

## Serial RS-422/485 Copper to Fiber Converters



*Illustrated: RS-422/485 Copper to Fiber converter family.*

Canary's CSC-4D9MX (multi-mode) and CSC-4D9S1 (single-mode) family is designed for linking Serial RS-422/485 devices over fiber optic segments. They allow the direct connection of 120 Kbps Serial devices via fiber cable links that are electromagnetic, and radio frequency (RFI) and electrical surge immune. CSC-4D9XX converters are ideal for industrial process control, surveillance, and other remote access applications with RS-422/485 interfaces. These compact stand alone units provide an economic solution for Serial to standard multi-mode and single-mode fiber conversion.

***Installed success ... proven in the field.***

**CSC-4D9MX**  
Serial to Standard  
Multi-mode fiber

**CSC-4D9SX**  
Serial to Standard  
Single-mode fiber

### **Features:**

**Supports  
asynchronous  
data transfer rate  
up to 120Kbps**

**Internal DIP switch-  
enabled termination**

**Economic linkage of  
Serial RS-422/485  
devices over fiber  
optic networks.**



## Product Specifications

### Standards:

- EIA/TIA-422, EIA/TIA- 485

### Connectors:

- DB-9 for RS-422/485; ST/SC for Multi-mode fiber; SC, ST for Single-mode fiber

### Max. Distance:

- Copper: up to 1200 meters.
- Fiber: 2000 meters (Multi-mode)  
30 kilometers (Single-mode)

### Power:

- Input Voltage: 120 VAC
- Output: 12 VDC 800 mA  
(External power adapter)
- Frequency: 60 Hz

### Environment:

- Operating:  
Temperature: 0°C to 50°C  
Relative Humidity: 10% to 80%,  
non-condensing
- Storage:  
Temperature: -20°C to 70°C  
Relative Humidity: 5% to 90%,  
non-condensing

### Emissions:

- FCC Part 15 of Class A & CE approved

### Dimensions:

- 4.3x 2.9x .95 inches [109.2 x 73.8 x  
23.4mm] (L x W x H)

### Weight:

- 0.33 Lb (0.15 Kg)

### Warranty:

- Three years, parts and labor

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## Serial RS-422/485 Copper to Fiber Converters



Illustrated: RS-422/482 Copper to Fiber converter

The page that follows provides ordering information for Canary's Serial RS-422/485 Copper to Fiber Converter products:

- **Serial to Standard Multi-mode fiber**  
CSC-4D9MX
- **Serial to Standard Single-mode fiber**  
CSC-4D9SX



Canary Communications is an  
ISO 9001 : 2000 registered company.



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# Serial RS-422/485 Copper to Fiber Converters

**CSC-4D9MX** – Serial to Standard Multi-mode fiber

**CSC-4D9SX** – Serial to Standard Single-mode fiber

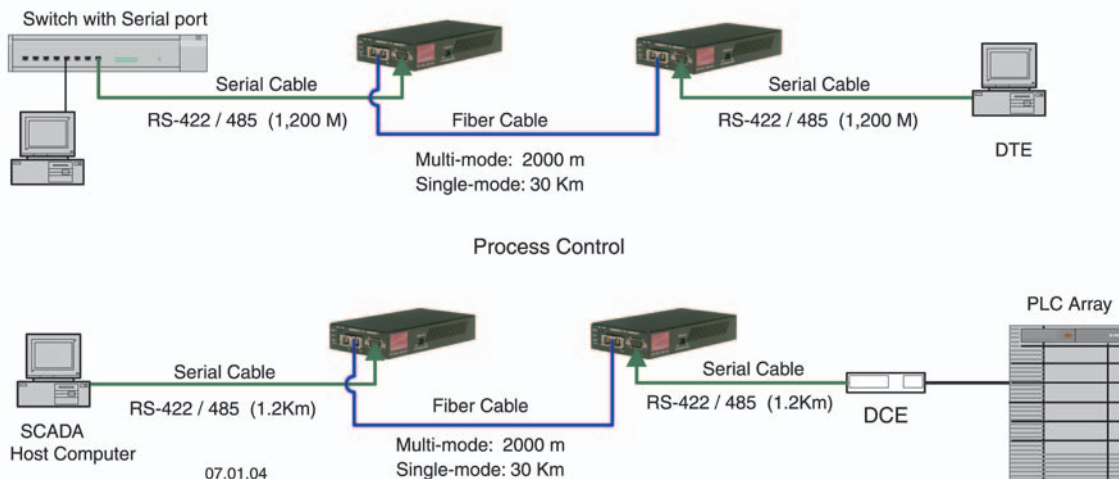
- Complies with EIA/TIA-422, EIA/TIA-485 specifications
- Supports asynchronous data transfer rates of up to 120 Kbps
- LED status indicators (power, link and receive)
- Easy "plug-and-go" installation
- Supports 4-wire full and half duplex modes
- Internal DIP switch enabled termination
- DTE, DCE selection push-button
- FCC Class A and CE approved
- Available ST/SC connectors
- External power supply

## Ordering Information

| Model Numbers   | Media Types | Optical Specifications |             |                |                 |                |                |                |                  |                   |
|---|-------------|------------------------|-------------|----------------|-----------------|----------------|----------------|----------------|------------------|-------------------|
|   |             | Min. Tx PWR            | Max. Tx PWR | Rx Sensitivity | Min. PWR Budget | Max.PWR Budget | Max. Input PWR | Connector Type | Wavelengths (nm) | Transmit Distance |
| CSC-4D9-M1  | RS / MM *   | -20.0 dBm              | -14.0 dBm   | -31.0 dBm      | 11.0 dB         | 17.0 dB        | N/A            | DB-9 / SC      | 1310 nm          | 2000 m            |
| CSC-4D9-M2  | RS / MM     | -20.0 dBm              | -14.0 dBm   | -31.0 dBm      | 11.0 dB         | 17.0 dB        | N/A            | DB-9 / ST      | 1310 nm          | 2000 m            |
| <i>Specifications above in blue are for multi-mode, fiber connectors. Specifications below for single-mode, fiber connectors.</i> |             |                        |             |                |                 |                |                |                |                  |                   |
| CSC-4D9-S1  | RS / SM     | -15.0 dBm              | -8.0 dBm    | -34.0 dBm      | 19.0 dB         | 26.0 dB        | -7.0 dBm       | DB-9 / SC      | 1310 nm          | 30 Km             |
| CSC-4D9-S2  | RS / SM     | -15.0 dBm              | -8.0 dBm    | -34.0 dBm      | 19.0 dB         | 26.0 dB        | -7.0 dBm       | DB-9 / ST      | 1310 nm          | 30 Km             |

\* Serial RS-422 / 485 interfaces (copper cable)

### CSC-2D9MX & CSC-2D9SX Serial-to-Ethernet Fiber Converters



The diagram illustrates typical applications for the CSC-4D9M1 series. The actual distances will depend on several factors including the quality of cables used and the terminal equipment employed.

