

# 3U VPX CMFF / SAVE COMPLIANT CHASSIS

## ALIGNED TO SOSA™ AND CMOSS

### DESCRIPTION

The Elma CMFF Chassis is an off-the-shelf 3U SOSA and CMOS aligned configurable and deployable chassis solution designed for ground vehicles and ground combat environments. It is intended for Integrated Command, Control, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) and designed for ground vehicle applications. The chassis meets the size, weight, power, and connector, and electrical interface requirements outlined by the Standard A-Kit Vehicle Envelope (SAVE)

The Chassis is compliant to CMOSS and aligned with SOSA Technical Standard. This mission-ready chassis comes standard with a 7 slot backplane ready to accept SOSA aligned plug-in cards (PICs) and VITA 62 power supply and is an ideal way to rapidly integrate a deployable platform. The chassis ships with the backplane, a chassis manager, a hold-up module, and a VITA 62 plug-in power supply. All are SOSA aligned. A key feature is the USB-based maintenance port aggregator for simplified servicing.

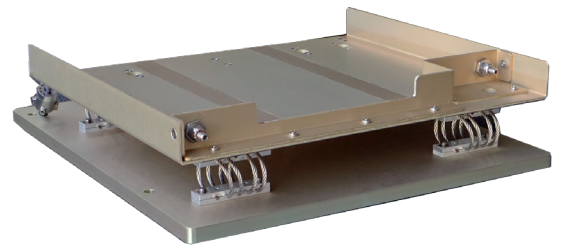
The all-aluminum chassis incorporates military-grade components like MIL-STD-38999 connectors, line filter, on/off and reset switches, LEDs, circuit breakers, etc. It is EMC shielded to MIL-STD-461E. The cooling fan is a military-grade, high-altitude fan that can operate under extremely harsh temperature conditions. Custom options such as different backplanes, dual power supplies, and different cabling are available from the factory upon request.

### Features

- CMOSS / SOSA Aligned and SAVE compliant Chassis
- Meets SAVE dimensional requirements of 9.3"(H) 15.9" (W) x 16.1" (D) with 2"x4" notch / keep out space
- Chassis dimensions allow space for cables and shock tray within the envelope
- Elma's 7-slot OpenVPX backplane aligned with SOSA profiles and CMOSS (1SVX306ARP-9K31)
- Meets ARINC 404A and ANSI/VITA 48.2
- Aluminum dip-brazed design to meet rugged environments
- Power supply and line filter combination optimized to meet MIL-STD-461
- Tested to meet MIL-STD-810 and 641 and MIL-1275
- Includes SOSA aligned chassis manager, a hold-up module (50ms), and VITA 62 plug-in power supply
- Front panel USB-based maintenance port aggregator



Front View



ATR Tray



RearView

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- Maintenance ports routed to connector on rear of backplane, brought out via breakout cable for board diagnostics and configuration
- Includes Maintenance Port serial break-out cable
- Includes a SAVE compliant shock and vibration isolation tray designed specifically for this chassis
- Elma's built-in VITA 46.11 Chassis Manager for intelligent system health monitoring
- Advanced airflow design distributes air across top and bottom external fins
- Front and rear fan trays with 12 VDC fans
- Front panel on/off switch, reset switch, voltage LEDs and test points
- NVMRO and Zeroize Switches
- AC operation with power cord

**Benefits**

- Compact lightweight design for SWaP sensitive applications
- CMOSS, SAVE and SOSA compliant
- Designed for ground vehicles and ground combat environments

**APPLICATIONS:**

- Ground combat and tactical vehicle electronic infrastructure
- High performance ground or rotary wing processing applications
- C5ISR

**RELATED PRODUCTS****MORA Ready Development Platform (MRDP)**

The MRDP is a turn-key product which the developer unboxes, plugs in, turns on, and can instantly begin developing new applications or integrating existing applications. It provides a known reference platform to support system development.

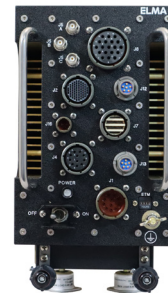
Developments from the MRDP can be deployed using the CMFF / SAVE Compliant Chassis.

