

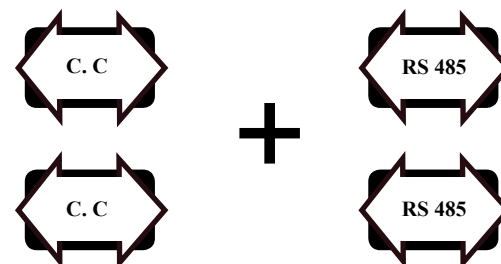
## Digitally Encoded Two Bi-directional Contact Closure and Two Full Duplex RS-485 Data (2-wire)



Card with  
Screw Terminals  
Connector



Card with  
DB25-F  
Connector



### FEATURES:

- One Slot Digital Module Design
- Real Time Contact Closure and Data Transmission
- Meets RS-250C Short Haul Transmission Specifications
- Two Full Duplex Contact Closure and RS-485 (2-wire) Data Channels
- Wide Optical Dynamic Range: Eliminates Need For Optical Attenuators
- Laser Based Systems for Multimode and Singlemode
- Surface Mount Technology (SMT) for High Reliability and Repeatability
- SpectraSmart™ Network Management Compatible
- Local LED Status Indicators to Monitor Critical System Diagnostics for Performance Parameters
- ST, FC Optical Connector
- Hot Swappable Cards
- Laser Back - Biased Photo Detector Circuitry for Stable Optical Output Over Full Temperature Range
- Meets EIA RS-170, RS-343A Formats
- Screw Terminals or DB25-F connector for Contact/Data interfaces

### DESCRIPTION:

The FXA/FXB-2C2J-x series fiber optic transmission system takes advantage of Meridian's new digital encoding technology and transmits following signals:

1. Two Bi-directional Contact Closure channels
2. Two full-duplex RS-485 Data (2-wire)

#### Example Transmission Configuration:

##### Side A:

FXA-2C2J-55

- a. 2-ch Contact Closure = Tx @ 1550nm & Rx @ 1570nm
- b. 2-ch RS-485 (2-wire) Data = Tx @ 1550nm & Rx @ 1570nm

##### Side B:

FXB-2C2J-57

- a. 2-ch Contact Closure = Tx @ 1570nm & Rx @ 1550nm
- b. 2-ch RS-485 (2-wire) Data = Tx @ 1570nm & Rx @ 1550nm

Both, multimode and singlemode, one or two fibers versions are available. The versatility of the FXA/FXB-2C2J-x system is enhanced by its compatibility with Meridian's PC based SpectraSmart™ Network Management and Remote Diagnostic Software System. SpectraSmart™ supervises the operating parameters of the transmission system such as status on video levels, sync, carrier detect, voltage, temperature, optical levels, data present etc. See the SpectraSmart brochure for more details.

### CONFIGURATIONS:

The DigiSlim products is available as rack mount cards that can be installed in either Meridian's desk chassis or in 19" rack-ing frames. Shelf/surface mount modules are also available. This system can be configured in either star (module to rack) or trunk-ing (rack to rack) configurations. These systems can be made a standalone system by using the SR-500/S, SR-1000/s, 1 or 2 slot desk / wall mount chassis (87 VAC- 264VAC)

### MARKETS:

- Intelligent transportation systems (ITS)
- Security and surveillance
- Access Control

## SPECIFICATIONS:

### Data

|                |                   |
|----------------|-------------------|
| Formats        | RS-485 (2-wire)   |
| Data Rate      | DC to 250 Kb/s    |
| Bit Error Rate | 10 <sup>-9*</sup> |

### Contact Closure

|                |                     |
|----------------|---------------------|
| Formats        | Contact Closure     |
| Rate           | 10 Hz.(Per Channel) |
| Bit Error Rate | 10 <sup>-9*</sup>   |

### Connectors

|                |                                     |
|----------------|-------------------------------------|
| Optical        | ST - MM(default), FC - SM(default)  |
| Power (module) | See SR-500 Brochure for details     |
| Data           | Screw Terminals (default) or DB25-F |

### Optical

|                 |         |
|-----------------|---------|
| Fiber Data Rate | 50 Mb/s |
|-----------------|---------|

### Power \*\*

|      |         |
|------|---------|
| Card | 6 Watts |
|------|---------|

\* measured @ max. optical budget

\*\* Due to variations of drivers and diagnostic options, power shown @ max value

### Indicators (LEDs)

|              |                                |
|--------------|--------------------------------|
| 1 - Green    | Power On                       |
| 1 - Bi-color | TX Carrier/ Laser Over Current |
| 1 - Bi-color | RX Carrier - Present / Error   |
| 2 - Green    | Tx Data Present                |
| 2 - Green    | Rx Data Present                |
| 2 - Green    | Contact Closure Present        |
| 2 - Green    | Contact Closure Present        |

### Physical

|                   |                                |
|-------------------|--------------------------------|
| Dimensions (Card) | 160 mm (6.3") L, 127 mm (5") W |
|                   | 20mm (0.80") W                 |
| Weight (Card)     | 450 gms (16 Oz)                |
| No. of Slots      | 1                              |
| Module            | See SR-500 Brochure            |

