



EN4165 / SIM CONNECTORS

EN4165 qualified
Rectangular, modular connector
High performance, comparable to MIL-STD-810 US standard

Available in either metal or composite with various plating options, SIM, with its broad range of plugs, receptacles, rear accessories and modules, is perfectly suited for both commercial aerospace and harsh environment military applications. The product can be customized into several different configurations - scoop-proof, high density & mixed contacts - all within a compact design.

YOUR RELIABLE PARTNER
FOR INTERCONNECTS & ATTACHMENT SYSTEMS

Amphenol Air LB
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Brochure 01/23 - V1.0

WHAT IS THE EN4165 / SIM CONNECTOR ?

SHELLS



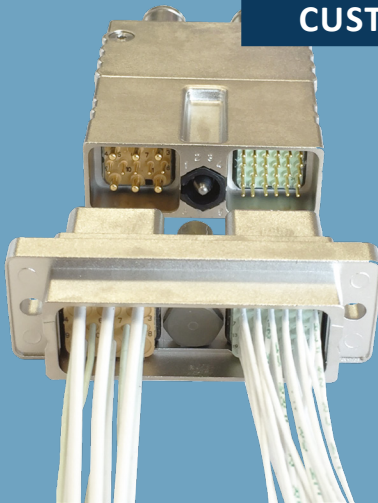
MODULES



CONTACTS



CUSTOM CONNECTORS



4 modules Metallic with Bright Nickel plating

4 modules Metallic with Black Nickel plating

2 modules Composite with Bright Nickel plating

2 modules Composite with Olive Drab Cadmium plating

SHELL SIZES
2 modules
4 modules
Custom

SHELL MATERIALS
Metallic
Composite

SHELL PLATINGS
Bright Nickel
Black Nickel
Olive Drab Cadmium

PRINCIPLE

Male module + Female module

SEVERAL TECHNOLOGIES

SIGNAL
From 30 x #23 to 1 x #8 (coax/triax/quadrax)

GROUNDING
From #8 to #16

SHUNTED
#16 and #22

POWER
Up to 80A in #8

PCB
Straight, angled, front removable

OPTICAL
Single / Multimode, Butt-joint / Expanded beam

MT FERRULES
Up to 2 x 24 fibers per insert

RF
From 3 to 110GHz

RJ45 ETHERNET
Standard, angled PCB

MIXED LAYOUT
Signal (high speed) + Power

WIDE RANGE OF ARRANGEMENTS

1 ct #8, 1 ct quadrax, 4 cts #12, 8 cts #16, 5 cts #22 & 6 cts #16, 12 cts #20, 20 cts #22, 30 cts #23. And many more...

SIM BENEFITS

- **Modular** -> Flexibility in design (RF, Power, Signal, Fiber optic & Ethernet)
- **Rectangular** -> Space efficiency due to compact design, more power in less space
- **Sealed** -> Excellent performances due to silicon overmolding process
- **Shielded** -> High EMI shielding performances
- **Wide range of contacts** -> Electrical (size 26 to 8), optical (butt joint, MT ferrule)...
- **RoHS & REACH compliant** -> Restricts use of hazardous materials

2 modules Composite without plating equipped with optical modules

4 modules Composite with Bright Nickel plating

2 modules Metallic with Bright Nickel plating equipped with modules with angled PCB contacts

SIM APPLICATIONS

- **Commercial aircraft** (Cabin, IFE / CWAP, Avionics, Landing gears, Galleys)
- **Helicopter** (Civil & Military)
- **Military aircraft** (Fighter, Transport, Trainer)
- **Launch system for missile & rocket**
- **Drone** (Civil & Military)
- **Military ground vehicle**
- **Navy ship** (incl. Submarine)

