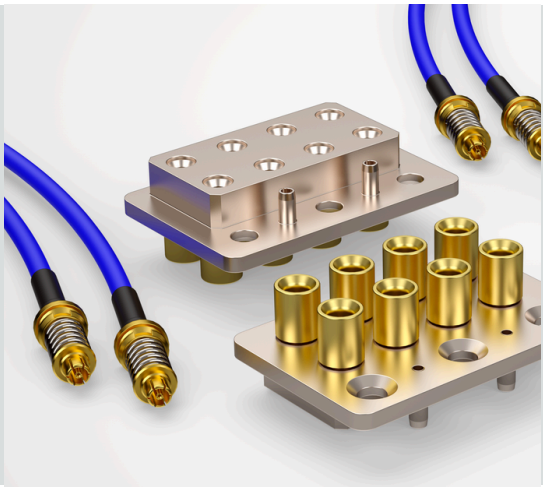
VITA 67.2 Connectors

The VITA 67.2 standard defines a robust, high-density coaxial interconnect system designed specifically for the OpenVPX (VITA 65) architecture. As the "full-width" counterpart to VITA 67.1, the 67.2 module provides 8 RF contacts in a single slot width, allowing high-frequency signals to be routed directly through the backplane. This eliminates the need for messy front-panel cabling, maximizing reliability and signal integrity in harsh environments.



KEY FEATURES & BENEFITS

- Density: 8-position module (occupies the same space as a single VITA 46 signal module)
- Frequency Range: DC up to 26.5 GHz (standard), with high-performance variants reaching 40 GHz
- Contact Interface: Utilizes proven SMPM (Sub-Miniature Push-on Micro) blind-mate interfaces
- Physical Resilience: Designed to meet MIL-STD-810 for extreme shock and vibration
- Signal Integrity: Exceptional isolation (>100 dB up to 26.5 GHz) and minimal insertion loss

APPLICATIONS

Electronic Warfare	Connecting multiple wideband antenna feeds and digital receivers/ exciters to a central processing card for signal analysis and jamming.
Signal Intelligence	Routing intercepted, high-frequency communication or radar signals from front-end tuners to powerful and for real-time digital processing.
Radar Systems	Used in high-resolution (Active Electronically Scanned Array) radar for board-to-backplane connection of numerous transmit/receive modules, where channel count is high.
Avionics & Communication	Used in Air Transport Racks (ATR)—the rugged enclosures used in aircraft—for secure, high-speed data links and command/control systems.
Ground Base Stations	Fixed, ruggedized communication and surveillance systems that require reliable high-density routing.

PRODUCT SPECIFICATIONS

Electrical Properties	
Frequency	DC up to 26.5 GHz (up to 40 GHz depending on contact and cable assembly)
Impedance	50 Ω (nominal)
VSWR	1.25:1 max up to 26.5 GHz
Shielding Effectiveness	> 100 dB up to 26.5 GHz
Dielectric Withstanding Voltage	325 VRM at sea level

Mechanical Properties	
Interface Type	SMPM (Sub-Miniature Push-on Micro) series
Contact Density	8-position module (standard configuration)
Mating	Blind-mate, float-mount design for board-to-backplane alignment
Durability	Minimum 500 mating cycles
Engagement Force	2.5 lbs typical (per contact)
Disengagement Force	1.5 lbs typical (per contact)

Environmental Properties	
Operating Temperature	-65°C to +165°C
Shock	MIL-STD-202, Method 213, Condition I
Vibration	MIL-STD-202, Method 204, Condition D
Compliance	ANSI/VITA 67.0, 67.1, 67.2; integrated within OpenVPX (VITA 65)

CONFIGURATIONS & INTERFACE OPTIONS

Standard Module Sizes	
8-Position Module	The standard size for 6U VPX applications or higher-density 3U slots • SMPM VITA 67.2 Plug-in Module • SMPM VITA 67.2 Backplane Module

Connector Types	
SMPM	This is the industry-standard interface for VITA 67.2. It provides the necessary "float" to allow for blind-mating between the plug-in card and the backplane.
Standard Interface	These are usually male pins on the backplane side and female sockets on the plug-in module side.

Cable Assemblies	
SMPM	Options for various 0.047” and 0.086” flex cables