

ST-270

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CDMA VSAT Modem

for mobile satellite based communications

Features

- Spread spectrum BW up to 20 MHz
- Dynamic data rate control
- Small antenna size
- Reduced intercept probability/increased jamming performance
- Three full-duplex 1.544 Mbps (T1) links in 36 MHz
- Remote VSAT mgmt from hub
- Rack mountable
- Single card option

Applications

- Return path internet service for broadcast satellite service
- Ship-to-shore SATCOM for disadvantaged platforms
- High data rate service for mobile vehicles

Backpanel



The ST-270 is a high data rate CDMA VSAT network. The network operates in a hub and spoke configuration with user data capability up to 1.544 Mbps. Dynamic data rates permit variable user loads based on network capacity and user platform transmit power. Programmable spreading chip rates enable transmission bandwidths of up to 20 MHz. The direct sequence spread spectrum modulation reduces power spectral density, permitting higher transmission power levels with a smaller antenna while keeping off-axis power below ITU limits. The ST-270 is ideal for small mobile platforms such as ships and land-based vehicles that necessitate antennas 90 cm or smaller.



Performance

Maximum Bandwidth	20 MHz (40 MHz Full Duplex)
Pulse Shaping	25% Root Raised Cosine
Data Rates	96.5/193/386/772/1544 kbps
Forward Error Correction	Turbo Product Codes ($r = 0.793$)
Capacity	3 Full Duplex at 1.544 Mbps (T1) in 36 MHz
BER Performance	TBD
Power Control	Adaptive (0.25 dB accuracy)

Interfaces

Transmit and Receive Data	70 MHz (BNC connectors)
Command & Control	RS-422 (37 Pin D-style) Front Panel Keypad or RS-232 (rear panel)

General

Voltage	110/220 Vac, 50/60 Hz
Dimensions (WxHxD)	VSAT: 19.0 in x 3.75 in x 14.0 in 48.3 cm x 9.53 cm x 35.6 cm Hub dimensions are config. dependent

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