**SOSA Aligned ATR (ATR3600)**

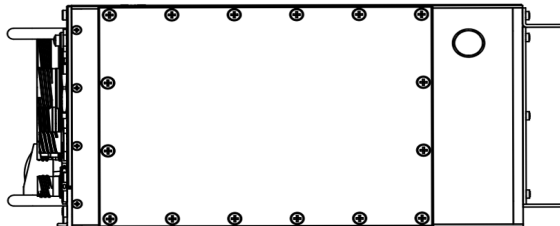
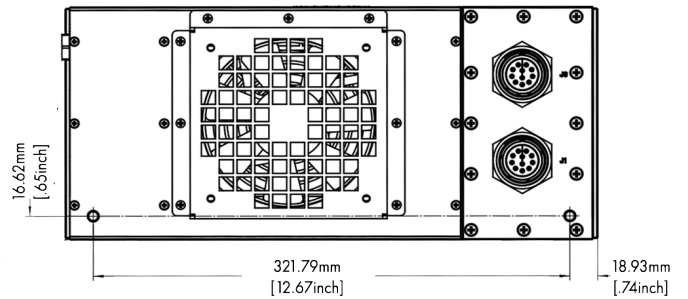
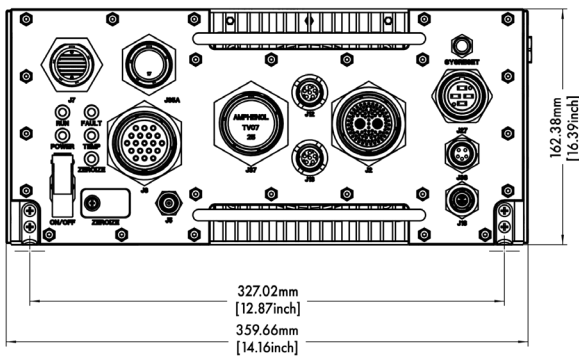
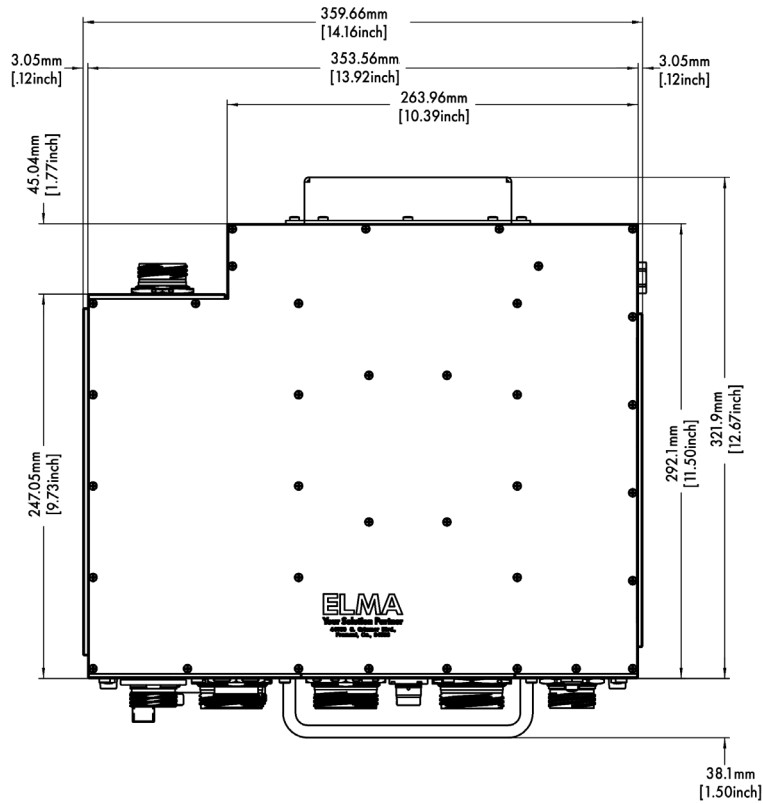
The SOSA aligned ATR-3600 is a sister product to the CMFF / SAVE chassis with a similar feature-set that allows rapid deployment in rugged environments.

