



CCS™



Integrated Command and Control System

The right platform for your mission-critical control systems.

Typical Applications:

- Control center situation awareness
- Remote/Mobile control & monitor
- Mobile command & control
- Telemetry & tracking
- Launch & fire control
- Automated test
- Process control
- Training simulation
- Robot cell control
- Communications gateway

Comes with CCTK Software:

- Multi-stream, multi-format I/O
- Stand-alone or multi-user operation
- Commanding
- Real-time graphical visualization
- Integrated simulation environment
- Archival, retrieval, and playback
- XML configuration database
- System customization tools
- Modular data processing
- Network/Internet data distribution
- Time Sync & NTP Server capability
- Built-in graphical tools: Quick-Look, Data Analysis, & Event Messaging

CCTK Product Options:

- Developer's Environment
- GIS Display Environment
- Web Server
- RangeNet™
- T-Zero™ Sequencer

Configuration Options:

- Linux OS: Red Hat or C2OS
- DSLT tape archive
- Hot swappable power supplies and disk drives
- Extended graphics
- Rack Enclosure
- Rack mounted Keyboard tray & flip up flat screen monitor



Device Interfaces:

- RADAR
- Cameras
- Unattended Ground Sensors
- Environmental Sensors
- PCM telemetry
- IRIG UTC (GPS opt), NTP Server
- SCADA: OPC/Fieldbus/Interbus
- Peer – Peer Networks
- (Contact CCT for more interface options)

CCS 2000 Hardware Features:

- Rugged 3U Chassis
- Dual Xeon Multi-core CPUs w/1333Mhz Front Side Bus
- 4Gb (4x512) DDR333 ECC RAM – Expandable to 32Gb
- 2 x Gigabit Ethernet
- Up to 8x 300Gb 15K RPM Removable Disk Array (SAS or SATA)
- Dual Head Video Controller
- 1 (x16) & 1 (x4 in x16) PCI-Express Slot
- 3x 64 Bit PCI-X Full-height, Full-length Expansion Slot (1) 100Mhz, (2) 133Mhz
- 1x 32 Bit PCI 32 Bit 33Mhz Full-height, Full-length Expansion Slot
- 760W Triple-Redundant Power Supply
- 8 x 1" Hot-swappable Drive Bays
- 2 x 5.25" Peripheral Drive Bays
- 1 x Dual Layer DVD-RW Drive
- 2 Year Warranty



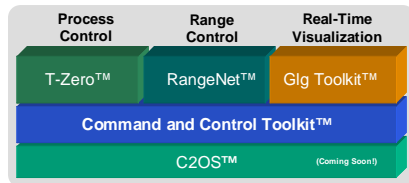
PCCS 2000 Hardware Features:

- Rugged Portable Configuration
- Dual Xeon 3.06 GHz CPU w/533Mhz System Bus
- 1024MB PC-2700 ECC DDR DIM Mem
- 1 x Gigabit, 1 x 10/100M Ethernet
- 3 x 36GB 15K SCSI Ultra 320 Disk Drives – RAID 5
- Built-in 17.1" 1280x1024 TFT Flat Display
- Aopen Gforce 4 MX440 SE 64MB Graphic Controller
- 3x 64 Bit PCI-X Full-height, Full-length Expansion Slot (1) 133Mhz, (2) 100Mhz
- 3x 32 Bit PCI 32 Bit 33Mhz Full-height, Full-length Expansion Slot
- 760W Triple-Redundant Power Supply
- 8 x 1" SCA Ultra320/160 SCSI Hot-swappable Drive Bays
- 2 x 5.25" Peripheral Drive Bays
- 1 x CDRW Slimline Drive
- Rugged wheeled cargo case
- 1 Year Warranty



CCTK Features Summary:

The CCTK™ software is off-the-shelf middleware designed to integrate your distributed operations for real-time shared situation awareness and reliable operation. CCTK is the core of CCT's Command and Control Product Line.

