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ROCKETLINX® MC5001

Part Numbers - Single-Mode: 32000-5 | Multi-Mode: 32001-2

KEY FEATURES AND BENEFITS

- 3-in-1 RS-232/422/485 serial to fiber media converter
- Easy DIP switch configuration
- Models supporting Multi-Mode 5KM, Single-Mode 40KM
- Peer-to-Peer or Serial Fiber Ring transmission mode for serial fiber ring communication
- Auto baud rate detection, selection and direction
- Baud rate of up to 921Kbps
- High level immunity with 15KV ESD protection
- Two-way 120 ohm line terminator embedded
- Dual modes for power input, AC 24V (12-32V)/DC 24V (12-48V) with polarity reverse protection
- -20°C to 70°C extended operating temperature
- RoHS2 compliant under CE
- Rugged IP30 rated enclosure

PRODUCT DESCRIPTION

The RocketLinx MC5001 is a 1-port serial to fiber media converter designed to extend RS-232/422/485 serial communications across a fiber media link using two converters. This product features simple DIP switch configuration, an extended operating temperature range from -20°C to 70°C, and a wide input voltage range. Cabling to the product is attached via direct wire screw terminal blocks for serial and power, and ST connectors for fiber connections. The product is packaged in a rugged IP30 rated enclosure suitable for panel or DIN rail mounting.

Single-Mode and Multi-Mode fiber models meet the needs for long distance transmission up to 40KM. The RocketLinx MC5001 will automatically detect the data baud rate of the connected full-duplex serial device, up to 921Kbps.

The RocketLinx MC5001 supports two transmission configurations, Peer-to-Peer in half/full-duplex and Serial Fiber Ring (SFR) in half-duplex. In a Peer-to-Peer configuration, two fibers are required between the two converters, one for data in each direction (RX and TX). To expand the number of connected serial devices, and extend transmission distance, multiple MC5001 units can link to each other as a ring architecture in SFR mode.

HARDWARE

Enclosure
IP-31 Grade
Aluminum Metal Case
Installation Method
Panel mount or DIN rail
LED Indicators
POWER, Serial Data Transmit, Serial Data Receive, Serial Fiber Ring
Dimensions
4.5" x 1.0" x 3.8"
11.43 x 2.54 x 9.65 cm
Product Weight
0.32 lb
0.15 kg

ELECTRICAL SPECIFICATIONS

Device

DC Input Voltage	12-48 VDC
AC Input Voltage	12-32 VAC, 50/60Hz

Current Consumption
+24VDC, 65 mA
Power Consumption (max)
1.5W
Power Connector Type
(1) 3-pin screw terminal block
Reverse Polarity Protection
Protection against power input reversal
Over Current Protection
0.65A over current protection
ESD Surge Protection
Provides a minimum of 15KV protection for all serial lines

ENVIRONMENTAL SPECIFICATIONS

Air temperature

System On	-20 to 70° C
System Off	-40 to 80° C

Operating Humidity (non-condensing)
0% to 95%
Heat Output
5.1 BTU/Hr
Mean time between failures (MTBF)

Single-Mode	55.3 years
Multi-Mode	46.5 years

SERIAL COMMUNICATIONS

Connector Type
(1) 7-Pin screw terminal block
Supported Standards
RS-232 (TxD, RxD, GND)
RS-422 4-wire (TxD+, TxD-, RxD+, RxD-, GND)
RS-485 Half-Duplex (Data+, Data-, GND)
RS-485 Full-Deplex (TxD+, TxD-, RxD+, TxD-, GND)
Baud Rate
300 to 921.6Kbps
Serial Link Distance

RS-232	50 feet
RS-422	4000 feet
RS-485	4000 feet

OPTICAL FIBER SPECIFICATIONS

Fiber Mode
Single-Mode or Multi-Mode
Connector Type
(2) ST
Fiber Ports
(1) Fiber TX port
(1) Fiber RX port
Fiber Cable Type
Single-mode
8/125um, 9/125um or 10/125um
Multi-mode
50/125um or 62.5/125um
Link Distance (Max)

Single-Mode	40KM with 9/125um
Multi-Mode	5KM with 62.5/125um

Wavelength

Single-Mode	1310nm
Multi-Mode	820nm

Transmit (TX) Power (Min)

Single-Mode	-9 dBM
Multi-Mode	-12 dBM

Transmit (RX) Power (Max)

Single-Mode	-8 dBM
Multi-Mode	-9 dBM

Receive (RX) Sensitivity (Min)

Single-Mode	-27 dBM
Multi-Mode	-28 dBM

Link Budget

Single-Mode	18 dBM
Multi-Mode	16 dBM

Architecture
PTP Mode
Peer-to-Peer wiring in Full-Duplex or Half-Duplex
SFR Mode
Serial Fiber Ring in Half-Duplex

EXPORT INFORMATION

Packaged Shipping Weight
0.55 lbs
0.25 kg
Package Dimensions
6.0" x 2.5" x 5.0"
15.24 x 6.35 x 12.7 cm
UPC Code

Single-Mode	7-56727-32000-5
Multi-Mode	7-56727-32001-2

ECCN
5A991
Schedule B Number
8517.62.0050

REGULATORY APPROVALS

Emissions
European Standard EN55022
FCC Part 15 Subpart B
Class B limit
Canadian EMC Requirements
ICES-003
Immunity
European Standard EN55024:
IEC 1000-4-2/EN61000-4-2: ESD
IEC 1000-4-3/EN61000-4-3: RF
IEC 1000-4-4/EN61000-4-4: Fast Transient
IEC 1000-4-5/EN61000-4-5: Surge
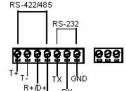IEC 1000-4-6/EN61000-4-6: Conducted Disturbance
IEC 1000-4-8/EN61000-4-8: Magnetic field
IEC 1000-4-11/EN61000-4-11: Dips and Voltage Variations
Other
RoHS2 compliant under CE
Regulatory Approvals

PIN ASSIGNMENTS

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