

F2238 / F2240 / F2245 FOM II Series RS-530 High-Speed Fiber Optic Modem



GENERAL DESCRIPTION

VERSITRON FOM II Series High-Speed Fiber Optic Modems convert RS-530 copper signals to light providing the capability for extended communication distances as well as isolation between two RS-530 devices. These modems convert RS-530 data at speeds up to 10 Mbps (synchronous) or 100 Kbps (asynchronous). Signals are transmitted up to 6 Km on multimode (MM) fiber cable or 15 Km on single mode (SM) fiber cable with fully transparent operation. The modems are data communications equipment (DCE) and support RS-530 (RS-422, RS-423) or MIL-STD-188-114 standards. They operate as two-channel multiplexer/modems. For high-speed synchronous operation, the first channel is used for data and the second is used for transmit clock. Both channels may be used for data in low-speed asynchronous operation, typically less than 100 Kbps. Operation modes include Automatic, Forced Asynchronous, or Forced Synchronous. Model F2238 uses 850nm MM LEDs for transmission up to 2 Km (1.24mi/6,560ft). Model F2240 uses 1300 MM LEDs for transmission up to 6 Km (3.7mi/19,680ft). Model F2245 uses 1300nm SM LEDs for transmission up to 15 Km (9.3mi/49,100ft). ST fiber optic connectors are standard for all models.

Three housing options are available. Model HF-1 single-card enclosures are available for standalone applications. Model HF-2SS 2-slot or HF-20A 20-slot chassis are available for standard 19" rack mount applications. Each modem installed in either the HF-1 or HF-2SS requires its own VAC to VDC power adapter. Modems installed in the HF-20A chassis are powered by the AC300WR power supply.

FEATURES

In Automatic modes, F22xx modems operate with a variable data rate from 250 Bps to 10 Mbps such as those found with high-speed telemetry systems. An internal bit-rate monitor selects the transmit-clock source. At clock rates under 100 Khz (or no clock), the Modems utilize an internal 10 Mhz reference for clocking. This assures a large number of samples for minimum end-to-end timing jitter. At clock frequencies over 100 Khz, the actual clock signal is used. In Forced Asynchronous modes the internal 10 Mhz reference is used. In Forced Synchronous modes the internal reference is disabled and the transmit-clock is used regardless of the data rate. Local and remote modems can be set to operate in different modes permitting operation in one direction at 10 Mbps synchronous and 250 Bps asynchronous in the other direction.

SPECIFICATIONS

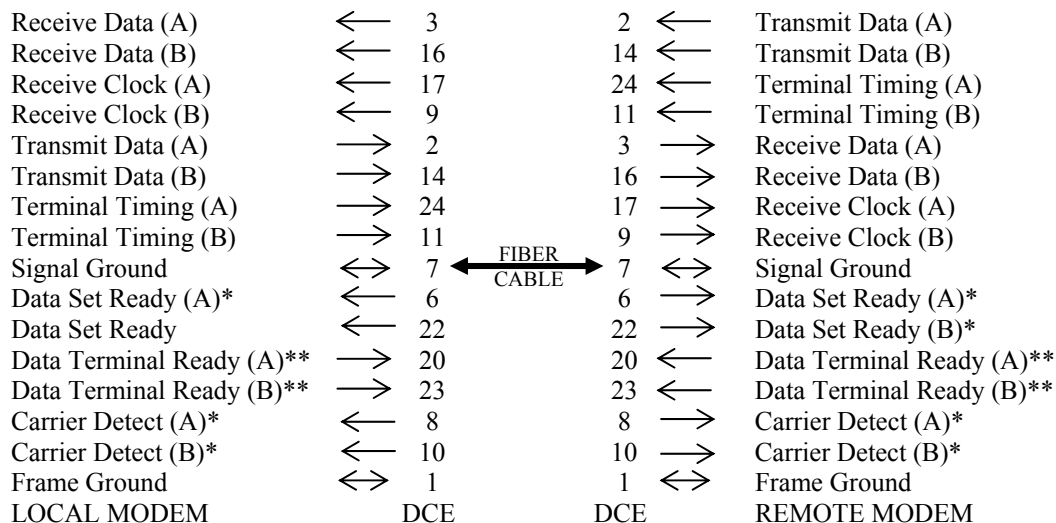
GENERAL	Dimensions	7 x 1 x 11 in. WxHxL (17.8 x 2.5 x 27.9 cm)
	Weight	12.0 oz (0.34 kg)
	Operating Temperature	0° to 50°C (32° to 122°F)
	Storage Temperature	-40° to 70°C (-40° to 158°F)
	Humidity	Up to 95% relative humidity (noncondensing)
	Altitude	Up to 10,000 ft

ELECTRICAL	Power Requirements	12 VDC / 1.5A
	Data Rate	Synchronous: 250 Bps to 10 Mbps / Asynchronous: 250 Bps to 100 Kbps
	Operation	Full duplex, Half duplex, Simplex
	Error Rate	Better than 10 ⁻⁹
	Connector	DB25 female
	Digital Interface	RS-530 (RS-422, RS-423) synchronous or asynchronous

FIBER OPTIC	Model	F2238	F2240	F2245
	Wavelength	Multimode 850nm LED	Multimode 1300nm LED	Single Mode 1300nm LED
	Connectors (2)	ST	ST	ST
	Link Budget	18 ± 1 dB	16 ± 1 dB	22 ± 1 dB
	Operating Range	2 Km / 1.24 mi / 6,560 ft	6 Km / 3.7 mi / 19,680 ft	15 Km / 9.3 mi / 49,100 ft
	Fiber Cable *	50/125, 62.5/125, 100/140 μM	50/125, 62.5/125, 100/140 μM	8/125, 9/125, 10/125 μM

* Note: Multimode tests were performed on 62.5/125 μM fiber optic cable.
Single Mode tests were performed on 9/125 μM fiber optic cable.

ACCESSORIES	Model	Description (Note: Dimensions measured WxHxL)	Weight
	HF-1	Single card standalone enclosure. 7.1 x 1.3 x 11.6 in. (18 x 3.3 x 29.5 cm)	0.5 kg (18 oz)
	HF-2SS	2-Slot rack mount chassis. 19 x 1.7 x 13.8 in. (48.3 x 4.3 x 35.1 cm)	1.2 kg (40 oz)
	HF-20A	20-Slot rack mount chassis. 19 x 7.1 x 12.4 in. (48.3 x 18 x 31.5 cm)	2.1 kg (73 oz)
	AC300WR	HF-20A power supply / monitor. 19 x 1.75 x 12.2 in. (48.3 x 4.5 x 31cm)	6.0 kg (212 oz)
	ADPHF01	Single slot blank panel.	0.05 kg (2 oz)
	ADPHF02	Double slot blank panel.	0.09 kg (3 oz)
	PSAC15	Power adapter, 120 VAC to 12 VDC (US). (Used with HF-1 and HF-2SS)	0.4 kg (14 oz)
PSAC09	Power adapter, 230 VAC to 12 VDC (VDE). (Used with HF-1 and HF-2SS)	0.4 kg (14 oz)	



* Produced by local modem, not received from remote modem
** Signal not physically passed, used to control signal flow through local modem

VERSITRON fiber optic modems are available for converting RS-232, RS-422, RS-423, RS-449, RS-485, RS-530, V.35, MIL-STD-188-114, MIL-STD-188C, T1, E1, DS3, NRZ, TTL and Audio (2-wire or 4-wire analog). Networking products available include Media Converters and Switches. Contact VERSITRON for more information.