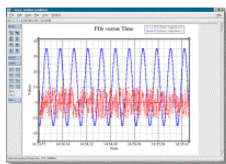


The scalable software architecture is suitable for embedded, headless, client/server, or network distributed operation capable of handling millions of data, command, event, and message transactions.



Built with highly modular services that can be arranged much like Lego™ building blocks, CCTK

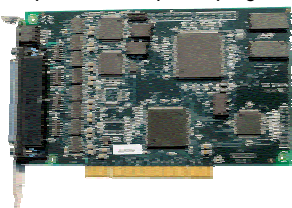
dramatically reduces the effort required to build mission critical command and control systems. Using technology developed for space mission control, CCTK converts large volumes of data from a variety of sources in to usable decision-support information that can be acted on by autonomous applications or human operators.



With this solution, you can manage your most complex operations more reliably with fewer operators and less technology.

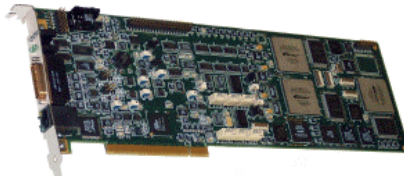
Farsync MultiPort Serial Controller:

The Farsync Multi-port four-port PCI communications controllers provide the performance and reliability needed for high-speed serial communications. Data transfer rates up to 8 Mbps, full duplex, are supported. Interface options include: RS-232, and RS-422/485, with octopus cable adapter and wrap test plug.



Tarsus PCM Telemetry Board Family:

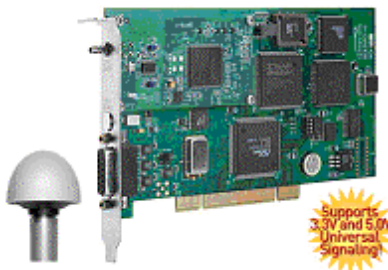
The Tarsus board family of products is based on the latest advances in Altera FPGA technology with the latest data acquisition integrated circuits that creates a very versatile telemetry processor card. The board has the ability to perform many different unique data acquisition and telemetry processing functions including dual full digitally implemented bit synchronizers, PCM decommutators, simulators, multi-channel clock data recovery (CDR) modules, SGLS



modulator/demodulator and many other data acquisition applications. The basis for the card is two 14-bit analog to digital paths into over 3 million gates of user configurable space. The card has two 12-bit high-speed digital to analog outputs that can also be user configurable. The FPGA configurations are downloadable via Ulyssix proprietary Windows application software.

Timing Reference Board:

Symmetricom's GPS bc637PCI-U receiver module provides precision time and frequency to the host computer and peripheral data acquisition systems. Precise time is acquired from the GPS satellite system or from time code signals such as IRIG B. GPS synchronization provides 1 microsecond accurate time to UTC and enables the bc637PCI-U to be an ideal master clock for synchronizing multiple computers to UTC. When combined with the CCTK NTP time management services, it provides all the time capabilities you will need.



INTERBUS INLINE Modular I/O:

One scalable network ready family of complete I/O solutions from Phoenix Contact.

INLINE Block:

- 16 and 32 digital channels
- Integrated fieldbus open interface
- One compact module

INLINE Modular:

- 2, 4, 8, 16, 32, I/O modularity
- Complete I/O interface range
- Distributed communications and control
- Add/remove modules without disconnecting wiring

Common features:

- Industry leading I/O diagnostics via the network
- Din rail mounting for easy installation
- Integrated fusing protects sensor and actuator wiring and reduces terminations in the control panel.



Fieldline: Machine Mount I/O:

Provides a fully distributed, IP67 machine mounted I/O solution that is complimentary to Inline panel mount I/O:

- Compatible with DeviceNet, Profibus, INTERBUS, and CANopen installations.
- Integrated "T" and industry standard M12 connectors, with extensive diagnostics, lowers installed costs and start-up/maintenance time
- Space saving, flexible, mounting I/O options meet the most demanding application needs.





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