INTRODUCING

NanoRF OPTICAL HYBRID MODULES

- **Modules allow for significant increase in density and speed in a small form factor**
- **Floating Insert on backplane side contains NanoRF contacts and optical mounts**
- **Alignment features provide reliable, stub-free mating**

Next Generation VPX module market trends are calling for increased density and bandwidth within an embedded computing slot (more speed and functionality), TE Connectivity (TE) NanoRF hybrid modules leverage a floating Insert in the backplane with guide features that pre-align contacts before engaging reducing potential for damage. These modules offer high density RF and optical connections within a common connector module for VPX-based embedded computing systems.

APPLICATIONS

- Radar
- Electronic Warfare
- Missile Guidance
- Tactical Communication

TARGET MARKETS

- Ground Defense
- Missile Defense
- C5ISR

COMMON MATING INTERFACE

- Supports CableMT and Edge Mount transceivers allowing additional modularity and options for customers
- Multiple slot profiles and connector modules added to VITA 65.0 and 65.1 allows intermateability, interoperability among VPX hardware suppliers for a robust supply chain

MATERIALS

- Available in Basecard and Mezzanine Edge Mount or Cable options

STANDARDS & SPECIFICATIONS

- NanoRF Product Specification: 108-163006
- NanoRF Qualification Test Report: 501-134076
- NanoRF Instruction Sheet: 408-163016

ELECTRICAL

- Rated Max Frequency: 85 GHz
- Isolation, Cable-to-Cable:
  ≥ 90 dB from 27 to 40 GHz
  ≥ 100 dB from 3 to 27 GHz
  ≥ 120 dB from 30 to 3 GHz
  ≥ 140 dB from 3 to 30 MHz
- Cable-to- Edge Launch in test, including effects of board termination
- Testing per EIA 364-90 Method B
- Impedance: 50 Ohm
- Surface VSWR, Cable-to-Cable:
  1.4:1 max to 40 GHz (both .047 and .086)
  1.5:1 max from 40 to 50 GHz (.086 cable)
  1.5:1 max from 40 to 67 GHz (.047 cable)
  1.6:1 max from 67 to 85 GHz (.047 cable)
- Cable-to-PCB Edge Launch:
  1.4:1 max to 40 GHz
  1.5:1 max from 40 to 67 GHz (.047 cable)

MECHANICAL

- Mating Cycles: 500
- Temperature Range: -55°C to +125°C
- Cable Diameter: .047 for plug-in card, .047 and .086 options for backplane

LEARN MORE

NanoRF Optical Hybrid Landing Page NanoRF Optical Hybrid brochure

NanoRF Optical Hybrid Customer Part List