

NEXT GENERATION AVIONICS CONNECTORS

*Modular High Density &
Quick Install Solutions*



50 YEARS OF EXPERIENCE IN AVIONICS CONNECTORS

Present in the most demanding markets such as aerospace or defense for more than 50 years, Radiall is known for its expertise and innovative ability to meet challenging market needs.

Our product knowledge and industry expertise led to the creation of new generations of connectors such as QuickFusio, Quick Multipin and Quick Install Radiall. Their optimized size and weight, harsh environment performances and quick connection features decrease the total cost of ownership and ensure secure installation.



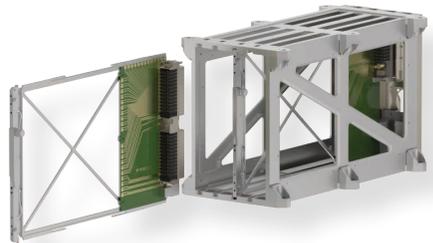
ESSENTIAL INNOVATION FOR NEXT ELECTRONIC EQUIPMENT GENERATION

Based on this experience and a partnership with the main OEMs of the European aerospace industry, Radiall designed cutting-edge technologies for modular and high density electronic equipment.

Although developed for the aerospace market, these technologies⁽¹⁾ answer the needs of many industries.

- Complex molding in a single piece will be lighter and cheaper than formal designs

- High density, right-angled, press-fitted contacts packaged in wafers will decrease electronic computer sizes, weight and manufacturing time
- Quick install features will simplify harness installation and maintenance operations



Notes

1. This project has received funding from the Clean Sky 2 Joint Undertaking under the European Union's Horizon 2020 research and innovation program under grant agreement No 785425.



ONE-PIECE LIGHTWEIGHT MOLDING

Radiall challenged the technological limits of high performance composite molding processes by successfully manufacturing a long (175 mm) and thin (1 mm) one-piece connector shell.

This piece enables customers to design complex features with fewer components, which reduces the weight of the connector and the overall cost of several industrial tools.

The use of high performance filled thermoplastics with a thin metalization layer brings the weight savings to 30% compared to existing connectors with similar dimensions, while guaranteeing EMI shielding.

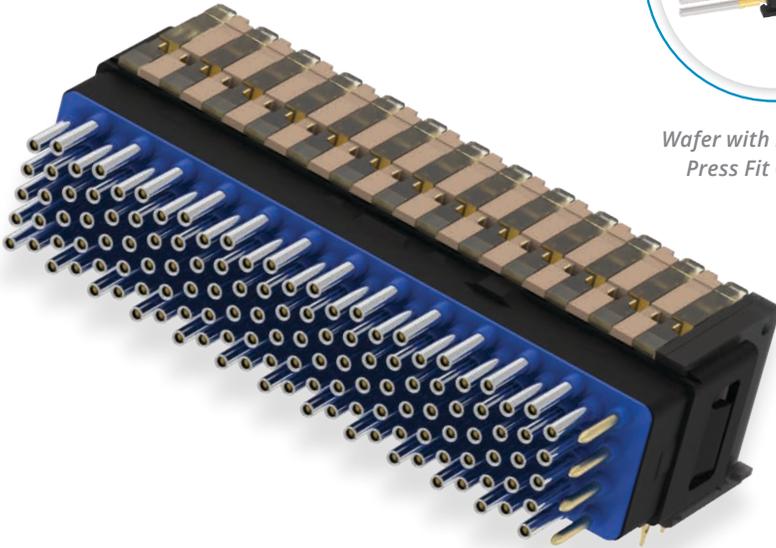
With more electric aircrafts using connectors in high volume, Radiall's new technology will bring significant reductions in fuel consumption and CO² emissions, resulting in substantial cost savings.

BENEFITS

- Recurring and non-recurring cost reductions
- 30% lighter
- Environmentally friendly



Wafer with Right Angle
Press Fit Contacts



HIGH DENSITY COST-EFFECTIVE PRESS FIT CONTACTS

Radiall developed the first electrical contact design by combining a standardized aerospace low insertion force interface, a cost-effective stamped and formed socket technology for right-angled, press-fitted PCB connections and a high density overmolded wafer design.

The right-angled connection replaces backplane PC boards. This reduces the size and weight of the electronic equipment and secures the signal transmission between the harnesses and the electronic box with less connection interfaces.

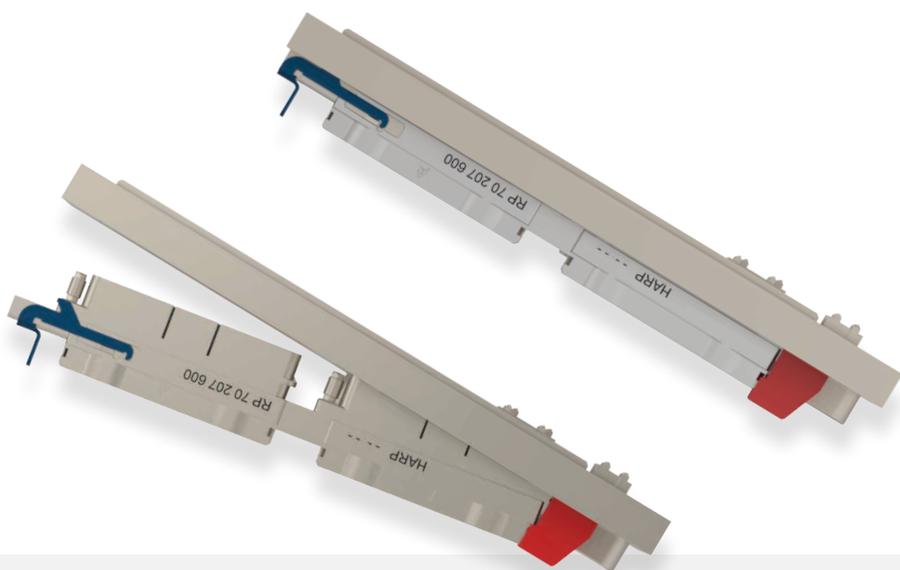
The compliant pin termination design of each electrical contact allows for one-step connector assembly on the PC board, drastically reducing the assembly time and the use of chemical substances.

The high density overmolded wafers can be stacked side by side to reach the quantity of signals required without purchasing a new connector mold for each configuration.



BENEFITS

- Reduced computer size and weight
- Secured signal transmission
- Reduced cost of ownership



QUICK INSTALL

Radiall designed a single modular connector range compatible with two different installations for electronic boxes: racked or fixed.

Mateable with the same receptacle, two plug designs are available to fit both installation configurations. The Quick Install and screw-less plug design is compatible with racked equipment, while the Quick Connect and tool-less plug enable harness installation on a fixed box in just a few seconds.

Both configurations offer 80% installation time savings and feature low insertion force connections. The PCB is placed in the box whether or not the plug is installed.

No tools are required to install those connectors, and the removal of screws and washers make this range FOD (Foreign Object Damage) proof.

BENEFITS

- Single connector range for racked and fixed equipment
- 80% installation time savings
- FOD-proof
- Simplified maintenance

SIMPLIFICATION is our INNOVATION

We advance the design and engineering process for innovators, groundbreakers and pioneers of technology. We reduce weight, improve durability and streamline installation to provide leading-edge connectors that drive product performance.

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