis

Satellite Settings

Setting the Satellite pair Edit Satellite Information Finding Transponders

System Settings

Setting Location System Management Key Lock

Introduction

This section of the handbook describes how to set up your Satellite TV System after Installing the ACU or GUI PC controller program and includes the following functions:

Normal Mode

- System startup
- Change of target satellite
- Monitoring current status

Starting Setup Mode

Installation Settings

Installation

Setting the Antenna

- Setting antenna manual search
- Setting antenna POL. angle
- Setting antenna search parameter
- Setting antenna parameters
- Executing antenna diagnosis

Setting the Satellite

- Setting the satellite pair
- Edit satellite information
- Setting the region
- Finding transponders

Setting the System

- Setting location
- System management
- Key lock

This section of the handbook describes how to set up your Satellite TV System after installation using the ACU.

ACU Soft Keys

Soft Key Functions	Soft key	Function
	MENU	Enter SETUP mode
	BACK	In SETUP mode: returns to the previous menu / option or save the adjusted settings. In normal mode: returns to the first page of the antenna's current status.
	FUNCTION	Save the adjusted settings.
	ARROW KEYS	Select from the alternative options to increse or decrese the selected character to the desired value.
	ОК	Enter the next step / menu
	NUMBER KEYS	Input the numbers



WARNING: Please ensure that your Intellian system is ALWAYS powered ON upon leaving the dock. Failure to follow these instructions could result in damaging mechanical parts in the antenna and/or possibly void your warranty. Intellian strongly recommends to restrain the antenna pedestal properly while underway when power is removed from the antenna. The normal operating condition is to remain powered up at all times.

Normal Mode

Startup

With the system installed and power applied, the ACU screen will show the following sequence.

INTELLIAN TECHNOLOGIES INC. INTELLIAN t110W

1. The data communication is being established between the antenna and the ACU.

INITIALIZE – ANTENNA INFO INTELLIAN t110W

2. The ACU receives antenna information.

3. The elevation angle and cross level angle are initialized.

4. The azimuth angle is initialized.

5. The antenna measures the noise levels of the default satellites.

INITIALIZE – SAT POSITION INTELLIAN t110W

6. The antenna returns to the target satellite position.

•	SEA	R	С	Н	1	9		2	E		Å	S	T	F	ł٨	\ 	. 1	Ą١	G(-	 3	Ø	1	÷		ļ	V		ŀ
	ΑZ	::	1	60	2.	9	Ć	З	4	0.	9)		E	E L	. :	29.	Ø	ŝ	3Kı	 	2	1		1		- 1	ŋ	

7. The antenna is searching for the target satellite.

·	1	Ē	ł٨	С	K	I	Ν	G		1	9	=	2	E			A	S	T	R	A	_ 1		A	G	С	:: ::	3	Ø	1	÷	V	L	ŀ
	Å	١Z	7	::	1	6	Ø	. :	9	¢	3	4	Ø		9)		E	I	:	23	9.	Ø	S	K	:	 2	1	#	1		F	n	

8. The antenna has locked onto the target satellite and is now tracking.

Change of Target Satellite

Your antenna is programmed with three selected target satellites as default. To change the target satellite, press the LEFT soft key. The target satellite is changed and is automatically tracked by the antenna.

+ TRACKING	[]	ASTRA_1	*
	[2]	HOT_SPOT	Fn

1. Press ②key for tracking satellite [2].

4	TRACKING	[]	HOT_SPOT	 +
		[1]	ASTRA_1	Fn

2. The antenna is tracking satellite [2].

4 TRACKING	[]	ASTRA_1	ŀ
	[2]	HOT_SPOT [3] ASTRA_3	Fn

3. Press ③ key for tracking satellite [3] (when in Tri-sat mode).

•	TRACKING	[]	ASTRA_3	#
l		[1]	ASTRA_1 [2] HOT_SPOT	Fn

4. The antenna is tracking satellite [3].

NOTE: If you have any problems while setting target satellites, contact the Intellian service team for support.

Monitoring Current Status

While POWER ON the Intellian ACU displays the status of the antenna. Various ACU displays may be shown according to the current status of the antenna.

-	SEARCH	[]	ASTRA_1	! •
		[2]	HOT_SPOT [3] ASTRA_3	

1. The antenna is searching for satellite [1].

4 TRAC	KING	[]	ASTRA_1	ŀ
	I	[2]	HOT_SPOT [3] ASTRA_3	Fn

2. The antenna is tracking satellite [1].

ANTENNA IS UNWRAPPING

3. The antenna is winding /unwinding the cables in the antenna. The necessity of "unwrap" is based on how far the ship has turned in one direction or the other.

4	TRACKING	[→]	ASTRA_1	ŀ
		[2]	HOT_SPOT [3] ASTRA_3	Fn

4. The antenna is again tracking satellite [1].

5. Press the FUNCTION key to save current satellite information or abort and return to the main display.

6. While the antenna is tracking satellite [1], press the RIGHT arrow key to display current antenna information.

-	TRACKIN	IG 19.2	E ASTR	A_1 AGC:301•	VL Þ
	AZ:160.	9(340	.9> EL	.:29.0 SK: -21.1	Fn

7. True azimuth [160.9] position of the antenna is the sum of ships heading 180.0
[HDG] and antenna relative [340.9]. Current IF signal level (AGC) is displayed .
will be only displayed when signal is strong enough to lock. VL indicates vertical low band. VH: vertical High, HL: horizontal low, HH: horizontal high. Press the UP and DOWN arrow keys to increase and decrease the LNB skew angle .
If the Up and Down arrow keys are unseen, press the OK key three times.

4	DVB_	D	F:1	1	50	9	S	: 2	2	Ø	Ø	Ø	Χ	Ø1	20	1	A	G	С	:: ::	30	1		.
	4.	53		5	2.	22	Ν			Н	D	6:	Ø	(2) I	0.	Ø	L	:: ::	9	7	50		F	n

8. Press the RIGHT arrow key to display current satellite, GPS and ship's heading [HDG] information.

Satellite Information :

Frequency : 11509 MHz Symbol rate : 22000 kSps Verification method : DVB_ Decode LNB local frequency : 9750 MHz

GPS Information :

Longitude : West /East Latitude : North/South

•	[PWR]	ANT:	23.9V	LNB: 1	3V +	ØKHz	ŀ
		ACU:	27.ØV	IRD: 13	3V +	ØKHz	

9. Press the RIGHT arrow key to display ACU and antenna ,LNB and IRD voltage information.

Antenna and ACU Voltage :

Due to the voltage losses across the multi-conductor cables, ensure that the minimum ACU operation voltage is within 27 ± 1 V and minimum antenna operation voltage is above 16V.

LNB and IRD Voltage :

- 13 V + 0KHz (Vertical Low)
- 18V + 0KHz (Horizontal Low)
- 13V + DiSEqC 22 KHz tone (Vertical High)
- 18V + DiSEqC 22 KHz tone (Horizontal High)

4 T3-111AW2	ANT.	Serial	4.	00/4.00	ŀ
BP-TAØ1	ACU	Serial	4.	00(2.00)	

10. Press the RIGHT arrow key to display Antenna, ACU and Library version. Keep pressing the RIGHT arrow key to return to the main display.

Setup Mode

To enter Setup Mode simply follow the instructions below:

•	4	T	R	A	С	K	I	Ν	G		1	9		2	E		A	S	T	R	A		1	ŕ	Ą	G	С	:	3	Ø	1	•		VL		ŀ
		A	Ζ	:: ::	1	6	Ø		9	¢		3	4	Ø		9)		E	L	::	2	9.	Ø		S	K	::	.:::.		2	1	1	. .	F	n
1	١A	/hila	- t	h۵	21	nte	n	na	ie	tro	ck	rin	a	r	ro	20	th	ا م		=N		ko	v fo	r co	tu	m	m	hc								_

While the antenna is tracking , press the MENU key for setup mode.

	SETUP	MODE	?	
 YES				NO

2. Press the LEFT key to move cursor to YES and press the OK key to enter setup mode or press the RIGHT key to move cursor to NO and press the OK key to abort and return to the main display.

Setting the Region

	SETUP	MODE	?	
→ YES				NO

1. Press the LEFT arrow key to move cursor to YES and press the OK key to enter SETUP mode.

+ANTENNA	>	+SATELLITE	
+SYSTEM		+INSTALLATION	

2. Press the LEFT arrow key to move cursor to SATELLITE and press the OK key to enter SATELLITE menu.

+SET	SAT.PAIR	+EDIT	SATELLITE
 +SET	REGION	+FIND	TRANSPONDER

3. Press the DOWN arrow key and the OK key to enter SET REGION menu.

>	SELECT CONTINENT	SELECT REGION
	EUROPE	NETHERLANDS

4. Press the arrow keys to select parameter you wish to edit and press the OK key to edit parameter. Press the BACK key to save or abort and return to the main display.



5. Set the CONTINENT.

Press the UP and DOWN arrow keys to select the continent that you are in. Press the OK key to set the CONTINENT.



6. Press the BACK key to load the current setting or abort and return to the previous view.

NOTE: If you have any problems while performing these steps, contact the Intellian service team for support. And refer to the "Appendix: Library Upgrade Guide" page for more details.



7. Press the BACK key to load the current setting or abort and return to the main display.

I	0	A	D	Ι	NC	3						∰	•		<u></u>	0	oc)()	O	0	<u> </u>	00	
D	0		Ν	0	Т	T	L	IR	Ν	0	F	F		ŀ									

8. Setting is being loaded to the system.

The ACU will restart the system automatically after uploading the setting. DO NOT turn off ACU power while uploading is being processed.

4	SEARCH	[]	ASTRA_1			ŀ
		[2]	HOT_SPOT	[3]	ASTRA_3	

9. Region information has been updated.

Installation Settings

Installation

1. Press the LEFT arrow key to move cursor to YES and press the OK key to enter setup mode.



2. Press the arrow keys to move cursor to INSTALLATION and press the OK key to enter INSTALLATION menu.



3. Press the arrow keys to select parameter you wish to edit and press the OK key to edit the selected parameter. Or press the BACK key to save or abort and return to the main display.



4. Set the CONTINENT.

Press the UP and DOWN arrow keys to select the continent that you are in. Press the OK key to set the CONTINENT.



5. Set the REGION.

Press the UP and DOWN arrow keys to select the region that you are in. Press the OK key to set the REGION.



6. Set the current LATITUDE .

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase or decrease the value. Or press the NUMBER keys to set the desired value directly. Press the OK key to set the LATITUDE.

LATITUDE	LONGITUDE
52.33N	. 4.53E ₩

7. Set the current LONGITUDE.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase or decrease the value.

Or press the NUMBER keys to set the desired value directly. Press the OK key to set the LONGITUDE.

GYRO	TYPE	BOW OFFSET	
. . . NMI	EA 👻	000	

8. Set the GYRO TYPE.

Determine the type of gyro compass that is used on the ship. Ensure that the Gyro Type is set correctly. Press the UP and DOWN arrow keys to select the gyro type and press the OK key to set the GYRO TYPE.

GYRO TYPE	В	OW OFFSI	= T
NMEA	.#.	<u>0</u> 00	.ii.

9. Set the BOW OFFSET

The radome should be positioned with the BOW marker aligned as close as possible to the centerline of the ship. Small variations from actual alignment can be compensated with the BOW OFFSET, so precise alignment is not required.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase or decrease the value. Or press the NUMBER keys to set the desired value directly. Press the OK key to set the BOW OFFSET.



10. Press the BACK key to load the current setting or abort and return to the main display.



11. Region information has been updated.

Antenna Settings

Setting Antenna Manual Search

		SETUP	MODE	?	
>	YES				NO

1. Press the LEFT arrow key to move cursor to YES and press the OK key to enter SETUP mode.

>	+ANTENNA	+SATELLITE
	+SYSTEM	+INSTALLATION

2. Press the OK key to enter ANTENNA menu.

4	•	+MANUAL	SEARCH	+SET	POL	ANGLE	ŀ
		+SEARCH	PARAM	+SET	PARA	METERS	

3. Press the OK key to enter MANUAL SEARCH menu.

ST	EP	S I	ZE	A	γZI	[M L	JTH		E	LE	٧¥	λT	ION	AGC	
#	<u>Ø</u> .	2	#	•	28	38.	7	ŀ	.#.	4	1.	Ø	·#·	288	Fn

4. Current IF signal level (AGC) is displayed to assist you in manually peaking EL for best signal level. Press the NUMBER key to change the step size(Range : 0.1~9.9). Press the LEFT and RIGHT arrow keys to move azimuth by step size (Range : 0~360). Press the UP and DOWN arrow keys to move elevation by step size(Range : 0~90). Press the FUNCTION key to save the bow offset when the antenna locks onto the peak level of the AGC signal.

	SAVE	CURRENT	SAT	INF0?	
>	YES			NO	

5. If the current settings are able to lock onto the satellite, press the LEFT key to move cursor to YES and press the OK key to save the bow offset. It will shorten the satellite acquisition time next time. Or you can press the RIGHT key to move cursor to NO and press the OK key to abort and return to the previous view.

Setting POL. Angle

		SETUP	MODE	?	
>	YES				NO

1. Press the LEFT key to move cursor to YES and press the OK key to enter setup mode.

→ +ANTENNA	+SATELLITE
+SYSTEM	+INSTALLATION

2. Press the OK key to enter ANTENNA menu.

•	+MAN	IUAL	SEARCH	→ +SET POL ANGLE	ŀ
	+GO	POSI	ITION	+SEARCH PARAMETERS	

3. Press the RIGHT arrow key to move cursor to SET POL ANGLE and press OK key to enter SET POL ANGLE menu.



4. Press the UP and DOWN arrow keys to select the menu and press the OK key to run the selected operation 'CALIBRATION ' or 'MANUAL ADJUST'. When you replace the control board, select CALIBRATION to calibrate LNB skew angle.

LNB	POL 4	ANGLE	F	OL	ARI	TΥ	S1	IGNAL	::	180
.#.	20.0	· · ••	4	L. I	NEAI	R I	•			

5. Press the UP and DOWN arrow keys to increase or decrease the LNB skew angle manually. Press BACK key to return to the main display.

Press the LEFT and RIGHT arrow keys to select the polarization between Linear and Circular. Press BACK key to return to the main display.

Setting Antenna Search Parameter

		SETUP	MODE	?	
>	YES				NO

1.Press LEFT arrow key to move cursor to YES and press OK key to enter SETUP mode.

>	+ANTENNA	+SATELLITE
	+SYSTEM	+INSTALLATION

2. Press OK key to enter ANTENNA menu.

·ŧ	+MANUAL	SEARCH		+SET	POL	ANGLE	ŀ
	+SEARCH	PARAM	>	+SET	PARA	METER	

3. Press DOWN arrow keys to move cursor to SEARH PARAM and press OK key to it.

SEAI	RCH WAI	T TIME	INCREMENT	STEP
.#.	<u>0</u> 30	• ••• •	0.50	

4. Set SEARCH WAIT TIME and INCREMENT STEP

Set the time-out for automatic initiation of a search after the signal level drops below the predefined threshold value (Range : 1 - 120 sec) and set increment step size (Range : 0.01 - 5.00 sec).

	SEARCH1	ΑZ	SEARCH1	EL
	<u>4</u> 00	•••••	<u>1</u> /16	
	SEARCH3	ΑZ	SEARCH3	
. .	<u>0</u> 03		②4	

5.Set SEARCH 1 and 3 AZ(Azimuth) range and EL (Elevation) range. SEARCH 2 is reserved for future use.

A search pattern 1 or 3 will be initiated according to which GYRO TYPE is selected and the existence of the gyro input.

Search 1: a search pattern 1 will automatically be initiated when the ship's heading input does not exist / is failed .The antenna will go to the relative azimuth position 0° at the calculated elevation and search in the azimuth CW and CCW direction in a turn rotation and search up + 0.5° & down - 0.5° with a total 6 (±3°) in elevation. The search cycle will repeat until the antenna receives the lock signal from the receiver or the DVB transponder of the target satellite is decoded by the antenna. If the desired signal is found and above the predefined detect level, the ACU will enter to Search 3. However, the antenna will not initiate Search 3 pattern but go into TRACKING mode immediately if the desired signal is above the predefined tracking threshold level. If the detected signal is below the predefined tracking threshold level, the search 1 will repeat and start 3° away from the current position.

Search 1 Antenna Motion



Target EL Angle 0° Turn 1

Target EL Angle + 0.5° Turn 2

Target EL Angle 0° Turn 3

Target EL Angle - 0.5° Turn 4

Search 3: a search pattern 3 will automatically be initiated when AGC falls below the current tracking level threshold value. If the desired signal is found and above the predefined tracking level, the ACU will terminate Search 3 and go into TRACKING mode.

A search pattern will automatically be initiated when AGC falls below the current threshold setting (indicates that satellite signal has been lost). Search is conducted in a two-axis pattern consisting of alternate movements in azimuth (AZ) and elevation (EL) as forming expanding square indicated as below diagram.



