# ATR Chassis, Top Loaded for 6U OpenVPX, Conduction Cooled

# ATR1XX6 Chassis

## KEY FEATURES

- Rugged MIL ATR enclosure for 6U OpenVPX / SpaceVPX / SOSA aligned boards (other architectures available upon request) in various widths
- Top or bottom loaded, sealed conduction cooled enclosure
- 1/2 ATR to 4 slots, 3/4 ATR to 6 slots (typical), and 1 ATR to 9 slots
- 6U OpenVPX in various VITA 65 profiles
- Various VITA 62 pluggable PSU options available, AC or DC, MIL 704
- SOSA options available
- Backplane speeds options up to 100GbE and beyond
- Optional custom front panel options with filtering, MIL 38999 connectors, etc.
- Designed to MIL-STD-461 for emissions & susceptibility and MIL-STD-810 for temperature, shock, vibration, humidity, fungus, & salt fog, & DO-160 aircraft requirements
- Versions for SpaceVPX available (160, 220mm boards, wider slot pitch)

The ATR1XX6 is a MIL-rugged ATR enclosures designed for MIL specifications for airborne, shipboard, and other hardened applications. The top loaded ATR is geared for 6U OpenVPX / SpaceVPX / SOSA aligned designs, with other customization options. The chassis is offered in cabled and cable-less versions.

With a modular, top-loaded design, various VITA 65 profiles are available with customizable front panel I/O. Mounting trays and other accessories are also available. Contact Pixus for details.

Pixus Technologies Inc. USA (916) 297-0020 Canada (519) 885-5775
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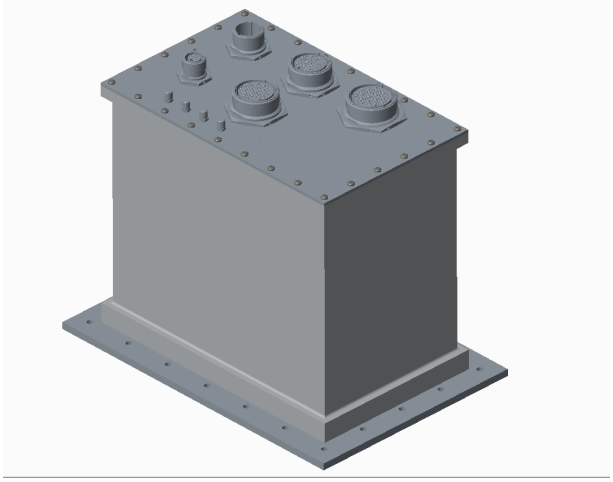
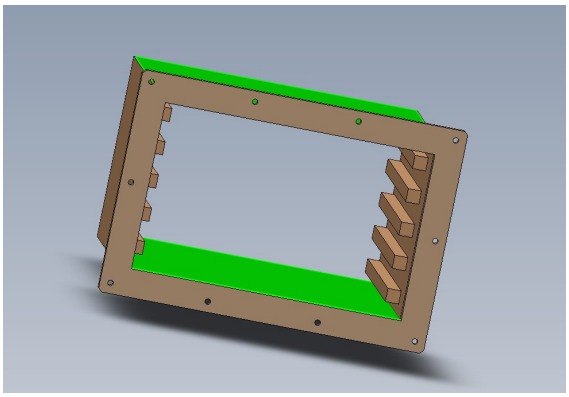
## POWER

