AMMP304-01
3U OpenVPX SOSA aligned Mission Computer with BuiltSAFE®

Accelerate safety-critical applications and their deployment
- SOSA aligned, 4 payload slots
- Up to 2 11th Gen Intel® Core i7® quad core processors with integrated GPU
- Certifiable to DO-254 and DO-178C DAL A
- Rugged SWaP optimized, <15 lb
- Discrete, MIL-STD-1553, ARINC-429, RS-485, CAN avionics interfaces
- Certifiable RTOS, CAST-32A compliant
- Optional ARM or PPC processing

Speed technology integration and quickly capture, distribute and process HD video and multiple mission- and safety-critical workloads with Mercury’s 5-slot, SOSA aligned 3U OpenVPX mission computer.

Highlights
- Deliver 20x more performance than legacy safety-critical processors with dual 11th Gen Intel Core i7 (codename Tiger Lake) CPUs with an integrated GPU
- Simplify integration and operate in demanding flight conditions with a SOSA aligned flight-ready, and compact computer
- Run mixed safety-domain workloads ranging up to DAL A and save space with 5 fully configurable, independent and certifiable 3U boards
- Maximize interoperability and throughput with DAL A certifiable Ethernet and numerous avionics I/O including MIL-STD-1553 bus, ARINC-429, RS-485 and CAN
- Speed integration with complete safety-certifiable board support packages (BSPs) that include drivers and BIT functionality
- Streamline certification and meet multicore certification CAST-32A objectives up to DAL A with support from Mercury’s expert engineering and certification team

Design with BuiltSAFE technologies-tested, certified and fielded over three decades

The AMMP304-01 mission computer is architected using Mercury’s proven BuiltSAFE commercial-off-the-shelf (COTS) elements and artifacts for flawless performance and ease of systems integration. Modular and reusable, BuiltSAFE technologies maximize interoperability and speed technology refresh by minimizing the need for recertification.

CONTACT US
The basic AMMP304-01 configuration consists of 4 independent modules:

**Up to 2x Processing Blades (SBC-3515)**
Certifiable up to DAL A

**Processor**
- 2x Intel Core i7 11th Gen Tiger Lake quad core processors

**Integrated Graphics Processing Unit**
Intel Iris GPU integrated

**Memory and Storage**
- 32 GB DDR4 with ECC
- 64 MB FLASH
- 64 GB M.2 SSD storage

**1x Ethernet Switch (SFM-3206)**
Up to 32x 1GBase-Kx or 10GBase-KR

**Up to 2x Avionics I/O Modules (AVIO-2360)**
Certifiable up to DAL A/C

*See table

### Possible Front Panel I/O Options
(with 1x avionics I/O module installed)

<table>
<thead>
<tr>
<th>Interface</th>
<th>In</th>
<th>Out</th>
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<tr>
<td>MIL-STD 1553</td>
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<td>RS-485 full duplex (note 1)</td>
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<tr>
<td>RS-232</td>
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### Maintenance and Diagnostics
Integrated built-in test (BIT) capability

### BuiltSAFE® Proven Elements
- DO-254 hardware
- DO-178C graphics CoreAVI OpenGL SC 1.0, 2.0
- DO-178C GPU accelerated compute
- DO-178C video encode/decode
- Design and information assurance

### Mechanical and Environmental
**Dimensions:**
5.32” × 7.42” × 9.89”
135 × 188 × 251 mm
**Weight:** <15 lb (6.08 kg)
**Supply voltage:** 22–32.5 VDC
**TDP:** 75 W

### Software Board Support Packages (BSP)
- Green Hills, Lynx and Linux with drivers
- Support to meet CAST-32A objectives
- Upon request:
  - Deos
  - PikeOS
  - WindRiver
AMMP304-01 BLOCK DIAGRAM (BASELINE CONFIGURATION)

Note: Specific I/Os detailed in Front Panel I/O Options table on previous page