Setting Antenna Parameters

		SETUP	MODE	?	
•	YES				NO

1. Press the LEFT key to move cursor to YES and press the OK key to enter setup mode.

>	+ANTENNA	-+	. 9	1	A	T	Е	I	L	I	T	E			
	+SYSTEM	-+	.]		Ņ	S	T	A	L	L	A	T	I	ΟN	

2. Press the OK key to enter ANTENNA menu.

+MANUAL	SEARCH	+SET	POL	ANGLE
+SEARCH	PARAM	→ +SET	PARA	METERS

3. Press the RIGHT arrow key to move cursor to SET PRAMETERS menu and press the OK key to enter SET PARAMETERS menu.



4. Access to the password protected system. Setup parameters is only required after installation or repairs of your antenna system. These parameters should only be changed by an authorized service technician. Improper setting of these parameters will cause your system to perform improperly.

Press 4-digit password to enter SET PRAMETERS menu. (1590).

ſ	D	ETECT LEVE		TRACKING	LEVEL
	.#.	<u>0</u> 60	·•••	030	

5. Set the DETECT LEVEL. (Range : 1-200)

The detect level is to set the satellite signal detection level.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase and decrease the selected character. Or press the NUMBER keys to set the desired value directly.

Press the OK key to set the new DETECT LEVEL.



6. Set the TRACKING LEVEL. (Range : 1-200)

The tracking level is to set the satellite signal tracking level.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase and decrease the selected character. Or press the NUMBER keys to set the desired value directly.

Press the OK key to set the new TRACKING LEVEL.

	BOW OFFSE	Ĩ	EL.ADJUST
.#.	<u>0</u> 00	. #.	+Ø.Ø

7. Set the BOW OFFSET. (Range :0 - 360°)

The bow offset is to offset the angle difference between the antenna's bow and the ship's bow.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase and decrease the selected character. Or press the NUMBER keys to set the desired value directly.

Press the OK key to set the new BOW OFFSET.

BOW OFFSET		EL.ADJUST	
<u>2</u> 22	.#.	+ <u>0</u> .0	.iii.

8. Set the EL ADJUST. (Range : ± 5°)

The elevation adjust is to offset the angle difference between the mechanical elevation angle and actual elevation angle.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase and decrease the selected character. Or press the NUMBER keys to set the desired value directly.

Press the OK key to set the new EL ADJUST.

	VOLT THRES.	SCAN OFFSET
.#.	<u>0</u> 650	* 55

9. Set the VOLT THRES.

The voltage threshold is to distinguish the voltage between 13 V and 18V.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase and decrease the selected character. Or press the NUMBER keys to set the desired value directly.

Press the OK key to set the new VOLT THRES.

VOLT THRES.		SCAN OFFSI	= T
265Z	.#.	<u> </u>	· …

10. Set the SCAN OFFSET. (Range: 0 - 90)

The scan offset is to offset the angle difference between the black marker on the sub-reflector and the optical sensor.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase and decrease the selected character. Or press the NUMBER keys to set the desired value directly.

Press the OK key to set the new SCAN OFFSET.

	USE	WRS		WRS	DE	T	Ē١	СТ	L	ΕV	١E	L	
.#.	ΥE	S	•••••		Ø	4	(2) I	2					

11. Set the USE WRS.

USE WRS is to determine whether the system uses WRS LEVEL or not.

USE WRS and WRS LEVEL are pair functions.

Press the UP and DOWN arrow keys to select "YES" to USE WRS or "NO" to NOT USE WRS and press the OK key to set the USE WRS.

USE WRS	WRS	S DETECT	LEVEL
YES		0400	. ii .

12. Set the WRS DETECT LEVEL. (Range : 10 – 5,000) The WRS level is to set the WRS detection level.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase and decrease the selected character. Or press the NUMBER keys to set the desired value directly. Press the OK key to set the new WRS DETECT LEVEL.

l_	JSE OFFSE	: T	OFFSET DIFF.	
.#.	YES		-040	

13. Set the USE OFFSET.

USE OFFSET is to determine whether the system uses OFFSET DIFF or not. USE OFFSET and OFFSET DIFF are pair functions.

Press the UP and DOWN arrow keys to select "YES" to USE OFFSET or "NO" to NOT USE OFFSET and press the OK key to set the USE OFFSET.

USE OFFSET	OFF	SET D	ITE.
YES		-040	. #.

14. Set the OFFSET DIFF. (Range : ±100)

The offset difference is to offset the signal difference between RHCP and LHCP.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase and decrease the selected character. Or press the NUMBER keys to set the desired value directly.

Press the OK key to set the new OFFSET DIFF.

 VERIFY TIM		OPERATION	
 <u>1</u> 500	·#·	SAVE	

15. Set the VERIFY TIME. (Range : 10~5000)

The VERIFY TIME is to set the time of decoding to verify whether the signal detected is the signal of the target satellite.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase and decrease the selected character. Or press the NUMBER keys to set the desired value directly.

Press the OK key to set the new VERIFY TIME.

VERIFY TIME	OPERATION	
 <u>1</u> 500 .	SAVE	

16. Set OPERATION

Press UP and DOWN arrow keys to select OPERATION items.

OPERATION*

SAVE : Save and execute the current settings. REBOOT : The antenna will restart automatically if REBOOT ANTENNA is ON.

Executing Antenna Diagnosis

	SETUP	MODE	?	
→ YES				NO

1. Press the LEFT key to move cursor to YES and press the OK key to enter setup mode.

 +ANTENNA	+SATELLITE
+SYSTEM	+INSTALLATION

2. Press the OK key to enter ANTENNA menu.

·

3. Press the arrow keys to move cursor to DIAGNOSTIC and press the OK key to enter DIAGNOSTIC menu.

4. Press the UP and DOWN arrow keys to select a full diagnosis or single diagnosis and press the OK key to execute the selected diagnosis.

DIAGNO	STIC	FULL	TEST
FULL T	EST I	₽₩₩₩₩₩₩₩	***-**5

5. A full diagnosis is completed.

DΙ	AGNO)STIC	COMMUNIC	ATION
CO	DE 1	01	RESULT :	PASSED

6. The diagnosis result is shown.

Diagnosis Code :

CODE 101 : The data communication between the antenna and the ACU is tested.

CODE 102 : The azimuth motor is tested.

CODE 103 : The elevation motor is tested.

CODE 104 : The cross-level motor is tested.

CODE 105 : The azimuth encoder is tested.

CODE 106 : The cross-level encoder is tested.

CODE 107 : The gyro sensor is tested.

CODE 108 : The tilt sensor is tested.

CODE 109 : The sensor box motor is tested.

CODE 110 : The LNB is tested .

CODE 111 : The LNB skew motor is tested.

CODE 112 : The sub-reflector is tested.

CODE 113 : The antenna power is tested.

CODE 114 : The ACU power is tested.

CODE 115 : The receiver power is tested.

Test result: ●2●●●●●●●●●●●

• Test means passed. - Test means skipped. ? Test means under process.

Refer No. 2 to the diagnosis code 102 as shown above for occurred error explanation.

Satellite Settings

Setting the Satellite Pair

	SETUP	MODE	?	
 YES				NO

1. Press the LEFT arrow key to move cursor to YES and press the OK key to enter setup mode.

+ANTENNA	>	+SATELLITE
+SYSTEM		+INSTALLATION

2. Press the RIGHT arrow key to move cursor to SATELLITE and press the OK key to enter SATELLITE menu.

→ +SET	SAT.PAIR	+EDIT	SATELLITE
+3ET	REGION	+FIND	TRANSPONDER

3. Press the OK key to enter SET SAT. PAIR menu.

	SET	TRIPLE	SAT	?		
>	YES				NO	

4. Move cursor to YES and press the OK key to enter Tri-Sat mode or move cursor to NO and press the OK key to enter Dual-Sat mode.

P	R	E	S	E	T	:	S	L	0	T	Γ	E	22	1		S	Â	\ \	Γ	E	L	L	Ι	T	E	
.#.	P	R	E	S	Е	T		1		. ů .					A	S		• [2	A		1				

5. Press the UP and DOWN arrow keys to select PRESET SLOT 1, 2 and 3 in Tri-Sat mode or 1 and 2 in Dual-Sat mode.



6. Press the UP and DOWN arrow keys to select the DESTINED SATELLITE from the library (pre-programmed satellites). Press the OK key to set the DESTINED SATELLITE.



7. Press the BACK key to save the current settings or abort and return to the main display.

Edit Satellite Information

	SETUP	MODE	?	
→ YES				NO

1. Press the LEFT arrow key to move cursor to YES and press the OK key to enter setup mode.

+ANTENNA	 +SATELLITE
+SYSTEM	+INSTALLATION

2. Press the RIGHT arrow key to move cursor to SATELLITE and press the OK key to enter SATELLITE menu.

+3ET	SAT. PAIR	 +EDIT	SATELLITE
+3ET	REGION	+FIND	TRANSPONDER

3. Press the RIGHT arrow key to move cursor to EDIT SATELLITE and press the OK key to enter EDIT SATELLITE menu.



4. Press the UP and DOWN arrow key to select the satellite that you whish to edit and press the OK key to edit the selected satellite.

•	LONGITUDE	EDIT NAME 🕨
	19.20E	ASTRA_1

5. Press the RIGHT and LEFT arrow keys to select parameter that you whish to edit. Press the OK key to edit parameter.

Press the BACK key to save or abort and return to the main display.

4 LONGITUDE	EDIT NAME	•
. 19.20E ₩	ASTRA_1	

6. Set the SATELLITE LONGITUDE .

Press the LEFT and RIGHT arrow keys until the desired character is underscored(selected). Press the UP and DOWN arrow keys to increase or decrease the value.

Or press the NUMBER keys to set the desired value directly.

Press the OK key to set the SATELLITE LONGITUDE.

4 LONGITUDE		EDIT	NAME	#
19.20E	. .	ASTI	₹A_1 *	

7. Set the SATELLITE NAME.

Press the LEFT and RIGHT arrow keys until the desired character is underscored(selected). Press the UP and DOWN arrow keys to increase or decrease the value.

Or press the NUMBER keys to set the desired value directly.

Press the OK key to set the SATELLITE NAME.

	VERIF	Y TYPE	VOLTAGE	
.#.	DVB	DECODE	₩ AUTO	

8. Set the satellite VERIFICATION TYPE.

Press the UP and DOWN arrow keys to select the Verification Method 1) while antenna is tracking the satellite signal and press the OK key to set the VERIFY TYPE.

VERIFY TYPE	VOLTAGE
DVB DECODE	∴ AUTO Ŧ

9. Set the LNB VOLTAGE.

Press the UP and DOWN arrow keys to select the LNB Voltage Supply Method 2) and press the OK key to set the VOLTAGE ("AUTO" is recommended).

	DISEQC	POL. TYPE
.#.	AUTO 🐙	LINEAR

10. Set the DISEQC .

Press the UP and DOWN arrow keys to select the DiSEqC Method 3) and press the OK key to set the DISEQC ("AUTO" is recommended).

DISEQC	POL. TYPE
AUTO	. LINEAR +

11. Set the POL TYPE manually.(Only for t130W model)

Press the UP and DOWN arrow keys to manually select LINEAR or CIRCULAR and press the OK key to set the POL TYPE.

NOTE: The t130Q model does not support the Pol function. Select **LINEAR** and continue to the next step.



12. Set LOCAL FREQ.

Press the UP and DOWN arrow keys to select the LNB local frequency from the installed LNB. Or press the NUMBER keys to set the desired value directly. Press the OK key to set the parameter.

VL	FREQ	SYMBOL	NID
		22000kSps	0×0001

13-1. Set the satellite FREQUENCY for VL(Vertical Low) band.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase or decrease the value. Or press the NUMBER keys to set the desired value directly. Press the OK key to set the FREQUENCY.

NOTE: For the t130Q model, set the local frequency to 10600 Ghz.

VL	FREQ	SYMBOL	NID	
	115094MHZ	∴22000kSps +	0×0001	

13-2. Set the frequency SYMBOL rate (Maximum: 45,000).

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase or decrease the value. Or press the NUMBER keys to set the desired value directly. Press the OK key to set the SYMBOL.

VL	FREQ	SYMBOL	NID
	115094MHZ	22000kSps	

13-3. Set the frequency NID (Network ID). Range is 0x0000 – 0xFFF. Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase or decrease the value. Or press the NUMBER keys to set the desired value directly. Press the OK key to set the NID.

Continue to press the OK key to set the satellite frequency, symbol rate and NID for HL(Horizontal/LHCP Low), VH (Vertical/RHCP High) and HH (Horizontal/LHCP High) in sequence.
1) Verification Method

AGC – use signal level for satellite tracking. DVB LOCK – use DVB Lock for satellite tracking. DVB DECODE – use DVB Decode for satellite tracking. DSS DECODE – use DSS Decode for satellite tracking.

2) Voltage Supply Method

AUTO- supply 13V or 18V to LNB. ONLY 13V – always supply 13V to LNB. ONLY 18V – always supply 18V to LNB.

3) DISEQC Method

AUTO – supply 0kHz or 22kHz to LNB. ONLY 0KHZ – always supply 0kHz to LNB. ONLY 22KHZ - always supply 22kHz to LNB.

Finding Transponders

		SETUP	MODE	?	
>	YES				NO

1. Press the LEFT arrow key to move cursor to YES and press the OK key to enter setup mode.

+ANTENNA	•		S	A	T	E	L	 Ī	T	E				
+SYSTEM		÷	1	Ν	S	T	AI	1	A	T	I	ΟN		

2. Press the RIGHT arrow key to move cursor to SATELLITE and press the OK key to enter SATELLITE menu.

+3ET	SAT.PAIR	+EDIT	SATELLITE
+SET	REGION	→ +FIND	TRANSPONDER

3. Press the DOWN arrow key and the OK key to enter FIND TRANSPONDER menu.

I	3AND		FREQ.	SYMBOL
.#. VE	ER LOW	v 11	509MHz	22000kSps

4. Press the UP and DOWN arrow keys to select the frequency band you wish you edit. Press the OK key to edit the selected frequency.

BAND	FREQ.	SYMBOL
VER LOW	∴ 11509MHz -	22000kSps

5. Set the satellite FREQUENCY.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase or decrease the value. Or press the NUMBER keys to set the desired value directly. Press the OK key to set the FREQUENCY.

BAND	FREQ.	SYMBOL
VER LOW	11509MHz	. 22000kSps ∓

6. Set the frequency SYMBOL RATE.

Press the LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press the UP and DOWN arrow keys to increase or decrease the value.

Or press the NUMBER keys to set the desired value directly.

Press the OK key to set the SYMBOL.

ICHECK NID1 F:11509 S:22000 0×0001 PRESS OK RECEIVED NID[0×0001]

7. CHECK NID is to verify the NID (Network ID) of the current tracking transponder. Press OK key to verify the NID [0x0001] only when "PRESS OK" function is activated. "PRESS OK" function will only be activated when DVB Lock signal is confirmed by the antenna. However, "NO LOCK" message will be displayed if DVB Lock signal can't be confirmed.

System Settings

Setting Location

SETUP MODE ? - YES NO

1. Press the LEFT arrow key to move cursor to YES and press the OK key to enter setup mode.

	+ANTENNA	+SATELLITE	
>	+SYSTEM	+INSTALLATION	

2. Press the DOWN arrow key to move cursor to SYSTEM and press the OK key to enter SYSTEM menu.

4	>	+SET	LOCATION	+MANAGEMENT	ŀ
		+KEY	LOCK		

3. Press the RIGHT arrow key to move cursor to SET LOCATION and press the OK key to enter SET LOCATION menu.

GYRO TYPE	BAUDRATE
NMEA	

4. Set the ship's GYRO TYPE* and BAUD RATE

A search pattern 1 or 3 will be initiated according to which GYRO TYPE is selected and the existence of the gyro input. Set the BAUD RATE as 4800,9600,19200 or 38400 according to your device.

A search pattern 1 will be initiated automatically if the gyro input does not exist and the gyro type is selected other than GROUND TEST.

Note: The bow offset will not be saved automatically if Search 1 pattern is initiated. In this case, the antenna will need to retarget the desired satellite using Search 1 every time if the antenna restarts.

Setting of Heading Device							
Existence of Heading Data	No Device	NMEA / NMEA 2000	Ground Test				
With Heading Data	Search 1	Search 3	Search 3				
Without Heading Data	Search 1	Search 1	Search 3				

GYRO TYPE* NO DEVICE NMEA NMEA2000 GROUND TEST

→ LATITUDE	LONGITUDE
52.22N	4.53E

5. Set the current LATITUDE and LONGITUDE

Press LEFT and RIGHT arrow keys until the desired character is underscored (selected). Press UP and DOWN arrow keys to increase or decrease the value. Or press NUMBER keys to set the desired value directly. Press the OK key to set the parameter.

HEADING 000.0

6. Entry of ship's heading is not required when your system is connected to a NMEA(0813) or NMEA2000 Heading Gyrocompass output. Ensure that the supported Gyro Type is set correctly.



7. Press LEFT arrow key to move cursor to YES and press OK key to save current settings. Or move cursor to NO and press OK key to abort and return to the main display.

System Management

	SETUP	MODE	?		
→ YES				NO	

1. Press the LEFT arrow key to move cursor to YES and press the OK key to enter setup mode.

+ANTENNA	+SATELLITE	
 +SYSTEM	+INSTALLATION	

2. Press the DOWN arrow key to move cursor to SYSTEM and press the OK key to enter SYSTEM menu.



3. Press the ARROW key to move cursor to MANAGEMENT and press the OK key to enter MANAGEMENT menu.



4. Press the UP and DOWN arrow keys to select the PROCESS TYPE 1) and press the OK key to set the PROCESS TYPE.



5. Processing message is displayed.

SELECT PROCESS TYPE*

BACKUP USER DATA: To backup the antenna settings set by user to the ACU.

