**Copper-to-Fiber Media Converters**

**Multiplexing Signal Aggregator**

*PRODUCT SELECTION GUIDE*

“Dramatically reduce size, weight, wire count, and shielding of copper cables”

“Leverage the high bandwidth of optical fiber by multiplexing many lower-data-rate signals onto a few fibers”

“One high-speed opto-electronic interface can serve practically all signal types”

“Ideal solution to enable optical rotary joints”

“-40°C to +85°C operating temperature range”

“Meets MIL-STD-810 Mechanical Shock and Vibration”

“Meets MIL-STD-1344 immersion resistance”

“Advanced monitor & control functions via serial interface to facilitate network management and BIT”

**SIGNAL AGGREGATION**

**Copper-to-Fiber Media Converters**

Combine multiple electrical signals into a high-speed fiber data stream

Glenair signal aggregation media converters integrate a set of compact opto-electronic modules to digitize and/or aggregate multiple common signal types, and combine them onto high-data-rate serial optical fiber channels. Silicon field-programmable gate array (FPGA) technology provides a flexible way to accommodate many signal I/O types.

**FEATURES**

- Dramatically reduce size, weight, wire count, and shielding of copper cables
- Leverage the high bandwidth of optical fiber by multiplexing many lower-data-rate signals onto a few fibers
- One high-speed opto-electronic interface can serve practically all signal types
- Ideal solution to enable optical rotary joints
- -40°C to +85°C operating temperature range
- Meets MIL-STD-810 Mechanical Shock and Vibration
- Meets MIL-STD-1344 immersion resistance
- Advanced monitor & control functions via serial interface to facilitate network management and BIT
- 1 - 10 Gb/sec Fiber-optic single link
- Bonded links up to 40Gb/sec or to a single-fiber link for slip-ring applications

**SIGNAL AGGREGATION FUNCTIONAL DIAGRAMS**

- 2 Fiber Optical Solution
- Single Optical Fiber Solution

**FPGA MAIN BOARD AND DAUGHTER CARD ARCHITECTURE CAN HANDLE MANY SIGNAL TYPES**

**Signal Aggregation Media Converter Selection Guide**

- 050-501: 1-Channel RS422 Copper-to-Fiber Media Converter
- 050-502: 2x RS-422 and 1x ARINC 429 Copper-to-Fiber Media Converter
- 050-503: DVI/HDMI (Dual fiber) + USB interface (KV) Copper-to-Fiber Media Converter
- 050-504: CAN Bus “bridge” (ARINC 429, ARINC 423, ARINC 568 AFDX ethernet) DO-160 compliant Copper-to-Fiber Media Converter
- 050-505: 2x Ethernet, 2xRS-422 or 2xRS-232 (H2 & H2 not simultaneously) Copper-to-Fiber Media Converter

**Contact the factory for other signal formats and custom configurations**