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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

TECHNICAL SPECIFICATIONS

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 Corei7 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)

Interface		In	Out
Mission	MIL-STD 1553	3	
	ARINC 429	7	7
	RS-422 full duplex (note 1)	7	
	RS-485 full duplex (note 1)	7	
	Gb Ethernet	3	
	CAN	1	
	Video	2	2
Maint	USB Console	1	
	Gb Ethernet	1	
	RS-232	2	

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

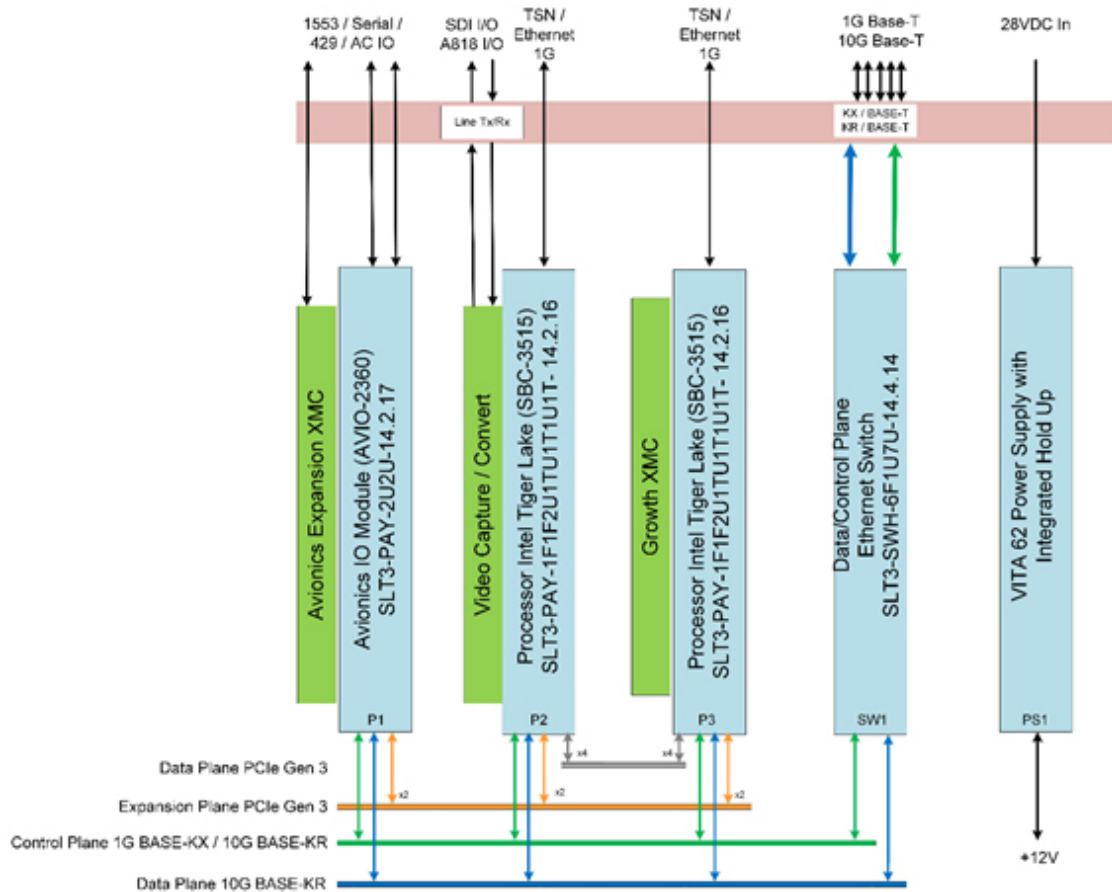Support to meet CAST-32A objectives

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

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