RESTORE USER DATA: To restore the antenna by using the backup user data stored from the ACU.

DEFAULT ACU-REMOTE P/W: to default ID and Password of the Web Server.

UPGRADE FROM USB: to upgrade the system by using the firmware files from a specified folder in the USB flash drive.

COPY LOG TO USB: to copy the antenna log data from the system to the USB flash drive.

BACKUP TO USB: To backup the antenna settings to a specified folder in the USB flash drive.

RESTORE FROM USB: To restore the antenna by using the backup user data from a specified folder in the USB flash drive.

UPGRADE ACU-REMOTE: To upgrade the system using the Aptus Web firmware file from a specified folder in the USB flash drive.

NOTE: UPGRADE FROM USB, COPY LOG TO USB, BACKUP TO USB, RESTORE FROM USB and UPGRADE ACU-REMOTE options are displayed only if the USB flash drive is plugged into the USB port located in the front panel of the ACU.

Key Lock

		SETUP	MODE	?	
>	YES				NO

1. Press the LEFT arrow key to move cursor to YES and press the OK key to enter setup mode.

	+ANTENNA	SATELLITE	
>	+SYSTEM	INSTALLATI	ON

2. Press DOWN arrow key to move cursor to SYSTEM and press OK key to enter it.

•	+SET	LOCATION	+MANAGEMENT	ŀ
	 +KEY	LOCK		

3. Press arrow keys to move cursor to KEY LOCK and press OK key to enter it.

KEY LOCK	UNLOCK P/W
m. ON m.	1590

4. Press UP and DOWN arrow keys to choose whether or not to use key pad lock when entering the SETUP mode or saving the satellite information. Setup the password for entering the key pad lock. The factory default is 1590.

-	TRA	١Ck	I	NG		1	9		28		A	S	Т	R	A		ΑG	iC	#	3	:Ø	1	æ	V	L	*
H	(AZ	: 1	6	Ø.	9	Ć	3	4	Ø.	90	I	E		::	29	 Ø	SK	. :	-2	1		1		F	n	

When KEY LOCK function is activated, the " $\ensuremath{\underline{\ast}}$ "mark is displayed.

USING APTUS PC

Introduction to Aptus®

Requirements

Software Installation

PC to ACU Communication Setup

Starting Aptus[®] Establishing a data communication AutoUpdate

Toolbar Menus

System Property Status Dashboard

Work View Tabs

- 1. Antenna Basic Info.
- 2. Antenna Advanced Info.
- 3. Satellite (Satellite View)
- 4. Graph View
- 5. Monitor
- 6. ACU System
- 7. Work View Functions

Introduction to Aptus®

Intellian's Antenna PC Controller Software, Aptus[®] is a next-generation graphically based antenna remote control software. The Aptus[®] allows users to easily and conveniently set up the antenna by using a personal computer.

The minimum PC hardware and software requirements to install and run Aptus[®] are as below.

Requirements

Hardware

HardwareRequirementsCPUIntel® Pentium® 4 or higherMemory512MB or higherVideo CardDirectX9.0 or higher supportedH/W acceleration supportedVideo Memory 128MB or higherHDD1GB or higher

Operating System and Software

Software	Requirements					
Operating System	Windows XP SP or higher					
Framework	Microsoft.Net Framework 3.5 Service Pack 1 or higher					

Software Installation

Double click the 'Aptus Setup.exe' icon Aptus to install Aptus[®] directly onto your computer/ laptop. The InstallShield Wizard will guide you through the program setup process. The installation routine provides an icon on the desktop.





Click the icon to start the software. In addition, Intellian also provides patch files for software upgrade.

PC to ACU Communication Setup

Starting Aptus®

Double-click the Aptus[®] desktop icon, then Communication Window appears to establish the data communication between your PC and the ACU. Select options of connection method to access your ACU either through the Serial Port Communication or the Network Communication (TCP/IP).

μŅ.	IP : Port : 4002	
Net	work 🔹	Connect Disconnect
Serial Comm	nunication	Network Communication
ort :	COM1 *	IP: 10.10.1.1
PS :	19200 -	Port : 4002
		Name : 💽 🔻
		Network List Setting

Establish a data communication

Access ACU through Serial Communication

- 1. Connect a 9 pin Serial cable between the PC INTERFACE connector on the ACU and the 9 pin Serial port on the PC. (Or you can use a USB cable to setup Serial connection between a PC and the USB port on the ACU.)
- 2. Select Serial at communication type combo-box.
- 3. The baud rate of the ACU is 57600.
- 4. Select a COM port which is not occupied by other devices.
- 5. Click the Connect button.

Access ACU through Network Communication (TCP/IP)

- 1. Connect your PC to the Management Port.
- 2. Select Network at communication type combo-box.
- 3. Enter in the ACU's IP address (Factory default : 192.168.2.1)
- 4. Enter in the ACU's port number (Factory default : 4002)
- 5. Click the Connect button then the Authentication window will appear.
- 6. Login by using the username and password below:
 - Username: intellian (Factory default)
 - Password: 12345678 (Factory default)

indow 💶 🗵
intellian
•••••
J
OK Cancel
/

NOTE: If the remote access PC is located in the same network group with the ACU, the ACU can be accessed through the internal IP address. But, if the remote access PC is located outside of the network group, the ACU's IP address should be changed to the IP address assigned by the network service provider.



WARNING:

- Do not plug a USB to the ACU while TCP/IP communication is in use. Doing so will disable current PC Software Control because the USB connection has higher priority than TCP/IP connection.

- The amount of data will increase rapidly if Network Communication is in use. Intellian recommends using Aptus Web to access the ACU.

AutoUpdate

Intellian Aptus[®] checks and notifies the latest version when it is started to maintain up to date software version by AutoUpdate function.

AutoUpdate Ver 1.0	
Software update is available.	
Current S/W Version :	
New S/W Version : 0.0.0	
Progress :	
Start Close	

- 1. When Aptus[®] is started, it automatically checks the latest software version from the server and runs AutoUpdate if new version is available.
- 2. Current software version information is displayed.
- 3. It notifies new software version information.
- 4. When you click the "start" button, "File downloading..." message is displayed while downloading files from the server.

Progress :	
File downloading	

- 5. When file downloading is finished, "installing..." message is displayed and Aptus patch runs and the installation starts by InstallShield.
- 6.Click the "Finish" button when InstallShield installation is finished, then "Run the Aptus" message is displayed and Aptus runs and AutoUpdate is automatically finished.

Toolbar Menus

Setup: enters Setup mode.

The toolbar menus at the top of the screen display command buttons of the most commonly used functions of the Aptus[®]. The toolbar menus consists of 6 main menus; Quick (for quick launch of functions), File (for file backup, restoring and loading), View(for user layout and work view), Connection(for communication), Utill (for firmware uploading and spectrum view) and Help(for reporting problems and information check).



 Setup

 Restart: exits Setup mode and restarts the antenna.

 Image: Restart: exits Setup mode and restarts the antenna.

 Reboot: reboots the antenna.

 Image: Restart: exits Setup mode and restarts the antenna.

 Image: Reboot: reboots the antenna.

 Image: Restart: exits Setup mode and restarts the antenna.

 Image: Reboot: reboots the antenna.

 Image:

2 File

(1) Quick

o



- Backup: backups the antenna information to ACU or PC.
- Select 'To ACU' to backup the antenna information to ACU. The backup file (file format: *.ibf) will be stored on the ACU.
- Select 'To PC' to backup the antenna information to a PC. The backup files (file format: *.rpt and *.ibf) will be generated on the PC.

NOTE: Both *.rpt and *.ibf files contain antenna information. However, while *.ibf file can be used for restoring antenna information, *.rpt file is stored as plain-text for viewing purpose only. Users can open the *.rpt using text editors such as notepad software.



Restore: restores the antenna by using the stored information in ACU or PC.

- Select 'From ACU' to restore the antenna by using the stored information in ACU.
- Select 'From PC' to restore the antenna by using the stored information in PC (file format: *.ibf).



Load Config. : loads the antenna configuration file (file format: *.cfg). The configuration file includes the antenna control parameters which are pre-loaded at the factory and should only be changed by an authorized service technician. Improper setting of these parameters will cause your system to perform improperly.

3 View



• User Layout: displays the layout list that the user has previously stored by using Layout Manager. If you select a layout in this list, the selected layout will be constructed in Work View screen. The 'Basic layout' is provided by default.



- Layout Manager: provides the user with add, delete, and save functionalities in order to manage the user's layouts.
- Selecting 'Add current layout' opens a pop up window. Type in a desired name of current layout and click Add, then the new name of the current layout will be saved to the list under User Layout menu.
- When changes are made to the current layout, select 'Save current layout' option. The current layout will be saved with changes.
- To remove a layout, select 'Delete layout' option. Select a desired layout to remove on the pop up window, then click 'Delete'. Close the window by clicking on 'Close'. The selected layout is removed from the User Layout list.

Default Layout

• Default Layout: returns the current layout to the default layout.

- View -Satellite View Antenna - Basic View Antenna - Advanced View Monitor View Graph View ACU System View Antenna UI View
- Work View: displays a list of seven pre-constructed Work View Tabs (Satellite View, Antenna Basic View, Antenna Advanced View, Monitor View, Graph View, ACU System View, and Antenna UI View) and also provides the Activate / Close functionalities for each view tab. Activate the work view tab by ticking the checkbox next to it.

(4) Connection



At any time, data communication channel can be re-established between Serial and Network connection. Selecting Comm. Button will display Communication W indow to connect to the ACU via Serial or Network communication.

5 Utill



• **Firmware Uploader:** provides the user with the latest firmware version and updates firmware by simple steps.



• **Spectrum:** displays current spectrum graph and allows to set spectrum data view options.

6 Help



• **Report:** provides e-mail contact to Intellian technical support team to let the user report problems at any time.



• Information: displays the information of current Aptus[®] software version.

System Property Status Dashboard

The property status dashboard on the left pane of the screen provides the antenna status, signal level, GPS and heading status, software information, product information and error status to be monitored quickly.

Tracking Satell KOREA_N KOREA_F	A B
Signal Level	0
GPS Heading	127.05 E 37.07 N 1.00
Voltage	
Antenna :	23.9V
ACU :	27.1V
Software Infor	mation
Ant. PCU :	V 4.00
Ant. Stabilizer	: V 4.00
ACU Main :	V 4.00
Lib Version :	V 1.15
Product Inform	nation
System Mode	I : T110W
Ant. Name :	T3-111AW2
System Type:	

- ① Antenna Status: Displays the status of the current mode of the antenna.
 - Search 1: A Search 1 pattern will automatically be initiated when the ship's heading input does not exist or if it fails. The search cycle will repeat until the antenna receives the lock signal from the receiver or until the DVB transponder of the target satellite is decoded by the antenna.
 - Search 2: Search 2 is reserved for future use.

- Search 3: Search 3 pattern will automatically be initiated when AGC falls below the current tracking level threshold value. Once the desired signal is found and above the predefined tracking threshold, the ACU will enter to tracking mode.
- Tracking: Antenna is tracking the target satellite.
- Initialize: Antenna or ACU is initializing.
- Setup: Antenna is in SETUP mode.
- (2) Tracking Satellite

Display or set current tracking satellite and tracking information. Up to three satellites can be selected.

3 Signal Level

Shows "DVB" when DVB mode of tracking signal is in use. The "Red" line indicates the signal "Detect Level Threshold" and the "Orange" line indicates the signal "Tracking Level Threshold". If the signal level is higher than the tracking level threshold, the signal level bar will display "Blue" color. If the signal level is lower than the tracking level threshold, the signal level bar will display "Orange" color and the antenna will stay in searching mode.

NOTE: If the signal level is not higher than the tracking threshold, decrease the detect and tracking level.

④ GPS and Heading

Displays the current GPS location from the Antenna and Ship's heading information. The status light flashes green if the system receives a correct input of the GPS and Ship's heading.

GPS	127.05 E 37.07 N
Heading	0.00

- 5 Voltage: Displays the antenna and the ACU voltage information.
- 6 Software Information: Displays the antenna and the ACU firmware versions, and the library version.

Software	Informa	ation	
Ant. PC	U :	V 0.90	
Ant. Sta	bilizer :	V 0.90	
ACU Ma	ain :	V 9.00	
Lib Vers	sion :	V 1.01	

- Product Information: Displays the antenna and ACU serial numbers, antenna model and ACU model.
- (8) Diagnostic Error Report

The square button next to the Diagnostic Error Report turns red when the system receives an error. Click the button to see a Diagnostic Report.

Diag	nostic Report	- • ×
11:16 11:16	LNB Diagnostic error LNB Diagnostic error	
11:17	LNB Diagnostic error LNB Diagnostic error	
11:17	LNB Diagnostic error LNB Diagnostic error	
		Clear
		Close

Work View Tabs

Aptus[®] provides seven Work View Tabs (Satellite View, Antenna Basic View, Antenna Advanced View, Monitor View, Graph View, ACU System View, and Satellite View) to manage the Antenna and the Satellite configuration.

How to modify the settings on Work View;



1. Enter the Setup mode by clicking Setup icon.



- 2. Tick the checkbox next to the "Set" button to modify the settings.
- 3. Enter the desired value then press the Set button to save the settings.

1. Antenna – Basic Info.

This view tab provides information on the Antenna's Current GPS location, Heading Device, Bow Information, Skew Information, and the Antenna's Angle. This view tab uses the Antenna's AZ and EL information as well as the Ship's Heading information in order to provide a dynamic graphic user interface (UI).

Aptus : Intellian Antenna Control So	ftware - Ver. 1.4.5 Connectinfo : USER	
Home		
Setup Restart Reboot Get Ant. Unfor Quick	Image: Sector billing Config. Image: Sector billing M Layout Manager - Default Layout Image: Sector billing <	m Report Information
Antenna Status: Setun	Antenna - Basic Info. Antenna - Advanced Info. Satellite Graph Monitor Diagnostic GUI	♥ 100% ▼ ₹
Setup Tracking Satellite • KOREA_N A • KOREA F B	GPS Azimuth 2* Longitude : 127.05 * E 127.05 * East * Latitude : 37.07 * N 37.07 * North * Set Set Set -90.00 *	Heading : 0.00* Bow Offset : 221* Heading Up North Up
iignal Level 0 •	Heading	
3PS 127.05 E 37.07 N leading 0.00	Heading Device: INMEA 4800 Set	
Antenna : 23.0V ACU : 26.9V	Skew Information Find Antenna Angle	
Acto 20.50 oftware Information Ant. PCU : V 4.00 Ant. Stabilizer : V 4.00 ACU Main : V 4.00 Lib Version : V 1.15	SACK information Information <thinformation< th=""></thinformation<>	
roduct Information System Model : T110W	Find Angles & Skew Antenna GPS	EL: 45.61
Ant. Name : T3-111AW2 System Type:	AZ Relative: -10.44* AZ Absolute: */ Image: 100 million of the state of	^
iagnostic Error Report	Go to Position	_
	EL: 0.00 * TargetPosition	

- GPS: displays and sets current antenna's GPS.
- Heading: displays and sets current ship's heading information.
 - Heading Device: None / NMEA/ NMEA 2000/Ground Test.
 The baud rate (4800/ 9600/ 19200/ 38400) must be set if NMEA is selected.
- Bow Information: displays and sets current antenna's bow.
- Skew Information: displays current antenna's skew and skew offset for the selected satellites.
 - · Pol Sensor Calibration: calibrates the sensor (potentiometer).
- Find Antenna Angle: displays and sets the current antenna angle. Select a desired satellite from the drop-down menu, then longitude, azimuth, elevation and skew information are displayed.
 - Find Angles & Skew Antenna GPS: Finds the current antenna angles and skew angle in relation to the longitude (orbit position) of the antenna's current GPS.
- Antenna Angle: displays and sets current antenna's absolute and relative AZ (azimuth) position, EL (elevation) position and polarization (between Linear and Circular). You can move antenna azimuth and elevation position and LNB Pol angle by using the arrows or inputting a value to find the desired satellite manually.
- Go to Position: The current position (angle) of the antenna is displayed.
 Push the "Go to target Position" button after keying in the desired angle to move the antenna to target position.

2. Antenna – Advanced Info.

This view provides information on the Tilt Sensor Bias, Rate Sensor, Conical Range, Parameter Setting, Threshold Setting, Search Parameter and Flag Setting.

