

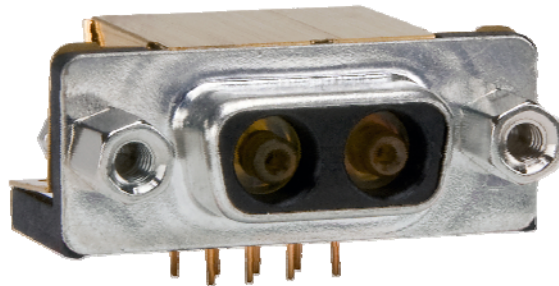
PROKRAFT AND SABRITEC TEAM TO ENHANCE HARSH ENVIRONMENT OPTICAL INTERCONNECTIONS

Protokraft and Sabritec Combine Sabritec's Avionics Industry-Leading ARINC 801 Fiber Optic Connectors with Protokraft's *Direct 9 Series* High Speed Optoelectronic Solutions to Improve Harsh Environment Optical Network Performance and Reliability

Kingsport, TN, February 26, 2011-- Protokraft today announced the availability of its *Direct 9 Series* of high speed optoelectronic solutions that improve optical network performance and reliability in harsh environment applications. Protokraft teamed with Sabritec; one of the world's leading suppliers of military / aerospace interconnects; to offer a high performance DB-9 / ARINC 801 based optical component solution for harsh environment fiber optic communications applications.

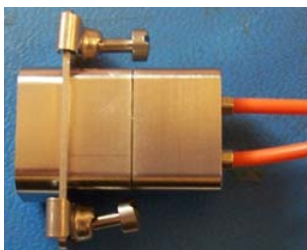


Protokraft has introduced the *Direct 9 Series* of high speed optoelectronic solutions with Sabritec's DB-9 / ARINC 801 optical interfaces, designed for military, aerospace, industrial or utility applications where significant levels of shock, vibration and extreme temperature ranges are experienced. The *Direct 9* optoelectronic transceivers integrate the functions of optical transmitters and receivers into the shell of a standard DB-9 connector. These components are ideal for use in harsh environments where small size, weight reduction and resistance to harsh environments are valued.



Protokraft *Direct 9 series* high speed optoelectronic solutions consist of fiber optic transmitter and receiver functions integrated into a DB-9 shell with a Sabritec ARINC 801 optical interface. The *Direct 9 series* optoelectronic transceivers are intermateable with Sabritec ARINC 801 DB-9 connectors.

The optical transmitters are high performance 850nm VCSEL's. The optical receivers consist of GaAs PIN and preamplifier assemblies and limiting post-amplifiers. The optical interface to the *Direct 9 series* optical transceivers is a Sabritec ARINC 801 DB-9 connector enabling interconnection to optical fiber cable assemblies.



The electrical interface to the *Direct 9 series* optical transceivers is a nine position solder pin field facilitating easy interconnection to printed circuit cards, backplanes or flexible printed circuits. The transmitter input lines are driven with differential CML, LVDS or LVPECL signals applied to the Transmit (TX+ and TX-) pins. The optical receivers consist of PIN and preamplifier assemblies and limiting post-

amplifiers. Electrical outputs from the receivers consist of differential CML, LVDS or LVPECL data signals on the Receive (RX+ and RX-) pins and single ended CMOS or LVPECL signal detect functions with output squelch on the Loss of Signal (LOS) pins.

FEATURES

- Suitable for optical communications applications from 100Mbps to 5.0Gbps
- Optical fiber link distances up to 550 meters
- Maximum optical channel bit error rate less than 1×10^{-12}
- Operating temperature range from -40°C to +85°C
- Shock, vibration and ESD resistant per Mil-Std-810 and DO-160
- DB-9 connectors and backshells are vibration / corrosion resistant and light weight
- ARINC 801 compliant optical fiber connector interface

Designed to operate in harsh environments, these high speed optoelectronic solutions feature excellent thermal characteristics, high tolerance to vibration and shock and corrosion resistant nickel plated stainless steel housings for exceptional EMI/RFI performance. Standard case operating temperature range is -40°C to +85°C, with a standard storage temperature range of -55°C to +100°C. All operate from +3.3VDC power supplies.

Protokraft's *Direct 9* Series high speed optoelectronic solutions are competitively priced compared to the typical pricing for optical transceivers designed for similar harsh environments.

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About Protokraft

Protokraft designs and manufactures high-speed optoelectronic components and subsystems for military and harsh environment networking equipment. The company provides transceiver subsystems for short-reach (1-meter to 20-kilometer) harsh environment optical-networking connections, including optical network switches, optical enterprise and storage area networks (SAN's), and tactical optical access networks. Protokraft is located in Kingsport, TN.

About Sabritec

Sabritec is a highly integrated engineering and manufacturing company providing special interconnect solutions for military, aerospace, telecom, space, test and measurement, and commercial applications. Sabritec designs and manufactures a full spectrum of interconnects that include Filter connectors, High Speed Quadrax and Twinax, Fiber Optic, Coax, Triax, High Power and High Density connectors, contacts and cable assemblies. Sabritec also manufactures custom multipin circular, rack and panel and umbilical launch connectors as well as extreme environmental water proof immersion connectors for sea and military land based equipment applications. For more information, see www.Sabritec.com

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