

RS-232/422/485 Multi-Drop System

The DS-120MDR multi-drop fiber optical data sets are designed to connect multiple equipment with the RS-232/422/485 2- or 4-wire interface. The data sets consist of one Master unit and at least one Slave. Both Master and Slave units provide one port with Async data rates up to 125 Kbps NRZ, and 1 7/8" x 17" character LCD status display on any remote unit, achieving full diagnostics with no PC. The Master unit has one optical channel and the Slave unit has two optical channels –A and B.

The DS-120-MDR is ideal for traffic control, industrial process control, and security systems that are configured for bus or ring topologies. The fiber modems regenerate fiber optic signals and provide greater system loss budgets and increased distances.

System Design

The DS120-MDR series is connected to SCADA, ITS, card access systems, CCTV and security host poll equipment through the RS-232/422/485 interface. It transmits the host's data and control signals on the optical channel to all the Slave units. Each unit has built-in dual power redundancy with alarm back-up battery.

DS-120-MDR-B: In Bus configuration, the Slave unit receives data/control signals from the SCADA host's channel A, and loops through channel B to the next Slave unit. Slave responds with an RTS signal.



DS-120-MDR-R: In Ring configuration, channel B can be used as a counter-rotating ring. The SCADA host polls every Slave, the Slave responds by an RTS signal, then transmits data/control signals on channel A instead of looping through channel B.

Features

- Master / Slave multi-drop system
- Choice of RS-232, RS-422 or RS-485 EIA interfaces
- Bus or Ring system topology with anti-streaming
- Async data rates up to 125 Kbps
- 3-35 km range full-duplex fiber
- Multimode or Singlemode operation over two fibers
- Self-healing and diagnostic display capability
- Compatible with ONS PC-based network management

865	1310	1550	Type	Mode	Wavelength Suffix	Fiber Type	Output Power	Receiver Sensitivity	Optical Loss Budget	Range*	Conn Type
•			LED	MM	L0	50/125μ	-16 dBm	-34 dBm	18 dB	3 km	ST
•						62.5/125μ					
	•		LED	MM	L1	50/125μ	-16 dBm	-34 dBm	18 dB	4 km	ST
	•					62.5/125μ					
	•		Laser	SM	L2	09/125μ	-10 dBm	-34 dBm	24 dB	25 km	FC
		•	Laser	SM	L3	09/125μ	-10 dBm	-34 dBm	24 dB	35 km	FC

* Chromatic dispersion and additional losses should be taken into account

Data (Ethernet/Serial/USB)

Data

Data rate	DC to 125 Kbps Async per channel
Connector Type	DB25F (30 micron gold pin)
Interface	DCE for RS-232, RS-422 or RS-485 (2- or 4-wire)
Bit error rate	10E ⁻⁹

General

Dimensions & Weight	5.0" L x 5.0" W x 1.5" H	24 oz
Operating temperature	-20° C to +70° C	
Storage temperature	-30° C to +85° C	
Humidity	0 to 95% non-condensing	
Operating voltage	12 V _{DC} (300mA), 24 V _{AC} (300 mA) and -48 V _{DC} (150mA) optional	
Vibration	Up to 5 g's	
Shock	Up to 12 g's	

Diagnostics

Status monitoring	LED indicators for PWR,XMT. RCV, RTS, CTS and CD with anti-streaming capabilities
	ESD Full Protection
	True Tri-state sensing
	Re-clocking and regenerated data at each unit
	Individual addressable at each unit
	Multiple masters and slaves
	Local and remote loopback test

Optiva™ Configurable Communication Platform
Network Management
SDI & HD-SDI
Composite Video, Audio & Data
RGB/VGA/DVI
Audio/FSK/Intercom
Data (Ethernet/Serial/USB)
CATV/RF & L-Band
Optical Switching, Routing & Redundancy
Passive Multiplexing Solutions
Enclosures, Racks & Frames
Power Supplies & Accessories

10 YEAR WARRANTY
ISO 9001:2000 CERTIFIED

CE
FCC PART 15 COMPLIANT
MADE IN THE USA

Sample Configuration

