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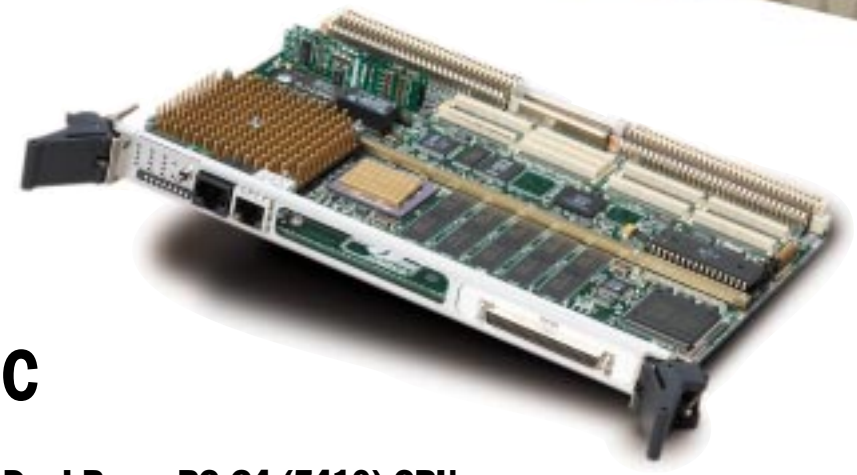
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Find the *Curtiss-Wright / Synergy Microsystems VCMD* at our website: ***Click HERE***

VME
SINGLE BOARD COMPUTER

COUGAR 10



Value/Performance General Purpose SBC

AT A GLANCE

- PowerPC G4 (7410) AltiVec™
- Single or dual CPU
- Up to 533 MHz
- 100 MHz frontside bus
- Up to 512 MB SDRAM
- Up to 64 MB User Flash
- 2 MB L2 cache per CPU
- Dual PMC sites
- On-board serial, Ethernet and Wide Ultra SCSI
- Multiple ruggedization levels
- Extended temp. tolerance
- DSP ready with Synergy's Math Library
- VxWorks® or Linux™ SMP

Dual PowerPC G4 (7410) CPUs

The Cougar 10 offers the proven performance of the PowerPC G4 (7410) processor with clock speeds up to 533 MHz. Offered in single or dual CPU configurations, the 7410 features advanced AltiVec™ vector parallel processing, a 2 MB L2 backside cache and very low power consumption.

I/O Flexibility

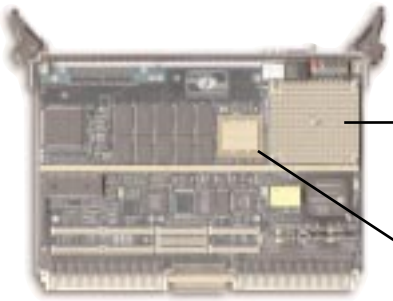
The Cougar 10 comes standard with on-board Ethernet, dual serial ports and one Wide Ultra SCSI port. For additional I/O capability, this board offers two industry standard PMC expansion sites. Synergy provides a full line of PMC modules to meet your I/O requirements, as well as partnering with many third party vendors for even more options.

For added flexibility, an optional transition module (model TPMD) allows routing of all on-board I/O and PMC traffic through the rear of the chassis.
(Requires 5-row connector for full I/O, and matching PIM modules for PMCs.)

Software Support

Synergy offers comprehensive board support packages for VxWorks and Linux, including Linux with symmetric multiprocessing (SMP). The Cougar 10 ships with Synergy's all-inclusive system monitor, configuration and diagnostic firmware, with power-up and initiated BIT.

For DSP applications, Synergy offers its own extensive math library containing several hundred of the most common DSP functions. This hand-coded library is optimized for the PowerPC and AltiVec technologies and supports both VxWorks and Linux.





PowerPC® 7410 Processor

The 7410 is a high-performance, low-power (40% less than previous G4s), 32-bit implementation of the PowerPC RISC architecture combined with a full 128-bit implementation of Motorola's AltiVec™ technology. This processor offers single-cycle double-precision floating-point performance and full SMP capabilities.



