



CRS-C2I-3CC1 COTS Rugged System

Convection Cooled 3U CompactPCI Application Ready Computer

Features

- Rugged convection cooled chassis
 - 2 slot 3U CompactPCI
 - MIL-C-38999 connectors
- Intel Atom @ 1.6 GHz
- Linux Real-time operating system (Windows, VxWorks 6.7 also available)
- BIT support
- Optional SATA drive
- I/O capabilities
 - Ethernet
 - Serial
 - USB
 - MIL-STD-1553
 - CAN Bus
 - ARINC 429
 - Discrete
- Designed for:
 - Military and civilian UAVs
 - Ground vehicles
 - Helicopters
 - Military and commercial aircraft

GE Intelligent Platforms' CRS-C2I-3CC1 COTS Rugged System is a packaged pre-validated control computer system with an Intel processor single board computer that provides a rugged and highly flexible computing platform suited for applications requiring rock-solid reliability such as civilian and military UAVs, manned commercial and military aircraft, helicopters, over- and underwater research vessels, ground vehicles, and locomotives.

GE's COTS-based CRS-C2I-3CC1 Application Ready computer system can be deployed in the field as soon as your application is ready, or use the CRS-C2I-3CC1 as a starting point for multiple application-specific configurations.

The arduous task of integrating off the shelf boards has already been done for you – shortening your time to project completion. You have one point of contact for all issues and a single part number – not a collection of parts.

The CRS-C2I-3CC1 successfully integrates GE's boards, and modules, drawn from their wide selection of COTS boards, into open modular systems that are tested and qualified for rugged systems deployment. The CRS-C2I-3CC1 contains a fully integrated set of boards and modules designed to fulfill control applications.

GE Intelligent Platforms' Systems Group is fully compliant with AS9100 processes and brings years of experience designing

rugged systems to your project. Our world class program management competencies are tailored to help mitigate your risk.

GE conducts all design, analysis, manufacturing, and testing in compliance with any system appropriate MIL and industry standards such as MIL-STD-810, 704, 461, 1472, and DO-160.

GE has integrated and tested the CRS-C2I-3CC1 and provides Board Support Packages (BSP's) and drivers that you can easily use to integrate your application and reduce your software development cycle time.

To help jump start your project, GE offers Laboratory Development Units, or starter kits, preconfigured for development purposes. Based on the required system controller architecture and bus system, GE can provide the appropriate development system for your specific needs.

GE offers a Product Lifecycle Management (PLM) program of innovative Long-Term Support services to reduce the overall cost of ownership and provide industry-leading safeguards against component obsolescence. GE Intelligent Platforms is committed to supporting customer programs throughout their lifecycle.

The next page illustrates a small subset of the configurations that are available with this system. If you are interested in additional configuration options please contact your sales representative.



CRS-C2I-3CC1 COTS Rugged System

| Standard Configurations* | CRS-C2I-3CC1-00 | CRS-C2I-3CC1-01 | CRS-C2I-3CC1-02 | CRS-C2I-3CC1-03 |
|--------------------------------------|--------------------------|---|---|---|
| Additional Memory (Flash, SSD, etc.) | N/A | SATA - 64 GB | N/A | N/A |
| Ethernet Ports | 2x 10/100/1000BaseT | 2x 10/100/1000BaseT | 2x 10/100/1000BaseT | 2x 10/100/1000BaseT |
| Serial Ports | 1x RS232/422 1x RS232 | 1x RS232/422 1x RS232 | 1x RS232/422 1x RS232 | 1x RS232/422 1x RS232 |
| USB Ports | 2x USB 2.0 | 2x USB 2.0 | 2x USB 2.0 | 2x USB 2.0 |
| MIL-STD-1553 Channels | N/A | N/A | 1x MIL-STD-1553 Redundant Ch 1x RT_ADDR | N/A |
| CAN Bus | N/A | N/A | N/A | N/A |
| ARINC 429 Channels | N/A | N/A | N/A | 8x ARINC 429 RX Ch 8x ARINC 429 TX Ch |
| Discrete I/O | 8x GPIO and PRST | 8x GPIO and PRST | 8x GPIO and PRST 12x Discrete** | 8x GPIO and PRST |
| Other I/O | 1x VGA Video 1x SATA | 1x VGA Video 1x SATA 12x Discrete DIFF In/Out 12x HL Discrete SE In 8x HL Discrete SE Out | 1x VGA Video 1x SATA 12x Discrete DIFF In/Out 12x HL Discrete SE In 8x HL Discrete SE Out 1x IRIG In/Out | 1x VGA Video 1x SATA 12x Discrete DIFF In/Out 12x HL Discrete SE In 8x HL Discrete SE Out 1x IRIG In/Out |
| Power Dissipation (W) | 23W (max.) | 33W (max.) | 36W (max.) | 38W (max.) |
| Ordering Number | 920-100846-000 | 920-100846-001 | 920-100846-002 | 920-100846-003 |

