WHEREVER SUSTAINABILITY LIVES,

We're There.

2023


BUS

PARIS AIR SHOW 2023

At Le Bourget, see how we're powering aviation, generating mobility and elevating space.

At Radiall, we are creating innovative interconnect solutions to help airframers across the industry meet their sustainability initiatives. Over the past seven decades, we have pioneered innovative solutions that reach every corner of the globe. Today, you'll find us everywhere technology rises above, from commercial aircraft to satellites and UAM.

SIMPLIFICATION IS OUR INNOVATION

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SIMPLIFICATION IS OUR INNOVATION

Q-MTITAN™

Ruggedized, High-Density MT Quadrax Contact Solution

Q-MTitan™ ARINC 846 protects an MT ferrule and fits inside size 8 Quadrax cavities to provide high-density optical connectivity in harsh environments.

Q-MTitan™ ARINC 846 has been designed to allow the mating of a minimum of 12 optical channels in size 8 Quadrax cavities of off-the-shelf multipin connectors such as MIL-DTL-38999, QuickFusio™, ARINC 600, EPX EN4644 and EN4165 connectors.

FEATURES & BENEFITS

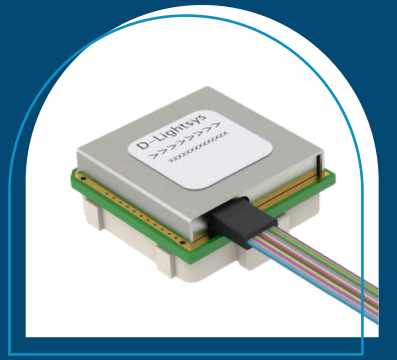
- *Protection of the MT ferrule for a ruggedized and sealed optical multifiber connection*
- *Easy retrofit of single size 8 Quadrax cavity into 12 or 24 fiber optic channels*
- *High-density optical contact compatible with ribbon and round cable*
- *Innovative and user-friendly solution: insertion and extraction using size 8 extraction tool*
- *Convenient and efficient visual inspection and cleaning kits available*

APPLICATIONS

- *For all applications requiring high density and/or high count of fiber optic channels, such as:*
  - *Radar*
  - *IFE (In-flight entertainment)*
  - *Displays*
  - *UAVs*
  - *Space*

D-LIGHTSYS® OPTO-ELECTRONIC MODULES

Harsh Environment Active Optics



D-Lightsys© opto-electronic modules are transparent and protocol independent optical transmitters, receivers and transceivers designed for harsh environments, demanding applications and markets.

These products operate in a wide temperature range and are available with a variety of options. There are several package options offered, including surface mount, pluggable and specific custom packages which cover data rates up to 12 Gbps.

FEATURES & BENEFITS

- *Bit rate from DC up to 12 Gbps*
- *1-channel duplex, 4-channel duplex and 12-channel transmitters or receivers*
- *Very compact form factor*
- *Low power consumption*
- *Custom pigtail length*
- *Large variety of termini/connector options*
- *Operating from -40 °C to +90 °C*
- *Qualified according to MIL and AERO standards*

APPLICATIONS

- *Harsh environment*
- *Avionics*
- *Displays*
- *Radar*
- *Electronic warfare*
- *Processing units*
- *Space*

OVERMOLDED TIMBERCON

High-Quality Breakout Cables

We manufacture high-quality breakout cables to customers' exact specifications. Our ruggedized solutions are ideal for applications requiring strong transitions.

When rugged projects require specific cable configurations to connect to a device, Timbercon's overmold transitions provide a solid connection between your devices.

FEATURES & BENEFITS

- *Ruggedized transitions for breakouts*
- *Stronger than conventional heat shrink transitions*
- *Molded plastic*
- *Available with OM2, OM3, OM4 or single-mode fiber*

APPLICATIONS

- *Harsh environment*
- *Military*
- *UAVs*
- *Data storage equipment*
- *Automotive*

QUARTZ-S™

SMT Electro-Mechanical Switch for Space

As a leader in the space market, Radiall created a new electro-mechanical space qualified switch. This new SMT (Surface Mount Technology) switch is perfectly suited for HTS or VHTS satellite payloads with redundant systems. This micro-miniature solution is cost effective, making integration into existing constellation applications easy.