Aptus : Intellian Antenna Control So	ftware - Ver. 1.4.5 Co	onnectInfo : USER	
Home			
Setup Restart Reboot Get Ant. Quick	Backup Restore Config. Layout	Layout Manager - Default Layout View View	FW Spectrum Report Information
Antenna Status: Setup	Antenna - Basic Info. 📝 Antenna - Adva	nced Info. Satellite Graph Monitor	Diagnostic GUI 🔮 100% 🔹 🖛 🗙
Setup Tracking Satellite KOREA,N KOREA,F B Signal Level 0	Tilt Sensor Bias Ready EL Image: Classific sensor Bias Image: Classin Bias Image: Classi	Search Parameter AZ Type1 Type2 Type3 E AZ : 400 * 16 * 6 * P P Wait Time : 20 (s) Search Step : 0.80 * P	zimuth :* Heading : 0.00* levation : 45.61* Bow Offset : 221* ol Angle : -90.00*
GPS 127.05 E 37.07 N Heading 0.00 Voltage Antenna : 23.0V ACU : 26.9V 26.9V	Conical Range CL : 93 AZ : 120 EL : 120 Set Set	Set Threshold Setting Initial Sat count : 50 Set Verify Time: 1500 Voltage Threshold : 650	
Software Information Ant. PCU : V 4.00 Ant. Stabilizer : V 4.00 ACU Main : V 4.00	Parameter Setting Scan Offset: 35 EL Adjust : -0.80	DISEqC Threshold : 100 Set	ISB CA
Lib Version : V 1.15 Product Information System Model : T110W Ant. Name : T3-111AW2 System Type:	Threshold Setting DV8 Detect Level : 60 DV8 Tracking Level : 30	Set	B: 45.61
Diagnostic Error Report			EL: 45.61
	*		*

- -Tilt Sensor Bias: This maintains the elevation and the cross level axes in order to keep the pedestal parallel to the horizon. Adjust the two solidstate tilt sensors to provide absolute cross-level tilt of the antenna and el evation feedback to eliminate long-term pointing drift (error). Tilt bias must be adjusted when the antenna control board or sensor box is replaced. If the bubble on the button level located on the sensor box is not centered, follow the following steps to adjust the tilt sensor bias.
 - Step 1. Enter Setup mode and press the "Ready" button to bring the elevation and cross-level to 0.
 - Step 2. Select "EL" from the drop down list and press Up and Down arrow keys to adjust the bubble until it is located in the center ring of the button level.
 - Step 3. Select "CL" from the drop down list and press Up and Down arrow keys to adjust the bubble until it is located in the center ring of the button level.



· Step 4. Press the "Restart" icon to restart the antenna.

- **Rate Sensor:** is used to calibrate the DC voltage output from the three rate sensors (azimuth, elevation, and cross-level). These are used to sense antenna motion that corresponds to the ship's motion (roll, pitch, and yaw) for stabilizing the pedestal. The DC voltage output from each of the rate sensors may vary by an amount which is directly proportional to the direction and rate of motion induced on it.

Before calibrating the rate sensors located in the Sensor box, make sure that the antenna is placed on a rigid and flat platform. During the calibration process, any motion of the antenna should be avoided as it can affect the antenna's performance. Proceed with the following steps to perform the calibration.

- · Step 1. Enter Setup mode
- Step 2. Press the "Idle Mode" button to release the elevation and cross level motor brakes while the antenna is in Setup mode.
- Step 3. Check whether or not the bubble is located at the center of the button level. If not, move it to the center by following the previous instruction of Tilt Sensor Bias adjustment.
- Step 4. Press the "Bias Check" button to calibrate the rate sensor.
 A blue circle will be displayed next to the Bias Check button if the calibration is completed. A red circle will be displayed if calibration failed. A green circle will be displayed during the calibration process.

- Parameter Setting: used to set the control parameter settings.

- Scan Offset: The scan offset is to offset the angle difference between the black marker on the sub-reflector and the optical sensor
- EL Adjust: The elevation adjustment is to offset the angle difference between the mechanical elevation angle and actual elevation angle.

- **Threshold Setting:** set the threshold level for detecting and tracking the satellite signal.

- DVB Detect Level: displays and sets signal detection threshold level when DVB tracking mode is in use.
- DVB Tracking Level: displays and sets signal tracking threshold level when DVB tracking mode is in use.

- Search Parameter:

- · Wait time: set the time-out for automatic initiation of a search after
- the signal level drops below the pre-defined threshold value.
- · Search Step: set increment step size.
- Type 1 & Type 3 (Search 1 & 3) Range: set Search 1 & 3 search range.
 Search 3 is conducted in a two-axis pattern consisting of alternate movements in azimuth and elevation as it forms an expanding square.
- · Type 2 (Search 2) Range: is reserved for future use.

- Threshold Settings

- · Initial Sat Count: Set the threshold count for maintaining tracking.
- · WRS Detect Level: Set the WRS detection level.
- Voltage Threshold: Set the voltage threshold. The voltage threshold is to distinguish the voltage between 13V and 18V.
- DiSEqC Threshold: Set the DiSEqC threshold. The DiSEqC threshold is to distinguish the 0KHz tone and 22KHz tone.

- Flag Settings

- Use WRS Method: Use WRS method is to determine whether the system uses "WRS Detect Level" or not. Use WRS method and "WRS Detect Level" are pair functions.
- Use Offset Difference: Use offset difference is to determine whether the system uses "Offset Difference" or not. Use Offset Difference and "Offset Difference" are pair functions.

3. Satellite (Satellite View)

The name, longitude, Skew Offset, Polarity, verification method of the satellite and local frequency are displayed. Tick the "Edit Satellite" box to edit the satellite information. After modifying the value.

		The second Measurement			
・ 米 ① Maine Set un Restart Rehoot Get Ant S	ave Backup Restore Load	D Default Layout	Work Comm	EW Spectrum	Report Information
Info Sat	tellite • • Config.	Layout •	View • U	Ploader	
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ntenna Status: Setup	Antenna - Basic Inio. Antenn	na - Auvanceu Inio. Satellite	Graph Monitor D	agnostic Gor	▼ 100% • •
Setup	MEASAT_3		No Name	Longitude	AZ. EL.
acking Satellite	91.50 ° East •	Skew Offset : 0	1 KOREA_N	116.01	90.00 -33.28
KOREA_N	Polarity:	Vertification : DVB Decode •	3 KOREA3BS	116.00	90.00 -33.27
KOREA_F B			4 KOREA3CS	116.00	90.00 -33.27
	Local Frequency	MH7 CTT	5 JCSAT_3	128.00	90.00 -44.22
	Single Band O Unive	ersal LNB O Amerecas	6 JCSAT_4A	124.00	90.00 -40.60
· ·			7 OPTUS_D2	152.00	90.00 -65.58
PS 127.05 E 37.07 N	Dual Satellite Mode	(8 OPTUS_C1	156.00	90.00 -69.09
eading 0.00	Register for Sat A Register	for Sat B	9 OPTUS_D1	160.00	90.00 -72.59
oltage			10 OPTUS_A3	164.00	90.00 -76.08
Antenna : 23.7V	VERTICAL/RHCP	HORIZONTAL/LHCP	11 THALCOMS	/8.50	90.00 2.81
ACU : 26.9V	Fren MHz 11682	Freq MHz 11682	12 IMEASAT_2	91.50	90.00 -02.00
oftware Information	Symbol KSpc : 20000	Sumbol kSpc : 20000	15 IVIEASAT_S	91.30	50.00 -10.07
Ant. Stabilizer : V 4.00	NID	Symbol: KSpS			
ACU Main : V 4.00	NID: 0X 0880	NID : 0X 0880			
Lib Version : V 1.15	HIGH	HIGH			
oduct Information	Freq. MHZ : 11682	Freq. MHZ . 11062			
System Model : T110W	Symbol. KSps : 30000	Symbol. ksps			
System Type:	NID : 0x 0880	NID . 0X 0880	Triple Satellite Mode	Edit Sate	allite Information
	Pol & Band Control			Euli Sale	enite information
	Pol: O Auto	0 13V 0 18V	Load Default	Upo	date Default
agnostic Error Report 🗌					

- LNB Local Frequency: Displays or sets LNB local frequency and its corresponding LNB voltage supplied. You may select pre-programmed LNB LO settings from the drop down list. This procedure is same for both the Intellian Global VSAT PLL LNB and any other LNB.

- Transponder Information

- \cdot Register for Sat A & Register for Sat B: register the selected satellite for A or B.
- Transponder information consists of frequency, symbol and NID (Network ID) of a transponder in tracking the satellite. There are four groups of transponder information. 'Vertical/RHCP' is applied when the IRD supplies 13V, and 'Horizontal/LHCP' is applied when the IRD supplies 18V. 'LOW' is applied when DiSEqC signal is not detected from IRD. 'HIGH' is applied when the DiSEqC signal is detected from the IRD. After modifying information, press the 'Edit Satellite Information' button, then new information is updated in the antenna.

- **Pol & Band Control:** The "Pol" controls 13V (Vertical/RHCP band) or 18V (Horizontal/ LHCP band). The "Band" controls DiSEqC 0KHz tone (Low band) and 22KHz tone (High band). After modifying information, press 'Edit Satellite Information' button, then new information is updated in the antenna.

- **Triple Satellite Mode:** To select between Dual-Sat mode and Triple-Sat mode, tick the 'Dual Satellite Mode' box or 'Triple Satellite Mode' box at the bottom of the screen.

- Edit Satellite Information: push the "Edit Satellite Information" button to update the information after modifying values.

- Load Default: Push the "Load Default" button to select a regional library file *.rif according to your region.

- **Update Default:** After loading a regional library file *.rif, push the "Update Default" button to update the system.

4. Graph View

This view provides information on Signal, Elevation (EL), Absolute AZ (Azimuth), Relative AZ, Heading, AZ and EL in Single or Multi graph formats.

elect Graph Item SIGNAL EL GRAPH AZ ABSOLUTE HEADING AZ RELATIVE AZ & EL gral S: 0 Set Pos Current Pos Span: Max Clear S: 0 Set Pos Current Pos Span: Max Clear	Anteni	ina - Basic Ir	ifo. 🛛 Antenna	- Advanced Info.	Satellite Graph Mo	nitor Diagnostic GUI	♥ 100% ▼
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- Select Graph Item: shows the graphs of only the checked item(s) in a Single or Multi Graph View.
- **Single Graph View:** shows Graph Views per each single Graph Item selected in 'Select Graph Item'.
- **Multi Graph View:** shows one large integrated Graph View of multiple Graph Items selected in 'Select Graph Item'.
- **Start/Stop Save:** the chosen item is saved within the data log. The data log which stores the information displayed in the graphs can be later used for a service technician to find out a cause of any possible problem to the antenna.
- Clear All: clears everything drawn on the Graph View window.

- Set Pos.: sets the current position as center value of each Graph Item.
- Current Pos.: moves to the location according to values of each Graph Item.
- Span: sets the Display Range(s) of each corresponding Graph Item.
- Period: displays and sets the signal sampling rate.
- Graph Column Count: makes all Graph Views show in either one or two-column format.

5. Monitor

This view provides a UI which can monitor all data that has been received from the ACU.

