

# v100PM

**Military Grade Ku-to-Ka Convertible Terminal**  
with 3-axis & 1m Reflector Diameter



## Designed for the Military Applications

The v100PM is specially designed for use in military applications and, as such, meets the required specification, including FCC, ETSI, MIL-STD-167-1A and MIL-STD 461F. The military market requires a solution which provides excellent performance in Ku band, an easy upgrade path to Ka band, and a rugged, purpose-built design at a COTS price point. The v100PM meets and exceeds all of these needs.

## Balance-free Installation

The v100PM is equipped with an integrated RF module consisting of the BUC and LNB. This BUC and LNB mounting assembly is attached to the rear side of the reflector in order to support easy conversion and balance-free installation.

## Optimized Reflector for Ku or Ka-band

The v100PM is designed and engineered to operate on both Ku and Ka-band. The reflector of the v100PM is capable of handling either Ku or Ka-band without the need to replace the reflector when the system is converted to Ka-band. The system is supplied with a Ku-band feed chain as standard. The 1m reflector for the v100PM satisfies EIRP and G/T performance of both Ku and Ka-band.

## Graphical and User-friendly Antenna Control Software

Intellian's next generation Antenna Control Software, 'Aptus®', is developed based on the Intellian-developed 'Antenna Remote Management System (ARMS) Software Development Kit (SDK)'. This graphic-based software is designed to remotely monitor and control Intellian antennas through an IP network.

## Dedicated Management Ethernet Port

The v100PM has a Management Ethernet Port on the ACU front that 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, Internet access and quick access to Intellian's remote management solution, the Web Monitoring and Control software (Aptus® Web).

## Intelligent Firmware Upgrade

Intellian v100PM provides easy and intelligent firmware upgrade methods. Firmware upgrade can be automatically initiated by launching 'Firmware Upgrade' on the Aptus® or Aptus® Web. User can also manually select a firmware file on a local disk and complete the upgrade. The firmware can be rolled back to a previous version as the ACU's built-in memory stores the current and previous firmware files.

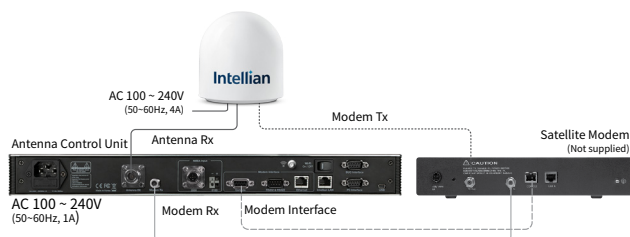
# v100PM

## Military Grade Ku-to-Ka Convertible Terminal

### Technical Specifications

Physical	
Radome Height	151.4cm / 59.63"
Radome Diameter	138.0cm / 54.33"
Reflector Diameter	103cm / 41"
Weight	Approx. 113.3kg / 249.78lbs
Stabilized Pedestal Assembly	
Platform	3-axis : Azimuth, Elevation, Cross-level
Azimuth Range	Unlimited
Elevation Range	-20° to +115°
Cross-level Range	Up to ±37°
Stabilization Accuracy	0.2° peak mispointing @ max ship motion condition
Motor Brake System	Elevation, Cross-level
Environmental Standard	MIL-STD-461F, EN60945, EN60950 MIL-STD-167-1A, DNV2.4 Class C (Military compliance applied to the above deck system only)
Reflector & Feed Assembly	
TX Frequency	13.75 ~ 14.5GHz Ku-band
TX Gain	41.6dBi @ Mid band
RX Frequency	10.7 ~ 12.75GHz Ku-band
RX Gain	39.4dBi @ Mid band
G/T	> 19.6dB/K (Clear Sky, 30° Elevation)
BUC Power	8W, 16W (optional)
LNB	Intellian PLL LNB
Polarization	Cross-pol and Co-pol
Antenna Control Unit	
Dimensions (WxDxH)	43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"
Weight	3.5kg / 7.7lbs
Display	2 line 40 character graphic VFD module
Ship's Gyrocompass Interface	NMEA 0183 / NMEA 2000
Modem Interface	Ethernet port / RS-232C / I/O ports
Modem Protocol	iDirect, Comtech, SatLink, Hughes, GILAT
Remote Management	Yes
Wi-Fi Operation	Yes
Management Port	Yes
Power Requirement	100~240V AC, 50~60 Hz, 1A

### System Diagram



**Intellian v100PM** is specifically designed for use in military applications and provides an easy upgrade path from Ku-band to Ka-band system.

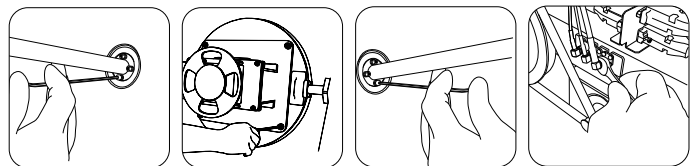
The v100PM builds upon the successful v100 platform and offers a lighter weight Above Decks Unit. The v100PM is purpose built to the exacting standards of the Military and Government user, while maintaining the benefits of a Commercial Off The Shelf (COTS) product line including superior usability. The v100PM offers a precision carbon fiber reflector with highly controlled surface accuracy to ensure consistent high gain. The v100 platform offers a robust, affordable, plug and play conversion kit to enable a smooth upgrade path from Ku to Ka service in as little as 10 minutes without requiring a factory trained technician. With the improved Ku-band RF performance from the proven v110, the Ka-band RF performance of the v100PM is optimized for Ka-band service at the same time.

The v100PM's high-gain, highly efficient reflector and tuned radome ensure the best service quality available when configured for Ku or Ka-band operation. In addition, the v100PM supports low elevation angle (-20°) capability to guarantee reliable connection at extremely high latitude.

The v100PM's seamless end-to-end solution is to offer hassle-free installation, operation, and maintenance. The v100PM provides a newly developed, graphic-based antenna remote control program with an additional Software Development Kit (SDK), allowing the NOC or service center to integrate antenna monitoring and control into its existing network management systems in an easier, user-friendly, and convenient manner.

The v100PM is available in 2 models that support 8W and 16W BUC sizes. All models are built with Co-pol and Cross-pol feed and come equipped with Intellian's Global PLL LNB as standard.

### 4 step Conversion



1. Remove the Ku-band feed by removing 4 bolts.
2. Remove the Ku-band BUC/LNB assembly by taking 4 bolts out and attach the Ka-band BUC/LNB assembly by inserting 4 bolts.
3. Attach the Ka-band feed by inserting 4 bolts.
4. Use same cable connector for Ku-Band BUC/LNB assembly and Ka-Band BUC/LNB assembly.



Esatcom Inc.  
www.esatcom.com

Tel:  
718.276.0800

Email:  
sales@esatcom.com