### Environmental

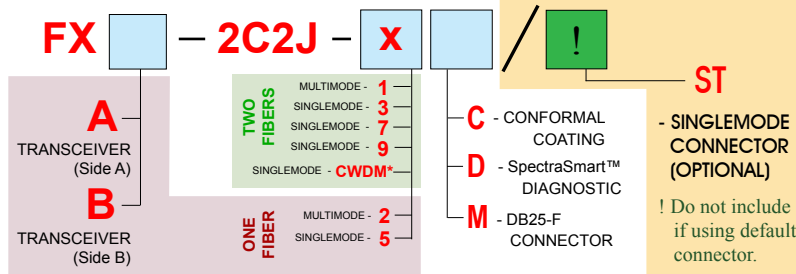
|                       |                         |
|-----------------------|-------------------------|
| Operating Temperature | -34°C to +74°C          |
| Storage Temperature   | -55°C to +85°C          |
| Relative Humidity     | 0 to 95% Non-condensing |

### Quality

|      |   |
|------|---|
| MTBF | >170,000 hours @ Ground Fix<br>35°C per MIL217F |
|------|---|

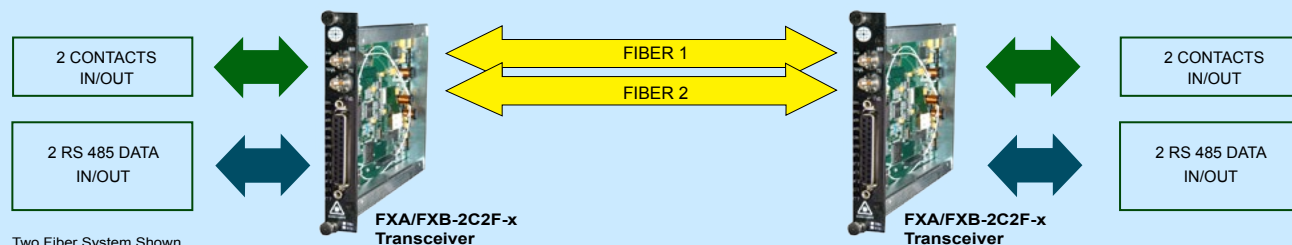
### Part Numbers:

| CWDM LASER GUIDE |                         |
|------------------|-------------------------|
| REFERENCE NUMBER | WAVELENGTH              |
| 27               | CWDM, 1270 nm DFB Laser |
| 29               | CWDM, 1290 nm DFB Laser |
| 31               | CWDM, 1310 nm DFB Laser |
| 33               | CWDM, 1330 nm DFB Laser |
| 35               | CWDM, 1350 nm DFB Laser |
| 37               | CWDM, 1370 nm DFB Laser |
| 39               | CWDM, 1390 nm DFB Laser |
| 41               | CWDM, 1410 nm DFB Laser |
| 47               | CWDM, 1470 nm DFB Laser |
| 49               | CWDM, 1490 nm DFB Laser |
| 51               | CWDM, 1510 nm DFB Laser |
| 53               | CWDM, 1530 nm DFB Laser |
| 55               | CWDM, 1550 nm DFB Laser |
| 57               | CWDM, 1570 nm DFB Laser |
| 59               | CWDM, 1590 nm DFB Laser |
| 61               | CWDM, 1610 nm DFB Laser |



| STANDARD PART NUMBERS |  |
|-----------------------|--|
| PART NUMBER           | DESCRIPTION  |
| FX-2C2J-1             | Transceiver module, multimode, 1300 nm, 2 fibers               |
| FX-2C2J-3             | Transceiver module, singlemode, 1310 nm, FP laser, 2 fibers    |
| FX-2C2J-7             | Transceiver module, singlemode, 1550 nm, DFB laser, 2 fibers   |
| FX-2C2J-9             | Transceiver module, singlemode, 1310 nm, DFB laser, 2 fibers   |
| FXA/FXB-2C2J-2        | Transceiver module, multimode, 850/1310 nm laser, 1 fiber      |
| FXA/FXB-2C2J-5        | Transceiver module, singlemode, 1310/1550 nm FP laser, 1 fiber |

\* See CWDM Laser Guide table for CWDM Lasers selection



### OPTICAL:

| Meridian Optical Code | Fiber Type/Size (um)           | Optical Output (dBm) | Receiver Sensitivity (dBm) | Optical Budget (dB) | Wavelength (nm) | Optical Connector | Optical Dynamic Range (dB) | Max Distance (Km) |
|-----------------------|--------------------------------|----------------------|----------------------------|---------------------|-----------------|-------------------|----------------------------|-------------------|
| 1                     | Multimode (Laser) 62.5 / 125   | -5                   | -27                        | 22                  | 1300            | ST                | 27                         | 7                 |
| 3                     | Singlemode (FP Laser) 9 / 125  | -5                   | -27                        | 22                  | 1310            | ST, FC            | 27                         | 60                |
| 2                     | Multimode (Laser) 62.5 / 125   | -5                   | -25                        | 20                  | 850/1300        | ST                | 25                         | 7                 |
| 5                     | Singlemode (FP Laser) 9 / 125  | -5                   | -25                        | 20                  | 1310/1550       | ST, FC            | 25                         | 55                |
| 7, 9, CWDM            | Singlemode (DFB Laser) 9 / 125 | +1                   | -27                        | 28                  | CWDM            | ST, FC            | 27                         | 80                |

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