VPX60 KEY FEATURES

- Compliant to latest VITA 65 specifications
- Various OpenVPX profiles—contact Pixus for details
- 6U backplane design
- 5, 6, 8, 9, 10, 16 and other slot sizes standard—contact Pixus for latest standard options (not all may be listed here)
- Power and ground only versions available in various slot sizes
- Highly competitive custom backplane design options
- Hybrid versions available with legacy VME64x slots
- Data rate options up to 100GbE utilizing RT-3 connector
- Custom rear IO options
- Fast turnaround, superior performance
- Customization available
- Conformal coating optional

OpenVPX is a process that defines system level VPX interoperability for multi-vendor, multi-module, integrated systems environment. The OpenVPX process defines clear interoperability points necessary for integration between Module to Module, Module to Backplane and Chassis.

Pixus has an experience team of OpenVPX experts and can help you find or create the OpenVPX backplane profile for your application. We offer various data signal speed options and have optional testing services. Pixus is ISO9001:2015 and ITAR registered.

The backplanes are typically 1.0” pitch, but 0.8” is also available standard in some configurations. Contact Pixus for details.

Pixus Technologies can modify this product to meet special customer requirements without NRE (minimum order placement is
## Specifications

<table>
<thead>
<tr>
<th>Architecture</th>
<th>Physical Dimensions</th>
<th>Height: 6U</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Width: Depending on slot #</td>
<td></td>
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<tr>
<td></td>
<td>Pitch: 1.0” or 0.8” standard for VPX slots, 0.8” standard for VME64x slots</td>
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</tr>
<tr>
<td></td>
<td>Connectors</td>
<td>MultiGig RT-2, RT-3 for higher speeds</td>
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<tr>
<td></td>
<td>Layers</td>
<td>14-18 layers typical</td>
</tr>
</tbody>
</table>

### Standards
- **VITA Type**: VITA 65 for OpenVPX
- **Type**: VITA 46 for VPX base specification

### Configuration
- **Power**: 5V, 12V, 48V, options

#### Environmental
- **Temperature**: Operating temperature: -40° to +85°C
  - Storage temperature: -55° to +90°C

- **PCB**: FR406 or equivalent, Nelco4000-13SI, Meg-6/7 or equivalent for higher speeds
  - (consult Pixus)

- **PCB traces**: 2 oz. power and ground standard

- **Conformal coating**: Upon request (See page 6 selection “J” for available options)

### Other
- **MTBF**: MIL Handbook 217-F @ TBD Hrs.
- **Certifications**: Designed to meet FCC, CE and EN/UL/TUV certifications where applicable
- **Warranty**: Two years
- **Trademarks and logos**: The Pixus Logo is a registered trademark of Pixus Technologies Inc. other registered trademarks are the property of their respective owners. Specs. subject to change without notice.
Connectors & Signals

Connector Ratings

Multi-Gig RT-2 (contact factory for RT-3 version):

Operating Voltage: 50 Volts AC peak or DC
Current: 1 Ampere at <30°C (single circuit, free air)
Temperature: -55 to 105°C
Low level contact resistance, circuit: 80 milliohms maximum initial
  5 milliohms maximum average increase
  10 milliohms maximum individual increase
Low level contact resistance, compliant pin: 1 milliohm maximum initial
  1 milliohm maximum change
Insulation resistance: 1000 megohms minimum
Withstanding voltage: 1 minute hold with no breakdown or flashover
Temperature rise vs. current: 30°C maximum temperature at 1 Ampere load, single circuit in free air using thermography
Mechanical Vibration, sinusoidal:
Mechanical Shock: No discontinuities of 1 microsecond or longer duration
Mating Force: 0.75 N [2.7 ozf] maximum per contact. Average for entire connector.
Unmating Force: 0.15 N [0.57 ozf] minimum per contact. Average for entire connector.
Compliant pin insertion: 31 N [7 lbf] maximum per pin average
Compliant pin retention: 13.35 N [3 lbf] minimum

VME64x (160-pin DIN):
Current Rating: Up to 40 A @ 30°C rise
Head Diameter: 0.230 inches nominal
Overall length: 0.615 inches minimum and 0.635 inches maximum
Thread Length: 0.545 inches maximum nut thread
Surface Treatment, Style: Tin overall, 86 knurled shank
Power Stud 8-32

Signal Definitions:

Fat Pipe: A channel that is comprised of four links (4 Tx pairs + 4 Rx pairs) is now being referred to as a fat pipe or by use of the x4 nomenclature. 10Gbps capable 10GBase-KX4, 10GBase-BX4, 10GBase-T, PCIe-x4, sRIO-x4, Infiniband-x4

Thin Pipe: A channel that is comprised of two links (2 Tx pairs + 2 Rx pairs) is now being referred to as a thin pipe or by use of the x2 nomenclature. 5Gbps capable 10/100/1000Base-T, 1000Base-BX, PCIe-x2, sRIO-x2, Infiniband-x2

Ultra-thin Pipe: A channel that is comprised of one link (1 Tx pair + 1 Rx pair) is now being referred to as an ultra-thin pipe or by use of the x1 nomenclature. 10GBase-KR, 1GBase-KX, PCIe-x1, sRIO-x1, Infiniband-x1a
OpenVPX Backplanes—6U

6U Drawing—9-Slot Example with 1.0” Pitch
Ordering Options
VPX60=6U OpenVPX Backplane

VPX60-ABYZ-CC-DFGHI-J

AB = VPX Slots
  = 02-18
YZ = VME64x Slots
  = 01-12
  XX = not applicable
CC = Profile Topology
  AA = CEN09-11.2.13
  AB = CEN10-11.2.6
  AC = CEN10-11.2.7
  BA = DIS06-11.2.8
  BB = DIS05-11.2.16
  DD = Other
D = Slot Pitch
  0 = 0.8”
  1 = 1.0” (most common size)
  2 = Custom
F = Voltage
  1 = 5V, 12V (6U Only) and +/- 12V AUX, 3.3V AUX
  2 = 3.3V, 5V, 12V (3U Only) and +/- 12V AUX, 3.3V AUX
  3 = Other
G = Rear IO
  A = Full rear IO connectors
  X = No rear IO connectors
  C = Partially loaded or custom
H = Data Rate
  1 = Data plane 3.125 Gbaud
  2 = 5.0 Gbaud
  3 = 6.25 Gbaud
  4 = 8.0 Gbaud (PCIe Gen3)
  5 = 40GbE
  6 = 100GbE
  7 = Other
I = Power Interface
  1 = M3 threaded power element
  2 = 1 x VITA 62 PSU interface
  3 = Other
J = Conformal Coating
  0 = None
  1 = Humiseal 1A33 Polyurethane
  2 = Humiseal 1B31 Acrylic