12:22:13 [P] Result[P0] 2 102 [S6 3] 0 330.65 330.65 45.61 0 127.05 E 37.07 N 12:22:14 [P] R4C : -40[X] [0, 0] 0 330.6 330.6 45.59 0 127.05 E 37.07 N 12:22:14 [P] AGC : -45[X] [0, 0] 0 330.6 330.6 45.61 0 127.05 E 37.07 N 12:22:18 [S] EL/CL 0 / 2-64] 0 330.53 330.53 45.61 0 127.05 E 37.07 N 12:22:18 [S] EL/CL 0 / 2-64] 0 330.47 45.61 0 127.05 E 37.07 N 12:22:20 [P] AGC : -45[X] [0, 0] 0 330.47 45.61 0 127.05 E 37.07 N 12:22:23 [P] AGC : -45[X] [0, 0] 0 330.47 330.47 45.57 0 127.05 E 37.07 N 12:22:23 [P] AGC : -45[X] [0, 0] 0 330.4 330.4 45.57 0 127.05 E 37.07 N 12:22:23 [P] AGC : -45[X] [0, 0] 0 330.4 330.4 45.57 127.05 E 37.07 N 12:22:24 [P] AGC : -45[X] [0, 0] 0 330.33 330.35 45.61 127.05 E 37.07 N <th>Antenna -</th> <th>Basic Info. Antenna - Advanced Info.</th> <th>Satellite / Graph</th> <th>Monito</th> <th>r Dia</th> <th>gnostic</th> <th>GUI</th> <th></th> <th>100%</th> <th>•</th> <th>₹×</th>	Antenna -	Basic Info. Antenna - Advanced Info.	Satellite / Graph	Monito	r Dia	gnostic	GUI		100%	•	₹×
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12:22:26 [P]RF2 Read Power: 2 0 330.35 45.63 0 127.05 E 37.07 N 12:22:26 [P] AGC : -45[X] [0, 0] 0 330.33 330.33 45.57 0 127.05 E 37.07 N 12:22:28 [P] AGC : -45[X] [0, 0] 0 330.29 330.29 45.55 0 127.05 E 37.07 N 12:22:28 [P] AGC : -45[X] [0, 0] 0 330.29 330.29 45.55 0 127.05 E 37.07 N 12:22:30 [P] AGC : -45[X] [0, 0] 0 330.24 330.24 45.61 0 127.05 E 37.07 N 12:22:31 [P] Result[P0] 2 102 [S6 3] 0 330.17 330.17 45.55 0 127.05 E 37.07 N 12:22:33 [S] EL/CL -5 / 6(-61) 0 330.17 330.17 45.55 0 127.05 E 37.07 N 12:22:33 [S] EL/CL -5 / 6(-61) 0 330.17 330.17 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.08 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.08 350.08 350.08 <t< td=""><td>12:22:25</td><td>[P] AGC : -45[X] [0, 0]</td><td>0</td><td>330.38</td><td>330.38</td><td>45.63</td><td>0</td><td>127.05 E 3</td><td>37.07 N</td><td></td><td></td></t<>	12:22:25	[P] AGC : -45[X] [0, 0]	0	330.38	330.38	45.63	0	127.05 E 3	37.07 N		
12:22:26 [P] AGC : -45[X] [0, 0] 0 330.33 330.33 45.57 0 127.05 E 37.07 N 12:22:28 [S] EL/CL 0 / 2(-61) 0 330.29 330.29 45.55 0 127.05 E 37.07 N 12:22:28 [P] AGC : -45[X] [0, 0] 0 330.29 330.29 45.55 0 127.05 E 37.07 N 12:22:28 [P] AGC : -45[X] [0, 0] 0 330.29 330.24 45.61 0 127.05 E 37.07 N 12:22:30 [P] AGC : -45[X] [0, 0] 0 330.24 330.17 127.05 E 37.07 N 12:22:31 [P] Result[P0] 2 102 [S6 3] 0 330.17 330.17 45.55 0 127.05 E 37.07 N 12:22:33 [S] EL/CL -5 / 6(-61) 0 30.17 330.17 45.55 0 127.05 E 37.07 N 12:22:36 [P] AGC : -45[X] [0, 0] 0 330.13 330.13 45.59 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.04 45.57 0	12:22:26	[P]RF2 Read Power: 2	0	330.35	330.35	45.63	0	127.05 E 3	37.07 N		
12:22:28 [S] EL/CL 0 / 2(-61) 0 330.29 330.29 45.55 0 127.05 E 37.07 N 12:22:28 [P] AGC : -45[X] [0, 0] 0 330.29 330.29 45.59 0 127.05 E 37.07 N 12:22:30 [P] AGC : -40[X] [0, 0] 0 330.24 45.61 0 127.05 E 37.07 N 12:22:31 [P] Result[P0] 2 102 [S6 3] 0 330.22 45.57 0 127.05 E 37.07 N 12:22:33 [P] AGC : -45[X] [0, 0] 0 330.17 45.55 0 127.05 E 37.07 N 12:22:33 [S] EL/CL - 5 / 6(-61) 0 330.17 45.55 0 127.05 E 37.07 N 12:22:36 [P] AGC : -45[X] [0, 0] 0 330.13 330.13 45.59 0 127.05 E 37.07 N 12:22:37 [P]RF2 Read Power: 2 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.04 45.57 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.04 330.04 45.57 0 127.05 E 37.07 N	12:22:26	[P] AGC : -45[X] [0, 0]	0	330.33	330.33	45.57	0	127.05 E 3	37.07 N		
12:22:28 [P] AGC : -45[X] [0, 0] 0 330.29 330.29 45.59 0 127.05 E 37.07 N 12:22:30 [P] AGC : -40[X] [0, 0] 0 330.24 45.61 0 127.05 E 37.07 N 12:22:31 [P] Result[P0] 2.102 [S6 3] 0 330.22 330.22 350.27 S 0 127.05 E 37.07 N 12:22:33 [P] AGC : -45[X] [0, 0] 0 330.17 45.55 0 127.05 E 37.07 N 1222:33 [P] AGC : -45[X] [0, 0] 0 330.17 330.17 45.55 0 127.05 E 37.07 N 1222:36 [P] AGC : -45[X] [0, 0] 0 330.17 330.17 45.55 0 127.05 E 37.07 N 12:22:36 [P] AGC : -45[X] [0, 0] 0 330.17 330.17 55.5 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.02 330.04 45.57 0 127.05 E 37.07 N 12:22:38 [S] EL/CL - 1 / 9(-61] 0 330.02 330.04 45.57<	12:22:28	[S] EL/CL 0 / 2(-61)	0	330.29	330.29	45.55	0	127.05 E	37.07 N		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	12:22:28	[P] AGC : -45[X] [0, 0]	0	330.29	330.29	45.59	0	127.05 E	37.07 N		
12:22:31 [P] Result[P0] 2:102 [S6 3] 0 330.22 45.57 0 127.05 E 37.07 N E 12:22:33 [P] AGC: -45[X] [0, 0] 0 330.17 330.17 45.55 0 127.05 E 37.07 N E 12:22:33 [S] EL/CL -5 / 6(-61) 0 30.17 330.17 45.55 0 127.05 E 37.07 N E 12:22:33 [S] EL/CL -5 / 6(-61) 0 30.17 330.17 45.55 0 127.05 E 37.07 N 127.05 E 37.07 N 12:22:33 [P] AGC: -45[X] [0, 0] 0 330.13 330.13 45.59 0 127.05 E 37.07 N 12:22:37 [P]RF2 Read Power: 2 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC: -45[X] [0, 0] 0 330.04 45.57 0 127.05 E 37.07 N 12:22:38 [S] EL/CL -1 / 9(-61) 0 330.02 330.04 45.57 0 127.05 E 37.07 N 12:22:39 [P] AGC: -45[X] [0, 0] 0 320.99 329.99 45.59 0 127.05 E 37.07 N 12:22:40 [P] Result[P0] 2:102 [S6 3] 0<	12:22:30	[P] AGC : -40[X] [0, 0]	0	330.24	330.24	45.61	0	127.05 E 3	37.07 N		
12:22:33 [P] AGC : -45[X] [0, 0] 0 330.17 45.55 0 127.05 E 37.07 N 12:22:33 [S] EL/CL -5 / 6(-61) 0 330.17 330.17 45.55 0 127.05 E 37.07 N 12:22:36 [P] AGC : -45[X] [0, 0] 0 330.17 330.17 45.55 0 127.05 E 37.07 N 12:22:36 [P] AGC : -45[X] [0, 0] 0 330.13 330.13 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.04 330.04 55.5 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.04 330.04 55.7 0 127.05 E 37.07 N 12:22:39 [P] AGC : -45[X] [0, 0] 0 330.02 330.02 45.61 0 127.05 E 37.07 N 12:22:40 [P] Result[P0] 2 102 [S6 3] 0 329.99 329.99 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 <td>12:22:31</td> <td>[P] Result[P0] 2 102 [S6 3]</td> <td>0</td> <td>330.22</td> <td>330.22</td> <td>45.57</td> <td>0</td> <td>127.05 E 3</td> <td>37.07 N</td> <td>_</td> <td></td>	12:22:31	[P] Result[P0] 2 102 [S6 3]	0	330.22	330.22	45.57	0	127.05 E 3	37.07 N	_	
12:22:33 [S] EL/CL - 5 / 6(-61) 0 330.17 45.55 0 127.05 E 37.07 N 12:22:36 [P] AGC : -45[X] [0, 0] 0 330.13 330.13 45.59 0 127.05 E 37.07 N 12:22:37 [P]RF2 Read Power: 2 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:39 [P] AGC : -45[X] [0, 0] 0 330.02 330.04 45.57 0 127.05 E 37.07 N 12:22:39 [P] AGC : -45[X] [0, 0] 0 330.02 330.02 45.61 0 127.05 E 37.07 N 12:22:40 [P] Result[P0] 2 102 [S6 3] 0 329.99 329.99 45.59 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97	12:22:33	[P] AGC : -45[X] [0, 0]	0	330.17	330.17	45.55	0	127.05 E 3	37.07 N	=	
12:22:36 [P] AGC : -45[X] [0, 0] 0 330.13 330.13 45.59 0 127.05 E 37.07 N 12:22:37 [P] RFZ Read Power: 2 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.04 330.04 45.57 0 127.05 E 37.07 N 12:22:38 [S] EL/CL -1 / 9(-61) 0 330.04 330.04 45.57 0 127.05 E 37.07 N 12:22:39 [P] AGC : -45[X] [0, 0] 0 320.99 329.99 45.59 0 127.05 E 37.07 N 12:22:40 [P] Result[P0] 2 102 [S6 3] 0 329.99 329.99 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97	12:22:33	[S] EL/CL -5 / 6(-61)	0	330.17	330.17	45.55	0	127.05 E 3	37.07 N		
12:22:37 [P]RF2 Read Power: 2 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:37 [P] AGC : -45[X] [0, 0] 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:38 [S] EL/CL -1 / 9(-61) 0 330.04 330.04 45.55 0 127.05 E 37.07 N 12:22:39 [P] AGC : -45[X] [0, 0] 0 330.02 330.02 45.61 0 127.05 E 37.07 N 12:22:40 [P] Result[P0] 2 102 [S6 3] 0 329.99 329.99 45.59 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 <	12:22:36	[P] AGC : -45[X] [0, 0]	0	330.13	330.13	45.59	0	127.05 E 3	37.07 N		
12:22:37 [P] AGC : -45[X] [0, 0] 0 330.08 330.08 45.55 0 127.05 E 37.07 N 12:22:38 [S] EL/CL -1 / 9(-61) 0 330.04 330.08 45.57 0 127.05 E 37.07 N 12:22:39 [P] AGC : -45[X] [0, 0] 0 330.04 330.02 330.02 45.61 0 127.05 E 37.07 N 12:22:40 [P] Result[P0] 2 102 [S6 3] 0 329.99 329.99 45.59 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N Tracking AZ EL CL EL Tilt Bias : 0.0° El W Param Save Debug Start DEBUG View © OFF -137 -131 93 Set Other Action Construction Construction Construction Construction Construction Construction Construction Construction Construction Constr	12:22:37	[P]RF2 Read Power: 2	0	330.08	330.08	45.55	0	127.05 E 3	37.07 N		
12:22:38 [S] EL/CL -1 / 9(-61) 0 330.04 435.07 0 127.05 E 37.07 N 12:22:39 [P] AGC : -45[X] [0, 0] 0 330.02 330.02 45.61 0 127.05 E 37.07 N 12:22:40 [P] Result[P0] 2 102 [S6 3] 0 329.99 329.99 55.9 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N -Tracking AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N • O FF AGZ : EL CL EL Tilt Bias : 0.0° EL Tilt Bias : 0.0° Show Param Save Debug Start Clear O OFF -137 -131 93 Set Cl Tilt Bias : 0.0° Check NID DEBUG View	12:22:37	[P] AGC : -45[X] [0, 0]	0	330.08	330.08	45.55	0	127.05 E 3	37.07 N		
12:22:39 [P] AGC : -45[X] [0, 0] 0 330.02 330.02 45.61 0 127.05 E 37.07 N 12:22:40 [P] Result[P0] 2 102 [S6 3] 0 329.99 329.99 45.59 0 127.05 E 37.07 N 12:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N Tracking ON AZ EL CL EL Tilt Bias : 0.0° Show Param Save Start Clear OFF -137 -131 93 Set CL Tilt Bias : 0.0° Check NID Check NID DEBUG View	12:22:38	[S] EL/CL -1 / 9(-61)	0	330.04	330.04	45.57	0	127.05 E a	37.07 N		
I2:22:40 [P] Result[P0] 2 102 [So 3] 0 329.99 329.99 45.59 0 127.05 E 37.07 N I2:22:41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 127.05 E 37.07 N Tracking Rate Sensor Bias Tilt Sensor Bias Save Save Debug Start Clear OFF -137 -131 93 Set Other Res 0.0° Check NID Check NID DEBUG View	12:22:39	[P] AGC : -45[X] [0, 0]	0	330.02	330.02	45.61	0	127.05 E a	37.07 N		
IZZZ41 [P] AGC : -45[X] [0, 0] 0 329.97 329.97 45.57 0 IZ7.05 E 37.07 N Tracking Rate Sensor Bias Tilt Sensor Bias Show Param Save Start Clear O OFF -137 -131 93 Set Cl Tilt Bias : 0.0° Check NID Check NID DEBUG View	12:22:40	[P] Kesult[P0] 2 102 [S6 3]	0	329.99	329.99	45.59	0	127.05 E :	37.07 N		
Tracking Rate Sensor Bias Tilt Sensor Bias Image: OPF AZ EL CL Image: OPF -137 -131 93 Image: OPF Set CL Image: OPF CL CL	12:22:41	[P] AGC : -45[X] [0, 0]	0	329.97	329.97	45.57	0	127.05 E 3	37.07 N	*	
◎ ON AZ EL CL EL Tilt Bias : 0.0° Show Param Save Debug Start Clear ○ OFF -137 -131 93 Set Cl Tilt Bias : 0.0° Check NID DEBUG View	- Tracking -	Rate Sensor Bias	Tilt Sensor Bi	as —							
OFF -137 -131 93 Set CL Tilt Bias - 0.0° Check NID DEBUG View	ON ON	AZ EL CL	EL Tilt Bias :	0.0°	Show Pa	aram	Save	Start	Clear		
Check NID (Start) Clark	OFF	-137 -131 93 Set					Debug	DEBUG	View		
			CL Tilt Bias :	0.0°	Check	NID	(Start)	DEBOG	VIEW		
Check Save 0x 0000		Check Save			0x 0	0000				_	
Sensor Bias		Sensor Bia	as								

- **Tracking:** turns on or off the dish scan function. If the dish scan function is disabled, the antenna will stop adjusting the antenna pointing angle in order to optimize the receive signal level.

- Rate Sensor Bias: is used to calibrate the DC voltage output from the three rate sensors (azimuth, elevation, and cross-level). These are used to sense antenna motion that corresponds to the ship's motion (roll, pitch, and yaw) for stabilizing the pedestal. Push the "Check" button to check the EL and CL Tilt Bias.
- Show Param: shows the current antenna parameters.
- Check NID: verifies the NID (network ID) of the current tracking tran sponder. Press the NID button to obtain the NID only if the antenna is locked onto the desired satellite .
- **Debug (Start):** starts the debug log of the antenna. The debug message will be displayed once the debug button is pressed.
- Stop Debug: stops debug logging of the antenna.
- Save Debug (Start/Stop): starts or stops saving the debug log. This button is enabled once the Start Debug button is pressed.
- Clear View: clears the debug message or log data in monitoring window.

6. ACU System This view provides Antenna Diagnostic Testing.

Diagnostic —		1	apri Wonton	Diagnostic	001	v (100%)	_
Test Start	Save Result						
🔲 Select All	ALL Clear						
Start	End						
Serial	Receiver						
Comm.	Connection						
Motor AZ	ACU Power						
•							
Motor EL	Power						
▼	A						
Motor CL	SKEW						
▼							
Encoder AZ	LNB/NBD						
▼							
Encoder CL	Sensor Box Limit						
▼	A						
Rate Sensor	Tilt Sensor						

- **Diagnostic :** select to run a full diagnostic test or single diagnostic test. "Green" indicator is displayed for the test under progress. "Blue" indicates the test result as Pass while "Red" indicates the result as Fail. "Yellow" indicates the test has been skipped.

- Serial Comm.: tests the data communication between the antenna and the ACU.
- Motor AZ: tests the azimuth motor.
- Motor EL: tests the elevation motor.
- Motor CL: tests the cross-level motor.
- Encoder AZ: tests the azimuth encoder.
- Encoder CL: tests the cross-level encoder.
- Rate sensor: tests the rate sensor.
- Tilt Sensor: tests the tilt sensor.
- Sensor Box Limit: tests the sensor box motor.
- LNB/ NBD: tests the LNB. (NBD is not available on this model.)
- Skew: tests the LNB skew motor.

- **Antenna power:** tests the antenna power to see whether or not it is within the nominal operating range.
- **ACU power:** tests the ACU power to see whether or not it is within the nominal operating range.
- Receiver Connection: tests the data communication between the antenna and the receiver.

7. Work View Functions

The seven Work View Tabs displayed in the Work View can be arranged in customized layouts.

- Layout Formatting

 Each of the Work View Tab can be separated from the rest Tabs. Click and hold the left mouse button on the Work View Tab's header and then drag a desired Tab out. When a Work View Tab is separated from the rest of your Work View Tabs, again click and hold the left mouse button on the Work View Tab's header to display a cross-shaped Navigator icon. While holding the mouse button, bring the selected Work View Tab closer to the Navigator icon and release the mouse button at your desired position (top, left, right or bottom arrow). This time, the selected Tab will be moved to the desired position.





- Horizontal or Vertical Tab Group

The Work View Tabs can be also aligned horizontally or vertically. Without dragging them out, right-click the mouse button on a desired Tab header and select 'New Horizontal Tab Group' or 'New Vertical Tab Group' option. Selecting 'New Horizontal Tab Group' will separate a selected Tab from the rest of other Tabs then arrange it in a horizontal format. Likewise, selecting 'New Vertical Tab Group' will separate a selected Tab from the rest of other Tabs then arrange it in a vertical format.

- Closing the Work View Tab

To close the Work View Tab, right-click the mouse button on a desired Tab header and select 'Close' option in the drop down list. To close all Work View Tabs except the selected Tab, select 'Close All But This' option in the drop down list.

- Zoom Tool

Using the Zoom tool, you can easily select the magnification you want by using Zoom In and Zoom Out bar, and Fit in Work View button.



Fit Work View Button: fits the current view to the Work View window size. The button toggles between the fit view and the previous view.



Zoom In and Zoom Out Bar: zooms in and out to expand and reduce the View to the desired size. (The zoom changes in 10% increments.)



View Switch Button: displays a list of the current views in a list. Choosing one of these views will display the selected view in the Work View window.

Ŧ

View Name Button: displays the current Work View name.



Close View Button: closes the current view.
USING APTUS WEB

Introduction

Main Page

Page Login Top menus Dash Board & Information

Antenna Settings

Ship setting Antenna Position & Parameters Tracking setting Diagnostic

Firmware & Configuration

Antenna Firmware Upgrade Antenna Log Antenna Backup & Restore

Administration

Network Setting SNMP Setting User Management iARM Upgrade iARM Save & Reboot Antenna Event Log Intellian Network Devices

Introduction

With embedded Aptus Web, the antenna can be monitored, controlled, and diagnosed remotely from anywhere, anytime through the TCP/IP protocol. This not only can save time but also save the cost generated from routine maintenance activities such as operating firmware upgrades, tracking parameters resets, and system diagnostic.

How to access Aptus Web:

 Connect an Ethernet Cable between your PC and the Management Ethernet Port.
 Enter the ACU's IP address (192.168.2.1) into your web browser's address bar to login into the ACU's internal HTML page, if this system has not been changed from the ACU's factory default.

NOTE: Aptus Web can be displayed in Internet Explorer 7 or later and is also compatible with Firefox and Chrome web browsers.



Main Page

Page Login

- 1. Choose either to Control & Monitor the ACU (Control & Monitoring) or Only Monitor the ACU (Monitoring Only).
- 2. Log into the ACU by typing in User Name and Password information. If this system has not been changed from the factory default:
 - User Name: intellian
 - Password: 12345678

Aptus Web T110W v9.24	
Control & Monitoring Momitoring Only Username	



WARNING: The Control & Monitoring Mode will be switched to the Monitoring Only Mode in the following cases;

- If PC Software (Aptus) is connected using TCP/IP Communication while Aptus Web Control is in use.
- If Aptus Web Control & Monitoring Mode is accessed while PC Software is running via TCP/IP Communication. In this case, the web page will display a pop-up message asking if you want to disconnect the PC Software network connection. If you select 'No', the Control & Monitoring Mode will be switched to the Monitoring Only Mode.

Top Menus

Once you log in, the following information and menus are displayed.

stat		ch	-		0	•	×
Signal Level 126	Setup Initial Search Track		-		· · ·		~
		Restart	Setup	Save Sat.	Ant. Info	Account	Logout
	**•••••••••	:	÷	:	:	:	÷
<u>i</u>	÷	÷	<u>:</u>	÷	<u>:</u>	<u>:</u>	÷
•	2	3	4	5	6	9	8

No.	Item	Description
1	Signal Level	Display current signal level.
2	Antenna status	 Setup: Displays whether or not the antenna is in SETUP mode. The indicator shows "Blue" in the SETUP mode. Initial: Antenna or ACU is initialized. Search: Antenna is searching a target satellite. Track: Antenna is tracking the target satellite.
3	Restart	Restart the antenna system.
4	Setup	Enter SETUP mode.
5	Save Sat.	Save current satellite settings. Bow offset will be adjusted and saved automatically.
6	Ant. Info	Obtain current antenna information.
7	Account	Shortcut to User Management menu. Change login ID and Password.
8	Logout	Logout the ACU's internal HTML page.

Dash Board & Information

On the left side of the page, Dash Board and Information menus are displayed as below to provide quick monitoring of the antenna status and settings. Other menus are displayed only in the Control & Monitoring mode and their functions will be described in the next sections.

