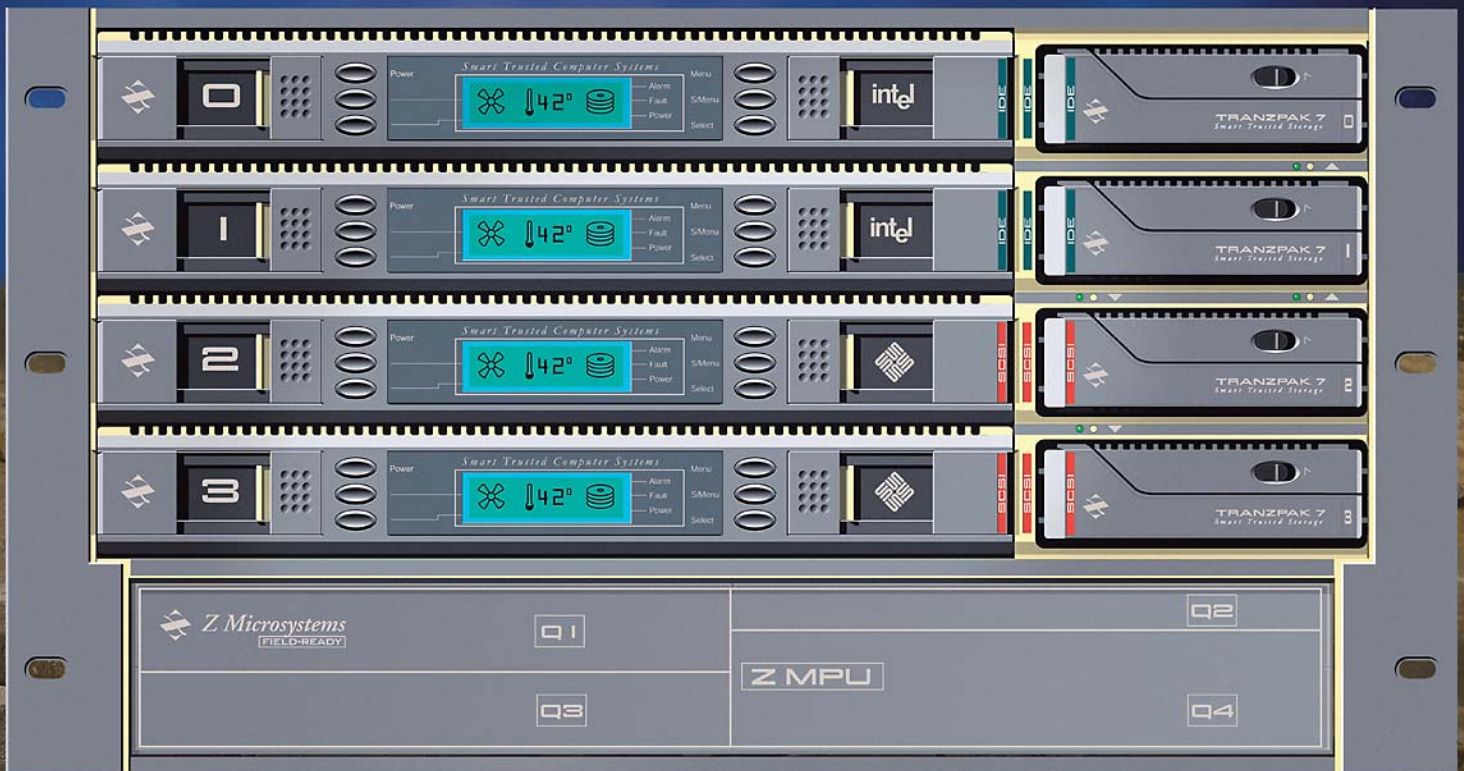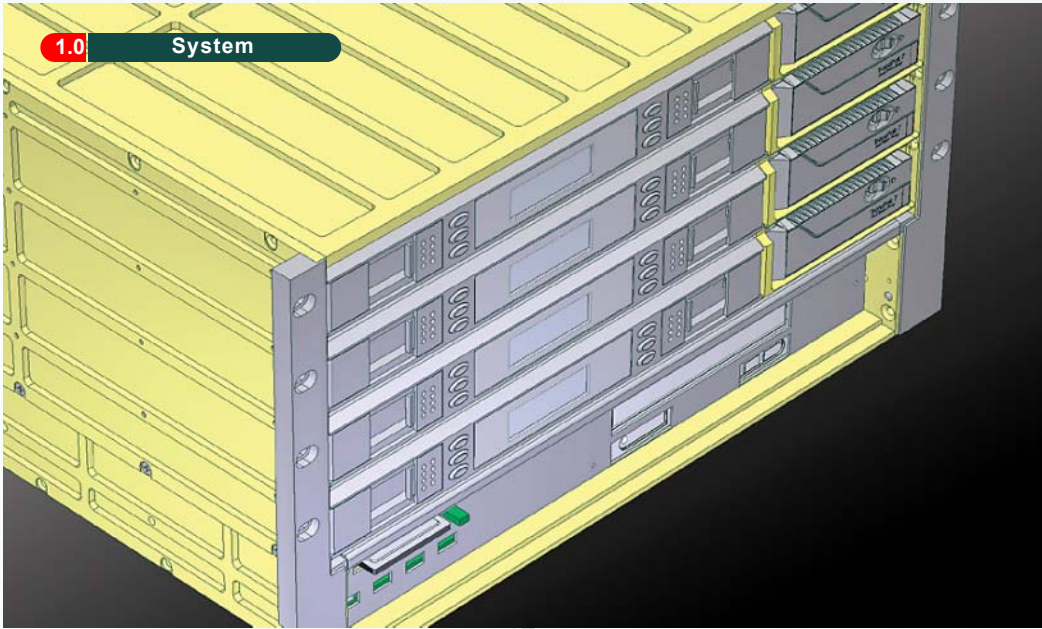Z Microsystems

Z MPU

FIELD-READY

1.0 System

Z MPU

- *Shared Chassis -- Shared Peripherals*
- *Less space, less weight, less power, less cost*

The rugged **Z MPU** delivers four independent computers. Each computer is an Intel or Sun COTS computer encased in its own environmentally sealed hot swappable module.

