

SWE-DISH IPT Mil Suitcase



Portable satellite terminal for rugged environments.

The combat proven Rockwell Collins SWE-DISH IPT Mil Suitcase satellite system is the most compact and quickest-to-air system on the market today. Easy, one-man operation and exceptional technical performance allow secure 4 Mbps IP broadband transmission, 10 Mbps using the L-band interface, from anywhere. Military units, government agencies and rescue organizations worldwide rely on the IPT Mil Suitcase.

Easy to use and quick to air

The IPT Mil Suitcase is deployed for live satellite transmission using a unique point & shoot system. The desired satellite is simply selected from a list and a pointing solution is automatically calculated. Inbuilt GPS receiver, electronic compass and a fully motorized antenna then assure trouble-free antenna pointing. The IPT Mil Suitcase automatically peaks towards the selected satellite and may optionally use an ASCII string from a hub for 100% assured identification.

Parameter set up, monitoring and antenna control are achieved through a web based graphical Man-Machine Interface (MMI) in the browser on your laptop. The laptop is connected to the IPT Mil Suitcase using the same standard LAN port used for IP transmission. The operator needs a minimum of training and no expertise to operate the system, and can concentrate on the task at hand.

IP broadband capability

The system allows 4 Mbps duplex transmission of IP standard data, voice and video. 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. A serial EIA-530 interface allows military standard communication equipment, e.g. for bulk encryption. An L-band port and Turbo Product Coding is included as standard. The IPT Mil Suitcase is compatible with other baseband equipment e.g. different PROMINAs (multi-service networking products used by DoD) and TDMA systems e.g. iDirect iNFINITI.

Compact

Measuring just 70 x 47 x 31 cm (27.6 x 18.5 x 12.2 in) and with a total weight of approximately 39 kg (86 lbs), the IPT 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 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 has been used during the Iraqi war and the Afghanistan conflict.

**Rockwell
Collins**

Building trust every day

KEY FEATURES

- Quick to air - less than five minutes to deploy using point and shoot
- 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 - ordinary LAN 10/100 base-T interface
- Serial EIA-530 interface for bulk encryption and L-band port
- Combat proven and rugged - meets MIL standards

SPECIFICATIONS

Antenna performance

| | |
|--------------------------|------------------------------------------------------------------------|
| Antenna type | Gregorian offset segmented into four pieces |
| Sidelobe performance | 29-25 log Ø 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 | ±30° 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 20 m/s (45 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 | 70 x 47 x 31 cm (27.6 x 18.5 x 12.2 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 and test

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|----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 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), Hispasat (HIS-ET-96221-10026-SWE) IPStar, Shin Satellite and AsiaSat |

Interfaces, transmit, receive and coding modes

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|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TCP/IP LAN | 10/100 base-T. MIL-C-26482 series 1 connector IP gateway for applications like video streaming, Internet connection, email (SMTP/POP) and ftp file transfer. |
| Serial data interface | EIA-530. Possible to connect external data communication equipment. |
| L-band interface | Included |
| Transmit modes | SCPC |
| Modulation | BPSK, QPSK, OQPSK and 8PSK |
| Coding | Viterbi and TPC @ rate 1/2, 3/4, 7/8 Trellis @ rate 2/3 |

Built-in TCP accelerator

SSPA and LNB performance

| | |
|-----------------------|---------------------------------------------------|
| SSPA extended Ku-Band | 13.75-14.50 GHz |
| Output power | Psat / P1dB: 45.5/44.5 dBW (35/28W) |
| Gain flatness | ±1.0 dB full band |
| Gain slope | +0.3 dB per 40 MHz |
| Gain variation | ±1.0 dB at -32° C to +50° C (-25.6° F to +122° F) |
| Gain adjustment | 10 dB, 0.1 dB resolution |

| | 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 | ±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 | KIV-7, KIV-19, KG-175, BID-2080 |
| Other | Baseband equipment e.g. different PROMINAs and TDMA systems e.g. iDirect iNFINITI |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Building trust every day.

Rockwell Collins delivers smart communication and aviation electronic solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

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