

ASM-31

2-Wire Multirate Short Range Modem



- Front panel LEDs provide indication for data receive and transmit, control signal status, state of the loopback tests and loss of synchronization.
- Line interface circuitry protects against lightning and power surges.

FEATURES

- Multirate short range modem operating in full duplex over 2-wire lines
- Synchronous and asynchronous operation
- Operating range up to 5.5 km (3.4 miles), irrespective of data rate
- 2B1Q line coding
- Adaptive equalizer for noise immunity and high performance over low quality lines
- Variety of DTE interfaces: RS-530, V.24, V.35, X.21, G.703 Codirectional, IR-ETH, IR-ETH/Q, IR-IP
- Selectable data rates:
 - Sync: 1.2 kbps to 128 kbps
 - Async: up to 38.4 kbps
- Available as a standalone unit or a single modem card
- Diagnostic loopbacks in compliance with ITU V.54

DESCRIPTION

- ASM-31, multirate sync/async short range modem, operates in full duplex over 2-wire twisted pair, at selectable data rates from 1.2 kbps to 128 kbps.
- ASM-31 operates using 2B1Q line coding and provides full duplex data transmission at the range of up to 5.5 km (3.4 miles), independent of the data rate. An adaptive equalizer provides noise immunity and high performance over low quality lines.
- The ASM-31 DTE interface options include V.24/RS-232, V.35, RS-530, X.21, G.703 Codirectional (64 kbps), IR-ETH, IR-ETH/Q, IR-IP. The line connection is provided via an RJ-45 or 3-screw terminal block connectors. Configuration is provided via internal jumpers and switches.
- ASM-31 is available as a standalone unit or as a single modem card for the 19-inch ASM-MN-214 rack.
- ASM-31 supports activation of the local analog, digital and remote digital loopbacks.

SPECIFICATIONS

LINE INTERFACE

- **Type**
2-wire unconditioned twisted pair
- **Coding**
2B1Q
- **Range**
Up to 5.5 km (3.4 miles) over 26 AWG line
- **Level**
Up to 14 dBm over 135Ω
- **Standard**
Line code and transmission specifications comply with ANSI T1.601, 1988
- **Connector**
RJ-45 and 3-screw terminal

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DTE INTERFACE

- **Type**
 - V.24/RS-232: 25-pin, D-type, female
 - V.35: 34-pin, female
 - RS-530: 25-pin, D-type, female
 - X.21: 15-pin, D-type, female
 - G.703 Codirectional (64 kbps): RJ-45 or 5-screw terminal block
 - IR-ETH (Ethernet bridge): RJ-45 or BNC coax
 - IR-ETH/Q (Ethernet bridge with VLAN support): RJ-45
 - IR-IP (IP router): RJ-45
- **Data Rate**
 - Synchronous: 1.2, 2.4, 4.8, 9.6, 19.2, 38.4, 64 or 128 kbps
 - Asynchronous: 1.2, 2.4, 4.8, 9.6, 19.2 or 38.4 kbps
- **Control Signals**
User-selectable:
 - DCD turns on upon synchronization or follows the remote RTS
 - DSR turns on upon power-up or follows the remote DTR

GENERAL

- **Diagnostics**
Digital loopbacks:
 - Local (DIG), activated by the front panel pushbutton
 - Remote (REM), activated by the front panel pushbutton or via the DTE interface pinsAnalog loopback:
 - Local (ANA), activated by the front panel pushbutton or via the DTE interface pins

Note: Activation of the local analog and remote digital loopbacks via the DTE interface pins is available only for the V.24/RS-232, V.35 and RS-530 interfaces.

- **Timing**
Master clock:
 - INT, supplied by internal oscillator
 - EXT, received from the DTE interfaceSlave clock:
 - LBT, derived from the line signal
- **Indicators**
PWR (green) – Power
RTS (yellow) – Request to Send
TD (yellow) – Transmit Data
RD (yellow) – Receive Data
DCD (yellow) – Data Carrier Detect
ERR (red) – Bit Error
LOS (red) – Signal Loss
TEST (yellow) – Test
- **Power**
AC: 115 VAC or 230 VAC ($\pm 10\%$), 47 to 63 Hz, 5W
DC: 24 VDC or -48 VDC
- **Protection**
AC/DC overvoltage protection via transformers connected to the transmit and receive lines
- **Physical**
Height: 44.0 mm / 1.7 in
Width: 21.5 cm / 8.5 in
Depth: 24.3 cm / 9.6 in
Weight: 1.15 kg / 2.55 lb

- **Specify DTE interface:**
 - V24** for V.24/RS-232 interface
 - 530** for RS-530 interface
 - V35** for V.35 interface
 - X21** for X.21 interface
 - G703** for G.703 Codirectional (64 kbps) interface
 - UTP** for IR-ETH module with RJ-45 connector
 - BNC** for IR-ETH module with BNC connector
 - UTP/Q** for IR-ETH/Q module
 - UTP/IP** for IR-IP module

Note: When using ASM-31/R with V.35 or X.21 interface, connector interface adapter (CIA) is required.

CIA/&

Connector interface adapter for ASM-MN-214 rack

- **Specify adapter type:**
 - V35/1** for adapting one 25-pin rack DTE connector to one V.35 34-pin connector
 - X21** for adapting two adjacent 25-pin rack DTE connectors to two X.21 15-pin connectors

RM-17

Special hardware for mounting one or two ASM-31 units in a 19-inch rack

ORDERING

ASM-31/*/\$

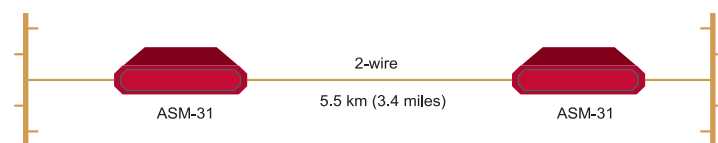
2-wire multirate short range modem

ASM-31/R/\$

Card version for ASM-MN-214 rack

- * Specify power supply:
 - 115** for 115 VAC power supply
 - 230** for 230 VAC power supply
 - 24** for 24 VDC power supply
 - 48** for -48 VDC power supply

APPLICATION



data communications

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662-100-01/01