In-line Fiber Optic Modem
Model BB-FOSTC

B+B SmartWorx

Powered by ADVANTECH

PRODUCT FEATURES

- Extend serial signals up to 4 km (2.5 mi) over multi-mode fiber
- Point-to-point or multi-drop ring configuration
- Inherent EMI/RFI immunity from surges, spikes, ground loops
- Data rates: RS-232, up to 115.2 kbps; RS-422/485, 500 kbps
- Quick, inline installation
- Modbus compatible
- External power source required (not included, sold separately)

Fiber optic cabling has inherent resistance to EMI/RFI and transient immunity, making it ideal for industrial and utility data communication applications.

Model BB-FOSTC provides the most versatile connection possible between asynchronous serial equipment using fiber optic cable. Any two pieces of asynchronous serial equipment can communicate full- or half-duplex over two fibers at distances up to 4 km (2.5 mi). The converter can be used for point-to-point communications between serial devices. It can also be used to create a multi-drop master/slave configuration, allowing one serial device to talk to multiple slave devices around a fiber ring.

RS-232, RS-422 or RS-485 data signals are supported. Different standards can be mixed and matched to allow RS-232 devices to connect to RS-422 or RS-485 systems. This means Model BB-FOSTC can replace converters and isolators when connecting remote devices, while providing the EMI/RFI and transient immunity of optical fiber.

Model BB-FOSTC supports both Transmit Data and Receive Data lines, and provides full hardware control of the RS-485 driver with B+B SmartWorx' Automatic Send Data Control circuit. All serial connections are provided on the same DB25 female connector, while the multi-mode fiber is connected via two ST connectors. Powered by 12 VDC at 140 mA (maximum). An external power sourced is required (not included, sold separately).

ORDERING INFORMATION

MODEL NUMBER	SERIAL CONNECTOR	FIBER CONNECTOR	MODBUS?
BB-FOSTC	DB25 female	Multi-mode ST	✔

ACCESSORIES – sold separately

BB-SMI6-12V-P230C1 - Power Supply, 12 VDC, 6 Watt, 2.5mm Plug, International AC Input, BB-International AC Blades

BB-232CAM - PC-AT serial computer to modem cable, 1.8 m (6 ft)

Automatic Send Data Control Explained

As operating systems become more complex, it is increasingly difficult to control an RS-485 driver with standard software and the RTS line. This is especially true in Windows and multi-tasking operating systems. With B+B SmartWorx' Automatic Send Data Control circuit, driver control is in the converter hardware, so you do not have to work with software at all.

The circuit monitors data flow and enables the driver during transmission and automatically disables it when no data is being sent. There is no need to rework software or install new drivers. Most B+B SmartWorx RS-232 to RS-485 converters and RS-485 serial cards include Automatic Send Data Control.

Note: Under the Model Number colulmn, change the "XX" to desired fiber length suffix for actual Model Number.
Example: If you want a 1M (1 meter) long, multi-mode LC to LC fiber cable, the part number would be DFMM-LCLC-1M.

All product specifications are subject to change without notice.
BB-FOSTC_4918ds

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SPECIFICATIONS

SERIAL TECHNOLOGY	
Data Rate	RS-232: 115.2 kbps, maximum RS-422/485: 500 kbps, maximum
RS-232	
Connector	DB25 female (DCE)
Signals	TD, RD, GND
RS-422/485	
Connector	DB25 female (DCE)
RS-485, 2-wire	Data A(-), Data B(+), GND
RS-422/485, 4-wire	TDA(-), TDB(+), RDA(-), RDB(+), GND

FIBER OPTIC TECHNOLOGY	
Transmission Line	Dual, multi-mode glass optical cable
Connector	ST
Wavelength	820 nm
Size Options	50/125, 62.5/125, 100/140, 200 μm
Output Power	(-) 17 to (-) 10 dBm
Receive Sensitivity	(-) 25.4 dBm to (-) 24 dBm
Cable	62.5/125 micro-meter
Data Rate	9.6 to 115.2 kbps
Maximum Distance	4 km (2.5 mi)

FIBER COMMUNICATION MODES	
Point-to-Point Transmission	Asynchronous, half or full-duplex
Multi-Drop Transmission	Asynchronous, half duplex fiber ring

POWER	
Source	External
Input Voltage	12 VDC
Range DC	10 to 14 VDC
Connections	2.5mm phone jack (tip positive) or DB25 pins 25(+) & 12(-)
Power Consumption	1.7 W maximum, 1 W typical

MECHANICAL	
Dimensions	11 x 5.9 x 2.5 cm (4.3 x 2.3 x 0.95 in)
Enclosure	Plastic, Inline

ENVIRONMENTAL	
Operating Temperature	-40 to +80 °C (-40 to +176 °F)
Storage Temperature	-40 to +85 °C (-40 to +185 °F)
MTBF	570522
MTBF Calculation Method	Parts Count Reliability Prediction

APPROVALS / CERTIFICATIONS - BB-FOSTC
FCC Part 15, CISPR, EN 55022 + AC:2011 Class A Emissions
CE
EN 61000-6-1 Generic Standards for Residential, Commercial and Light-Industrial Environments