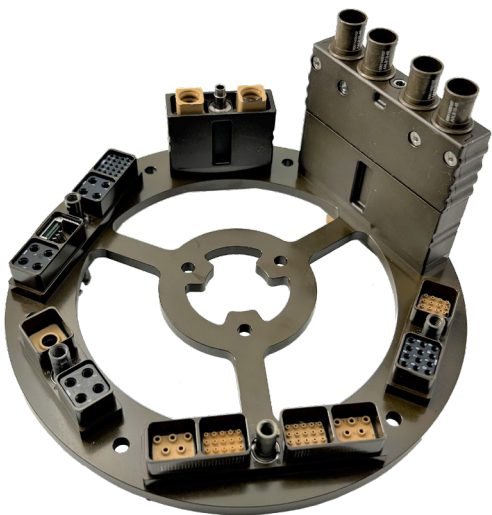
SIM DATA

- **Operating temperature:** -55°C to 175°C
- **Vibrations:** Random frequency from 10 to 2000Hz, spectral density 0.4g²/Hz, 8h/axis
- **Shocks:** 1 shock/direction of each axis, half-sinusoidal form, amplitude 100g_n, duration 6ms
- **Endurance:** 500 full mating and unmating cycles
- **Insulation resistance:** ≥ to 5000MΩ, max in altitude ≥ to 1000MΩ
- **Salt spray:** Composite 500h, Metallic 96h (Nickel), 500h (Cadmium)
- **Current rating:**

Contacts Size	Max. Current Rating (A)
23	5
22	
20	7,5
16	13
12	23
8	46
	80



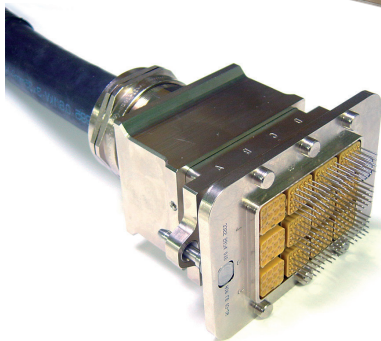
WHAT CAN BE DONE WITH EN4165 / SIM CONNECTOR ?



Combination of power, signal, fiber optics, RF... within one connector shell



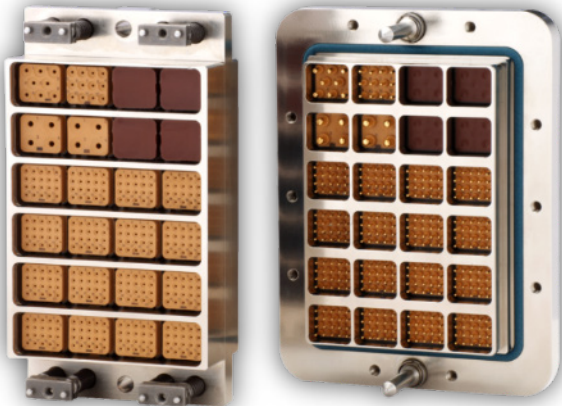
Connectorization:
Multiple shells sizes and shapes to be used with standard plugs
Weight Saving + Space Saving + Time saving + Parts reduction = Cost effectiveness



Easy upgrade or (re-)configuration by the end-user at any time (without changing the cut-out of the panel)



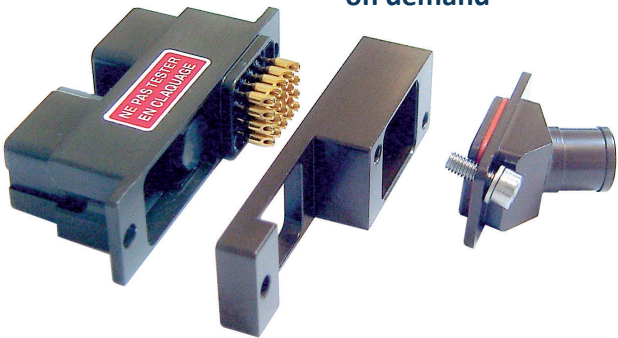
High contact / connector density



Filtered SIM connectors on demand



SIM Quick Release connectors available



For more information, do not hesitate to contact us or to visit our website

www.amphenol-airlb.fr

