AVC-4910

MOSARC AIR VEHICLE COMPUTER

Safety-critical modular processor

Modular processing for next generation MOSA architectures

Collins Aerospace's next generation, modular, safety-critical computer, the Mosarc Air Vehicle Computer (AVC), features our general purpose processing, video mixing and I/O interfaces. It includes Collins field programmable gate array (FPGA) developed to DO-254 design assurance level (DAL) A, providing superior video mixing capabilities with low latency. Our entire Mosarc AVC product line provides a low-risk approach for achieving airworthiness certification.

The Mosarc next-generation AVC includes three Collins multi--core processors - the only multi-core processor on the market that meets FAA Technical Standard Order (TSO) for all cores per Certification Authorities Software Team (CAST)-32A requirements.

Designed to keep safety-critical and mission data separate and enabling advanced video blending on the primary flight displays of military aircraft, the next generation Mosarc AVC provides users with a powerful, ruggedized situational awareness tool for challenging electromagnetic and environmental conditions.

Built to meet Modular Open Systems Approach (MOSA) standards, the next-generation Mosarc AVC maintains backward compatibility with current systems and features a Hardware Open Systems Technologies (HOST)/Sensor Open Systems Architecture™ (SOSA)-conforming backplane and 3U OpenVPX cards.

KEY FEATURES & BENEFITS

- System-level reduction in SWaP
- Support for current and next-generation displays
- MIL-STD-810H, MIL-STD-461G and MIL-STD-704 qualified for rugged applications
- Employs MOSA to ensure third-party accessibility and lower lifecycle costs for enhancement and obsolescence
- DO-297 (IMA), FACE™, SOSA, HOST, ARINC 653 and ARINC 661 standards
- Built to satisfy U.S. DoD and international reference architectures supporting AMS-GRA, PYRAMID, ECOA and other open standards
- High-technical/-manufacturing readiness level (TRL)/(MRL) hardware and software
- Low risk for airworthiness certification

Model: AVC-4910

FEATURES

- Support for legacy input/output (I/O), graphics and processing currently available in the Common Avionics Architecture System (CAAS) and Flight2™
- Hosts multi-level design assurance level (DAL) applications.
- Supports legacy and next-generation large-area remote displays.
- Supports both OpenGL SC 2.0.1 and non-OpenGL (ARINC 661) safety-critical graphics.
- System-level reduction in size, weight and power (SWaP).
- Installs quickly on platforms with MT-4910 mounting trays.
- Fiber video interfaces for next-generation applications.
- Low risk for airworthiness certification: Collins' Assured MultiCore processor is FAA TSO certified for use of all cores.

CHARACTERISTICS	
Maximum size	AVC-4910 8.88 in. W x 13.37 in. L x 7.73 in. H MT-4910 8.89 in. W x 16.81 in. L x 8.23 in. H Overall 8.89 in. W x 16.74 in. L x 8.61 in. H
Cooling methods	Forced air convection cooled via MT-4910
Ambient operating temperature	-40º C to 71º C
Maximum power	354 W (baseline configuration) 115 VAC, 400 Hz, three-phase
Maximum weight	AVC-4910: 34.86 lb. MT-4910: 4.36 lb. Overall: 39.22 lb.
Connectors	Military-style circular connectors

INTERFACES	AVAILABLE
SMPTE-292 output	6
ARINC 818 output	4
SMPTE-292 input	8
RS-170 input	3
MIL-STD-1553B	2
Discrete input	16
Discrete output	16
ARINC 429 input	32
ARINC 429 output	16
RS-422 input	8
RS-422 output	8
100/1000 BASE-T communication ethernet	9/5
100 BASE-T high-integrity ethernet	14
One pulse per second (1PPS)	1
ARINC 708 input	1

PRODUCT LINE SUPPORT

Collins funds product line support for the AVC and its components, reducing sustainment costs for our customers. This includes next-generation technology development, insertion planning, obsolescence monitoring and refresh. Collins is incentivized to continue investment in the safety-critical commercial market, resulting in lower cost solutions for our military customers.

The AVC-4910 contains the following Collins product line modules:

- SCX3 (3x)
- VMX3
- GPX3
- GPMX
- IOX3 (2x)
- Power Supply Module (PSM)
- Commercial Ethernet Switch (CES)

Specifications subject to change without notice.

Collins Aerospace
An RTX Business

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