**Optional Computing Products**

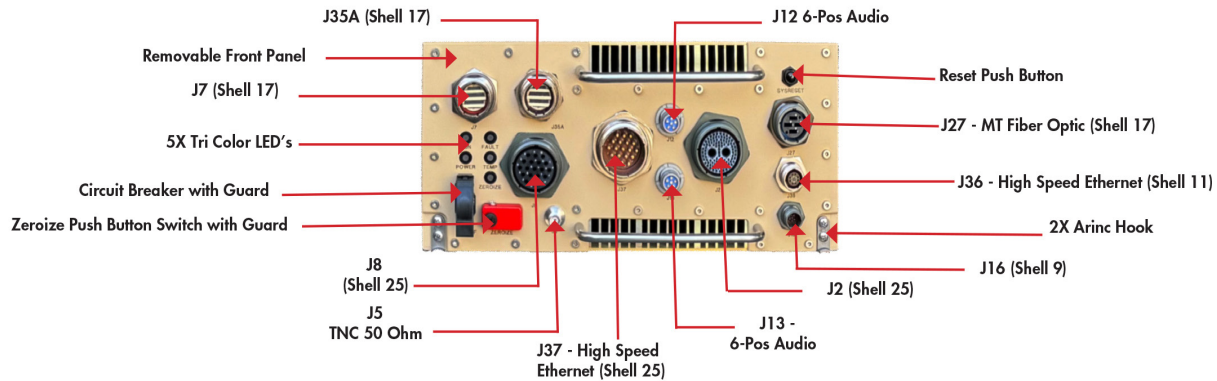
- Single Board Computers
- Ethernet and PCIe switches
- PNT Boards
- GPGPU and FPGA boards
- Data Storage
- Other I/O boards



