

UHF IW/DAMA/DASA SATCOM TERMINAL

ViaSat's RT-1828 and RT-1830 Satcom IW/DAMA/DASA terminals support either single-channel or multiple-channel chassis configurations to meet a wide range of user requirements.



RT-1828(P)/G

RT-1830 TERMINAL

The RT-1830 is a single UHF channel, four I/O port terminal. It supports expansion to eight I/O ports.

RT-1828 FOUR-CHANNEL TERMINAL — STANDARD 19-INCH CABINET THAT ALLOWS FOR GROWTH

The RT-1828 UHF satcom terminal provides from one to four satcom channels, and uses a VME open architecture that enables easy modification of configurations or selection of only the features required to meet user requirements. When combined with an external 200 watt power amplifier, LNA/diplexer, and antenna, both the RT-1828(P)/G and RT-1830(P)/S terminals comprise a complete low-cost UHF satcom terminal that can meet all Legacy Demand Assigned Multiple Access(DAMA) and Integrated Waveform (IW) MIL-STDs.

Both 19-inch rack mount chassis are equipped with four VME cards per channel: (1) 5/25 kHz IW, DAMA & non-DAMA modem, (2) four port input/output (I/O), (3) UHF upconverter (U/C), and (4) UHF downconverter (D/C). Additional available slots on the RT-1828 series can accommodate up to four independent channels, or alternatively, mix and match variations of other VME-based functions such as additional I/O ports (maximum of 8 I/O ports per channel).

The RT-1828(P)/G version is capable of providing up to four channels and 32 I/O ports per chassis. All ViaSat IW, DAMA, and DASA terminals can conform to MIL-STD-188-181B, -181C, -182A, -182B, -183, and -183B. A simple software download will upgrade the terminal to the latest MIL-STD revisions as they become available.

LINE-OF-SIGHT (LOS) OPTIONS

Both the RT-1828 and RT-1830 are available with VHF/UHF LOS up and down converters.

OPEN VME ARCHITECTURE — FOR FLEXIBILITY AND MODULAR GROWTH

The VME architecture and modular design of the RT-18XX series terminal makes it easy to expand the system's capabilities. You can add additional channels by adding VME modules. The open architecture enables low-cost growth paths for embedded UHF LOS mode, telephony interface, and other features and functions.

VIASAT CONTROL INDICATOR — OR USE OTHER CONTROL OPTIONS

The RT-18XX series of terminals may be controlled by a variety of means including the ViaSat Control Indicator, or ViaSat's Network Terminal Control (VNTC) software.



RT-1830(P)/S

SPECIFICATIONS

GENERAL CHARACTERISTICS

Operating Modes	5 kHz (bps)	Non-DAMA (kbps)	25 kHz DAMA (bps)
User I/O Rate	75, 300, 600, 1200, 2400	1.2, 2.4, 4.8, 7.2, 8.0, 9.6, 16.0, 28.8, 32.0, 38.4, 48.0, 56.0	75, 300, 600, 1200, 2400, 4800, 16000
Burst Rate	600, 800, 1200, 2400, 3000 sps	N/A	9.6, 19.2, 32 ksp/s
Modulation	SOQPSK	SBPSK, FSK	BPSK, CPM, DEQPSK
Coding	R1/2, 3/4, 7/8	RS	R1/2, 3/4
I/O Ports	2	1	8

Control

- » **Ethernet:** PC or Workstation
- » **MIL-STD-188-114:** ViaSat Control Indicator
- IW** All mandatory rates supported
- Key Fill** KYK-13, KYX-15, KOI-18, AN/CYZ-10, SKL

PERFORMANCE CHARACTERISTICS

- Frequency Offset** Acquisition with up to ± 1200 Hz offset
- Doppler Correction** Uplink for operation with narrow bandwidth acquisition modems (e.g., TD-1271)
- BER** Within 1.5 dB of theory, Acquisition typically <5 seconds

