

Highlights

- **NEW Turbo Code Option 0.75 to 0.95**
- **Quad Demodulators in 1U Chassis**
- **9.6kbps to 10Mbps in 1bps steps**
- **Select 70MHz or L Band**
- **PSU and Reference for LNB**
- **RS422 serial via RJ45 connector**
- **Optional Ethernet 10BaseT Interface**
- **Optional Front LCD Display and Keyboard**



Applications

The **Cost Effective** AMT-34 is the ideal solution in hubs providing star configured FDMA and frame relay networks. Provision for Serial data, (via EIA530, RS422) or IP data, (via the IP Gateway Bridge Router RJ45 interface) ensures connectivity to most system architectures. These attributes and the modular and flexible construction provide the opportunity to construct the solutions best suited in today's cost conscious system designs.

Overview

The AMT-34 provides BPSK, QPSK, 8PSK and 16QAM demodulation schemes and Viterbi as the FEC as standard, individually on each demodulator. The addition of Reed Solomon and the **New Turbo** codec provide performance gains. TCP simultaneously offers increased coding gain, lower decoding delay and significant bandwidth savings. The rates span from 0.75 to 0.95 dependant on modulation type and are interoperable with market standard.

Given the modular design the unit can be configured to offer L band Rx, 70MHz RX. It's directly modulated L band transmit signal leads to an extremely pure spectrum resulting in efficient uplink systems, and the L band has a resolution of 100Hz.

Overview (cont)

In large installations, multi-drop RS485 M&C is used to control several AMT-34's or you can use the Ethernet interface with Telnet or SNMP. A PC may be used to configure the unit and access all alarms and status messages. A front panel jack is provided on each unit for local hand-held terminal access. All other connections are located at the rear panel of the unit.

The data interface is RS422 signal levels via an independent RJ45 connector from each demodulator. Optionally, it can be equipped with an Ethernet 10BaseT IP Gateway interface providing a single connection for all traffic.

The L-Band input to each dual demodulator is via an F-type connector (standard). The 70 MHz input to each dual demodulator is via a BNC connector.



DEMODULATOR SPECIFICATIONS						
L Band Input Frequency Range and Step Size (each demodulator pair) Input Impedance/Return Loss L Band Input Connectors L band Input Level		950-1750MHz in 100Hz steps (demodulators in each pair must be tuned within 36MHz of each other) 75 Ω /15 dB minimum (2) F connectors, female -65 dBm to -40 dBm, with Automatic Gain Control (AGC)				
Outdoor LNB/BDC Power and Reference (through L band input connector)		(2) LNB/BDC Power sources: +20 VDC @ 0.4 Amperes (2) LNB Reference sources: 10 MHz @ 0 dBm, ± 2 dB; -140 dBc/Hz maximum @ 1 kHz				
70 MHz Input (Optional) Frequency Range and Step Size (each demodulator pair) Impedance/Return Loss IF Input Connectors IF Input Level		52-88 MHz in 100 Hz steps (demodulators within each pair must be tuned within 5 MHz of each other) 50 Ω /15 dB minimum (2) BNC, female -55 to -35 dBm, -5 dBm maximum composite				
Demodulation/Data Rates At 1/2 Rate Maximum Data Rate Data Rate Step Size		QPSK 19.2 to 2200 kbps, BPSK 9.6 kbps to 1100 kbps QPSK, 3850 kbps, 7/8 Rate 8PSK, 10Mbps, 7/8 Rate Selectable in 1 bps steps				
FEC Decoding		Selectable from Viterbi k=7, 1/2, 3/4 and 7/8 rate Optional Turbo, 3/4, 7/8 and 0.95 rate				
Descrambling		V.35, IESS 308, 309, CCITT				
Eb/No Performance @ 10 ⁻⁶ BER, QPSK		Viterbi	1/2 Rate	3/4 Rate	7/8 Rate	0.95 Rate
		Viterbi with Reed Solomon Option	6.1 dB	7.6 dB	8.7 dB	
		Turbo Option	4.3 dB	5.7 dB	6.7 dB	
			-	3.9 dB	4.35 dB	5.8 dB
Carrier Acquisition Range		Programmable, from ± 1 to ± 512 kHz				
Carrier Acquisition		<0.5 Second, ± 25 kHz, 32 kbps at > 8 dB Eb/ No <1 Second, ± 15 kHz, 9.6 kbps at > 8 dB Eb/ No				
Carrier Acquisition Threshold		4.2 dB Eb/No at 1/2 rate Viterbi, Sweep Acquisition Mode				
GENERAL SPECIFICATIONS						
Remote Monitor and Control		Full remote M&C via RS 485 and RS232 at rear panel, RS232 at front panel (handheld terminal port) and Ethernet				
Data Ports		Four separate RJ45 connectors, RS422 electrical interface				
Power Supply Input DC Input (Option)		Universal Input 115-230 VAC, 50/ 60 Hz, Approved to EN60950 48 VDC				
Dimensions/Weight		1U high, 19 inch rack mount, 18 inches deep/ 11 Lb. (5 kg) maximum				
ENVIRONMENTAL SPECIFICATIONS						
Temperature Range Operating/Storage		0 to 40°C/-25°C to 85°C				
European standards		EN55022 Class B and EN50082-1				
USA		FCC Part 15, Subpart B Class A				
OPTIONS						
Advantech Turbo FEC		Add Turbo Codec for 1x10 ⁻⁷ BER at 4 dB Eb/No				
Ethernet 10BaseT		Substitute RS422 for Ethernet 10BaseT option				
Power Supply		Substitute -48V DC power supply				
Dual Demodulator Only		Remove Two Demodulators				
L band Input Connectors		BNC, female or Type N, female				
Hand Held Terminal		Allows text-based access to all functions, alarms and status messages				

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