Dash Board	Back Barad			
Ship Setting	Dash Board			
Antenna Setting	Current Automa David			
Tracking Setting	Relative Azimuth(*)	306.09		
Diagnostic	Absolute Azimuth(°)	306.09 / 198.05		
Firmware&Configuration	Elevation(°)	45.53 / 45.61		N
Antenna Firmware Upgrade	LNB Pol Angle(°)	-82.00 / 14.27		
Antenna Log Antenna Backun & Restore				
Administration	3 GPS			
Network Setting	Longitude(")	127.05 E 🗸 🔮		
SNMP Setting	Latitude(°)	37.07 N 🗸	~~	
User Management IARM Upgrade	4 Heading Device			
iARM Save & Reboot	Current Device			
Antenna Event Log Intellian Network Devices	NMEA 4	800 🗸		
Information	Heading(°)	0.00		S
Control IP + 175 195 19 5			~	
Current IP 175.195.19.5	5 BOW Offset	2012-21		
Refresh Rate • 1 (sec) Refresh Disable 2:47	Current Bow Offset(°)	117	Antenna Information	110 cm / 42 inch
Idle Session Timeout 13:48	6 Triple Satellite Mode-		Voltage	10 71/ / 23 81/
Wifi	A KOREA_3		Antenna Product	T2-11170
	B KOREA_5		Antenna Serial Number	TW2U-0001
	C NSS6_NE		ACU Serial Number	
	Catallita Information			
	Name	KORFA 3	Antenna Stabilizer Version	V 4.00
	Longitude	116 0 ° E M	Antenna PCU Version	V 4.00
	Polarity		ACU Main Version	V 4.00
	Local Fraguency	LINEAR V	Library Version	V 1.15
	Local Frequency	11300 V MH2		
	8 Verification			
	AGC Only	0		
	DVB Lock Only	0		
	DVB Decode	۲		
	DSS Decode	0		
	9 HORIZONTAL / LHCP-			
에 다양한 성상 가지?	-LOW-		_	
	Freq.	12490 MHz		
	Symbol	27490 KHz		

No.	Item	Description
1	Dash Board	Displays current antenna status to be quickly monitored.
2	Current Antenna Position / Target Antenna Position	Displays current antenna position. - Relative Azimuth: displays antenna relative AZ angle. - Absolute Azimuth: displays antenna absolute AZ angle. - Elevation: displays antenna elevation angle. - LNB Pol Angle: displays LNB pol angle.
3	GPS	Displays current GPS information. - Longitude (East / West) - Latitude (North / South)
4	Heading Device	Displays current Heading Device: NONE, NMEA, NMEA 2000, Ground test If the ship's gyrocompass input is other than NMEA separate purchase of NMEA Converter is required. - Heading: displays ship's heading information.

5	BOW Offset	Display current bow offset
6	Triple Satellite Mode	Mode: Select between Dual-Sat mode and Triple Sat mode.
7	Satellite Information	Displays the satellite name, longitude, polarity and LNB local frequency of the current satellite.
8	Verification	Displays current verification method for satellite tracking.
9	Tracking Information (Frequency band)	Displays current frequency band that consists of frequency, symbol and NID (Network ID) of a transponder in tracking the satellite.
10	Azimuth Animation	Shows a graphical representation of the current antenna position to identify whether or not the antenna is aligned properly to the target satellite or is in a block zone.
1	Antenna Information	Displays the product information
12	Software Information	Displays current Antenna and ACU firmware versions and Satellite Library version installed in the system. - Antenna Stabilizer Version - Antenna PCU Version - ACU Main Version - Library Version

Antenna Settings

Ship Setting

> Dash B	oard	Ship Settir	ng				
1 Ship Se	etting	-	-				
> Antenna	a Setting					5 Antenna Angle –	
> Trackin	ig Setting	Longitude(°)			127.05 E 🗸	Satellite	KOREA_3
> Diagnos	stic	Latitude(°)			37.07 N 🗸	Longitude	116.0 ° E 🗸
> Firmwa	re&Configuration	0				Aziumuth	•
Antenna	Firmware Upgrade					Elevation	•
Antenna	Backup & Restore	3 BOW Offset	: 🗆			Skew	•
> Adminis	stration	Current Bow	Offset(°)		117	Find Angles & Skew	Antenna GPS
Network	Setting						
SNMP S	etting	Heading De	vice 🗆 ———				
iARM Up	ograde	Current Devi	ce				
iARM Sa	eve & Reboot	NMEA	✓ 4800	~]		
Intellian I	Network Devices	Heading(°)			0.00		
> Informa	ation	0					
No.	Item		Descr	iption			
1	Ship Settin	g	Set the	ship info	ormation a	nd find anter	nna angle.
			Set GP	S inform	ation.		
(2)	GPS		- Long	itude (Ea	ast/West)		
			- Latitu	ude (Nor	th/South)		
3	Bow Offset		Set Bo	w Offset	if needed.		
4	Heading De	evice	Set shi Ground	p's head I Test) ar	ing device nd ship's he	(NONE, NMI eading inform	EA, NMEA2000, nation
5	S Antenna Angle		Find th the lon Click 'F	e current gitude (o Find Angl	t antenna a rbit positic les & Skew	angles and sl n) of the ant Antenna GF	kew angle in relation to enna's current GPS. PS' button.



WARNING: Enter the SETUP mode for configuration. Tick the checkbox before modifying the settings. After configuration, click 'Set ...' button to submit the settings.

Antenna Position & Parameters

Intellia	Signal Level 0 Set	tup Initial Search Track	U 🗘		2
Dash Board			Restart Setup	Save Sat. Ant. Info	Account L
Ship Setting	Antenna Setting				
Antenna Setting			-		
Tracking Setting	2 Current Antenna Position	/ Target Antenna Position	9 Search & Tracking Param	eter Setting 🗆 —	
Diagnostic	Relative Azimuth(°)	-31.72	Detect Level Threshold		60
Firmware&Configu	Absolute Azimuth(°)	328.28 / 198.05	Tracking Level Threshold		
Antenna Firmware Un	Elevation(°)	45.57 / 45.61	Wait Time(s)		20
Antenna Log	LNB POT Angle(*)	-82.307 14.27	Search Step(°)		0.80
Antenna Backup & Re	store	0.00	Search 1 Range(°)	Azimuth	400
Administration	3 - Manual Movement		Search 2 Range(°)	Azimuth	16
Network Setting	Azimuth Angle(°)	◀ 5.00 ►		Elevation	12
User Management	Elevation Angle(°)	▼ 5.00 ▲	Search 3 Range(°)	Azimuth	6
iARM Upgrade	LNB Pol Angle(°)	▼ 5.00 ▲		Elevation	6
Antenna Event Log					
Intellian Network Devic	ces 4-LNB Pol Sensor Calibratio	n 🗆	-10 Tilt Sensor Bias 🗆		
Information	SAT A	2.2 11.9	Tilt Sensor		
Control IP • 175.195.1	9.5 SAT B	17.8 0.0		O Elevation	
Refresh Rate • 1 (se	9.5 sat c	35.0 0.0	Step(°)		
Refresh Disable 8:03					
Idle Session Timeout Wifi	19:03		11 Rate Sensor Adjust -		
	5-Elevation Adjust		Azimuth		-137
	EL Adjust(°)	-0.6	Elevation		-131
			Cross-level		93
			Parameter Setting		
	T Reboot		Initial Sat Count		50
			WRS Detect Level		300
	8-Flag Setting		Voltage Threshold		650
	Use WRS Me	ethod	DiSEaC Threshold		100
	Use Offset D	ifference	Sat Verify Time		1500
			Tracking Stable Count		20
			Offset Diff AZ-EL		30
			Search Lock Count		4
		Description			
No. Item		Description			
1 Ante	enna Setting	Set current ant ing parameters changed by an proper setting system inopera	tenna position and s. These paramete a authorized servic of these paramete able.	d Search a ers should ce technici ers will ren	nd Trac only be an. Im- der you
Ourread Curread Cur	Current Antenna Position/ Target Antenna Position Current Antenna Position/ Target Antenna Position Current Antenna Position			a relative A a absolute ation angl	AZ angl AZ ang e.

211	- Elevation. display antenna elevation ang
	- LNB Pol Angle: display LNB pol angle.

5	Elevation Adjust	Adjust the elevation to offset the angle difference between the mechanical elevation angle and actual elevation angle.
6	Idle Mode	Release the elevation and cross level motor brakes while the antenna is in SETUP mode. The antenna can be moved manually during the mode.
7	Reboot	Reboot the system.
8	Flag Setting	Set the flag settings. Select 'Use WRS Method' to use 'WRS(Wide Range Search) Detect Level'. Select 'Use Offset Difference' to enable the system to offset the signal difference between RHCP and LHCP.
9	Search & Tracking Parameter Setting	 Detect Level Threshold: display / set current detect level threshold to set the satellite signal detection level. Tracking Level Threshold: display /set current tracking level threshold to set the satellite signal tracking level. Wait Time: set the time-out for automatic initiation of a search after the signal level drops below the pre-defined threshold value. Search Step: set increment step size Search 2 Range: is reserved for future use Search 1 Range: set Search 1 search range. The antenna is detecting the satellite signal is located, the antenna will enter to "Search 3 mode". Search 3 Range: set Search 3 search range. The antenna is detecting the satellite signal which is above the current detect level threshold. The search range. The antenna will enter to "Search 3 mode". Search 3 Range: set Search 3 search range. The antenna is detecting the satellite signal which is above the antenna will enter to "Search 7 mode".
@	Tilt Sensor Bias	Adjust the two solid-state tilt sensors used to provide absolute cross-level tilt of the antenna and elevation feed- back to eliminate long-term pointing drift (error). Tilt bias is required to be adjusted when the antenna control board or sensor box is replaced. Check to see whether or not the bubble is located at the center of the level vial.
11	Rate Sensor Adjust	Calibrate DC voltage output from the three rate sen- sors used to sense antenna motion in azimuth, elevation and cross-level axes. During the calibration process, the antenna should avoid any motion as it can affect the an- tenna's performance.

		 Initial Sat Count: Set the threshold count for maintaining tracking.
		- WRS Detect Level: Set the WRS detection level.
		 Voltage Threshold: Set the voltage threshold. The voltage threshold is to distinguish the voltage between 13 V and 18V.
		 DiSEqC Threshold: Set the DiSEqC threshold. The DiSEqC threshold is to distinguish the 0KHz tone and 22 KHz tone.
12	Parameter Setting	 Sat Verify Time: Set the threshold count for the satellite verification.
		 Tracking Stable Count: Set the threshold count for stabilizing the satellite before tracking.
		 Offset Diff AZ-EL: Set the offset difference between Azimuth and Elevation range.
		 Search Lock Count: Set the threshold count for locking on the satellite before tracking.
		 Offset Diff RH-LH: Set the offset difference between RHCP and LHCP signals.



WARNING: Tick the checkbox before modifying the settings. After configuration, click 'set...' button to submit the settings.

Tracking Setting

> Dash Be	sh Board Tracking Setting						
> Ship Se	etting						
> Antenna	a Setting	2 Tracking Satellite		6 Tracking Information (Prima	ry) ————		
1 Trackin	Tracking Setting			Satellite KOREA_3 VID:0x000			
> Diagnos	> Diagnostic						
> Firmwa	re&Configuration	C NSS6_NE		-VERVICAL / RHCP	-HORIZONTAL / LHCP		
Antenna	Firmware Upgrade			-LOW	-LOW-		
Antenna	Backup & Restore	3 Triple Satellite Mode —		Freq. 12490 MHz	Freq. 12490 MHz		
> Adminis	stration	Register for Sat A Register	ter for Sat B Register for Sat C	Symbol 27490 KHz	Symbol 27490 KHz		
Network	Setting	4 Satellite Information —		NID 0x 00AD	NID 0x 00AD		
SNMP Se	etting nagement	Satellite	KOREA_3				
iARM Up	grade	Name	KOREA 3	—HIGH———	—HIGH———		
iARM Sa	ve & Reboot	Longitude	115 0 ° E V	Freq. 12490 MHz	Freq. 12490 MHz		
Intellian N	Network Devices	Dolarity		Symbol 27490 KHz	Symbol 27490 KHz		
> Informa	ition	Local Fraguenay		NID 0x 00AD	NID 0x 00AD		
Control II	P • 175.195.19.5	Local Frequency	11300 MHZ				
Current I	P 175.195.19.5	5 Verification		-Pol & Band Control-			
Refresh I Refresh I	Rate • 1 (sec) Disable 8:44	AGC Only	0	OAuto OAuto			
Idle Sess	sion Timeout 19:44	DVB Lock Only	0	O13V O0 KHz	Edit Satellite information		
Wifi		DVB Decode	۲	●18V ○22KHz			
		D\$\$ Decode	0	0.01			
		Edit Satellite information	ual Satellite Mode				
No.	Item		Description				
1	 Display or set current tracking satellite and tracking information. 				llite and tracking		
2	② Tracking Satellite Seler			Select the tracking satellite.			
3	③ Triple Satellite Mode		Register the sele lite for Sat A, Sa Dual-Sat mode a Satellite Mode' I ton on the botto	lite for Sat A, Sat B or Sat C. To select between Dual-Sat mode and Triple-Sat mode, press the 'Dual Satellite Mode' button or 'Triple Satellite Mode' but- ton on the bottom of the screen.			
4	Satellite I	nformation	Set the satellite local frequency	name, longitude, p of LNB to be used.	olarization and		
5	Verificatio	on	Set the verificati Only, DVB Lock	Set the verification type for satellite tracking (AGC Only, DVB Lock Only, DVB Decode, DSS Decode)			
6	 Tracking Information 		Tracking informa and NID (Netwo satellite. There a tion. "Vertical/RI 13V, and "Horizo supply 18V. "LO (0 kHz tone) is n plied when DISE from IRD. Pol & Band Con RHCP band) or "Band" controls 22KHz tone (Hig	Tracking information consists of frequency, symbol and NID (Network ID) of a transponder in tracking satellite. There are four groups of tracking informa- tion. "Vertical/RHCP" is applied when IRD supply 13V, and "Horizontal/LHCP" is applied when IRD supply 18V. "LOW" is applied when DiSEqC signal (0 kHz tone) is not detected from IRD. "HIGH" is ap- plied when DiSEqC signal (22 kHz tone) is detected from IRD. Pol & Band Control: The "Pol" controls 13V (Vertical/ RHCP band) or 18V (Horizontal/LHCP band). The "Band" controls DiSEqC 0KHz tone (Low band) and 02(/LIz tone (Ligh band).			
			After modifying formation' butto in the antenna.	information, press ' n, then new inform	Edit Satellite In- ation is updated		

Diagnostic

> Dash B	loard	Diagnostic & Debug					
Antenn	a Setting			-			
Trookin	a Setting	Diagnostic 🗆 — 🕄 Graph —					
Diagno	ig Setting	 Serial Comm. 	O . LNB / NBD	A Month			
Firmwa	are&Configuration	O Motor A7	○ • SKEW	View Graph			
Antenna	Firmware Upgrade	0 1 1000 / 2	O F BILLI	4 Spectrum			
Antenna Antenna	Log Backup & Restore	 Motor EL 	 Antenna Power 	View Spectrum			
Admini	istration	O Motor CL	ACU Power				
Network	Setting	 Encoder AZ 					
User Ma	setting inagement	C = Encoder Cl					
iARM Up iARM Sa	ograde ave & Reboot						
Antenna	Event Log	 Rate Sensor 					
Informa	ation	 Tilt Sensor 					
Control I	IP • 175.195.19.5	 Sensor Box Limit 	Test ALL				
Current I Refresh	IP 175.195.19.5 Rate • 1 (sec)						
Refresh	Disable 8:46						
No.	Item	Description					
(1)	Diagnostic	Execute anten	na diagnostic tes	t.			
0	Diagnostic	 Motor AZ: te Motor AZ: te Motor CL: te Encoder AZ: Encoder CL: Rate Senor: Tilt Sensor: t Sensor Box I LNB/NBD: te SKEW: test t Antenna Pow ACU Power: 	 Motor AZ: test the azimuth motor. Motor EL: test the elevation motor. Motor CL: test the cross-level motor. Encoder AZ: test the azimuth encoder. Encoder CL: test the cross-level encoder. Rate Senor: test the rate sensor. Tilt Sensor: test the tilt sensor. Sensor Box Limit: test the sensor box motor. LNB/NBD: test the LNB. SKEW: test the LNB pol motor. Antenna Power: test the antenna power. 				
3	Graph	 Select to view a graph of AZ Absolute, AZ Relative, EL and Heading data of the antenna. A Month: display all data within a month A Week: display all data within a week A Day: display all data in a day Real-time: display data in real time. Press F5 button to refresh. Data Num: set the maximum number of graph data set to be displayed. View Graph: select to view the data graph. 					
(4)	Spectrum	Select to view	a current spectru	im graph and to set the spectrum.			



WARNING: Tick the checkbox before modifying the settings. Click Diagnosis button to execute diagnostic test. To clear previous diagnosis result, click Diagnosis Clear button.

