ASM-10/8

Sync/Async Short Range Modem

- Synchronous or asynchronous transmission format
- Selectable data rates up to 19.2 kbps
- Extended range up to 28 km (17.5 miles) over 24 AWG copper line
- V.54 diagnostics
- Remote unit power failure detection

The ASM-10/8 long range modem operates full or half duplex with synchronous or asynchronous transmission format over unconditioned dedicated copper lines.

ASM-10/8 has an extended range of up to 28 km (17.5 miles) over 24 AWG copper lines and operates at eight selectable data rates of 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 voltage 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 the ITU V.14 standard.

ASM-10/8 features V.54 diagnostic capabilities for performing local analog loopback and local/remote digital loopbacks. 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 can detect and indicate power failure on the remote unit. The front panel RPF indicator lights if remote power failure occurs.

ASM-10/8 is available as a desktop unit in a plastic enclosure.

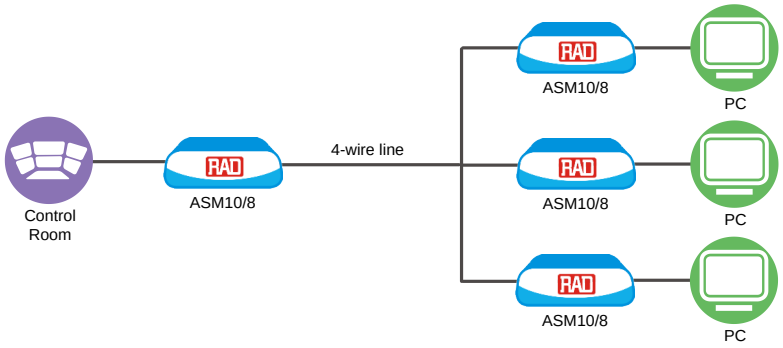

Figure 1. ASM-10/8 Point-to-Multipoint Application

ASM-10/8

Sync/Async Short Range Modem

Specifications

LINE INTERFACE

Line Type
Unloaded twisted pair 19 to 26 AWG
2-wire for half duplex
4-wire for full duplex

Range
(*see Table 1*)

Transmit Output Level
0, -3, -6, -9 dBm, jumper-selectable

Impedance
150, 300, 600Ω, jumper-selectable

Return loss
Greater than 15 dB

Carrier
Controlled by RTS or constantly ON

Modulation
- Differential diphase
- Eurocom Std. D1

SERIAL INTERFACE

Type
EIA RS-232-C/ITU V.24

Data Rates
Sync and async, 1.2, 2.4, 3.6, 4.8, 7.2, 9.6, 14.4, 19.2 kbps, jumper-selectable

RTS/CTS delay
0, 8 or 64 msec, jumper-selectable

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

Receive Clock Signal
Derived from CDP receive signal

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

GENERAL

Indicators
TD –Transmit Data

RD –Receive Data

RTS –Request to Send

DCD –Data Carrier Detect

TEST –Test

PWR –Power

RPF –Remote Power Fail

Physical
Height: 44 mm (1.7 in)

Width: 215 mm (8.5 in)

Depth: 243 mm (9.5 in)

Weight: 0.96 kg (2.1 lb)

Power
115 VAC (±10%)

230 VAC (±10%)

47 to 63 Hz

Power Consumption
3W

Environment
Operating temperature: 0 °C to 50°C (32 °F to 122°F)

Humidity: Up to 90%, non-condensing

Ordering

ASM-10/8/SA/*/+

Legend

* Power supply type
- **115** 115 VAC
- **230** 230 VAC
- **48** 48 VDC
- **24** 24 VDC

\+ Remote power fail indication (Default: without RPF indication)
- **RPF** Remote power fail indication

Table 1. Approximate ASM-10/8 Range

Data Rate	19 AWG (0.9 mm)		24 AWG (0.5 mm)		26 AWG (0.4 mm)	
[kbps]	[km]	[miles]	[km]	[miles]	[km]	[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

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