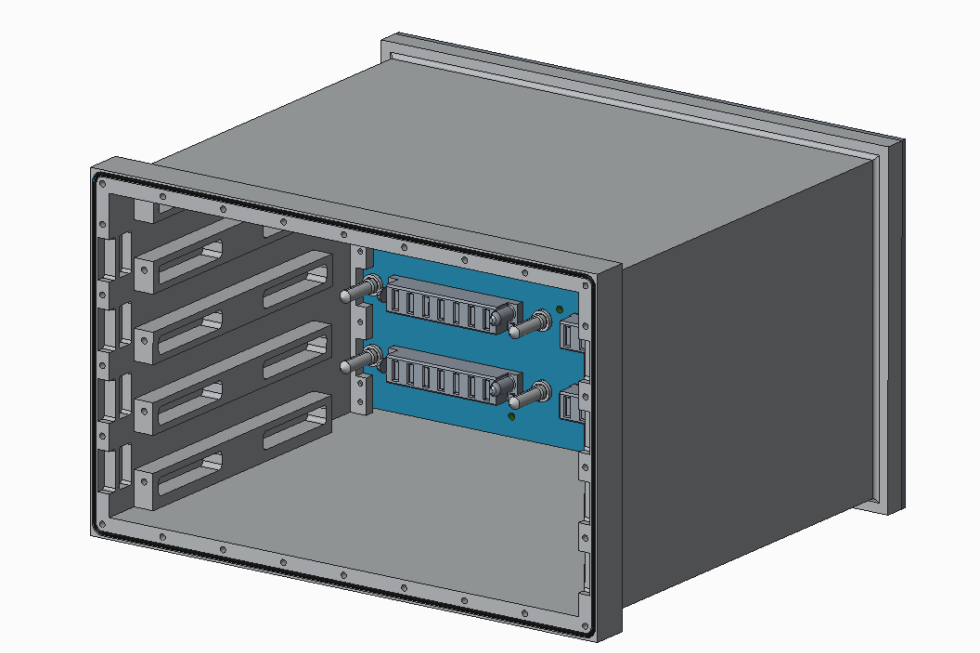
Pixus works with several PSU vendors for the optical power solution for your application. Typically, VITA 62 PSUs are utilized with 85-264V universal AC and 18-40V DC input options. There are additionally versions for 3-phase AC power. The VITA 62 power supplies are designed for the rigors or airborne and other rugged applications and meet the applicable MIL 704, 810, and 461 standards. Optional 50ms (or other) hold-up time typically achieved with separate plug-in or specialty modules. Contact Pixus for more details for your specific power requirement.

## COOLING

Pixus can perform preliminary thermal simulations for modified standard designs to meet the requirements of each application. Additional thermal simulation services are available. Pixus will find the optimal cooling approach for your loading configuration.







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## SOSA Aligned Profile

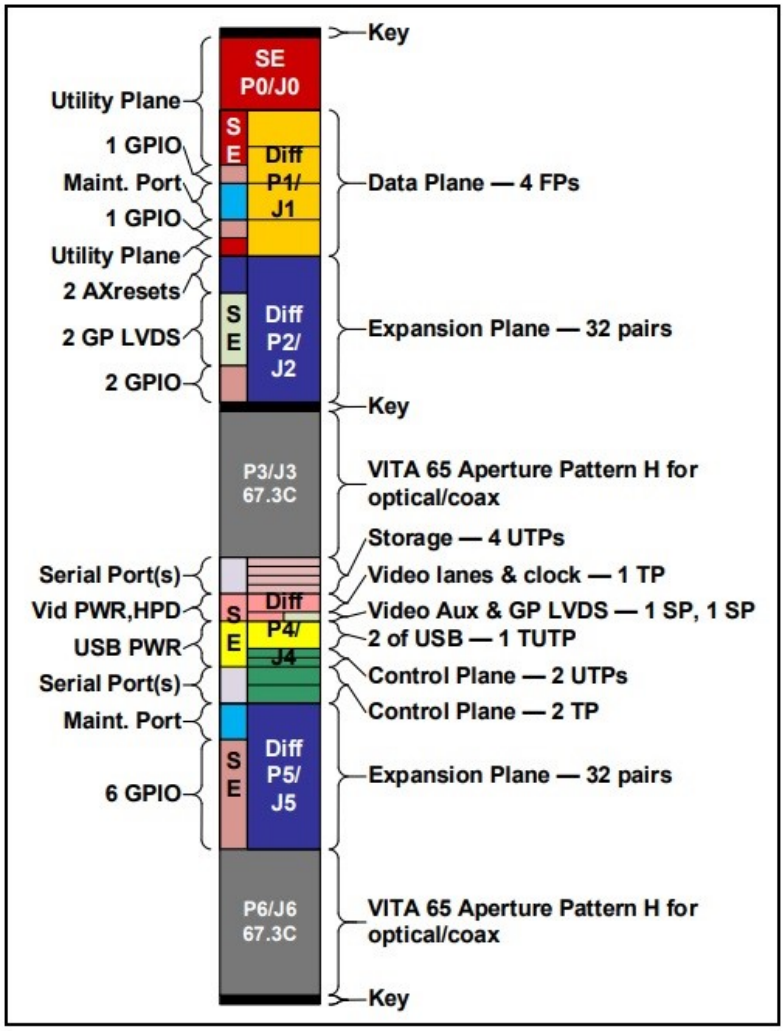


Figure 10.6.4-1 SLT6-PAY-4F2Q1H4U1T1S1S1TU2U2T1H-10.6.4-n

Pixus has multiple backplane options that support the various SOSA slot profiles. SOSA aligned systems utilize just the 12V (VS1) rail along with some 3.3 AUX. The IPMB is routed across the backplane to support the use of a SOSA aligned chassis manager and VITA 46.11 compliant versions. Visit https://pixustechnologies.com/products/enclosure-system-solutions/vpx-vme64x-chassis-2/openvpx-3u-6u-sosa/ to see Pixus' offering of SlotSaver™ mezzanine-based and pluggable SOSA aligned/ VITA 46.11 chassis manager options.

