HFD-FO-FD Series

CAN FD to Fiber Optic Converter

Product Description

The HFD series products, which uses the most advanced technology in the world, providing an optical point-to-point or bus network connection for CAN FD data interfaces on one or two, multi mode or single mode optical fibers. A twisted pair port has an independent CAN (FD) transceiver, which can multiply the number of nodes. Therefore, while providing free wiring mode, it also cancels the limit to the maximum number of nodes driving of CAN (FD) transceiver on the system bus, One optical fiber port can make HFD-FO-FD be applied in high interference environment, especially in high-voltage occasions and power occasions. Each port also has a led indicator for detecting bus activity and bus fault, which is convenient to observe the CAN (FD) network's working state.

The HFD-FO-FD can be used in CAN (FD) network with baud rate up to 5 Mbps. It can be used in various high-level CAN (FD) protocols (CANopen, SDS, J1939, DeviceNet or other customized protocols).

The HFD-FO-FD can be configured with corresponding CAN (FD) message filter to ensure that only the required data is transmitted to other CAN (FD) networks through the repeater. Therefore, the device can effectively reduce the network load.

The HFD-FO-FD can be configured by connecting to PC through asynchronous serial communication interface. Configuration software is based on Windows OPS, which is easy to use and configuration can take effect immediately. After equipment configuration is completed, it can be put into operation directly.

Product Features

◆ 32-bit 400Mb high-speed processor, embedded with real-time operating system and adaptive flow control algorithm, suitable for the system with strict real-time requirements.

◆ The port has queue buffering to ensure the frame integrity of all applications from low speed to high speed.

◆ The port uses rotary dial switch to set the baud rate of CAN (FD) data. For most applications, customers even do not need to use configuration software.

◆ The port has indicator for sending, receiving and status indication, which is convenient for industrial field debugging.

◆ The configuration software and configuration method of CAN (FD) to serial port, CAN (FD) bridge, CAN (FD) switch, CAN (FD) to optical (point-to-point), CAN (FD) to optical (bus type), CAN (FD) fiber optic switch are completely unified. Customers can switch between these products seamlessly.

◆ The CAN FD port can process 5000 frames per second.

◆ The CAN (FD) interface has electrical isolation, and the isolation voltage is 2500V DC

◆ It has 1-channel fiber interface (transmission distance 10-15km, 25km / 40km / 60km optional), ST / SC / FC interfaces as option.

◆ Optical fiber connection: point to point

◆ Users can configure communication baud rate: 5Kbps ~ 5Mbps through rotary button or RS232 port

◆ Powerful CAN (FD) message filtering function,which can effectively avoid unnecessary messages being forwarded

◆ Built in terminal resistor and external termination resistor are optional.

◆ Power supply, device status, bus transmitting, bus receiving, bus error LED indicators.

◆ Wide voltage range: 9-40V DC (surge, over-current, reverse connection protection)

◆ Industrial temperature range: - 40 ℃ ～ + 85 ℃

◆ 3 years warranty

Typical System Configuration
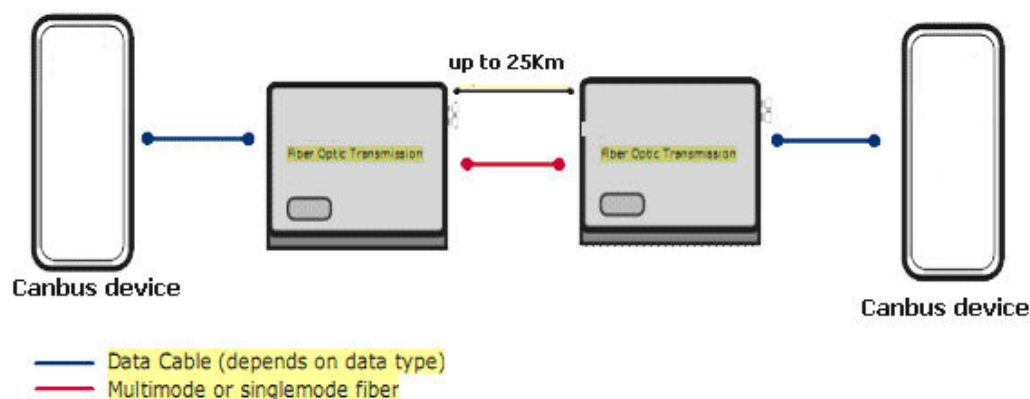
Specifications：