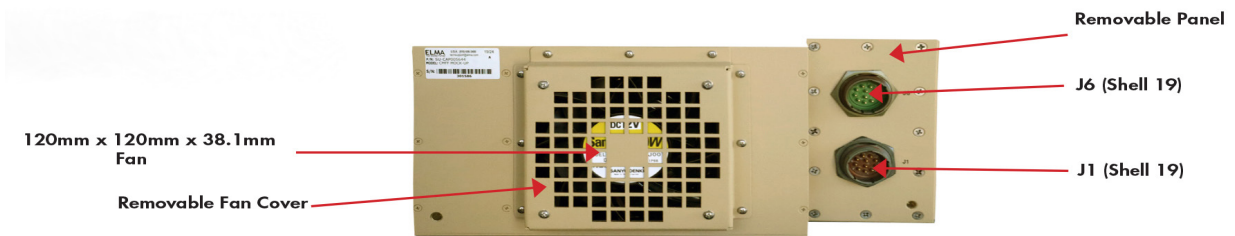
## LINE DRAWING



## Front Panel Connections



## Rear Panel Connections



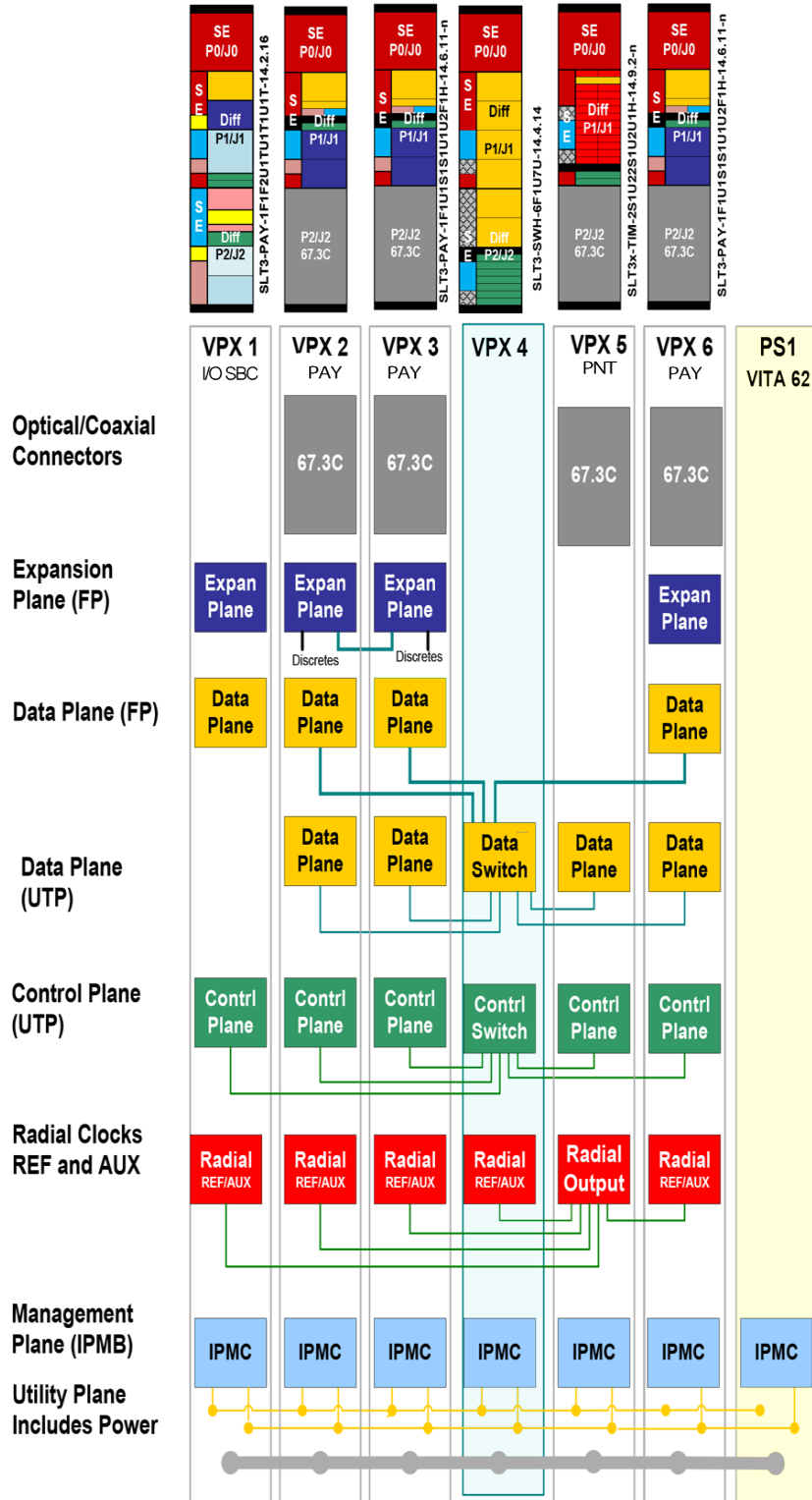
## BACKPLANE SPECIFICATIONS

- 25Gbps 100GBASE-KR4 Data & Control Planes
- 1/10/40 Gb & 25/100 Gb dual domain Ethernet switch
- Radial Clock connectivity to 5 other slots
- All IMPI interfaces routed to Chassis Manager
- VITA 67 apertures for optical and RF I/O

## Slot Definitions

- Slot 1 - SLT3-PAY-1F1F2U1TU1T1U1T-14.2.16
- Slot 2 - SLT3- PAY-1F1U1S1S1U1U2F1H-14.6.11-N
- Slot 3 - SLT3- PAY-1F1U1S1S1U1U2F1H-14.6.11-N
- Slot 4 - SLT3-SWH-6F1U7U-14.4.14
- Slot 5 - SLT3x-TIM-2S1U22S1U2U1H-14.9.2-n
- Slot 6 - SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11-n
- Slot 7 - VITA 62 Power Supply

## BACKPLANE PROFILE



**ENVIRONMENTAL**

	Specifications
Temperature:	-40°C to +70°C, -55°C to +85°C optional
Storage Temperature:	-50°C to 120°C
Altitude:	30,000ft (1,829m)
Humidity:	0% to 95% non-condensing
Shock:	30Gs @ 11ms
Vibration:	1.0G <sup>2</sup> /Hz (RMS 12G) @ 15 to 2,000Hz
Standards:	Designed to meet MIL-STD-810F, MIL-STD-461E & MIL-STD-704F
Weight:	Approx: 34 lbs with SAVE tray included

**ORDER INFORMATION**

Description	Model Number
CMFF / SAVE Compliant Chassis – SOSA Aligned	ATRSAV07BRN1HVQE4
<ul style="list-style-type: none"> <li>› Holds 6, 3U x160mm conduction cooled cards (1" Pitch)</li> <li>› 7 slot (6+1) SOSA aligned OpenVPX backplane</li> <li>› Includes Chassis Manager, VITA 62 Wide Input Power Supply, and Hold-up module (50ms)</li> <li>› Comes with SAVE Tray</li> </ul>	
SAVE Compliant Tray with Shock Isolators	CAS002168

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**Please contact our sales team for more details.**

United States: +1 510 656 3400  
France: +33 388 56 72 50

Germany: +49 7231 97 34 0  
Israel: +972 3 930 50 25

Singapore: +65 6479 8552  
Switzerland: +41 44 933 41 11

United Kingdom: +44 1234 838 822