

LFM series RS-232 / 422 / 485 serial optic fiber MODEM

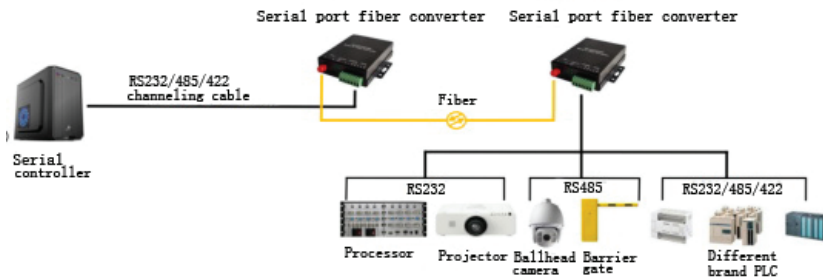
Lightem LFM series is a RS232 Fiber Modem that converts the RS232 / 422/ 485 serial signal over Fiber Optics interface. LFM series modem supports asynchronous RS-232/422/485 communication interface (Serial port communication rate up to 921.6KBPS). It is used to connect remote terminal unit (RTU) to a host (HOST) or a distributed data acquisition system (SCADA) controllers via Multimode and Singlemode Fiber.



FEATURES

- Support RS-232/RS-485/RS-422 ports
- Support synchronization, point-to-point, point-to-multiple transmission
- Automatic signal detection rate
- Prevent electrical interference and chemical corrosion
- Serial port transmission rate up to 256 KBPS
- 1500W surge protection, 15KV electrostatic protection
- Support multi-mode 2KM (dual fiber), single mode 20KM (single fiber, dual fiber) product selection
- Multi-mode transmission distance up to 2KM, single mode transmission distance up to 120KM (customized)

APPLICATION



SPECIFICATIONS

Technical	Values
<i>Fiber</i>	
Wavelength	1310-1550nm
Rate	155Mbps
Tx power	> -8db
Rx sensitivity	> -24db
Fiber connector	SC (FC/ST optional)
Data index Standard	Meets EIA RS-232 , RS-485 , RS-422 standards
Physical interface	7-Pin industry terminal
Baud rate	50 bps to 256 kbps (support non-standard baud rate)
Simultaneous use of ports	2
RS232	3-wire system (RXD 、 TXD 、 GND) 、 full duplex 、 point to point communication Maximum communication distance is 15 meters
RS485	2-wire (A 、 B) 、 half-duplex 、 point to mutiple points communication The maximum transmission distance is 1219m, transmission rate is inversely proportional to the transmission distance

RS422	4-wire, full duplex
	The maximum transmission distance is 1219m, transmission rate is inversely proportional to the transmission distance
	RS485 circuit index
RS-485 pull up resistance/ pull down resistance	1 kΩ ∙ 150 kΩ
RS-485 terminal resistance	N/A ∙ 120 Ω 和 120 kΩ
Power Input current	1A
Power Input voltage	5V
Overload current protection	Support
Power consumption	<1.5W
Chassis	Aluminum alloy
Product net weight	0.25kg
Mechanical Installation	Desktop
Operating temperature / humidity	-20°C ~75°C / 5 to 95% (non-condensing)
Storage temperature / humidity	-40°C ~85°C / 5 to 95% (non-condensing)
Size	105*90*25 mm
Working life	>100,000 hours

DESCRIPTION OF INDICATOR STATUS (TX/RX DEVICES DISPLAY THE SAME STATUS)

- PWR/FIBER light: Indicating light blinks when powered up, fiber light is on
- TXD light: Data transmitting when light blinks, light is off when no data
- RXD light: Data receiving when light blinks, light is off when no data

7-Pin industrial terminal printed description	
T+	RS422 data transmit +
T-	RS422 data transmit -
R+/D+	RS485A ∙ RS422 receive +
R-/D-	RS485B ∙ RS422 receive -
RS232T	RS232 transmit
RS232R	RS232 receive
GND	Ground wire

Attention

1. Lightning protection, static electricity and grounding:

It is recommended that when install the device, consideration should be given to the impact of grounding by lightning, and take prevention measures. Strong static electricity will damage the optical device and data chip in the equipment.

It is recommended that when plug/unplug the data port of the optical converter, please disconnect the power supply of the optical converter first.

2. Fiber and optical components

Be careful when plugging the optical fiber as optical components of the optical converter is very fragile, and it should avoid causing damage to the optical components. It should be noted that the light source produced by the optical components of the optical converter will be harmful to eyes, so do not have direct eye contact with the optical components of optical converter. if you need to detect the optical power of the optical converter, please use the optical power meter.

3. Equipment and installation procedures

(1) Optical fiber installation: please carefully insert the optical fiber into the optical fiber interface of the optical terminal after confirming that the optical fiber link meets the installation requirements.

(2) Equipment installation: the equipment does not distinguish between transmitter and receiver, and the equipment can be bidirectionally transmitted.

ORDERING INFORMATION

P/N	Descriptions
LFMRS244-ABC-x	(RS-232/422/RS485 Optical Fiber Modem)
A	M: Multimode S: Singlemode
B	D: Duplex S: Simplex
C	T: ST S: SC F: FC
x	S: Standalone R: Rackmount card type
LR2U-17	19" 2U Rackmount chassis support max 17x cards