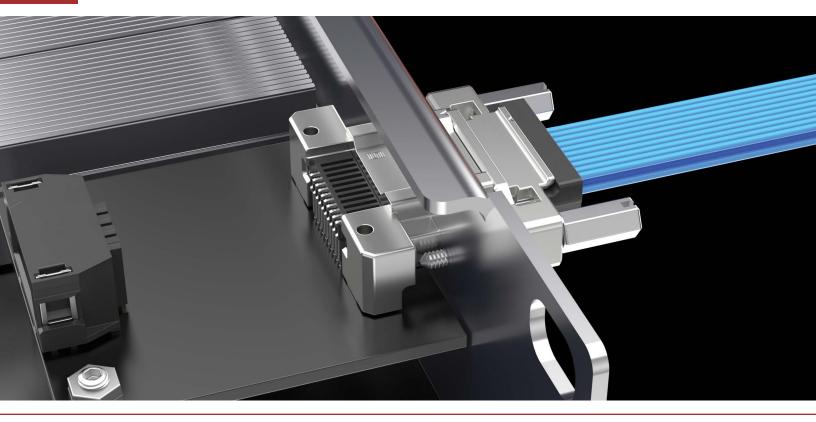


# RUGGED I/O SYSTEMS



## **RUGGED POWER I/O SYSTEMS**

- Four points of contact for an extremely reliable connection
- Micro 1.00 mm pitch
- Up to 40 positions per row
- Cable-to-cable and cable-to-board solutions
- Rugged captive panel screws and strain relief
- EMI shielding to limit signal degradation and optimize performance
- Through-hole or surface mount
- 28 and 30 AWG PVC or Teflon™ fluoropolymer wire; color coded available
- Components available (B1SDS/IBT1/CC508, P1PDS/IPP1/TC145)



Extreme density with up to 1,450 total I/Os in a 1RU panel (29 cables at 50 total I/Os each)









### **ROADMAP**



AcceleRate® Mini combo assembly for extreme performance to 112 Gbps PAM4



SMPM combo assembly for high frequency to 65 GHz



Magnum RF™ micro-miniature SMPM combo assembly for greater density to 65 GHz



Shielded vertical mating heade for design flexibility



Rugged cable shielding for EMI protection



Slim, rugged latching for a secure connection



Size 20 high frequency coax 38999 contacts

#### 38999 RUGGED I/O SYSTEMS

- Samtec's NovaRay® I/O high data rate cable system in a rugged 38999 shell
- Salt fog resistant to 48 hours
- IP67 sealed option for dust and water applications
- High-density 16 pair; 32 pair on roadmap
- Threaded cable-to-panel design using Flyover® cable technology
- 28 or 34 AWG (external) and 34 AWG (internal) ultra low skew twinax
- Up to 3,584 Gbps PAM4 aggregate data rate from the IC package to the panel and beyond



# EXTREME ENVIRONMENT OPTICAL SYSTEM

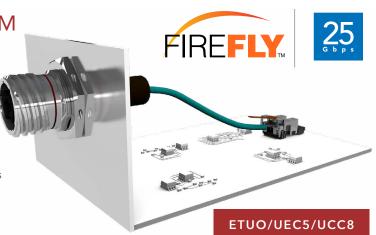
- Sealed and parylene-coated for exposed military, aerospace and submersible applications
- Ruggedized for tin whisker mitigation and fungal resistance; operates in harsh environments including salt fog, blowing sand and dust, jet fuel exposure, altitudes up to 65,000 feet
- Extended temp range of -40  $^{\circ}$ C to +85  $^{\circ}$ C
- x4 bidirectional design to 25 Gbps per lane performance
- Dual power mode for interoperability with legacy optical modules
- Customizable optical end 2 connectors including MT Elite®, MTP Elite® and low loss MXC®

\*MT Elite®, MTP Elite® and MXC® are registered trademarks of US Conec Ltd.



### **EXTENDED TEMP OPTICAL SYSTEM**

- Extended temperature range from -40 °C to +85 °C
- x4 and x12 designs to 25 Gbps per lane performance
- Extended Temperature FireFly™ with Amphenol® Aerospace bulkhead interconnects (MT38999)
- Developed for military, aerospace and industrial applications
- Micro rugged connector set with positive latching, weld tabs and loading guides for secure connection
- Variety of rugged end 2 options







- IP67 sealed USB type-C system capable of USB 3.1 speeds; metal shell on roadmap
- Rectangular design for maximum panel area savings
- IP68 threaded circulars with rugged overmold design
- USB & Ethernet options ideal for data uploads/downloads









Rectangular design for 25-45% panel area savings



Kitted components for efficient field assembly (ACPK/ACRK)



Rugged dust caps available



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