Firmware & Configuration

Antenna Firmware Upgrade

oard tting	Antenna Fi	rmware Upda	ate
a Setting			
a Settina	2 New Antenn	a Firmware —	6 6 9 ·
stic	Browse and se	elect the firmware file	to upload. 첡아보기
re&Configuration Firmware Upgrade Log	The update ma The upload tim Upload an inco	ay take a few minute ne may vary due to a prrect firmware file m	s to complete. variety of factors such as the speeds of your network. ay cause serious damage to your antenna and ACU.
Backup & Restore		Curren	
stration	3 Current Run	ning Version —	
Network Setting SNMP Setting User Management iARM Upgrade IARM Save & Reboot Antenna Event Log Intellian Network Devices		vare Version	Antenna STABILIZER¥4.00 Antenna PCU ¥4.00 ACU Main ¥4.00 Library ¥1.15
		c k kage Version	Antenna STABILIZERv Rollback
Information Control IP • 175.195.19.5 Latest Packs v131203 Current IP 175.195.19.5 Refresh Rate • 1 (see)		ge Version	Antenna STABILIZERv4.00 Rollback Antenna PCU v4.00 ACU Main v4.00
Item		Descrip	tion
Antenna Fi Upgrade	irmware	Upgrade	e antenna and ACU firmware version.
New Antenna Firmware		Browse and select the firmware package file to upload and click Start Upload button.	
Current Running Display current firmware version (Antenna STABILIZER) Version Antenna PCU, ACU main, Library)		current firmware version (Antenna STABILIZER, PCU, ACU main, Library)	
Cold Rollb	Display Previous/Latest Package version and rollback firmware to Previous or Latest version (Can do nothing while rollback is in progress)		
	Aard titing a Setting g Setting g Setting tic e&Configuration Firmware Upgrade Log Sackup & Restore tration Setting titing Setting titing Setting titing Setting titing Setting titing Setting titing Setting titing Setting titing Setting titing Setting titing Setting titing Setting Setting titing Sett	And titing A Setting g Setting tic e&Configuration Firmware Upgrade Log Sackup & Restore tration Setting titing Setting titing Setting titing Setting titing Setting titing Previous Pactor Current Firmware Upgrade New Antenna Firmware Current Running Version Cold Rollback Cold Rollback	Antenna Firmware Update setting g Setting g Setting tic e&Configuration Firmware Upgrade Log Sackup & Restore tration Setting titing tration Setting titing sackup & Restore tration Setting titing 100 Setting titing 100 Setting titing 100 Setting titing 100 Setting titing 100 Setting titing 100 Setting titing 100 Setting titing 100 Setting titing 100 Setting titing 100 Setting titing 100 Setting 100 Setting titing 100 Setting 100 100 Setting 100 Seting 100 Setting 100

Upgrade procedures:

- 1. Select the upgrade package file.
- 2. Click on "Start Upload" button to transfer the Firmware package file ("*.fwp") to iARM module.
- After the package file is transferred, it'll show "upgrade from vx.xx Version to vx.xx Version". Enable the check box to select the firmware file that you wish to upgrade. To select all firmware files, click Select All Firmwares.
- 4. Click on "Start Upgrade" button.

> Dash Board	Antenna Firmware Update		
 > Snip Setting > Antenna Setting 	— The Firmware Package Update Read	dy	
> Tracking Setting	Antenna STABILIZER	Update From v4.00 To v4.00	
> Diagnostic	Antenna PCU	Update From v4.00 To v4.00	
> Firmware&Configuration	ACU MAIN	Update From v4.00 To v4.00	
Antenna Firmware Upgrade	Start Update Select All Firmwares		
Antenna Log Antenna Backup & Restore			
> Administration			
Network Setting			
SNMP Setting			
iARM Upgrade			
iARM Save & Reboot			
Antenna Event Log			

Firmware upgrade status page

> Dash Board	Antenna Firmware Update		
> Antenna Setting	— The Firmware Package v131203	Update Status	
> Tracking Setting	Antenna STABILIZER	Update From v4.00 To v4.00 20 %	
> Diagnostic	Antenna PCU	Update From v4.00 To v4.00 Ready	
Firmware&Configuration	ACU MAIN	Update From v4.00 To v4.00 Ready	
Antenna Firmware Upgrade Antenna Log Antenna Backup & Restore	Back to main page		
Administration			
Network Setting SNMP Setting User Management iARM Upgrade			
IARM Save & Reboot Antenna Event Log			

5. It'll display information about the upgrade process status on full screen.

Upgrade process Antenna Firmware Update status page — The Firmware Package v131203 Update Status -Antenna STABILIZER

Update From v4.00 To v4.00 Success Antenna PCU Update From v4.00 To v4.00 Success ACU MAIN Update From v4.00 To v4.00 70 % Back to main page

6. If the firmware is successfully upgraded, it'll display "The firmware update is completed."

7. Click on "Back to main page" to go out of the screen.

To verify the upgraded firmware version, go to Dash Board > Software Information.

Upgrade complete page

The Firmware Package v131203 Upgrade Complete

Antenna STABILIZER "4.00" "Success" Antenna PCU "4.00" "Success" ACU MAIN "4.00" "Success"

The firmware update is completed. If you receive an fail message, please try again. Please refer to the User Guide if you have trouble connecting to the antenna.

Back to main page

-

NOTE: To roll back to the previous firmware package version or latest package version, select Rollback Upgrade menu on the Antenna Firmware Upgrade page.

Antenna Log

> Dash Bo > Ship Se	> Dash Board > Ship Setting						
> Antenna Setting > Tracking Setting							
> Diagnos	stic	Enable	Help				
> Firmwa	re&Configuration	Submit	ancei				
Antenna Antenna Antenna	Firmware Upgrade Log Backup & Restore	3 - Antenna Execute St It will open	Log Download —— art Download button to a new pop-up window	proceed. for log download.			
> Adminis	stration	4 Start Down	load				
Network SNMP Se	Setting	5 - Antenna	Firmware Log				
iARM Up	grade	Date/Time	(UTC 00:00)	STAB	PCU	Main	
iARM Sar	ve & Reboot	Mon, 01 Ja	an 2007 00:32:13	4.00 Skip	4.00 Skip	4.00 Success	
Intellian 1	Network Devices						
No.	Item		Descript	ion			
1	Antenna Lo	og	Displays antenna log data				
2	GPS Log (Option	Disable/Enable to save GPS information in the antenna log file.				
3	Antenna Log Download		Download the log file. Select start download button to proceed.				
4	Start Download		Download the antenna log information.				
5	Antenna Firmware Log		Display lo	g informatio	on of firmwa	re upgrade.	

Log Downloade procedures:

- 1. Select 'Start Download' button.
- 2. To run Java applications you must have Java Runtime Environment JRE) version 6.0 and above installed in your PC/ laptop when you access the antenna log page for first time. Click "Run" button on the popup message "The application's digital signature cannot be verified. Do you want to run the application? " to install the Applet. Refer to Appendix for Java Installation Instructions if the system does not display the popup message.

C Log Download - Windows Internet Explorer		
Antenna Log		
-Log Download		
Select range for logs and execute download. The data volume will grow significantly for the n	etwork download.	

- 3. Select 'Browse' to browse the target directory of the antenna log file.
- 4. Select log period for file download.
 - Last 3 Months: download the antenna log information for the past three months.
 - Last 1 Month: download the antenna log information for the past one month.
 - Last 1 week: download the antenna log information for the past one week.
 - Last 1 Day: download the antenna log information for the past one day.
- 5. Select 'Download'to download the log file to the target directory according to the selected log period.

C Log	Download - Windows Internet Explorer	J
An	enna Log	
L	og Download	
D	wnload Folder C:#Users#Intellian#Documents Browse	l
P	ogress Status 83%/-/ ~/ Last 1 Day 🗸 Download	
	Downloading: 157422169 Jan 1 00:14 M_TEMPFILE_NODATE,txt	
SI TI	elect range for logs and execute download. e data volume will grow significantly for the network download.	

NOTE: In system, users can choose to Enable or Disable the GPS tracking function. Liability for information that is disclosed when GPS is enabled is solely the operators responsibility and it is up to the operator on whether or not to provide their GPS information to third parties. Any issues regarding safety and privacy when turning on the GPS function is solely up to the user. Intellian is not responsible for information that is disclosed when the GPS function is enabled.

Antenna Backup & Restore

 > Dash Board > Ship Setting 	Antenna Backup	& Restore	
 > Antenna Setting > Tracking Setting > Diagnostic > Firmware&Configuration Antenna Firmware Upgrade Antenna Backup & Restore 	Backup & Restore- 2 Target 같아보기	ACU O PC Backup	
> Administration Network Setting SNMP Setting User Management IARM Jave & Reboot Antenna Event Log			

No.	Item	Description
1	Antenna Backup & Restore	Enter Backup & Restore page. (Setup mode is required)
2	Target	Backup antenna information to ACU/PC or restore antenna by using the saved information from ACU/PC.
3	Backup	Backup antenna information.
4	Restore	Restore antenna information.

Administration

WARNING: Ensure to enter the SETUP mode before starting configuration. After completing the modification of settings, enter Save & Reboot page and click on "Save & Reboot" button. Without doing so, the modified settings will be lost.

Network Setting

> Dash Board > Ship Setting	Network Setting					
> Antenna Setting > Tracking Setting	2 Network Configuration – — Public Port Configurati	on		3 Sys Log Configuration – Management Server	Disable	▼ Help
> Diagnostic	IP Address	175.195.19.87	Help	Server IP	192.168.1.1	Help
> Firmware&Configuration	Subnet Mask	255.255.255.128	Help	UDP Port	514	Help
Antenna Firmware Upgrade	Gateway	175.195.19.126	Help	Message Type	a	Ivanced Help
Antenna Log Antenna Backup & Restore	DNS	168.126.63.1	Help		0 🗹 Diagnostic	
> Administration	NAT Routing	Enable	✓ <u>Help</u>		1 M Important 2 Periodic	
Network Setting	- Management Interface	Configuration ———			3 🗌 Setting 4 🗌 Reserved	
SNMP Setting User Management	IP Address	192.168.2.1	Help	Syslog Target Level	LOG NOTICE	✓ Help
iARM Upgrade	Subnet Mask	255.255.255.0	Help	Submit Cancel		
iARM Save & Reboot Antenna Event Log	Lease Start Address	192.168.2.2	Help	•		
Intellian Network Devices	Lease End Addres	192.168.2.30	Help	4 Browser Configuration -		
> Information	Lease Time	180	min	Refresh Rate(second)	1	Help
Control IP • 175.195.19.5			Help	(minute)	9	Help
Current IP 175.195.19.5	-WiFi Acccess Point Co	nfiguration	-	Set to Current Browser Can	cel	
Refresh Disable 3:15	SSID	intellian-T110W	Help			
Idle Session Timeout:	Channel	5	✓ <u>Help</u>			
win •	Authentication Type	WPA2	Help			

 No.
 Item
 Description

 ①
 Networking Setting
 Enter network setting page.

Modify ACU's internal IP address and click the Submit button. Go to the "Save & Reboot" page and click the Save & Reboot button to validate the changes.

• Public Port Configuration

- IP Address : Factory default (Primary:192.168.0.223)/ (Secondary:10.10.1.1).
- Subnet Mask : Factory default(255.255.255.0).
- Gateway : Factory default(192.168.0.254).
- DNS : Current default DNS Address is assigned to.
- NAT Routing : Enable/Disable NAT routing.

• Management Interface Configuration.

- IP Address : ACU front network port /Factory default(Primary:192.168.2.1)/(Secondary:10.10.10.1).
- Subnet Mask : Factory default(255.255.255.0).
- Lease Start Address : Lease IP address start range.
- Lease End Address : Lease IP address end range.
- Lease Time : Lease IP address update time.



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• Wi-Fi Access Point Configuration.

- SSID : The SSID is the network name shared among all devices in a wireless network. The SSID must be identical for all devices in the wireless network. It is casesensitive and must not exceed 32 alphanumeric characters, which may be any keyboard character. Make sure this setting is the same for all devices in your wireless network.
- Channel : Select an appropriate channel from the list provided to correspond with your network settings. All devices in your wireless network must use the same channel in order to function correctly. Try to avoid conflicts with other wireless networks by choosing a channel where the upper and lower three channels are not in use.
- Authentication Type : Module supports an authentication mode that the 802.11 device uses when it authenticates and associates with an access point or IBSS cell.
- Password : Wi-Fi access password.
- Max Stations : Setting max stations.

• Network Service Configuration.

- Telnet Service : Enable or disable telnet login support.
- HTTPS Port : HTTPS port number.

Set the Syslog Configuration.

- Antenna makes log messages according to emergency level. When this function is enabled, your management server receives the log messages.
- Management Server : Syslog function enable/disable.
- Server IP : Management server IP address.
- UDP Port : Management port.

Sys Log Configuration

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- Message Type : Select message type(Intellian message level) to send management server (The lower level is more emergency).
- Syslog Target Level : If you select this target level, the Server receives log message equal or less than this level.

Set the refresh rate and the refresh disable time. • Refresh Rate : Set the browser refresh rate (Default 1 seconds. Range 1~99). Browser 4 Configuration • Refresh Disable Time : Set the browser idle timeout(Default:9 minutes. Range 0~9). If you tick the checkbox, you can use this function.

SNMP Setting

> Dash E	Board	SNMP Setting				
> Antonr	na Sotting					
> Anteni	na Setting	- SNMP Agent Configuration				
> Tracking Setting		2 SNMP V1/V2 Status	Read Write Help			
> Diagno	ostic	3 V1/V2 Community Name	intellian Help			
> Firmwa	are&Configuration	4 V3 Authentication Type	Auth Help			
Antenna	a Firmware Upgrade a Log	5 V3 Authentication Encoding	MD5 V Help			
Antenna	a Backup & Restore	6 V3 Username	intellian / 12345678 Help			
> Admin	istration	7 V3 Private Encoding	AES Y Help			
Network	k Setting	8 V3 Private Password	Help			
User Ma	Setting anagement	9 TRAP IP / Port	192.168.1.1 / 162 <u>Help</u>			
iARM U	pgrade	10 TRAP Parameter	-v 2c -c public Help			
Antenna	ave & Reboot a Event Log	Submit Cancel				
Intellian	Network Devices					
No.	Item		Description			
1	SNMP Se	tting	Display and Set SNMP configuration.			
2	SNMP V1/V2 Status		Set SNMP mode(Use Attribution Disable, Read Only or Read Write).			
3	V1/V2 Community Name		Set SNMP V2 community name.			
4	V3 Authentication Type		Set SNMP V3 authentication mode.			
5	V3 Auther	tication Encoding	Set SNMP V3 authentication encoding.			
6	V3 Userna	ime	Set the V3 username and password of the SNMP Agent. The password is at least 8 character string.			
7	V3 Private Encoding		Set SNMP V3 Private Encoding.			
8	V3 Private Password		Set the V3 password of the SNMP Agent. The Password is at least character string.			
9	TRAP IP/Port		Set the V3 password of the SNMP Agent. The Password is at least character string.			
10	TRAP Parameter		Set the SNMP trap specific parameter.			

User Management

> Dash Bo	pard	Manager 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
> Ship Set	tting	wanagement			
> Antenna	a Setting				
> Tracking	g Setting	age ID & Password			
> Diagnos	stic Cur	rent ID	intellian		
> Firmwar	re&Configuration Nev	r ID	intellian		
Antenna	Firmware Upgrade	ange Password			
Antenna I Antenna I	Log Backup & Restore Ent	er Current Password			
> Adminis	stration Ent	er New Password			
Network	Setting Cor	firm New Password			
SNMP Se	etting	it Cancel			
User Mar	nagement				
iARM Sav	ve & Reboot 3 Char	ge User Settings			
Antenna	Event Log Pas	sword Expire Timeout			
Intellian P	Tim	eout in days	0 day		
> informat		Session Timeout			
Current IF	P 175.195.19.5 for	Console login	10 min		
Refresh F	Rate 1 (sec) for	Network login	20 min		
Refresh E Idle Sess	Disable 8:51 sion Timeout 19:52	it Cancel			
Wifi -					
No.	Item	Description			
1	User Management	Change login ID and Password to access the Web M&C. This set- ting can be also accessed by 'Account' icon on the top menu.			
2	Change ID & Password	Change your login ID (u • Change ID : Enter you login ID. Click the Subr made to the login ID. • Change Password : E login password. Click t that are made to the lo	username) and password. ur current login ID (username) and new nit button to validate the changes that are Enter your current login password and new he Submit button to validate the changes		
3	Change User Settings	Change User Password • Password Expire Tim • Idle Session Timeout	d Expire in days and Idle session timeout. eout : Set password expire in days. : Set for Console and for Network Timeout.		

iARM Upgrade

• Antenna Setting • Tracking Setting • Diagnostic	2 New iARM Firmware — Ignore warr Browse and select the firmw	ings during installation and force the in	nstallation to continue	Start Upgrade Cance
Firmware&Configuration			찾아보	.71
Antenna Firmware Upgrade Antenna Log	3 Bootstrap/Bootloader -			
Antenna Backup & Restore	Bootstrap	Main	v1.00	
Administration		Factory Default	v1.00	
Network Setting	Bootloader	Main	v1.00	
SNMP Setting		Factory Default	v1.00	
iARM Upgrade		Active Bootloader	Main	
iARM Save & Reboot Antenna Event Log	4 Kernel/File System-			
Intellian Network Devices	Sys0	Kernel	v1.00	
Information		File System	v1.00	
Control IP • 175.195.19.5	Sys1	Kernel	v1.00	
Current IP 175.195.19.5		File System	v1.00	
Refresh Disable 7:43	Factory Default	Kernel	v1.00	
Idle Session Timeout 18:44		File System	v1.00	
Wifi	Current Active	Sys0		
		Active Kernel	v1.00	
		Active File System	v1.00	

(1)	iARM Upgrade	Upgrade the firmware of iARM module.
2	New iARM Firmware	Select a new firmware file and click Start Update button to upgrade the firmware.
3	Bootstrap /Bootloader	Displays current bootstrap and bootloader version.
4	Kernel /File System	ACU has 3 storage parts sys0, sys1, Factory Default Display kernel and file system version and current activated part Information.

iARM firmware upgrade procedures:

- 1. Click on "Browse" button to select the iARM firmware file (.tgz) that you wish to upgrade.
- 2. Click on "Start Update" button to update the iARM firmware. Wait until the page is loaded.
- 3. It'll inform you that the firmware is being uploaded.