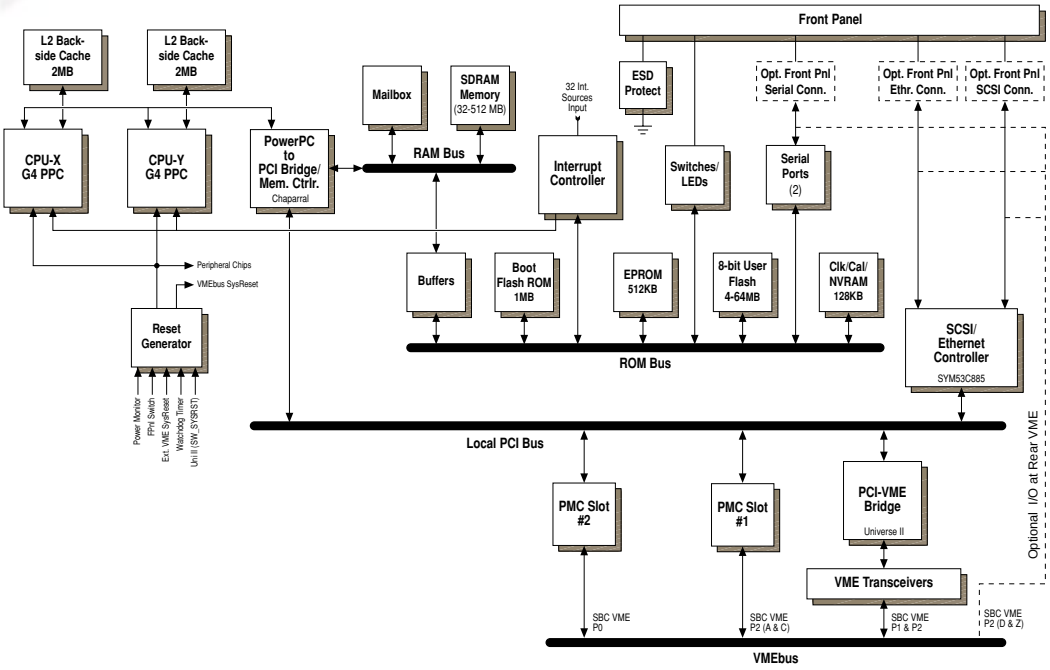
Motorola MPC107 System Controller

The MPC107 (Chaparral) provides an integrated high-bandwidth, high-performance interface between the PowerPC 7410 processors, the PCI bus, and main memory. The Chaparral was designed to support two processors with a 64-bit, 100 MHz memory bus and full memory coherency.

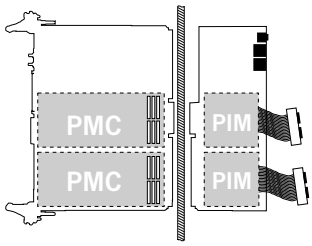
SYNERGY MICROSYSTEMS

VME
SINGLE BOARD COMPUTER

COUGAR 10



Dual PMC Sites
Rear I/O option



The TPMD transition module with two industry-standard PIM sites provides a convenient method for bringing the Cougar 10's I/O out the rear of the chassis.

Processor:
- Single or dual PowerPC G4 (7410) 400—533 MHz

Memory:
- Main memory: 64, 128, 256 or 512 MB SDRAM supporting parity or ECC
- L2 Cache: 2 MB per CPU
- Boot Flash: 1 MB loadable via 32-pin JEDEC socket
- User Flash: 8, 16, 32 or 64 MB
- NVRAM (clock/calendar): 128 KB

VME interface:
- VME64, optional VME64x, A32, D64
- VME-to-PCI Interface: Tundra Universe II

PCI interface:
- PPC-PCI bridge/memory controller: MPC107 Chaparral 100 MHz
- Local PCI bus: 32 bit/33 MHz
- PMC interface: two PMC sites, 64-bit/33 MHz

On-board I/O:
- Ethernet: auto-sensing 10/100 Base-T
- Serial: two RS-232 (20 KB/s), RS-423 (100 KB/s) or RS-422 (10 Mb/s)
- SCSI: Wide Ultra, 8/16 bit, 40 MB/s

Physical dimensions:
- 6U form factor: 9.187" (233.35 mm) x 6.690" (169.93 mm) x .070" (17.78 mm)

Weight:
- 6U board: 16 oz (450g)

Power requirement:
- PPC 7410/450MHz: 4.09 amp/20.45 W (power req. differs with configuration)

Environmental & reliability:
- Operating temperature:
  Standard range from 0° to +65° C
  Extended ranges from -20° to +71° C ambient with forced air cooling, 300 LFM min. air flow
- Ruggedization options:
  Level R1: 6.25G RMS random /20G shock
  Level R2: 8.9G RMS random/30G shock
- Storage temperature: -50° to 100° C
- Shock temperature: -40° to 85° C
- Humidity: 0–95% RH non-condensing
- Altitude (est.): to 39,000 ft. above MSL
- MTBF: 182,000 hours (20.7 years)

Other Features:
- Six multicolored status LEDs, eight user-programmable LEDs, one 8-bit readable switch, and one CPU reset/interrupt switch
- Programmable interrupts — priority of any interrupt source can be set in software
- Two 32-bit counters can be read at any time as well as generate interrupts
- Two mailbox registers per CPU with doorbell interrupts
- Watchdog timer
- Real time clock/calendar, four-digit
- JTAG support

Options:
- VxWorks or Linux SMP
- Single or dual CPU
- PMC carrier board
- Synergy's DSP Math Library
- Conformal coating
- Extended ruggedization
- Extended temperature ranges
- Other options: CPU speed, SDRAM size, Flash size, and L2 cache speed

For more information, visit our web site: www.synergymicro.com

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