

Features:

- Low power, light weight 1 U case.
- BPSK, QPSK, OQPSK, 8PSK, 16QAM.
- Typical DSP acquisition time of 315 mseconds at 9.6 kbps QPSK, 71 mseconds at 64 kbps QPSK.
- Viterbi and Reed-Solomon FEC standard, TPC optional. BER vs. Eb/No performance within 0.3 dB of theoretical. 10⁻⁷ BER at 6.0 dB Eb/No (2.8 dB with TPC, 3.5 dB with Reed-Solomon codec).
- Built-in IBS Multiplexer with overhead channel, AUPC and Remote Modem Control.
- Built-in BER Test Set.
- DDS setting of transmit and receive data rates from
- 1.2 kbps to 20 Mbps in 1 bps increments.
- Viterbi FEC codec programmable to rate 1/2, 3/4, 5/6, 3/4, 5/6, 7/8 and disabled.
- DDS transmit and receive frequency setting in 1 Hz increments.
- Programmable receive acquisition tracking range.
- 40 dB AGC range with +15 dBm composite input power.
- Fully programmable from either front panel or remote command without jumpers.
- Built-in 1:1 Redundancy.
- Designed to use internal or external G.703 and Ethernet interfaces.
- 140 MHz IF available on request.
- 8 User stored and recallable configurations. Automatic Recovery of stored configurations.
- Programmable Interface type.



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AM-7500 (70MHz and L Band) Satellite Modem

