

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

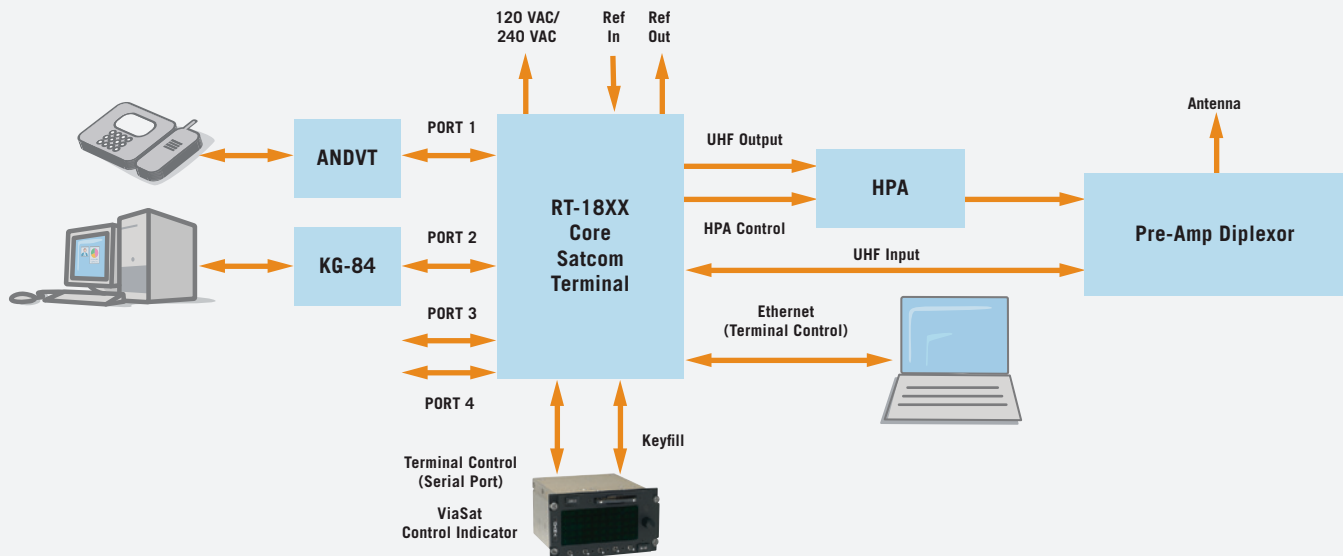
- Data** MIL-STD-188-114 balanced or unbalanced; synchronous data, clock and control
- Compatible COMSEC** ANDVT Minterm, Tacterm, Airterm, KG-84, and others
- Frequency Ref, Ext** 1, 5 or 10 MHz standard, 0 ± 10 dB
- Frequency Ref, Int** 10 MHz, 1 ppm
- LOS AM/FM TX, RX:** 600 ohms, balanced, 300 to 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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