

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 Vetrionics
- 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 g_{rms} , 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
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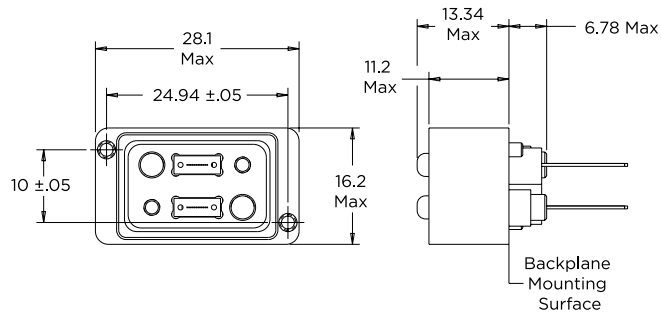
Part Numbering and Dimensions

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

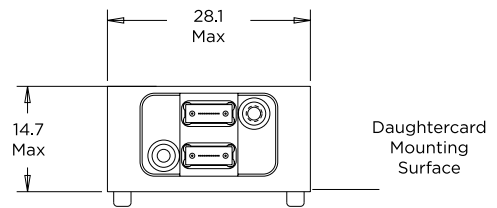
VITA 66.1

(Shown Assembled with Reference MT Cable Assemblies Installed)

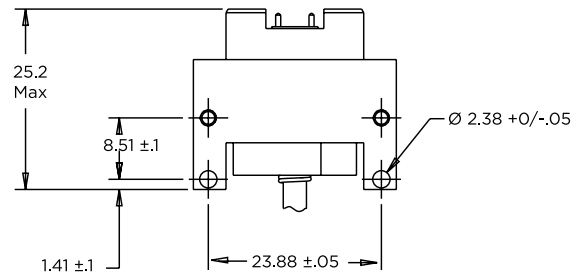
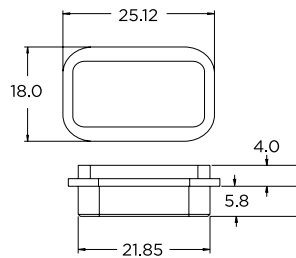
Backplane Module Part No. 2000973-1



Daughtercard Module Part No. 2000974-1



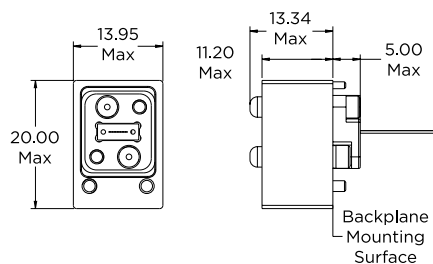
Protective Cover Part No. 2102321-1



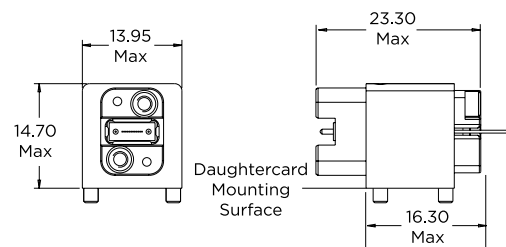
VITA 66.4

(Shown Assembled with Reference MT Cable Assemblies Installed)

Backplane Module Part No. 2226880-1



Daughtercard Module Part No. 2226881-1



LET'S CONNECT

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Consult TE for the latest dimensions and design specifications.

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