Parameter	AM7500 (70Mhz)	AM7500 (L-Band)
Operating Mode, all programmable	Receive and Transmit Continuous (SCPC), Optional Tx Burst	
Transmit IF frequency Range:	50-90MHz in 1Hz step	950-1750MHz in 1Hz step
Receive IF frequency Range:	50-90MHz in 1Hz step	950-1750MHz in 1Hz step
Transmit Output Power	+5 to -35 dBm	+5 to -35dBm C6
Transmit Output Interface	50 ohm or 75 ohm	50ohm N Type
Return Loss	20dB min.	14dB typical
Transmit Output Phase Noise	6dB Better than IESS std.	6dB Better than IESS std.
Transmit output Level Satability/Accuracy	±0.5 dB, 0 ~ 50°C, accurate ±0.5 dB, 50 ~ 90 MHz at 25°C	±0.5 dB, 0 ~ 50°C, accurate ±0.5 dB, 950 ~ 1750 MHz at 25°C
Transmit Output Spurious/Harmonics	<-50dBc	<50dBc
Receive Carrier Level in	-20 to -60dBm	-20 to -70dBm
Receive Input Interface	50ohm or 75ohm	75ohm F-type
Return Loss	>15dB	>15dB
Maximum Composite Receive Input Power	+15 dBm or +40 dBc whichever is lower power	+15 dBm or +40 dBc whichever is lower power
Receive Acquisition Range	Programmable from 100 Hz to 1.25 MHz in 100 Hz increments	Programmable from +/- 100 Hz to +/- 1.25 MHz
Transmit BUC Power (Rear Panel)	NA	Nominal 24VDC, 96 Watts (Or 12/36/48 VDC)
Voltage & Current monitor	NA	Provided on Front Panel
Transmit BUC Ref	NA	10 MHz at nominal +3 dBm from internal or external reference
Receive LNB Power	NA	Selectable +13/+18 VDC at <500mA.
Current Monitor	NA	Max/Min current alarms limits settable.
Receive LNB Ref	NA	10 MHz at nominal -3 dBm internal or external reference.
Frequency Ref	2 x 10-6 TCXO std.	1 x 10 -8 OCXO. 2 x 10 -7/year aging (L-Band).
External Ref	on rear panel for 1, 5, 9, or 10 MHz	
Modulation & Demodulation	Programmable for BPSK, QPSK, OQPSK, independently	Programmable for BPSK, QPSK, OQPSK, independently
Forward Error Correction	Viterbi standard. k=7. 4 or 16k block Turbo Product Codes optional.	Viterbi standard. k=7. 4 or 16k block Turbo Product Codes optional.
Standard Concatenated Reed Solomon	n=126, k=112, t=7 or n=219, k=201,t=9 or programmable, depth of 4 or 8	n=126, k=112, t=7 or n=219, k=201,t=9 or programmable, depth of 4 or 8
FEC (Viterbi or TPC) rate selectable	1/2, 3/4, 7/8 or disabled. Rate 5/6 in Viterbi only, Rate 2/3 in 8PSK mode.	1/2, 3/4, 7/8 or disabled. Rate 5/6 in Viterbi only, Rate 2/3 in 8PSK mode
Data Rates Minimum, all modem at FEC rate (without IBS Mux or R-S option)	5 Mbps, all modulation modes and FEC rates. 10 Mbps all modulation modes and FEC rates – see Note below 29.52 Mbps depending on modulation mode and FEC type an rates. – see Note below Note: Maximum rate limit of 7.38 Mbps, BPSK, rate ½; M523 Maximum rate limit of 14.76 Mbps, QPSK, rate ½, 19.68 Mbps 8PSK rate 2/3	1.2 kbps rate 1/2 BPSK, 2.4 kbps, rate ¾ or 7/8 BPSK 2.4 kbps rate ½, 4.8 kbps rate ¾ or 7/8 QPSK or OQPSK 9.6 kbps all rates 8PSK, 19.2 kbps all rates 16QAM
IBS Multiplexer (Standard Built-in)	IBS framing supporting enhanced buffered RS-232/485 overhead channel, AUPC, remote modem control and variable overhead.	IBS framing supporting enhanced buffered RS-232/485 overhead channel, AUPC, remote modem control and variable overhead.
Data Rate Selection: Transmit & Receive	Programmable in 1bps increments. Accurate to 2 x 10E-12 (relative to reference).	Programmable in 1bps increments. Accurate to 2 x 10E-12 (relative to reference).
Receive Data FIFO Buffer: Plesiochronous or Doppler Elastic Store	4 bits to 524,280 bits, programmable in 1 bit increments, or in delay time.	4 bits to 524,280 bits, programmable in 1 bit increments, or in delay time.
Data Interface (All Synchronous)	RS-449/422 or V.35 or EIA-530 or RS-232 electronically selectable at DB-37 connector. DB25 and V.35 (M34) adaptors available.	RS-449/422 or V.35 or EIA-530 or RS-232 electronically selectable at DB-37 connector. DB25 and V.35 (M34) adaptors available.
BER Performance:Viterbi FEC 1/2 rate:	10-7 at 6.0 dB Eb/No, 10-5 at 4.8 dB	10-7 at 6.0 dB Eb/No, 10-5 at 4.8 dB
1/2 Rate Viterbi + R-S Concatenated FEC:	10-7 at 3.7 dB, 3.5 dB typical (n=126, k=112)	10-7 at 3.7 dB, 3.5 dB typical (n=126, k=112)
3/4 Rate Viterbi + R-S Concatenated FEC:	10-7 at 4.7 dB, 4.5 dB typical	10-7 at 4.7 dB, 4.5 dB typical
1/2 Rate TPC FEC	10-7 at 3.0 dB, 2.8 dB typical	10-7 at 3.0 dB, 2.8 dB typical
3/4 Rate TPC FEC	10-7 at 3.7 dB, 3.5 dB typical	10-7 at 3.7 dB, 3.5 dB typical
Case Dimension	Rack mount at 1RU (19"W X 14"D X 1.75"H.)	
Input Power requirements	90 to 264 VAC, 50/60 Hz, Approx. 40 Watts, 60 Watts maximum, fully loaded including LNB power .	90 to 264 VAC, 50/60 Hz, Approx. 40 Watts, 60 Watts maximum, fully loaded including LNB power .
Operating Conditions:	0 to 50 Deg. C, to 95% humidity, non-condensing.	0 to 50 Deg. C, to 95% humidity, non-condensing.

Amplus Communication reserve the right to make any changes to products specification without notice