Based on the Quartz design, the Quartz-S is a unique SMT electro-mechanical relay qualified up to 32 GHz. As a partner in the Selector project (funded by European commission with three partners), Radiall designed, evaluated and qualified this new SMT relay.

FEATURES & BENEFITS

- *Reliability up to 100,000 actuations hot switching*
- *RF performance up to 32 GHz*
- *Small and lightweight (10 g)*

APPLICATIONS

- *HTS and VHTS satellite payload*
- *Constellations*

MPX

Developed for Harsh Environments

The Radiall MPX series is a robust rectangular connector for Rack & Panel applications compliant with the MIL-DTL-83527B specification and EN 3682 European Standard.

This series is well suited for military applications and commercial aircraft where harsh environmental issues are a concern.

In response to the market demand for higher bandwidth, density and reliability, Radiall MPX connectors integrate Physical Contact (PC), Expanded Beam (EB) and Multifiber (MT based) optical solutions.

FEATURES & BENEFITS

- *High density connectors*
- *Compliant and qualify with optical solution*
- *Wide range of accessories*
- *Compliant with the MIL-DTL-83527B specification and EN 3682 European Standard*

APPLICATIONS

- *Avionic bays on military airplanes and helicopters (radio, radar, calculators, screens, etc.)*
- *Ground military applications*

67 GHZ 1.85 MM ATTENUATORS & LOADS

High Performance Attenuators

New radio frequency applications are developed at millimeter wavebands, especially in Q band (33 to 50 GHz) and V band (40 to 75 GHz) to support communication applications. As a result, Test & Measurement radio frequency equipment has been designed to reach a maximum frequency of 67 GHz.

With demands for millimeter wave products increasing, Radiall designed a new range of 67 GHz attenuators and loads (or terminations) equipped with 1.85 mm connectors. This supports satellite communication using Q/V bands to increase the throughput of VHTS satellites and telecom applications with millimeter wave frequencies for high-capacity, backhaul, point-to-point applications.

FEATURES & BENEFITS

- *Exceptional VSWR performance*
- *Excellent stability in attenuation precision*
- *Wide temperature range: -55 °C, +125 °C*
- *Very small form factor*

APPLICATIONS

- *RF Test & Measurement > 40 GHz*
- *RF military or telecom equipment > 40 GHz*

QUICK SLIM CONNECTOR

A Shielded Modular Connector

The Quick Slim has been designed to protect the most critical electrical signals from electromagnetic interferences and guarantee a safe flight.

This new metalized composite connector provides exceptional performance, weight reduction and ground block or shielded backshell to easily ground the wire shields or target full EMI protection.

FEATURES & BENEFITS

- *Reduced weight*
- *Visible red mark*
- *Panel density*
- *Cam added to guarantee safe lock*
- *Slide technology*

APPLICATIONS

- *Aircraft and equipment manufacturers*
- *Disconnect applications*
  - *Panel mount*
- *Cable-to-cable connection*
  - *EWIS*

EB-LUXCIS®

Easy Installation with Minimal Maintenance Required

The EB-LuxCis® product range combines the benefits of the LuxCis® ARINC 801 contact and Expanded Beam technology for commonly-used multipin connectors.

Radiall's new EB-LuxCis® product range offers Expanded Beam technology for high performance and durability within multipin connector solutions. This product range features the commonly-used LuxCis® ARINC 801 fiber optic contact inserted into a 2 or 4 channel (MM or SM) Expanded Beam insert.

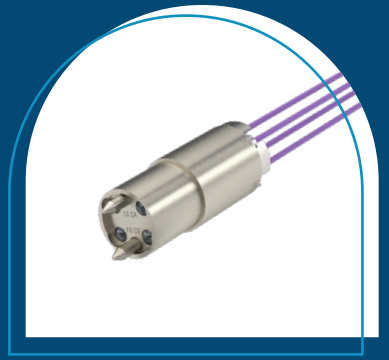
EB-LuxCis® is an easy-to install and low-maintenance solution that can be used in various circular or rectangular connectors. This design combines the advantages of the LuxCis® ARINC 801 contact with Expanded Beam technology, which enables a simplified cleaning process and reduces sensitivity to contamination.

