Amphenol
MILITARY HIGH SPEED

OpenVPX™ SOSA Sensor Open Systems Architecture MEMBER



3U VPX 50G Development Chassis: "Nessie"

Supporting VPX and SOSA Aligned Payload Integration

Mysteriously fast. Not just a legend. Nessie is the only development chassis with high density SOSA V91 connectors for next-generation VPX chassis at 50Gbps. Nessie provides the scalability to support rapid development, demonstration and evaluation of MIL-HD2 Next-Gen SOSA/VITA 91 aligned connectors for next generation switch and payload card requirements.

It enables shortened design cycles for faster time to deployment. Nessie allows fast backplane replacement and fast **conversion between air and conduction cooled slot inserts.**

The open frame design includes backplane, power supply, fan cooling and rear transition slots in support of a variety of test functions.

Nessie comes standard with an 6 slot, 1.2" pitch power and ground **50Gb** backplane to support your development efforts. The chassis has a balanced 12V / 5V power supply for **mixed power payloads** and a 12V centric power supply is available on request. Both support current and emerging VPX and SOSA aligned module power requirements. Nessie is part of Amphenol's development solutions supporting VPX system development and hardware convergence and interoperability initiatives of the US Department of Defense.

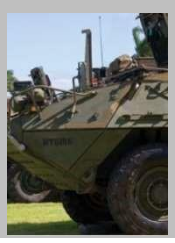
Features

- Quick-conversion air or induction cooled slot inserts
- Standard power and ground 50Gb backplanes
- PCIe Gen3 and 10GbE signal speed capability
- MIL-HD2 Next-Gen SOSA/VITA 91 aligned connectors
- Open access design and carrying handle
- VITA 66 and 67 apertures for optical and RF I/O
- Adjustable speed high cfm fans
- Rear transition modules slots
- Integrated AC/DC power supply

Benefits:

- Allows testing of air or conduction cooled modules
- Easily swap backplanes to support development progress
- Portability promotes collaboration
- Flexible reconfiguration supports multiple development stages
- Easy test-probe access speeds up development
- Enables single module or application level testing







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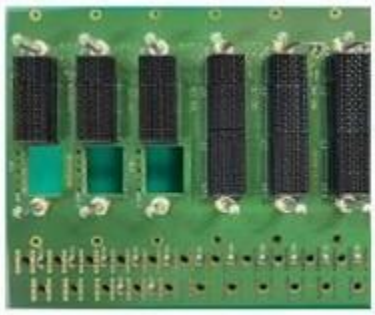
Amphenol Military High Speed
40-60 Delaware Ave.
Sidney, NY 13838

HOW TO ORDER

PART NUMBER	DESCRIPTION
CF-020400-612	The Nessie development chassis, 6 x 1.2” pitch air-cooled slots, power, and ground pass-thru 50Gb backplane with 3 x VITA 67 full width apertures and balanced 12V/5V PSU. Consult Amphenol for 12V centric PSU and fully populated backplane availability
CF-020400-605	Conduction cooled guide accessory kit. Includes top and bottom guides plus mounting hardware

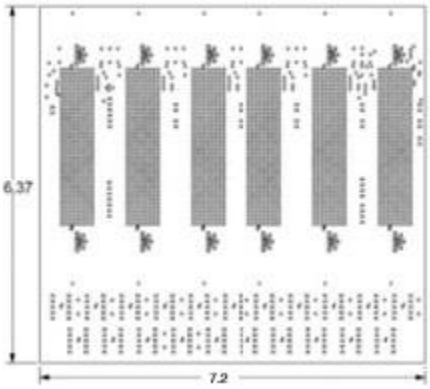
BACKPLANES

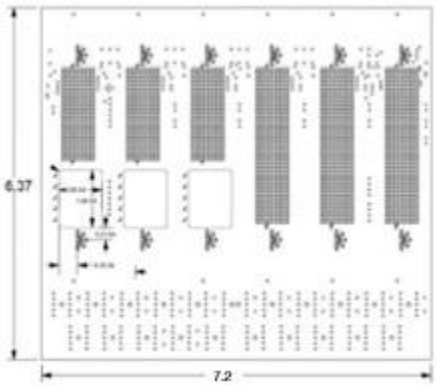
“Nessie” includes as standard, a 6 slot 50Gb capable power and ground pass through backplane with 3 x fully populated slots and 3 x slots with VITA 67 full width apertures. Apertures allow installation of SOSA/VITA 91 connectors for optical and RF connectivity. Systems can be supplied with or without the required connectors installed.