An examples of the wide variety of options are shown above. Several of the Pixus power and ground and routed backplanes have cutouts for Aperture H (VITA 67.3c) or other RF/Fiber sizes (Aperture J—VITA 67.3d, etc)

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## SPECIFICATIONS

| | | |
|---|---|---|
| **Architecture** | | |
| Physical | Dimensions | Height: ~ 8.63”* |
| | Pitch | 1.0” slot pitch standard, 1.2” or custom optional |
| | (from aspect of front of card cage) | Width: 1/2 ATR: ~ 4.88” standard, 3/4 ATR: ~ 7.50”, 1 ATR: ~ 10.12” |
| | | Depth: ~ 9.00” (deeper if VITA 66/67 interfaces)<br>Length: ~ 11.70” |
| Type | ATR chassis | *consult Pixus for other options |
| **Standards** | | |
| ARINC | Type | ARINC 404, 600 optional |
| VITA/ANSI | Backplane, Chassis | VITA 65 for OpenVPX, VITA 48.2, SOSA Technical Standard, VITA 63, VITA 78 |
| MIL-STD | Type | 810 (shock, vibration, environmental), 461 (EMI), DO-160 (avionics), 704 (power) |
| **Configuration** | | |
| Power | Type | 28VDC, 90-264VAC input @ 47-880Hz typical, other options |
| | | Various output options for 6U OpenVPX (5V, 12V, 3.3 AUX, + 12V AUX) |
| Environmental | Temperature | Operating temperature: -40° to +85°C |
| | | Storage temperature: -55° to +90°C |
| | Altitude | Application dependent options, consult Pixus for details |
| | | |
| | Weight | ~ 12 lbs for 1/2 ATR version including enclosure and backplane, depending on configuration |
| Conformal Coating | | Upon request (See page 6 selection “J” for available options) |
| | | |
| **Other** | | |
| MTBF | 25 degrees GB 82,000 hrs, 65 degrees A/C 27,000 hrs | |
| Certifications | Designed to meet FCC, CE and UL certifications where applicable | |
| Standards | ISO9001:2015 and AS9100B standards | |
| Compliance (DTM) | MIL-STD-810, MIL-STD-461, DO-160 | |
| 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. | |

# ATR Chassis, Top Loaded for 6U OpenVPX, Conduction Cooled

## ORDERING OPTIONS

**ATR1XX6-ABCDD-EFG-JK**

### A = Backplane

1 = 6U OpenVPX
2 = Other
3 = 6U SpaceVPX

### B = Backplane Speed

1 = Up to 5.0 GB/s
2 = 6.25 GB/s
3 = 8 GB/s (PCIe Gen3)
4 = 40GbE or equivalent
5 = Other
6 = 100GbE or equivalent

### C = Width

1 = 1/2 ATR ~ 4.88”
2 = 3/4 ATR ~ 7.50”
3 = 1 ATR ~ 10.12”
4 = Other

### DD = Payload Slots (Not including PSUs)

Example 0n = n slots
01 = 1 slot
03 = 3 slots
02 = 2 slots
12 = 12 slots

### E = PSU Input

1 = 28V DC
2 = 48V DC
3 = 90-230V AC
4 = Other

### F = PSU Output

1 = Reserved
2 = Reserved
3 = Reserved
4 = Reserved
5 = 6U OpenVPX voltages, 12V SOSA (+ 12V, 3.3 AUX, VBAT)
6 = 6U OpenVPX voltages (5V, 12V, 3.3 AUX, + 12V AUX)
7 = Other

### G = Cooling

1 = Conduction cooled—no fans (standard)
2 = Other

### J = Conformal Coating

0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic

### K = Finish/Coating

0 (or Blank) = Clear chromate finish (standard)
1 = Painted (contact Pixus for options)
2 = Anodized (external only)

### XX = Pitch/Depth

00 = 1.2” pitch spacing and 160mm board depth
01 = 1.2” pitch spacing and 220mm board depth
10 = 1.0” pitch spacing and 160mm board depth
11 = Other