

# Fiber Optic Multiplexers

**914**

## *Fiber optic multiplexer*

### **Description**

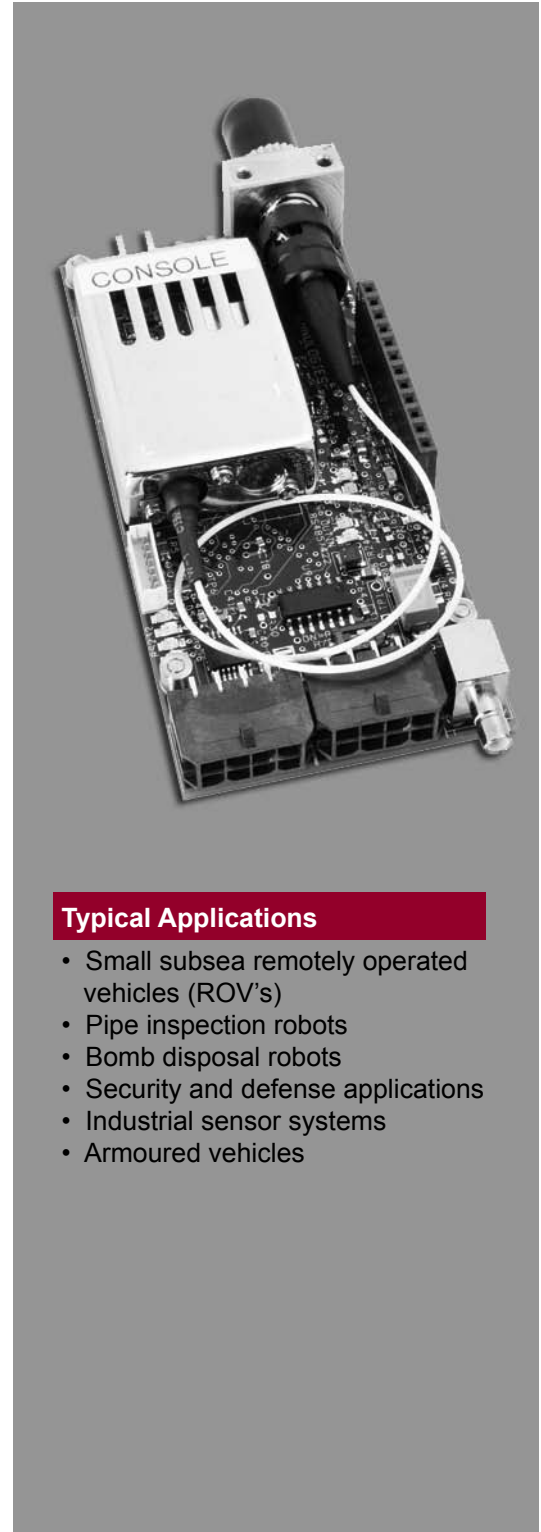
The 914 video / data multiplexer provides digital fiber optic transmission for 1 high quality video channel and 4-6 bidirectional data channels in the industry's smallest package. The 914 offers extremely small size; rugged design with extended operational temperature range; bidirectional operation over 1 singlemode or multimode fiber; broadcast quality video with 10-bit digitization and greater than 6 MHz bandwidth for high resolution cameras; 4 bidirectional serial data channels (2 x RS-232, 1 x high speed RS-485, 1 x high speed RS-485 / 422); connector types and pin wiring compatible with the Focal 907; on-board LED diagnostics for data, video, and optical link status; and options for bidirectional video, daughter card expansion and CWDM upgrades.

### **Features**

- Standalone, single card multiplexer in a small profile
- High speed RS-484 / 422
- Expansion port for 2 extra data channels
- High quality digitized video with bidirectional option
- Singlemode and multimode bidirectional transceivers
- Integrated ST fiber bushing for external connection

### **Benefits**

- Simplified interfaces for minimal configuration
- Extremely small size allows installation in less than 2 inch diameter enclosures
- Less prone to fiber damage with no loose pigtails
- Operates reliably at extended temperatures
- Low cost



### **Typical Applications**

- Small subsea remotely operated vehicles (ROV's)
- Pipe inspection robots
- Bomb disposal robots
- Security and defense applications
- Industrial sensor systems
- Armoured vehicles

