



The combat proven SWE-DISH IPT-i Mil Suitcase satellite system is the most compact and quickest-to-air system on the market today, and it comes with an integrated iDirect modem. Easy, one-man operation and exceptional technical performance allow secure 4 Mbps IP broadband transmission, 10 Mbps using the L-band interface, from anywhere. Its tailored for military units, government agencies and rescue organizations.

#### **INBUILT iDIRECT MODEM**

The IPT-i Mil Suitcase has integrated iDirect modem allowing efficient bandwidth usage and set-up of a secure and flexible network. The iDirect network allows the nodes to share the same satellite capacity (by dividing it into time slots). This dramatically cuts the satellite capacity needed down to just 2-5% when compared with traditional networks. All the time your traffic is 100% physically separated from the other. The IPT-i Mil Suitcase allows 4 Mbps duplex transmission of IP standard data, voice and video.

#### **EASY TO USE AND QUICK TO AIR**

The IPT-i Mil Suitcase is deployed for live satellite transmission using a unique point & shoot system. The desired satellite is simply selected from

a list and inbuilt GPS receiver, compass and a fully motorized antenna then assures trouble-free antenna pointing and auto peaking. Parameter set up, monitoring, antenna and network control is achieved through a web based graphical Man-Machine Interface (MMI) in the browser on your laptop. With its 10/100 base-T port, the system works as an ordinary LAN for email, FTP, VoIP and data streams. As any standard IP traffic this can be encoded. An L-band port is included as back-up.

#### **COMPACT**

Measuring just 70x47x31 cm (27.6x18.5x12.2 in) and with a total weight of approximately 39 kg (86 lbs) the IPT-i Mil Suitcase is scarcely bigger than a hand baggage. It can easily be made compatible with the IATA weight and size concept.

#### **RUGGED AND DEPENDABLE**

The IPT-i Mil Suitcase is designed to meet military standards regarding performance, usage and ruggedness. It is fully enclosed in a tough carbon fiber and aluminum carrying case. It is combat proven and have been used during Operation Iraqi Freedom and the Afghanistan conflict.

# KEY FEATURES

- Integrated iDirect modem - low bandwidth cost, and easy and flexible network set up
- Quick to air - less than five minutes to deploy
- Portable - suitcase size and compatible with the IATA weight and size concept
- IP broadband capable 4 Mbps duplex, 10 Mbps using the L-band interface
- Easy to use - web based MMI, GPS, electronic compass, auto peaking and fully motorized antenna
- LAN standard - LAN 10/100 base-T interface
- Combat proven and rugged - meets mil standards

FEBRUARY 2006 VERSION 2.2, Revision 1

## SPECIFICATIONS: SWE-DISH® IPT-i MIL SUITCASE

### ANTENNA PERFORMANCE

Antenna Type	Gregorian offset segmented into four pieces
Sidelobe performance	29-25 log $\theta$ dBi in azimuth
Antenna Aperture	0.90 x 0.66m (35.4 x 26.0 in)
Polarization	Linear
Rx Frequency	10.95-12.75 GHz.
G/T	19.3 dB/K @ 11.0 GHz 20° elevation
Tx Frequency	13.75-14.5 GHz
EIRP Capability	Up to 54 dBW
Antenna Positioning	Motorized positioning through GPS, electronic compass and inclinometer
Azimuth Range	$\pm 30^\circ$ in 0.1° steps
Elevation Range	5°-90° in 0.1° steps
Polarization Range	190° (-30° to 160°) in 0.1° steps
Transmit gain at midband	38.4 dBi
Receive gain at midband	38.2 dBi
3dB beamwidth in azimuth	1.53° @ 14.25 GHz
First sidelobe level	-21 dB @ 2.4° relative to mainlobe peak in azimuth
Polarization performance	XPD > 30 dB within 1 dB cone
Beam deflection at 22mph	<0.1° in azimuth
Beam deflection at 45mph	<0.4° in azimuth

### OPERATIONAL CONDITIONS

Operational Temperature	-30°C to +50° C (-22°F to +122°F)
Operational Humidity	95% non-condensing
Operational Wind Speed	Max 10 m/s (22.4 mph), anchored unit
Operational Altitude	Max 3,000 m (9,850 ft)
Rainfall	Max 100 mm (4 in) rain per hour
Storage Temperature	-40°C to +70°C (-40°F to +158°F)
Sealing Class	IP65, including Power Supply Unit
Deployment and Set-up	< 5 minutes

### MECHANICS

Physical Size	70x47x31 cm (27.6x18.5x12.2 in) when stowed for transportation
Weight	Approximately 39 kg (86 lb) depending on options. IATA compatible

### POWER SUPPLY UNIT

AC Supply	100-240 V, AC 50-400 Hz, 750 W
DC Supply	21-32 V DC, 750 W
Output	26 V DC, max 27 A

### ENVIRONMENTAL STANDARDS & TEST

IEC 68-2-14	Change of temperature, -40°C to +70°C (-40°F to 158°F)
IEC 60068-2-64 Fdb	Random vibration broadband
IEC 60068-2-27 Ea	Shock
IEC 60068-2-29 Eb	Bump
IEC 60068-2-31 Ec	Drop and topple
IEC 60068-2-32 Ed	Free fall

IEC 60-2-52	Salt mist
IEC 60068-2-68	Sand and dust
Continuous Operation	>10,000 antenna and polarization motion cycles during 15 days continuous operation
Type Approvals	FCC license (E030197), Eutelsat (EA-V042), Intelsat (IA097AA0), EuropeStar (ES-ME-39), Hispasat (HIS-ET-96221-10026-SWE) IPStar, Shin Satellite and AsiaSat

### INTERFACES, AND TRANSMIT, RECEIVE AND CODING MODES

Inbuilt Network modem	iDirect
TCP/IP LAN	10/100 base-T. MIL-C-26482 series 1 connector IP gateway for applications like video streaming, Internet connection, E-mail (SMTP/POP) and ftp file transfer
L-band interface	Included

### SSPA AND LNB PERFORMANCE

SSPA extended Ku-Band	13.75-14.50 GHz
Output Power	Psat / P1dB: 45.4/44.5 dBm (35/28 W)
Gain Flatness	$\pm 1.0$ dB full band
Gain Slope	+0.3 dB per 40 MHz
Gain Variation	$\pm 1.0$ dB at -30°C to +50°C (-22°F to + 122°F)
Gain Adjustment	10 dB, 0.1 dB resolution
Noise Figure	8 dB at max gain

	LNB1*	LNB2	LNB3
RF Frequency	10.95-11.70 GHz	11.70-12.20 GHz	12.25-12.75 GHz
IF Frequency	950-1.700 MHz	950-1.450 MHz	950-1.450 MHz
Local Frequency	10.00 GHz	10.75 GHz	11.30 GHz

\*Three different LNBS are delivered as standard together with the military IPT Mil Suitcases. LNB1 is mounted as standard from factory. It is easy to change LNBS in the field.

Local Stability	$\pm 3$ ppm
Noise Figure	0.8 dB typical at 25° C (77° F)
Conversion Gain	60 dB typical at 25° C (77° F)
Conversion Gain Variation	Max 2dB in any 50 MHz segment over the frequency band

### COMPATIBILITY (NOT EXHAUSTIVE)

Cryptos	IP cryptos
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Specifications are subject to change without notice, and this datasheet will not form part of any contract.