# imall

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# **RUGGEDIZED OPTICAL BACKPLANE INTERCONNECTS**

FOR VITA 66.1 AND 66.4

High-Density Optical Modules for Demanding **Embedded Computing Application** 

## RUGGEDIZED OPTICAL BACKPLANE INTERCONNECTS

Support VITA 66.1 and 66.4 Standards



#### RUGGED RELIABILITY

- Meets VITA 66.1 and 66.4 standards
- Common protective cover is made of anti-static material
- Receptacle (backplane) connector includes two robust guide pins for blind mating
- Connector mounting screws contain pre-applied Nylok patch to help withstand vibration

#### VERSATILE

- Full-size VITA 66.1 or half-size VITA 66.4 modules
- Plug (daughtercard) connector housing contains a slot feature to facilitate cleaning the MT interfaces
- Locating post features helps ensure proper position on the backplane and daughtercard

#### **HIGH PERFORMANCE**

- Connectors designed to maximize optical performance, accommodating up to two MT ferrules
- Receptacle connector insert floats relative to the shell, providing ±0.25 mm planar floating alignment capability

#### APPLICATIONS

- Embedded Computing
- Avionics and Vetronics
- Secure Communications
- Processing
- Radar
- Imaging and Targeting

TE Connectivity's (TE) Ruggedized Optical Backplane interconnect system provides a high-density, blind-mate optical interconnect in a backplane/daughtercard configuration. The fiber optic ribbon cable interconnect feeds through the backplane to removable system modules using MT ferrules.

The optical module are available in two sizes:

- VITA 66.1 modules are full width and accommodate two MT ferrules.
- VITA 66.4 modules are half width and hold a single MT ferrule. Two modules can be fit into the same space as a VITA 66.1 modules.

Designed for rugged embedded computing applications, the optical modules are compatible with VPX and other high-performance standards.

### MECHANICAL/ENVIRONMENTAL

- Mating Force (per 12-fiber MT ferrule):
  - Min: 7.8 N (1.75 lb) Max: 11.8 N (2.65 lb)
- Durability: 100 cycles, tested per EIA-455-21
- Shock: 50 g, sawtooth, 11 ms pulse duration, tested per TIA/EIA-455-14, condition E
- **Random Vibration:** 11.95 grms, 50 to 2000 Hz, 2 hr per plane. Tested per TIA/EIA-455-11, test condition V1-D
- Storage Temperature: -55°C to +85°C
- Operating Temperature: -20°C to +85°C
- Thermal Aging: 168 hrs at +85°C
- Humidity, Steady-State: 95% RH at 60°C
- Temperature Cycling: 21 cycles between -20°C and +85°C

#### MATERIALS

- **Connector Shell and Housing:** Aluminum alloy 6061, clear-chromate conversion-coated (RoHS compliant)
- Alignment Posts and Screws: Stainless steel, 300 series, passivated (RoHS-compliant)

#### STANDARDS AND SPECIFICATIONS

- **TE Application Specification:** VITA 66.1: 114-32050
- VITA 66.4: 114-32144
- TE Product Specification: VITA 66.1: 108-2467 VITA 66.4: 108-2467-1
- **TE Qualification Test Report:** VITA 66.1: 501-134012 VITA 66.4: 501-134012-1

## TE Components . . . TE Technology . . . TE Know-how . .

AMP | Agastat | CII | Hartman | Kilovac | Microdot | Nanonics | Polamco | Raychem | Rochester | DEUTSCH SEACON Phoenix | L.L. Rowe | Phoenix Optix | AFP | SEACON

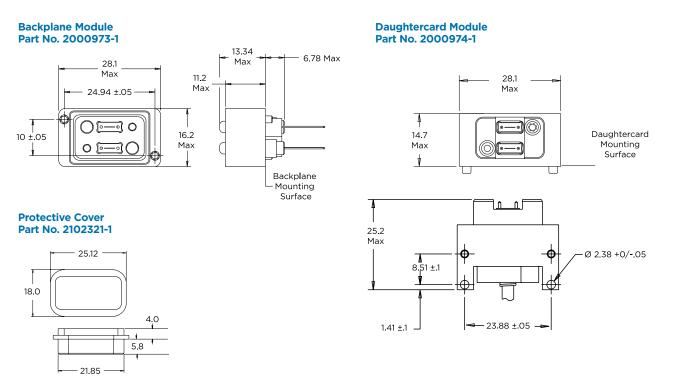
Get your product to market faster with a smarter, better solution.

| 1  | Part No.  |              |  |
|--|-----------|--------------|--|
| Interface -                                    | Backplane | Daughtercard |  |
| VITA 66.1                                      | 2000973-1 | 2000974-1    |  |
| VITA 66.4                                      | 2226880-1 | 2226881-1    |  |
| <b>MT Ferrule Kit</b><br>(12 Fiber, Multimode) | 2102866-1 | 2102866-2    |  |

#### **Part Numbering and Dimensions**

### **VITA 66.1**

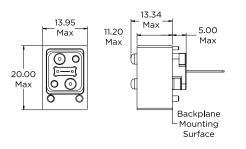
(Shown Assembled with Reference MT Cable Assemblies Installed)



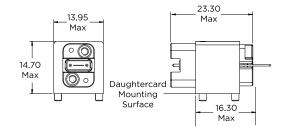
## VITA 66.4

(Shown Assembled with Reference MT Cable Assemblies Installed)

#### Backplane Module Part No. 2226880-1



#### Daughtercard Module Part No. 2226881-1



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Consult TE for the latest dimensions and design specifications.

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