TERRASAT Communications, Inc.

INTERFACE UNIT

Interface Unit Advantages

Enables multiple modem support through internal combining of up to six modems. (Multi-modem configuration)

Reduces terminal cost by incorporating a 10 MHz reference and / or BUC power supply in the multi-modem configuration.

Enhances system performance by:

- Closing the loop with the BUC to maintain constant gain
- compensating for IFL cable loss and slope variation

Simplifies system installation by automating the system calibration process.

Provides access to BUC M&C via Ethernet Port, RS232, RS485 or optional Hand-Held Terminal.

Seamless interface with Terrasat's PowerPlus C-band and Ku-band ODUs via FSK signaling through the IFL cable.

Terrasat's innovative Interface Unit (IFU) provides the interface between the user, the Block Upconverter, and the modem. The IFU unlocks the power and flexibility of L-band technology for advanced satcom networks. Complete in a single 1RU chassis, the IFU can be configured by the addition of modules to address individual RF system requirements such as:

- Combining up to six modems
- 10 MHz reference frequency
- 24 or 48 VDC ODU power supply
- Transmit and receive with LNB DC power

The Interface Unit establishes an FSK communication link with the Block Upconverter through a single coaxial IFL cable. A separate M&C cable bundle is not required. A multiplexer within the IFU combines L-band IF, 10 MHz reference, FSK signaling for M&C, and DC power for the BUC.

The IFU provides M&C access on a 10BaseT Ethernet port plus RS485 and RS232 serial ports for integration with a broad range of NMS systems. Alarms are also brought out to the rear panel on Form C relays. An optional handheld terminal is available for local M&C access.

Included in the IFU package is Terrasat's SysMon GUI software which runs on any Windows PC or laptop computer. SysMon enables the user to access extensive facilities for transmit and receive M&C. Through SysMon the operator has a window to view current BUC conditions. The user can activate advanced algorithms to automate system calibration, compensate for IFL cable loss and slope, enable an AGC loop, terminate unused ports, customize alarm thresholds, and view alarm history.

Terrasat's Interface Unit completes the L-band package to give you higher performance, advanced features, and simplified installation.

Interface Unit Specifications

Parameter	Transmit Specification	Receive Specification
Input Frequency Range	950-1525 MHz	950-1750 MHz
Output Frequency Range	950-1525 MHz	950-1750 MHz
Input Connector(s) (1 or 6 TX)	N-type Female	F-type Female
Input Impedance	50 ohms nominal	75 ohms nominal
Input VSWR	1.5:1 max.	1.5:1 max.
Output Connector(s) (1 or 6 RX)	N-type Female	N-type Female
Output Impedance	50 ohms nominal	50 ohms nominal
Output VSWR	1.5:1 max.	1.5:1 max.
Conversion Gain	5 dB min.	35 dB min.
Operational Input Range	0 dBm max.	-20 to -98 dBm
Maximum Composite Input	0 dBm max.	-5 dBm max.
Attenuator Range	na	50 dB
Cable Calibration Range	20 dB min.	na
Gain Flatness (36 MHz, 575 MHz)	1 dB, 3 dB p-p max.	1 dB, 3 dB p-p max.
Slope Equalizer	8 dB in 1 dB steps	na
Reference Output Frequency	10 MHz	10 MHz
Reference Output Level	-3 dBm nominal	-3 dBm nominal
DC Supply to ODU (optional)	+24 VDC at 130W max. +48 VDC at 200W max.	+24 VDC at 20W max.
Monitor and Control Interface		
Ethernet	RJ-45 Connector	
Handheld Terminal	RJ-11 Connector	
RS232/RS485	9 Pin D-sub Female	
Alarm Output	9 Pin D-sub Male	
AC Power Requirements		
Input Voltage	100-260 VAC autoranging	
Input Frequency	47-63 Hz	
Environmental / Mechanical		
Operating Temperature	0 to +50 degrees C	
Size	19.13" (L) X 19" (W) X 1.75" (H) 48.6 cm (L) X 48.3 cm (W) X 4.4 cm	
Weight	16 lbs. (7.3 Kg) nominal	

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*Specifications are subject to change without notice.

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