



HIGHLIGHTS

- **16 kbps to 10 Mbps in 1 bps Steps**
- **BPSK ,QPSK, 8PSK & 16QAM Operation**
- **Third Generation Turbo 0.5 to .95**
- **Demodulators with 36MHz Separation**
- **L-band or 70MHz interfaces**
- **Viterbi FEC**
- **10/100 BaseT Web Server, SNMP, Telnet, and HTTP**

The AMT-30 modem includes a BPSK, QPSK, 8PSK and 16QAM modulator and demodulator with data rates from 16 kbps to 10 Mbps in 1 bps steps. Its construction is modular and so can be configured for transmit/receive, transmit-only or receive-only options. We can also configure it with two independent demodulators (dual demodulator option), which can be used for peer-to-peer voice connectivity in DAMA networks or in hub applications for star configured FDMA and frame relay networks.

The modem modulates carriers directly at L-band, resulting in an efficient uplink system with an extremely pure output spectrum. A 70MHz option, S/W selectable, is also available for integration with existing systems. DC power and high stability 10 MHz reference can be supplied for powering and synchronizing a Block Up Converter (BUC) and Low Noise Block Down Converter (LNB).

Additional stability (control) over the transmission chain is achieved when using Advantech's PowerTrack™ system. Compatible BUC's include a power detector on the output, which the modem monitors, using the results to adjust its own Tx output level in response and maintaining a constant output power from the BUC. This closed loop power control maintains the output power from the BUC stable within ± 1 dB under all environmental conditions.

The AMT-30 provides Viterbi forward error correction (FEC) as standard. An Intelsat compliant Reed Solomon outer FEC codec is available as an option. Or it can be ordered with the Turbo FEC option that greatly improves BER performance and reduces data latency.

The standard data interface is EIA-530, though a number of other options are available such as IP enabling with a built-in bridge. The serial RS-232, RS-485 and Ethernet monitor and control ports provide access to a command line interface, with options for SNMP, Telnet and HTTP interfaces. In addition, the modem can be configured via an optional front panel or hand held controller.

OPTIONAL FEATURES:

- **Turbo FEC ¾, ½, 0.95 Rates**
- **Dual Demodulator (with 36MHz window), 4-Channel Rx Demodulators**
- **Concatenated Reed Solomon outer/ Viterbi inner FEC**
- **Power Supplies and High Stability Reference for BUC and LNB**
- **Optional Front Panel Display and Keypad (shown)**
- **IP Enabled Modem with Optional 10/100BaseT Router/Bridge**

AMT 30 Modem Series



MODULATOR SPECIFICATIONS:					
L Band IF Output Frequency Range / Step Size / Output Connector 70/140 MHz Option, S/W selectable Output Level Output Impedance/Return Loss		950MHz to 1750MHz / 100 Hz steps / Type N, female 100 Hz steps / BNC, female -5 to -35 dBm in 0.1 dB steps 50 Ω/17 dB		70MHz±18 MHz	
Spectral Shape		IESS 308/ 309 compliant			
Output Spurious / Harmonics		-55 dBc DC to 2500 MHz / -50 dBc; 1900 MHz to 2500 MHz			
Integrated Phase Noise		IESS308/ 309 compliant			
DEMODULATOR SPECIFICATIONS					
L Band IF Input Frequency Range / Step Size / Input Connector 70MHz Option, S/W selectable L Band IF Input Level 70/140 MHz IF Input level Input Impedance/Return Loss		950MHz to 2150MHz / 100 Hz steps / Type F, female 70MHz±18MHz or 140MHz±36MHz / 100 Hz steps / Type BNC, female -70 dBm to -40 dBm, with Automatic Gain Control (AGC) -55 to -35 dBm, -5 dBm maximum composite level, with AGC 75Ω /12 dB at L band; 50Ω /12dB at 70MHz			
Eb/No Performance @ 10 ⁻⁶ BER,		Viterbi Viterbi with Reed Solomon Option Turbo Option		<u>1/2 Rate</u> 6.1 dB 4.3 dB -	<u>3/4 Rate</u> 7.6 dB 5.7 dB 3.9 dB
				<u>7/8 Rate</u> 8.7 dB 6.7 dB 4.35 dB	<u>0.95 Rate</u> 5.8 dB
MODEM SPECIFICATIONS					
FEC: Viterbi		Selectable, 1/2, 3/4 or 7/8 rate, Viterbi, k=7 Optional Reed Solomon Outer Codec for Viterbi Optional Turbo Codec Selectable 3/4, 7/8, 0.95 Rate			
Data Rates		16Kbps to 210Mbps in 1bps steps			
Scrambling/Descrambling		V.35, IESS 308, 309, CCITT			
GENERAL SPECIFICATIONS:					
Remote Monitor and Control		10/100 Base-T port, RS-485, and RS-232 at rear panel. RS-232 hand held terminal port. Can be managed by Windows GUI, CLI, Telnet, SNMP v2, and HTTP. In field software upgradeable via FTP.			
Data Ports		EIA-530 Interface, RS-422 (25 pin) or 10Base T for IP Bridge option			
Power Supply Input		Universal Input 95-264 VAC, 50/ 60 Hz, Approved to EN60950 DC Input (Option) 48 VDC			
Dimensions/Weight		1U, 19 inch rack mount, 15.75 inches deep/11 lb. (5 kg) maximum			
ENVIRONMENTAL SPECIFICATIONS:					
Temperature Range Operating/Storage		0 to 50°C/-25°C to 85°C			
European standards		EN55022 Class B and EN50082-1			
USA		FCC Part 15, Subpart B Class A			
OPTIONS:					
Turbo FEC		Add Turbo Codec			
Intelsat concatenated FEC		Add Intelsat Reed Solomon Codec for concatenated Viterbi/RS FEC			
Dual Demodulators		Add a second demodulator with EIA-530 Interface, tuneable within 36MHz of first carrier			
IP Gateway		Substitute EIA-530 for Ethernet 10/100Base-T IP router/bridge option			
10 MHz reference stability		5x10 ⁻⁹ per day, 5x10 ⁻⁸ per year, +/-1.5x10 ⁻⁷ per 4 years			
Active Front Panel		Provides display and keypad on front panel for access to all functions, alarms and status messages			
ODU Supply Output (via IFL)		24VDC, 4.0 Amperes max. (BUC), 20V, 0.5A max. (LNB) optional 48 VDC, 2.0 Amperes max (BUC)			
Hand Held Terminal		Allows text-based access to all functions, alarms and status messages			
TX Only/RX Only		Remove either demodulator or modulator for transmit- or receive-only operation			

An ISO9001 2000 Company

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