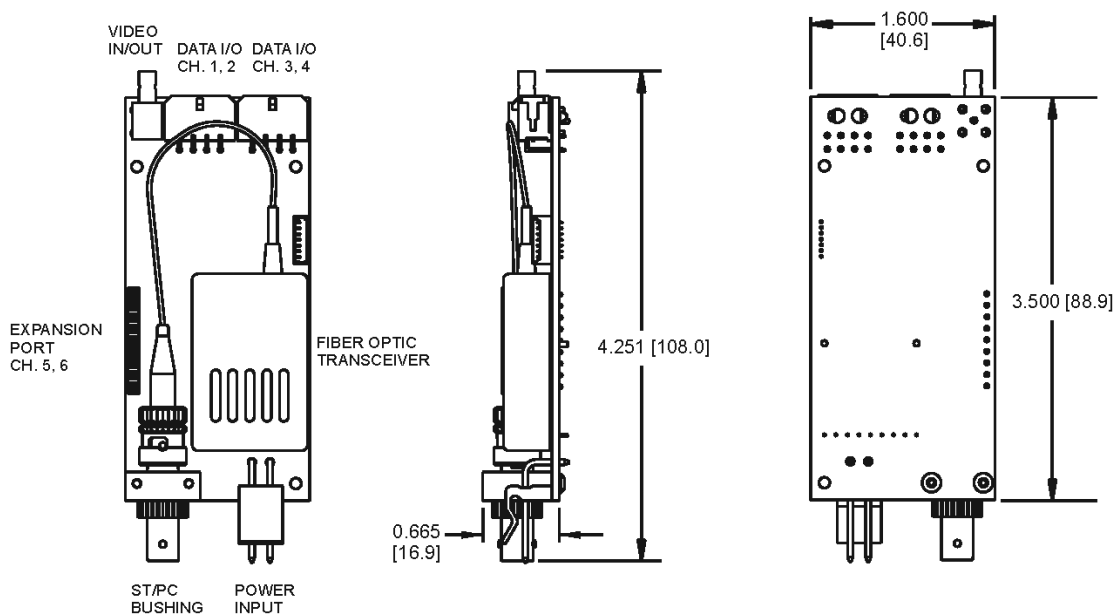
# Fiber Optic Multiplexers

Video	
<b>No. Channels</b>	1
<b>Format</b>	Composite (NTSC, PAL), 1 Vpp nom.
<b>Digitization</b>	10 bit @ 30 MHz sampling
<b>Bandwidth</b>	6.0 MHz, minimum
<b>SNR</b>	> 60 dB, typical
<b>Impedance</b>	75 Ohms
<b>Options</b>	Bidirectional video
Data	
<b>RS-232</b>	2 bidirectional channels, 120 kbaud
<b>RS-422 / 485</b>	1 bidirectional channel, Up to 5 Mbaud
<b>RS-485</b>	1 bidirectional channel, Up to 5 Mbaud
<b>Options</b>	Expansion cards including Ethernet, audio, serial data (RS-232 / 485 / 422), Tritech ARCNET, MS-900 / 971, TTL, and hydrophone
Optical	
<b>Optical Fiber</b>	1 singlemode or multimode
<b>Data Rate</b>	600 Mbaud uplink and downlink
<b>Wavelengths</b>	1310 nm uplink, 1550 nm downlink standard
<b>Flux Budget</b>	16 dB min., 20 dB typical
<b>Max. Link</b>	2 km (50 / 125 um multimode fiber)
<b>Distance</b>	4 km (singlemode fiber, FP lasers) 10 km (singlemode fiber, DFB lasers)
<b>Options</b>	850 nm uplink / downlink on 2 fibers; DFB or CWDM lasers; higher flux budgets

Electrical	
<b>Power Supply</b>	+5 VDC regulated input required
<b>Power Used</b>	< 3 W typical, each end
<b>Grounding</b>	Shared common for power, data, video
<b>Options</b>	Isolated power card (DC-DC)
Mechanical	
<b>Dimensions</b>	See drawing below
<b>Weight</b>	90 g (0.20 lb)
<b>Enclosures</b>	Standard and custom versions available
Connectors	
<b>Optical</b>	ST / PC bushing (FC / PC optional)
<b>Video</b>	SMB
<b>Data</b>	2 x 8-pin Molex, dual row Micro-Fit
<b>Power</b>	1 x 2-pin Molex, 0.156" pin spacing
Environmental	
<b>Temperature</b>	-40 to +85 degrees C (operating) -40 to +85 degrees C (storage)
<b>Humidity</b>	85% relative, non-condensing
<b>Vibration</b>	MIL-STD-167-1 (ships)
<b>Shock</b>	MIL-STD-810E

Refer to model 914 configuration drawings for detailed specifications and information on installing and configuring the boards.

## 914 Dimensions



Dimensions in inches [mm]. 914 shown with singlemode bidirectional transceiver option.