

New 3U VPX ATR and 19" Rackmount Chassis Join WILD100 Family of Chassis, Backplanes & Chassis Managers

Annapolis Micro Systems, a leading Modular Open Systems Approach (MOSA) solutions supplier, has introduced a rugged WILD100 8-Slot 3U OpenVPX SOSA™-Aligned $\frac{3}{4}$ Air Transport Rack (ATR) Chassis ([WC3A80](#)) and two WILD100 19" Rackmount 3U OpenVPX Chassis ([WC31E0](#) & [WC31DH](#)).

The new chassis join the WILD100 Family of [Annapolis Chassis, Backplanes & Chassis Managers](#), most of which were developed in alignment with the Sensor Open Systems Architecture (SOSA) Technical Standard and support C5ISR/EW Modular Open Suite of Standards (CMOSS).

WILD100 products feature 25 Gbps Line Rates on Data and Expansion Planes via:

- 25/40/100Gb Ethernet
- SDR/DDR/QDR/EDR Infiniband
- Gen 3/4 PCI Express
- Custom protocols up to 25Gbps per lane

All three chassis include a secure WILD Chassis Manager ([WABGM0](#) or [WABGM2](#)). The chassis managers are SOSA-aligned and VITA 46.11 compliant, and are powered by a Xilinx UltraScale+ ZU5EG or ZU11EG MPSoC and Microsemi PolarFire MPF200T FPGA for security functions. Multiple security and advanced features are available; contact factory for details.

WC3A80 ATR Chassis

The top-loading forced-air, conduction-cooled [WC3A80](#) is in

production and is shipping to customers. It has eight 3U OpenVPX slots:



- Four Primary RF/Compute Intensive Payload Slots with 14.6.11 profile
- One I/O-intensive SBC Slot with 14.2.16 profile
- One 40/100GbE Switch Slot with 14.4.14 profile
- One Timing Slot with 14.9.2 profile
- One 12V-only VITA 62 Power Supply Slot

Payload slots feature VITA 66.5C and VITA 67.3C connectivity, and optional MIL-DTL-38999 SOSA-aligned circular connector(s) with 19 RF or four 24 fiber MT connections. Up to two dual redundant MIL-STD-1553 interfaces are supported.

The rugged unit supports operation from -40 to 70°C and storage from -50 to 85°C ambient air, and is targeted at demanding airborne and land/sea-based applications.

WC31E0 & WC31DH 19" Rackmount Chassis

The front-loading forced-air, conduction-cooled [WC31E0](#) (in production) and [WC31DH](#) (in development) have 14 and 13 3U OpenVPX slots, respectively. Both include:



- Eight Primary RF/Compute Intensive Payload Slots with 14.6.11 profile
- One Timing Slot with 14.9.2 profile
- Two 12V-only VITA 62 Power Supply Slots

The WC31E0 Chassis also includes:

- One I/O-intensive SBC Slot with 14.2.16 profile
- Two 40/100GbE Switch Slots with 14.4.14 profile

The WC31DH Chassis also includes two HD Switch slots that feature high-density VITA 91 connectors with double the available density, up to 64 lanes of Ethernet or PCIe or 128 LVDS pairs.

The two HD switch slots allow the WC31DH Chassis to handle all Data and Control Plane Ethernet via one slot, with the second switch slot dedicated to the expansion plane – Ethernet, PCIe and/or LVDS (for low latency jamming or radar applications).

“The new VITA 91 high-density connector allows for a completely switched backplane, so the expansion plane is no longer defined by a fixed backplane PCB, but is now fully reconfigurable,” said Jay Grandin, Annapolis Micro Systems VP of Product Development.

“This not only allows for all the slots to be on the same non-

blocking Ethernet switch instead of two switches chained together, but it facilitates a flexible, programmable expansion plane. This supports either 8x Gen4 PCIe or 4x Gen4 PCIe, plus eight LVDS using the [WP3P20 Switch](#) or dual 100Gb Ethernet with the [WP3E20 Switch](#).”

WILD100 EcoSystem

These chassis are three of dozens of products that comprise Annapolis’ [proven WILD100 EcoSystem that aligns with SOSA™ 1.0](#). The EcoSystem is an interoperable portfolio of rugged high-performance OpenVPX COTS boards and systems that are used for challenging data acquisition, digital signal processing, and data storage applications.

The WILD100 EcoSystem includes these 3U VPX products:

- **3U Baseboard:** [Eight WILDSTAR Baseboards](#)
- **3U Storage:** [WILDSTAR 3SN0 Storage](#)
- **3U Switch:** [Three WILDSTAR Switches](#)
- **3U Chassis:** [Three WILD100 Chassis & Backplanes](#)
- **3U Kit:** [WILD100 SOSA Development Kit](#)

The WILD100 EcoSystem also includes these 6U VPX products:

- **6U Baseboard:** [Four WILDSTAR Baseboards](#)
- **6U Storage:** [WILDSTAR 6SN0 Storage](#)
- **6U Switch:** [WILDSTAR 6E10 Switch](#)
- **6U Chassis:** [WILD100 16-Slot Chassis & Backplane](#)

Annapolis’ [powerful BSP options](#) include 40/100GbE IP and both VxWorks 7 and Linux support.

Annapolis high-performance products are designed for advanced HPC, ISR, and multi-function EW applications, including phased array radar, cybersecurity network processing, DRFM, beamforming, sensor processing, wireless communication, and radar signal processing.