Slots 1-3, VITA 67.3 apertures for fill and half width
VITA 66 & 67 optical and RF connectivity

Power and ground or pass through backplanes are also referred to as uncommitted backplanes. Uncommitted VPX and SOSA backplanes rely on a slot to slot cabling system to establish the data, control, and expansion planes necessary for integration testing. The backplane in Nessie includes slot to slot connectivity for power, and ground plus VPX-Standard system signals such as a system reset and reference clocks

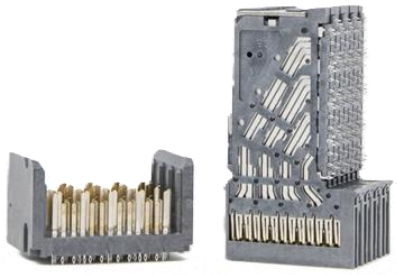




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MIL-HD2 CONNECTORS

Developed in alignment with The Open Group Sensor Open Systems Architecture™ (SOSA) technical standard, MIL-HD2 provides developers with a readily available, robust open architecture solution for tighter card pitches and chassis designs where space requirements and density are critical. These connectors are available in 3-, 4-, and 6-pair configurations, providing the MIL-embedded market with the highest count of differential pairs available today in a 3U configuration at 56Gb/s PAM 4 speeds. This series was selected by the SOSA Consortium and provides a SOSA aligned solution for nextgen switch and payload card requirements enabling the MIL-embedded market to meet next-gen performance levels while still meeting COTS requirements.



Features:

-Highest density with 1.80mm pitch

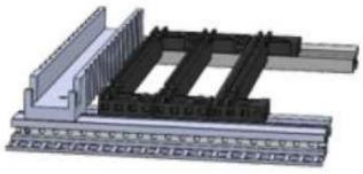
-Proprietary crosstalk reducing technologies

-Differential pairs 28-84 per inch (11-33 differential pairs per centimeter)

-Enables hot plugging

AIR AND CONDUCTION COOLED CONVERSION

Nessie supports air cooled VITA 48.1 or conduction cooled VITA 48.2 VPX or SOSA aligned plug in cards. Quick conversion air, or conduction cooled card guides, allow slot by slot configuration for mixed payloads. Slot conversion can be completed in minutes to support both card types as needed.



Mixed air and conduction guides



Individual conduction cooled guides

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SPECIFICATIONS

Physical	
Dimensions including feet and handle: 16.89" x 9.82" x 17.28"	Weight: Approximately 39lbs
Power Supplies	
Integrated AC-to-DC 1000W power supply Two available power supply options: 1) 12V/5V - 1058W; 12V/450W, 5V/375W,3.3V/82.5W, -12V/150W 2) 12V - 1083W; 12V/600W, 5V/250W,3.3V/82.5W, -12V/150W	Outputs; MAIN: +12V, +5V, +3.3V *AUX: +3.3V, +12V, -12V *Note: AUX voltages use main voltage rails*
Thermal	
Push-pull cooling with 5 upper and 2 lower high cfm fans over the front and RTM areas of the chassis Heat sensing automatic fan speed plus manual dial override	Conduction cooled guides feature air passthrough cut-outs Removeable side plates to direct airflow
Environmental	**Standards Compliance**
Intended for lab use in benign environments.	Nessie is intended for use with VITA 48.1 air or conduction cooled 3U VPX and SOSA aligned plug in cards.
Controls and I/O	
Rear switch for AC ON/OFF, Status indicators: AC, +12V, +5V, +3.3V, -12V	Rear switch for AC ON/OFF
Backplane Options	**Slot Profiles**
6 slot power and ground 50Gb backplane, 1.2" pitch slots 1-3 with SOSA/VITA 91 apertures, 1.2" pitch- Consult us regarding fully populated backplanes.	Power and ground, pass through for profile development using Meritec cabling

