ASM-10/8

Sync/Async Short Range Modem

FEATURES

- Synchronous or asynchronous
- Full or half duplex
- Selectable data rates up to 19.2 kbps
- Extended range up to 28 km (17.5 miles)
- Differential diphase modulation
- Carrier control for multipoint operation
- V.54 diagnostics including unattended remote test
- Detects power failure in the remote unit
- Line protection circuits
- Low power consumption

DESCRIPTION

■ The ASM-10/8, Short Range Modem, operates full or half duplex with synchronous or asynchronous transmission format over unconditioned dedicated lines. ASM-10/8 has an extended range of up to 28 km (17.5 miles) and operates at eight selectable data rates up to 19.2 kbps.

■ The modem uses conditioned differential diphase modulation (EUROCOM Std. D1), which provides immunity to background noise, and eliminates normal line distortion for efficient transfer of serial data over twisted pair cable. ASM-10/8 is coupled to the dedicated line through isolation transformers which, in conjunction with other circuitry, protect against AC or DC overvoltage. The protection circuitry enables operation even when DC is connected to the line.

■ Transmit level and impedance are independently selectable. Transmit timing can be provided internally, or can be derived externally from the data terminal or from the receive signal. Receive timing is regenerated from the data. Line communication is always synchronous. When set to async mode, ASM-10/8 performs async to sync conversion in compliance with ITU V.14 standard.

■ ASM-10/8 features V.54 diagnostic capabilities for performing local analog loopback, local and remote digital loopback. The operator at either end of the line may test both modems and the line when in the digital loopback mode. The loopback is controlled by either front panel pushbuttons or via Pins 18 and 21 of the V.24/RS-232 interface. A selectable option allows insertion of a delay into the data stream so that the V.54 loops are not carried across the network.

■ ASM-10/8 is available as a desk-top unit or as a rack-mount card for a 19" rack. The rack can carry up to 14 of the ASM-10/8 cards. The rack-mount card can detect and indicate power failure on the remote stand-alone unit. The front panel RPF indicator lights if remote power failure occurs.

SPECIFICATIONS

Transmission Line

Type:
Unloaded twisted pair:
19 to 26 gauge
2W for half duplex
4W for full duplex
Range: (see *Table 1*)
Level:
0 dBm, -3 dBm, -6 dBm, -9dBm
Impedance:
150, 300, 600Ω
Strap-selectable
Return loss:
Greater than 15 dB
Carrier:
Controlled by RTS or constantly ON
Modulation:
Differential diphase, Eurocom Std. D1

Digital Interface

Type:
EIA RS-232-C/ITU V.24
Data Rates:
Sync and async selectable
1.2, 2.4, 3.6, 4.8, 7.2, 9.6, 14.4, 19.2 kbps
RTS/CTS delay:
Strap-selectable
0, 8 or 64 msec

Diagnostics

Complies with V.54 standard
Digital loopback:
Local (DIG), activated by manual pushbutton
Remote (REM), activated by manual pushbutton or by DTE interface signal, Pin 21
Analog loopback:
Local (ANA), activated by manual pushbutton or by DTE interface signal, Pin 18

Timing Elements

Receive clock: derived from CDP receive signal

Transmit clock: derived from 3 alternative sources:
- Internal
- External from terminal, via Pin 24
- Loop clock, derived from receive signal, looped back as transmit clock.

Indicators

TD – Transmit Data
RD – Receive Data
RTS – Request to Send
DCD – Data Carrier Detect
TEST – Test
PWR – Power
RPF – Remote Power Fail (ASM-10/8/R only)

Physical

ASM-10/8/SA Modem:
Height: 44 mm / 1.7 in
Width: 215 mm / 8.5 in
Depth: 243 mm / 9.5 in
Weight: 956 gm / 2.1 lb

ASM-10/8/R Card:
Length: 230 mm / 9.0 in
Width: 157 mm / 6.2 in
Height: 25 mm / 0.9 in
Weight: 284 gm / 0.6 lb

ASM-MN-214 Rack:
Height: 178 mm / 7.0 in
Width: 480 mm / 19.0 in
Depth: 216 mm / 8.5 in
Weight: 4.0 kg / 8.8 lb

Power Supply

115 or 230V (±10%)
47 to 63 Hz; 3W

Protection

AC/DC overvoltage protection circuits are connected via transformers to transmit and receive lines.

Environment

Temperature: 0-50°C / 32-122°F
Humidity: up to 90%, non-condensing

Table 1. Approximate Range

Data Rate kbps	19 AWG (0.9 mm) km	19 AWG (0.9 mm) miles	24 AWG (0.5 mm) km	24 AWG (0.5 mm) miles	26 AWG (0.4 mm) km	26 AWG (0.4 mm) miles
19.2	22.5	14.0	10.0	6.2	7.5	4.7
14.0	24.5	15.3	11.0	6.9	8.2	5.1
9.6	29.0	18.1	13.0	8.1	9.5	5.9
7.2	33.0	20.5	15.0	9.4	11.0	6.9
4.8	36.0	22.5	16.0	10.0	12.0	7.5
3.6	40.0	25.0	18.0	11.2	13.5	8.4
2.4	47.0	29.3	21.0	13.1	15.7	9.8
1.2	55.0	34.3	28.0	17.5	21.0	13.1

ORDERING

ASM-10/8/SA/*
Short Range Modem, stand-alone unit with internal power supply

ASM-10/8/R
Short Range Modem card for ASM-MN-114 19" modem rack

ASM-MN-214/+/&
19" modem rack for 14 cards

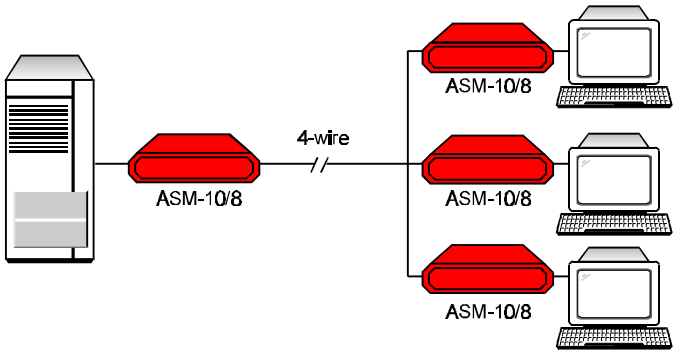
* Specify stand-alone power supply:
115 for 115 VAC
230 for 230 VAC

\+ Specify rack main power supply:
115 for 115 VAC
230 for 230 VAC
48 for -48 VDC

& Specify rack secondary power supply:
(Same options as the main power supply.)

Specifications are subject to change without prior notice.

APPLICATION



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