



CRS COTS Rugged Systems

3U CompactPCI Application Ready Control Systems

Features

- Rugged convection or conduction cooled chassis
 - 2, 3 or 4 3U CompactPCI slots
 - MIL-C-38999 connectors
- Processor Options
 - Freescale MPC7448 @ 1.0 GHz or
 - Intel® Atom™ @ 1.6 GHz
- Operating Systems Available
 - VxWorks 6.7
 - Linux
 - Windows® Embedded
- BIT support
- Optional SATA drive
- I/O capabilities
 - Ethernet
 - Serial
 - USB
 - MIL-STD-1553
 - ARINC 429
 - CANbus
 - DAC
 - ADC
 - Discrete
- Designed for:
 - Military and civilian UAVs
 - Ground vehicles
 - Helicopters
 - Military and commercial aircraft

GE Intelligent Platforms' CRS COTS Rugged Systems line are packaged prevalidated control computer systems with either a Freescale or 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.

A GE COTS-based Application Ready computer system can be deployed in the field as soon as your application is ready, or use a CRS subsystem 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 COTS Rugged Systems series successfully integrates GE's boards and modules, drawn from our wide selection of COTS products, into open modular systems that are tested and qualified for rugged systems deployment.

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 series 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 Intelligent Platforms 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. We are committed to supporting customer programs throughout their lifecycle.



CRS COTS Rugged Systems – Application Ready Control Systems

Systems Configurations*	CRS COTS Rugged Systems 2-slot	CRS COTS Rugged Systems 3-slot	CRS COTS Rugged Systems 4-slot
SBC RAM	Up to 1 GB DDR2 with ECC		
SBC Flash Memory	Up to 4 GB		
Additional Memory (Flash, SSD, etc.)	Optional 64 GB SATA Drive or 4 GB Compact Flash Carrier	Optional 4 GB Compact Flash Carrier	Optional 64 GB SATA Drive or 4 GB Compact Flash Carrier
Ethernet Ports	Up to 3x 10/100/1000BaseT	Up to 10x 10/100/1000BaseT	Up to 10x 10/100/1000BaseT
Serial Ports	Up to 13x RS232/422/485	Up to 13x RS232/422/485	Up to 16x RS232/422/485
USB Ports	Up to 2x USB 2.0		
MIL-STD-1553 Channels	Up to 4x		
ARINC 429 Channels	Up to 8x RX and 8x TX	Up to 15x RX and 15x TX	Up to 15x RX and 15x TX
CAN Bus	Up to 2x		
DAC	NA	Up to 8x	Up to 6x
ADC	NA	Up to 12x	Up to 5x
Discrete I/O	Up to 20x		
Other I/O	Up to 1x IRIG In/Out; Up to 12x HL Discrete (SE) In; Up to 8x HL Discrete (SE) Out; Up to 12x Discrete (DIFF) In/Out	Up to 1x VGA; Up to 2x IRIG IN/Out; 12x HL Discrete (SE) In; 8x HL Discrete (SE) Out; 12 Discrete (DIFF) In/Out; 12x RTD	Up to 1x VGA; Up to 2x IRIG IN/Out; 12x HL Discrete (SE) In; 8x HL Discrete (SE) Out; 12 Discrete (DIFF) In/Out; 12x RTD
Cooling Type	Cold plate with fin assist	Cold plate cooled	Convection cooled
Dimensions (H x W x D, inches)	3.96 x 7.15 x 9.03 (excludes connectors)	5.60 x 4.25 x 8.76 (excludes connectors)	4.90 x 4.66 x 8.39 (excludes connectors)
Weight (pounds)	~ 10.5	~ 9	~ 10
Input Power (MIL-STD)	28VDC nominal (MIL-STD-704)		
Power Dissipation (W)	Up to 39 max.	Up to 68 max.	Up to 69 max.
Operating Temp. Range (°C)	-40° to +45° C (Qual. -40° to +55°) -40° to +71° C at cold plate (DO-160 Category A1)	-40° to +71° at cold plate (Qual. -40° to +71°)	-40° to +50° (Qual. -40° to +60°)
Shock	+40g SRS (MIL-STD-810G, DO-160 B)		
Random Vibration	0.1g ² /Hz 15-1000Hz; 6dB/octave decrease, 1K to 2K Hz (DO-160 Category S1/2, Zone 2)		
Humidity	95% RH non-condensing		

* Varies by system configuration. SE=Single Ended; HL=High Level; DIFF=Differential

Ordering Information

CRS-C2P-3CC1	2 slot PPC	920-100830-0xx
CRS-C3P-3CB1	3 slot PPC	920-100834-0xx
CRS-C4P-3CC2	4 slot PPC	920-100844-0xx
CRS-C2I-3CC1	2 slot Intel	920-100846-0xx
CRS-C3I-3CB1	3 slot Intel	920-100847-0xx
CRS-C4I-3CC2	4 slot Intel	920-100848-0xx

GE Intelligent Platforms Contact Information

Americas: **1 800 433 2682** or **1 434 978 5100**

Global regional phone numbers are listed by location on our web site at www.ge-ip.com/contact

defense.ge-ip.com/systems