| Standard Configurations* | CRS-C2I-3CC1-04 | CRS-C2I-3CC1-05 | CRS-C2I-3CC1-06 |
|--------------------------------------|---|---|---|
| Additional Memory (Flash, SSD, etc.) | N/A | N/A | SATA - 64GB |
| Ethernet Ports | 2x 10/100/1000BaseT | 2x 10/100/1000BaseT | 2x 10/100/1000BaseT |
| Serial Ports | 1x RS232/422 1x RS232 12x RS232/422/485 | 1x RS232/422 1x RS232 | 1x RS232/422, 1x RS232 |
| USB Ports | 2x USB 2.0 | 2x USB 2.0 | 2x USB 2.0 |
| MIL-STD-1553 Channels | N/A | N/A | 4x MIL-STD-1553 2x RT_ADDR |
| CAN Bus | N/A | 2x CANbus Ch | N/A |
| ARINC 429 Channels | N/A | N/A | N/A |
| Discrete I/O | 8x GPIO and PRST 8x Discrete | 8x GPIO and PRST | 8x GPIO and PRST, 6x Discrete** |
| Other I/O | 1x VGA Video 1x SATA 12x Discrete DIFF In/Out 12x HL Discrete SE In 8x HL Discrete SE Out 1x IRIG In/Out | 1x VGA Video 1x SATA 12x Discrete DIFF In/Out 12x HL Discrete SE In 8x HL Discrete SE Out | 1x VGA Video 1x SATA 12x Discrete DIFF In/Out 12x HL Discrete SE In 8x HL Discrete SE Out 1x IRIG In/Out |
| Power Dissipation (W) | 36W (max.) | 34W (max.) | 39W (max.) |
| Ordering Number | 920-100846-004 | 920-100846-005 | 920-100846-006 |

* Contact factory for additional modification options. **An additional 6 Discrete channels are available if the RT_ADDR channel is not used. SE = Single Ended, HL = High Level, DIFF = Differential, PRST = Pushbutton Reset

CRS-C2I-3CC1 COTS Rugged System

Specifications: All Systems

Processor

- Intel Atom @ 1.6 GHz

SBC RAM

- 1 GB DDR2 with ECC

SBC Flash Memory

- 4 GB

Operating System

- Linux, Windows, VxWorks 6.7

Cooling

- Convection

Form Factor

- 3U CPCI

Slots

- 2

Dimensions (H x W x D, excludes connectors)

- 3.96 x 7.15 x 9.03 (inches); 10.16 x 18.16 x 22.94 (cm)

Weight

- ~10.5 lbs (4.8 kg)

Input Power (MIL-STD)

- 28V DC nominal (MIL-STD-704E)

Operating Temp. Range (°C)

- -40° to +45°, without cold plate (Qual. -40° to +55°)
- -40° to +71° at cold plate

Shock (operational)

- +40g SRS (MIL-STD-810G/1)
(DO-160 Category B)

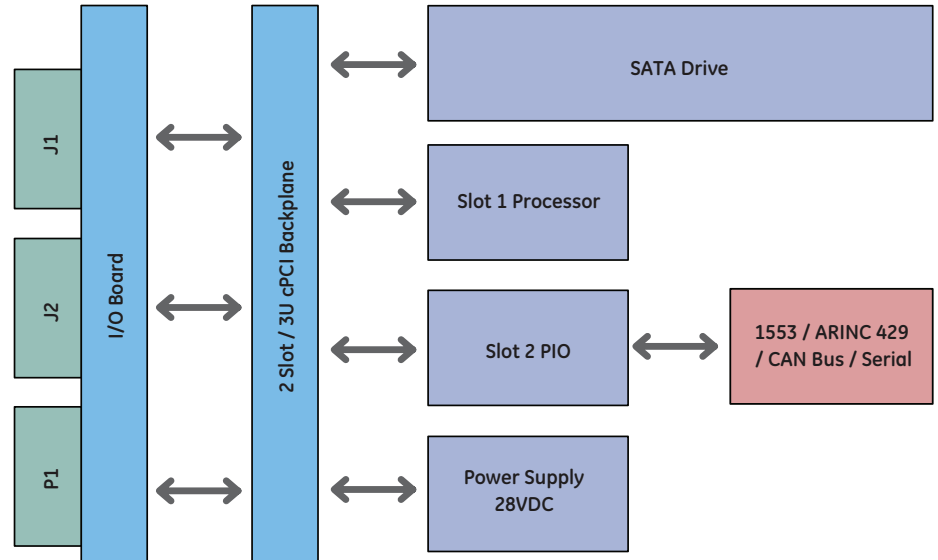
Random Vibration

- 0.1g²/Hz, 15-1000Hz; 6dB/octave decrease, 1000-2000Hz (MIL-STD-810F/1, Method 514.5)
(DO-160 Category S1/2, Zone2, Curve E)

Humidity

- 95% non-condensing
(DO-160 Procedure 6, Category B)

Block Diagram



About GE Intelligent Platforms

GE Intelligent Platforms, a General Electric Company (NYSE: GE), is an experienced high-performance technology company and a global provider of hardware, software, services, and expertise in automation and embedded computing. We offer a unique foundation of agile, advanced and ultra-reliable technology that provides customers a sustainable advantage in the industries they serve, including energy, water, consumer packaged goods, government and defense, and telecommunications. GE Intelligent Platforms is a worldwide company headquartered in Charlottesville, VA and is part of GE Home and Business Solutions. For more information, visit www.ge-ip.com.

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