Data	
Data Formats	CAN FD ,Device Net,CANOPEN
CAN Data Rate	5Kbps~5Mbps
Bit Error Rate	<1 x 10-12
Connectors	
Data	Screw Block Terminal or DB9
Fiber	ST, SC or FC (ST fitted as standard)
Environmental	
Operating Temperature	-30C~+70C
Storage Temperature	-40C~+85C
Operating Humidity	0-95%
MTBF	>100,000 Hours
Optical	
Fiber	Single mode or Multi Mode
Wavelength	MM: 850/1310nm,SM: 1310/1550nm
Number of fibers	2 or 1
Power	
Power Input	9~40V DC
Mechanical	
Dimensions	43(W)×88.5(D)×124.5(H)mm DIN Rail

Ordering Information:

Model Number	Description	Fiber No.	Fiber Mode	Fiber Connector
HFD-FO-FD-P1M	Point to Point Link,Single Fiber(BI-DI), 2km, DIN Rail mount	1	Multi Mode	ST/SC/FC
HFD-FO-FD-P2M	Point to Point Link,Dual Fiber, 2km, DIN Rail mount	2	Multi Mode	ST/SC/FC
HFD-FO-FD-P1S	Point to Point Link,Single Fiber(BI-DI), 20km, DIN Rail mount	1	Single Mode	ST/SC/FC
HFD-FO-FD-P2S	Point to Point Link,Dual Fiber, 20km, DIN Rail mount	2	Single Mode	ST/SC/FC
CAN-FD-FIB-100PT-P1M	Point to Point Link,Single Fiber(BI-DI), 2km, Wall or rack mount	1	Multi Mode	ST/SC/FC
CAN-FD-FIB-100PT-	Point to Point Link,Dual Fiber, 2km, Wall or	2	Multi Mode	ST/SC/FC

Contact: sales@buenoptic.net

P2M	rack mount			
CAN-FD-FIB-100PT-P1S	Point to Point Link,Single Fiber(BI-DI), 20km, Wall or rack mount	1	Single Mode	ST/SC/FC
CAN-FD-FIB-100PT-P2S	Point to Point Link,Dual Fiber, 20km, Wall or rack mount	2	Single Mode	ST/SC/FC
CAN-FD-100BT-M2M	Multi-drop Link,Dual Fiber(BI-DI), 2km	2	Multi Mode	ST/SC/FC
CAN-FD-100BT-M4M	Multi-drop Link,4 Fiber, 2km	4	Multi Mode	ST/SC/FC
CAN-FD-100BT-M2S	Multi-drop Link,Dual Fiber(BI-DI), 20km	2	Single Mode	ST/SC/FC
CAN-FD-100BT-M4S	Multi-drop Link,4 Fiber, 20km	4	Single Mode	ST/SC/FC
CAN-FD-FIB-MIXED-P1M	CANFD Fiber Optic Switch, 2 CAN+2 Fiber	2	Multi Mode	ST/SC/FC
CANFD-FIB-MIXED-P2M	CANFD Fiber Optic Switch, 2 CAN+4 Fiber	4	Multi Mode	ST/SC/FC
CANFD-FIB-MIXED-P1S	CANFD Fiber Optic Switch, 2 CAN+2 Fiber	2	Single Mode	ST/SC/FC
CANFD-FIB-MIXED-P2S	CANFD Fiber Optic Switch, 2 CAN+4 Fiber	4	Single Mode	ST/SC/FC
CANFD-Bridge-200T	CAN FD to CAN Bus Bridge	N/A	N/A	N/A
CANFD-SW-400T	CAN FD Switch	N/A	N/A	N/A
CANFD-COM-100T	CAN FD to RS-232/485/422 Converter	N/A	N/A	N/A
CANFD-USB-100T	CAN FD to USB Converter, 1 channel	N/A	N/A	N/A
CANFD-USB-200T	CAN FD to USB Converter, 2 channels	N/A	N/A	N/A
CANFD-NET-100T	CAN FD to Ethernet Converter 1 channel	N/A	N/A	N/A
CANFD-NET-200T	CAN FD to Ethernet Converter 2 channels	N/A	N/A	N/A