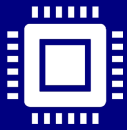


Versatile Computing Systems



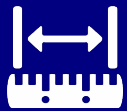
VCompS-4200 Distributed Processing and I/O Unit

Distributed solution with an architectural approach that provides both flexibility and cost effectiveness.



Dissimilar Computing Capability

- GE Custom System On Chip (cSoC) processor architecture offers two fully independent processors in one package
- Xilinx Ultrascale+ Multi-Processor System on a Chip (MPSoC) provides a dissimilar ARM-based processor



Optimized Design

- Packaging developed to optimize size, weight, and power requirements for allowing for flexible integration on many type of aircraft
- GE Synergy software environment includes all components necessary to fully support an entire avionics application solution
- Field loadable via A615 data loader



Comprehensive Input/Output (I/O) Complement

- Standard digital avionics interfaces available are compatible and interoperable with a wide range of aircraft systems
- Large bank of analog and discrete signals offer flexibility for many aircraft applications
- Able to configure I/O to the multiple processing elements



Operating Environment

- Ruggedized design allows for operations at extreme temperature, altitude, and humidity conditions
- Protected from electro-magnetic interference, power transients, and lightning strikes



Certification Ready

- Full artifacts to efficiently create safe, certifiable systems at the highest levels of criticality
- Certifiable to safety critical design assurance levels in accordance with ARP4754, DO-178C, and DO-254.

Performance specifications

Processors

- GE cSoC Dual Lane e5501 Power Architecture® 1.2 GHz
- Xilinx Ultrascale ARM A53/R5 1.5 GHz

GE cSoC Features (VCompS-1000)

- Dual lane, independent processor mode
- Fully coordinated cross-lane lockstep JTAG debugging
- Cross-lane communication mailbox (not available in lock-step mode)

Input/Output and Signal Characteristics

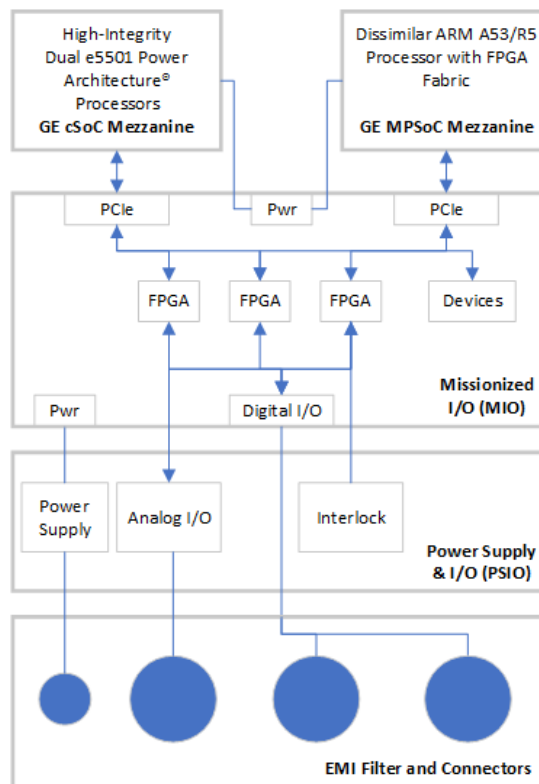
- 12x Discrete Output O/G: 250 mA
- 12x Discrete Output 28V/O: 28V @ 250 mA
- 36x Discrete Input configurable in banks of 8 - 28/V Open or GND/Open
- 6x RT ADDR: Open/Gnd (5+Parity)
- 3x in / 3x out Channel Operative (CHOP): - 100 us pulse at 800 Hz at low voltage differential levels (RS-422)
- 3x DPIU Channel ID discrettes
- 4x 2 port node, 1x 3-port node IEEE-1349b: 200 mbps
- 16x RS-485/422: up to 921.6 K Baud
- 10x Rx / 8x Tx ARINC 429: Low or High Speed
- 4x ARINC 825 (CAN)
- 4x Ethernet: 10/100/1000 BaseTx
- ARINC 664 Part 7 (AFDX): 10/100/1000 BaseTx (Option)
- 1x in / 2x out 1PPS: 0-10 V, 20 mSec pulse/sec
- 8x A-to-D Inputs (Differential or Single-Ended)
- 8x D-to-A Outputs (AC or DC, FOP or VOP)
- 4x Analog Current Output
- 4x +15V Excitation (various resistances)
- 4x in/3x out Mode/TTL Discrettes
- 8x NVM control discrettes
- 3x RS-232 (test)
- 3x 10/100 Ethernet (test)

Operating Environment

- Temperature: -40°C to +71.1°C
- Altitude: up to 50,000 ft
- Relative Humidity: >95%
- Vibration: up to 11.3 GRMS
- MIL-STD-461E: CE102, CS101, CS114, CS115, CS116, RE102, and RS103 (200V/m)
- DO-160E: A1J22 Lightning Protection
- MIL-STD-704F: 50 mSec transient protection

Software Environment

- GE Synergy w/ VxWorks7, ARINC 615A Data Loader, Factory Support Application, and comprehensive configuration, analysis, and development toolset



Feature	Attribute
Size (L x W x H)	11.25 inches x 8.00 inches x 2.50 inches 28.6 cm x 20.3 cm x 6.4 cm
Weight	< 10.0 lbs < 4.5 kg
Power	< 70 W (passive cooling)

Safety

- BIT > 95% coverage
- Fast Restart (< 100 ms)
- Support for Single to Quad Redundancy: Cross Channel Data Link (CCDL) and Channel Operation Discrettes (CHOPs)
- Up to ARP4754, DO-178C, and DO-254 DAL A certifiable
- MIL-HDBK-516C Safety Critical verifiable

Manufactured and Distributed Worldwide by:

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About GE Aviation Systems

GE Aviation Systems, a General Electric Company (NYSE: GE), provides state-of-the-art digital technology to meet the needs of the world's evolving airspace marketplace through highly reliable, integrated avionics systems essential to aircraft operation. GE's pioneering work in modular processing systems and ability to integrate third party software is a leader in the industry. These solutions provide a truly open architecture system that integrates the aircraft's computers, networks and interfacing electronics, and hosts avionics and utilities functions providing major cost benefits.