RT-1828(P)/G AND RT-1830(P)/S MIL-STD CAPABILITIES

- 188-183: Yes / (AC/DC)
- 188-181C: Yes
- 188-181B: Yes
- 188-182B: Pending
- 188-182A: Yes
- 188-183B: Yes
- Encrypted O/W: Yes
- 188-185A: Yes

INTERFACES

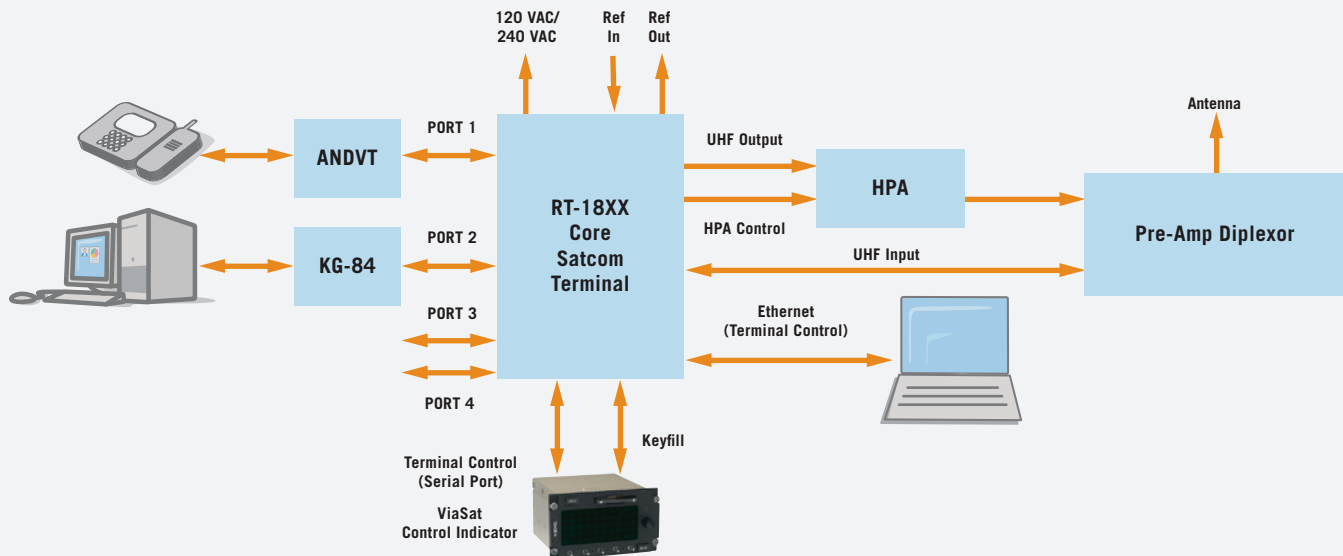
- Data** MIL-STD-188-114 balanced or unbalanced; synchronous data, clock and control
- Compatible COMSEC** ANDVT Minterm, Tacterm, Airterm, KG-84, and others
- Frequency Ref, Ext** 1, 5 or 10 MHz standard, 0 ± 10 dB
- Frequency Ref, Int** 10 MHz, 1 ppm
- LOS AM/FM TX, RX:** 600 ohms, balanced, 300 to 3500 Hz frequency response
- UHF**
 - » RX: 243 to 270 MHz, 50 ohms, VSWR <2.5:1
 - » TX: 292 to 318 MHz, 50 ohms, VSWR <2.5:1
- Remote Control** Ethernet or MIL-STD-188-114 asynchronous with interface to RS-422, RS-423 and RS-232
- Power Source** 120 VAC, 50/60 Hz or 240 VAC, 50 Hz

PHYSICAL CHARACTERISTICS

- Dimensions (HD)** 15.25 x 24 in
- Volume** < 7200 cubic in
- Weight** < 100 lbs

ENVIRONMENTAL/EMI

- Operation Temperature** 0° C to +50° C
- Altitude** 0 to 15,000 ft
- Humidity** 95%
- Cooling** Convection cooled
- EMI** MIL-STD-461D



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