Firmware upload in progress



4. Do not turn off the ACU power if the firmware upgrade page is displayed.

Firmware upgrade in progress

> Ship Setting	
> Antenna Setting	
> Tracking Setting	
> Diagnostic	
> Firmware&Configuration	
Antenna Firmware Upgrade Antenna Log Antenna Backup & Restore	
> Administration	
Network Setting SNMP Setting User Management iARM Upgrade IARM Save & Reboot Antenna Event Log Intellian Network Devices	Plesse wat for updating system ruming DO NOT TURN OFF ACU.
> Information	
Control IP • 192.168.3.5 Current IP 192.168.3.5 Refresh Rate 0 (sec) Refresh Disable 1:31 Idle Session Timeout 10:31	

5. It'll take around 2 minutes to complete the firmware upgrade. Once the upgrade is completed, the system will reboot automatically.

> Dash Board	
> Ship Setting	Save & Reboot
> Antenna Setting	
> Tracking Setting	A the device will reboot with new firmware. Ase refer to the User Guide if you have trouble connecting to the device.
> Diagnostic	This screen will be inaccessible in To Seconds.
> Firmware&Configuration	
Antenna Firmware Upgrade	
Antenna Backup & Restore	
> Administration	
Network Setting	
SNMP Setting	
User Management	

6. The connection will be disconnected during the reboot. It'll take around 30 seconds to reboot the iARM module and get the connection back again. (Disconnection message may vary depending on the web browsers.)

iARM Save & Reboot

Dash Br Ship Se Antenna Trackin Diagnos Trackin Diagnos Firmwar Antenna Antenna Antenna Antenna Antenna Antenna Antenna Inatenna Inatenna Informa Control II Current II	a Setting a Setting g Setting stric tre&Configuration Firmware Upgrade Log Backup & Restore stration Setting etting ragement grade ve & Reboot Event Log Network Devices trion P + 175.195.19.5 P 175.195.19.5	& Reboot
No.	Item	Description
1	iARM Save & Reboot	Save settings to the ACU and reboot or reboot the system without saving.
2	Save & Reboot	Save the modified settings and reboot the system. Click Save & Reboot button.
3	Reboot without Saving	Reboot the system without saving the modified settings. Click Reboot Only button.

Antenna Event Log

> Dash Board		2021		
> Ship Setting	Antenna Even	it Log		
> Antenna Setting				
> Tracking Setting	2 - Query Filter			
> Diagnostic	Severity: All Time Frame: La	st 1 Dav	~	Category: All
> Eirmware Configuration	Query Event Log	,		
Antonna Firmware Ungrado	Query Event Log			
Antenna Log	3 - Event Log			
Antenna Backup & Restore	Date/Time(UTC)	Severity	Category	Log Save Event Log
> Administration	2007-01-01 03:31:31	Normal	Access	Remote Control Login through WEB from 175.195.19.5 using ID intellian
Network Setting	2007-01-01 03:26:27	Normal	Access	Remote Login through CLI from 175.195.19.5 using ID guest
SNMP Setting	2007-01-01 03:24:05	Normal	Access	Remote Control Login through WEB from 175.195.19.5 using ID intellian
User Management	2007-01-01 02:09:26	Normal	Access	Remote Control Login through WEB from 175.195.19.5 using ID intellian
iARM Save & Reboot	2007-01-01 00:54:31	Normal	Access	Remote Control Login through WEB from 175.195.19.5 using ID intellian
Antenna Event Log	2007-01-01 00:40:31	Normal	Access	Remote Control Login through WEB from 175.195.19.5 using ID intellian
Intellian Network Devices	2007-01-01 00:39:39	Normal	Access	Remote Control Login through WEB from 175.195.19.5 using ID intellian
> Information	2007-01-01 00:36:17	Normal	Access	Remote Control Login through WEB from 175.195.19.5 using ID intellian
Control IP + 175.195.19.5	2007-01-01 00:36:08	Normal	System	BIM successfully booted up in SYS0
Current IP 175.195.19.5	2007-01-01 00:36:06	Major	System	Skipped Recoveing /tmp/mmcblk0p2/event_log.db : /tmp/mmcblk0p2 is not mounted
Refresh Rate • 1 (sec)	2007-01-01 00:30:27	Normal	Access	Remote Control Login through WEB from 175.195.19.5 using ID intellian
Idle Session Timeout 19:38	2007-01-01 00:26:14	Normal	Access	Remote Control Login through WEB from 175.195.19.5 using ID intellian
Wifi	2007-01-01 00:22:04	Normal	Access	Remote Control Login through PC Client from ipv4_tcp:192.168.2.2:59681 using ID intellian
	2007-01-01 00:20:33	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:20:31	Major	System	Skipped Recoveing /tmp/mmcblk0p2/event_log.db : /tmp/mmcblk0p2 is not mounted
	2007-01-01 00:18:48	Normal	Access	Remote Control Login through WEB from 192.168.2.2 using ID intellian
	2007-01-01 00:16:43	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:16:41	Major	System	Skipped Recoveing /tmp/mmcblk0p2/event_log.db : /tmp/mmcblk0p2 is not mounted
	2007-01-01 00:12:45	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:12:43	Major	System	Skipped Recoveing /tmp/mmcblk0p2/event_log.db : /tmp/mmcblk0p2 is not mounted
	2007-01-01 00:04:57	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:04:55	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:04:45	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:03:14	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:03:07	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:03:06	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:02:39	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:01:05	Normal	Access	Remote Login through CLI from 127.0.0.1 using ID intellian
	2007-01-01 00:00:40	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:00:38	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:00:36	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:00:36	Major	System	Recovered /flash/event_log.db with SD Card DB
	2007-01-01 00:00:34	Normal	System	BIM successfully booted up in SYS0
	2007-01-01 00:00:32	Major	System	Recovered /flash/event_log.db with SD Card DB
	2007-01-01 00:00:30	Major	System	Recovered /flash/event_log.db with SD Card DB

No.	Item	Description
1	Antenna Event Log	Displays user's log information (Data/Time, Login ID and IP)
0	Query Filter	 Set the Log message option. Severity : Set urgency level. Category : Set target that caused the message. Time Frame : Set time limit that you want to show. Sorting Order : Sorting based on date(descending or ascending).
3	Event Log	Displays log information (Date/Time, Severity, Category, Log). • Save Event Log : Save log message to your PC

Intellian Network Devices

> Dash E	Board Intellion Net	buark Davisas
> Ship S	Setting	
> Antenn	na Setting	figuration
> Tracki	ing Setting Eth0 IP Con	figuration — Eth1 IP Configuration —
> Diagno	ostic	Enable V Disable V
> Firmwa	are&Configuration IP Address (Eth	0) 192.168.3.1 Help IP Address (Eth1) Help
Antenna	a Firmware Upgrade Subnet Mask (E	th0) 255.255.255.0 Help Subnet Mask (Eth1) Help
Antenna	a Backup & Restore Submit Canc	el Submit Cancel
> Admin	nistration Intellian Net	work Port Status
Network	k Setting Intellian Device	Enable V Setting
SNMP S	Setting anagement	
iARM U	Jpgrade 3-Add Network	Device Address
Antenna	a Event Log	20001 20002 20003 20004 20005 Add Device Prease input port numbers between 2000 and 2000
1 Intelliar	n Network Devices 4 - Network Data	View
> Inform	Address	HTTP HTTPS SSH PC PORT SPECTRUM PORT Connection
Control	IP • 175.195.19.5	mation
Refresh	n Rate • 1 (sec)	
Refresh	Disable 8:23	
Wifi •	ssion rimeout	
No.	Item	Description
	latell's Alstone als	
1	Intellian Network	Add up to 8 network devices and enable to monitor real time
•	Devices	information of the connected device.
		 Eth0 IP Configuration : ACU network Eth0 IP and subnet
		mask setting.
୍	Network	Eth1 ID Configuration : ACLI natwork Eth1 ID and subnat
Ø	Configuration	• EITH IF Configuration . ACO network Eith IF and subhet
		mask setting.
		 Intellian Network Port Status : not used on t-series.
		Add Intellian network devices, then you can browce the
		Add Intellian network devices, then you can browse the
		various information of the device.
~		
	Add Network Device	• IP Address : IP address of the device to be menitered
(3)	Add Network Device Address	• IP Address : IP address of the device to be monitored.
(3)	Add Network Device Address	IP Address : IP address of the device to be monitored.HTTP, HTTPS, SSH : Set port number(These port
(3)	Add Network Device Address	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port
(3)	Add Network Device Address	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device).
(3)	Add Network Device Address	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device).
(3)	Add Network Device Address	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device).
(3)	Add Network Device Address	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device).
(3)	Add Network Device Address	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device). Displays the setting information of the added device (IP address, http, https, SSH port number, current
(3)	Add Network Device Address	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device). Displays the setting information of the added device (IP address, http, https, SSH port number, current connection).
(3)	Add Network Device Address Network Data View	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device). Displays the setting information of the added device (IP address, http, https, SSH port number, current connection). If you click the http/https port number of each device,
(3)	Add Network Device Address Network Data View	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device). Displays the setting information of the added device (IP address, http, https, SSH port number, current connection). If you click the http/https port number of each device, then you can connect to the device's web page.
(3)	Add Network Device Address	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device). Displays the setting information of the added device (IP address, http, https, SSH port number, current connection). If you click the http/https port number of each device, then you can connect to the device's web page. If you click Delete Device button, then you can't see its
(3)	Add Network Device Address	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device). Displays the setting information of the added device (IP address, http, https, SSH port number, current connection). If you click the http/https port number of each device, then you can connect to the device's web page. If you click Delete Device button, then you can't see its information.
(3)	Add Network Device Address	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device). Displays the setting information of the added device (IP address, http, https, SSH port number, current connection). If you click the http/https port number of each device, then you can connect to the device's web page. If you click Delete Device button, then you can't see its information.
(3) (4) (Add Network Device Address	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device). Displays the setting information of the added device (IP address, http, https, SSH port number, current connection). If you click the http/https port number of each device, then you can connect to the device's web page. If you click Delete Device button, then you can't see its information. Displays the information of each device. (Updated every 3
(3) (4) (5)	Add Network Device Address Network Data View Detailed Information	 IP Address : IP address of the device to be monitored. HTTP, HTTPS, SSH : Set port number(These port numbers will be matched the http, https or SSH port number of each device). Displays the setting information of the added device (IP address, http, https, SSH port number, current connection). If you click the http/https port number of each device, then you can connect to the device's web page. If you click Delete Device button, then you can't see its information. Displays the information of each device. (Updated every 3 second).

TECHNICAL SPECIFICATION

General	
Approvals	
CE – conforms to	EU Directive 89/336/EEC
FCC – verified to	CFR47:Part 15
Dimensions	
Satellite antenna unit	165.2cm x 168.4cm(65" x 66.2")
Antenna dish diameter	125cm(49.2")
Antenna control unit	43.1cm x 38cm x 4.4cm (17" x 15" x 1.7")
Weight	
Satellite antenna unit	117kg (258lbs)
Antenna control unit	3.5kg (7.7lbs)
Environmental	
Operating temperature range	-25°C to +55°C (-13°F to +131°F)
Storage temperature range	-40°C to + 80°C (-40°F to + 176°F)
Humidity limit	95% R.H
Power requirements	110/220V AC
Power consumption	Typ. 50W, Max. 100W
Antenna system performance	
Frequency	Ku-band(10.7 to 12.75 GHz)
Minimum EIRP	40 dBW
Azimuth range	-340° to +340°
Elevation range	-15° ~ +120°
Roll/Pitch/Yaw	±25°/±15°/±8° @ 6 sec period
Turning rate	up to 12°/sec and 5°/sec ²

WARRANTY

Intellian systems are warranted against defects in parts and workmanship, these warranties cover THREE (3) YEAR of parts and TWO (2) YEAR of factory repair labor to return the system to its original operational specification.

Warranty periods commence from the date of shipment from Intellian facility, or date of installation which is come sooner. Providing maximum 6 months Warranty additionally if submission of authorized form which is described installation occurs within 6 months from the shipment date.

Intellian Technologies warranty does not apply to product that has been damaged and subjected to accident, abuse, misuse, non-authorized modification, incorrect and/or non-authorized service, or to a product on which the serial number has been altered, mutilated or removed. Intellian Technologies, will (at its sole discretion) repair or replace during the warranty period any product which is proven to be defective in materials or workmanship, in accordance with the relevant product warranty policy. All products returned to Intellian Technologies, during the warranty period must be accompanied by a Service Case reference number issued by the dealer/distributor from Intellian Technologies, and (where applicable) a copy of the purchase receipt as a proof of purchase date, prior to shipment. Alternatively, you may bring the product to an authorized Intellian Technologies, dealer/distributor for repair.

APPENDIX

Library Upgrade Guide

The purpose of this section is to provide you with the necessary information to properly upgrade the Library version. Intellian recommends reviewing this guide thoroughly to perform the Library function successfully.

Step 1

Open a web browser on the PC and type the default IP address (192.168.1.2) to access the Aptus web page. Login to the "Aptus Web" page by typing the User Name and Password on the Aptus Web page.

Step 2

Before beginning Library Upgrade, check the "Current Library Version" on the "Software Information" section of the main page.

Then click "Firmware & Configuration" → "Antenna Firmware Upgrade" on the left side of the main page to display "Antenna Firmware Update" page.



Step 3

Click the "Browse" button on the "New Antenna Firmware" section to download the specific library file.

NOTE. Be sure to select "Manual Upgrade" in the drop-down list to specify the Upgrade Method.



Step 4

After clicking the "Browse" button, the Open File dialog box will pop up. Select the latest approved version of the Library file for your ACU to download.

NOTE.

- Be sure the Library file is the latest approved version and correct model name.
- If you have any problems while performing this step, contact the Intellian service team for support.

9		Open					
ⓒ ⊙ ~ ↑ 📓 « 998. Document	> FirmwareUpdatesStora	ge → Library Files → TW2	SERIES	v 0	Search TW2 SERIES		P
Organize 💌 New folder					8==	•	
	 Name 	^	Date modified	Type	Size		
This PC	T2 W2 Series Int	tellian Library vd 00, 170209	6/13/2017 9:34 AM	ILF File		31 KB	
(P° [PC]KONG-PC	T2_W2_Series_Int	tellian Library_v4.01_170209.	ilf 6/13/2017 9:34 AM	ILF File		31 KB	
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ASPM TECH Server							
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E Pictures							
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VNAS-RD.software							
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100 2010 12010		··-··		- 1			
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Step 5

Click the "Start Update" button to move to the "The Library Update Ready" page.

Intellian	Signal Level 211 Setup Source True Retain Setup Saw Art. Info
> Dashboard > Ship Setting	Antenna Firmware Update
> Antenna Setting	
> Tracking Setting	Wew Antenna Firmware Upgrade Method Manual Upgrade
Diagnostic Firmware&Configuration	The update may take a few minutes to complete. The upload time may vary due to a variety of factors such as the speeds of your network. Upload an incorrect firmarre file may cause serious damage to your antenna and ACU.
Antenna Firmware Upgrade Antenna Log Antenna Backup & Restore	Browse and select the firmware file to upload. Browse T2,.V2_Series_Intellian Library_v4.01_170209.iif
> Administration	Start Upload Cancel
Network Setting SNMP Setting User Management IARM Upgrade IARM Save & Reboot	Current Ranning Version Current Firmware Version Antenna TADILUZE v4.09 Antenna FCU Watis v4.09 Library v4.09
Antenna Event Log Intellian Network Devices	Cold Rollback
> Information Centrol IP • 192.168.2.78	Previous Package Version Antenna STABILIZER v4.08 Rollback v161203 Antenna PCU v4.08 ACU Main v4.04
Current IP 192.168.2.78 Refresh Rate • 1 (sec) Refresh Disable 6:20	Latest Package Version Antenna STABIL/ZERv4.09 Rollback v170411 Antenna PCU v4.09 ACU Main v4.05
Idle Session Timeout 27:21 Time 07:05:01 (UTC)	

Step 6

Check the current Library version and the latest Library version. Click the "Start Update" button to update the Library file.

NOTE. Be sure to select the checkbox before clicking the "Start Update" button.

Intellian	Signal Level 235 Setup Insur Security Trace
> Dashboard > Ship Setting	Antenna Library Cold Update
> Antenna Setting	
> Tracking Setting > Diagnostic	Library Update From v 4.00 To v4.01 8
Antenna Firmware Upgrade Antenna Log Antenna Backup & Restore	
> Administration Network Setting SHAPD Setting User Management IARM Upgrade IARM Save & Reboot Antenna Event Log Intellian Network Devices	
Information Centrol IP • 192.168.2.78 Current IP 192.168.2.78 Refresh Rate • 1 (sec) Refresh Disable 5:33 Idle Session Timeout 26:33 Time 07:05:50 (UTC)	

Step 7

The "Upgrade is running! We move to upgrade status monitor page." message will appear indicating the upgrade has started. Click "OK" button.

192.168.2.1 내용:	×
Upgrade is running! We move to upgrade status monitor page.	
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Step 8

After the upload is complete and the Library upgrade confirmation message is displayed, confirm the "Library vx.xx Success" message and the ACU will automatically restart. Click the "Back to main page" button to return to the main page.

The Library v4.01 Upgrade Complete
Library v4.01 Success
The Lineary update is completed. If you receive an fail message, please try again. Please refer to the User Guide if you have trouble connecting to the antenna.
Back to main page

Step 9

Check the "Upgraded Library Version" on the "Software Information" section of the main page.

