

Universal Processor Chassis 64 (VME/cPCI/PCI)

Processor Independent Upgrade



Key Features

- Rugged 64/32-bit VME, cPCI or PCI chassis
- Modular subassemblies
- Optional configurations to support all currently available industry standard single-board computer form factors & operating systems
- Configurable I/O panels to support customized requirements
- Evacuated forced-air cooling (~200cfm)
- AC or DC power option
- Accepts 32-bit singleboard computers and peripherals

When the Navy and the commercial maritime industry invest in COTS based high performance rack systems and workstations, they select the L-3 Rugged Command & Control Solutions (RCCS) family of rugged processor modules to support new system development, technology insertion and upgrade requirements.

The L-3 RCCS Universal Processor Chassis (UPC) is a versatile, low cost modular product first introduced in CY 2000 to support processor upgrade requirements in existing, standard 19" shipboard rack installations. Specifically designed as a common chassis with

modular processor subassemblies capable of supporting multiple form factors, the UPC is a uniquely cost effective upgrade that supports Total Program Cost requirements associated with the shortened COTS product technical life cycles. Additionally, the UPC is a U.S. Navy Grade A shock certified chassis that supports rugged open systems architecture requirements, provides processor and operating system independence and is capable of minimizing the costs associated with upgrading or migrating to different operating systems.



communications

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Standard Navy rack upgraded with 2 RCCS Universal Processor Chassis and 2 RCCS Rugged 20-inch Flat Panel Display

Using this common chassis design with modular processor subassemblies, the UPC can be configured for any of the currently available industry standard COTS single board computer form factors; 64/32-bit 6u VME, PCI or 6u compact PCI (cPCI). The integration of operating system independent processors within the UPC has been accomplished for both rugged rack and console applications using HP-UX, Solaris and Windows NT operating systems. Incorporating a modular mass storage peripheral drive bay subassembly, the UPC can accommodate up to five 5.25-inch half-height, fixed or removable Small Computer Systems Interfaces (SCSI) or four fixed Enhanced Integrated Drive Electronics (EIDE) peripherals. The UPC is easily and quickly adaptable to support various standard high-speed interfaces: 10/100Base-Ethernet TX/FX technologies; RS-422/RS-485 and MIL-STD-144A serial interfaces and the Universal Serial Bus are examples. Additionally, configurable I/O panels on the rear of the UPC can be designed to accommodate specific rack and connector I/O requirements for either new or fielded systems. Key environmental design elements of the UPC address high and low operating temperatures, shipboard shock and vibration, EMI, DC Magnetic field rejection, operating humidity, and shipboard inclination issues. Intended for technology insertion upgrades for existing systems and base-line designs of new systems.

Physical

Dimensions 14" H x 16.5" W x 21" D
Weight 65 lbs typical

Environmental

(anticipated)

Temperature 0° to 50°C (operating)
-25° to 70°C (non-operating)
Humidity MIL-STD-810, Method 507
Operational Shock MIL-STD-901D, Grade A
(as shown mounted in rack or console)

Operational Vibration MIL-STD-167-1 (as shown mounted in rack or console)

EMI/ RFI MIL-STD-461 compliant

Electrical

Power Input 350 watts minimum with AC or DC input option

Options

VME Processor Bay 12-slot 64 bit VME chassis with optional split backplane configurations
cPCI Processor Bay 10-slot minimum 64 bit cPCI chassis with optional split backplane configurations
PCI Processor Bay Passive PCI backplane with optional:
• Pentium® class single board computer
• 7-slot capacity
• Custom configurations available
Mass Storage 5-user definable drive bays

Operating Systems Per customer specification:
• HP-UX
• Solaris
• Windows NT/2000

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