FEATURES & BENEFITS

- *Optimized Expanded Beam technology provides easy cleaning and resistance to shock and vibration*
- *Contactless connection increases product life cycle*
- *Compatible with multi-mode and single-mode fiber*
- *Wide product range available: MIL-DTL-38999, EPX® EN4644, NSX ARINC 600, EN4165*

APPLICATIONS

- *Avionics*
- *Power and flight management*
- *Radar*
- *Electronic warfare*



EPXB2

When Less is More - A Lightweight Solution

Radiall understands the growing market demands for weight-saving solutions for aircraft interconnects. Radiall's new EPXB2 with M and J plating is now available as a weight-effective solution to replace EPXB2 with N plating.

Radiall's EPXB2 series is a perfect solution for aircraft manufacturers requiring a lightweight solution. Offering up to 24% weight savings in comparison to EPXB2 connectors with N plating, this improved design reduces cost to airlines over the lifecycle of an aircraft.

FEATURES & BENEFITS

- *Modular and user-friendly connector*
- *Backwards compatibility with EPXB2 with N plating*
- *Weight savings*
- *Cost savings*
- *EN 4644 European standard*

APPLICATIONS

- *Aircraft and equipment manufacturers*
- *Cable-to-cable connection*
- *PCB-to-cable connection*
- *Disconnect applications*

SELF-LOCK CONNECTORS

Designed to Reduce Installation Time

As a leader in civil aircraft interconnection and RF connectors, Radiall introduces a new innovative technology in response to market demands to eliminate locking wires. Radiall's Self-Lock RF connectors are the perfect solution to provide secure connection-facing vibrations experienced in aerospace applications.

With all the antennas present on civil aircraft, cable assemblies for airborne electronic systems are still receiving plenty of development attention. Coaxial cables remain the transmission medium of choice. It is not uncommon for a single aircraft to contain several hundred coaxial cable assemblies. To expedite the installation of these assemblies into the aircraft, new self-locking connectors have been developed. Eliminating the need for safety wires saves many hours during both the initial build cycle and whenever equipment is removed or replaced for service.

FEATURES & BENEFITS

- *No locking wire*
- *Secure connection in harsh environments*
- *Easy and fast to install*
- *Up to 40 GHz*
- *Hermetic crimp technology*
- *Self-Lock plugs compatible with standard jacks and receptacles*
- *High flexibility for dynamic applications*

APPLICATIONS

- *ARINC 791*
- *ARINC 792*
- *Aircraft connectivity*

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IMP-SR

Ground-Breaking Solution for RF, Signal and Data Rate Interconnection

To meet the new needs of active antenna radar applications, Radiall has created the IMP-SR, a ground-breaking solution to RF, data and signal interconnection.

The IMP-SR was created to meet the emerging needs of active antennas. Smaller than existing solutions with a minimum size of 3.1 mm and a diameter of 2.52 mm, the IMP-SR is a space saving solution that meets manufacturers' expectations. The simple architecture makes the IMP-SR's length easily adaptable, making it the ideal product for customers needing seamless integration.

FEATURES & BENEFITS

- *Up to 70 GHz*
- *Insertion Loss: 0.63 dB @ 40 GHz*
- *VSWR: 1.3 Max @ 40 GHz*
- *1.2 N pressure force*
- *Data: over 100 Gbps PAM4*

SHF4M

Ultra Low Loss 40 GHz Cable

Radiall's end-to-end SHF cables and connectors reach high performance requirements to address customer concerns when doing RF measurements.

SHF4M is a best-in-class, 40 GHz, ultra low loss cable suitable for all applications where minimal loss is vital. Radiall's SHF cable offering meets a wide range of applications for defense, aerospace and Test & Measurement markets, as well as copes with the rigorous demands of space and other harsh environments. Radiall is able to manufacture the ideally tuned cable to fulfill your exact specifications and the most demanding requirements. Radiall connectors for SHF cables are engineered specifically for compatibility and performance for SHF applications.

FEATURES & BENEFITS

- *Ultra low loss*
- *Frequency: DC - 40 GHz*
- *Phase and attenuation stability vs temperature and flexures*
- *Excellent resistance to environmental hazards*
- *Mechanical performances: flexibility, high temperature*
- *Versatile*

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