Each computer is a complete stand alone system with its own dedicated boot disk.

1.1 Sealed
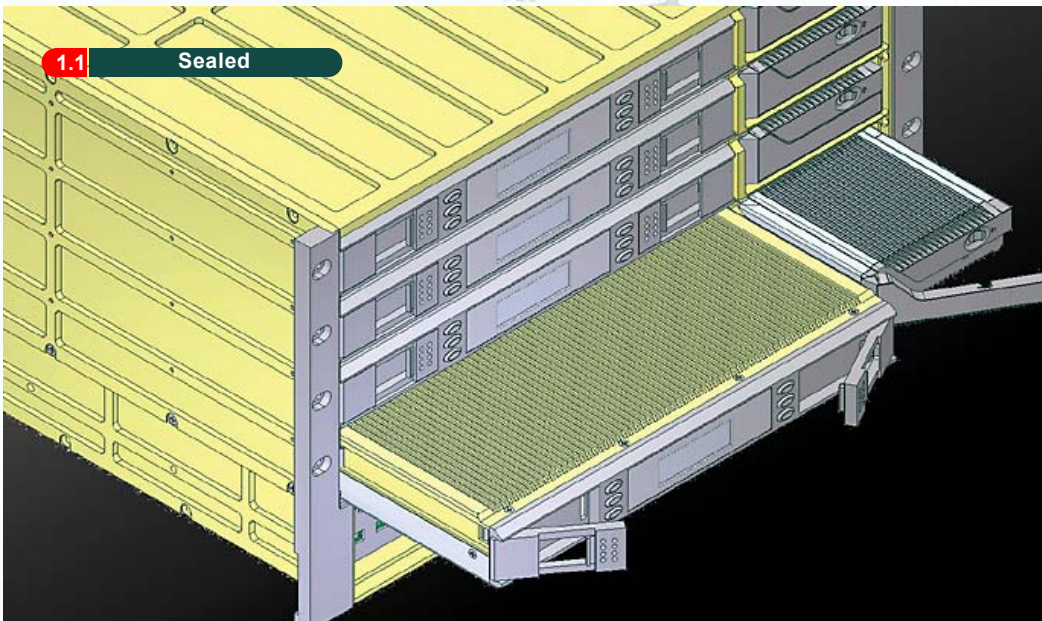
- *Hot swappable Sealed Computer Modules (SCM) and Disk modules*
- *Mix & match platforms and OS's*

The chassis can be quickly populated with SCM's and hard drives, and can be mixed and matched with Intel and Sun motherboards using IDE and SCSI hard drives.

Each hot pluggable computer and its dedicated disk module is environmentally sealed against sand and dust, effectively reducing maintenance and increasing reliability and system life.

1.2 Independent
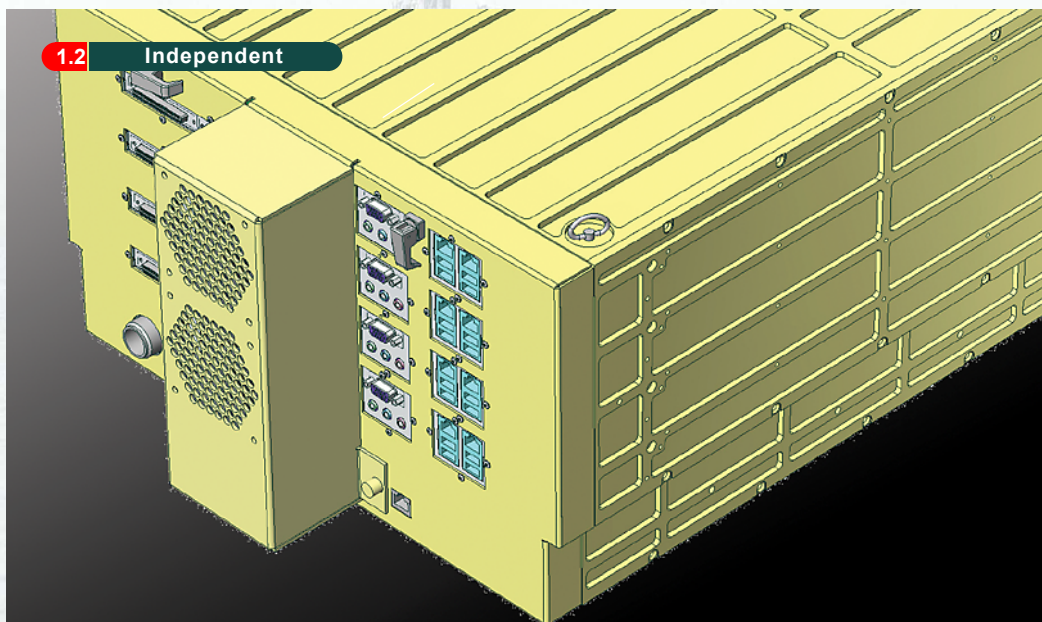
- *Independent Stand Alone Systems*

Four physically and logically separate computers enable different software applications to run independently.

Each computer has its own dedicated TranzPak 7 disk module, its own external I/O connectors, and shared access to support peripherals.
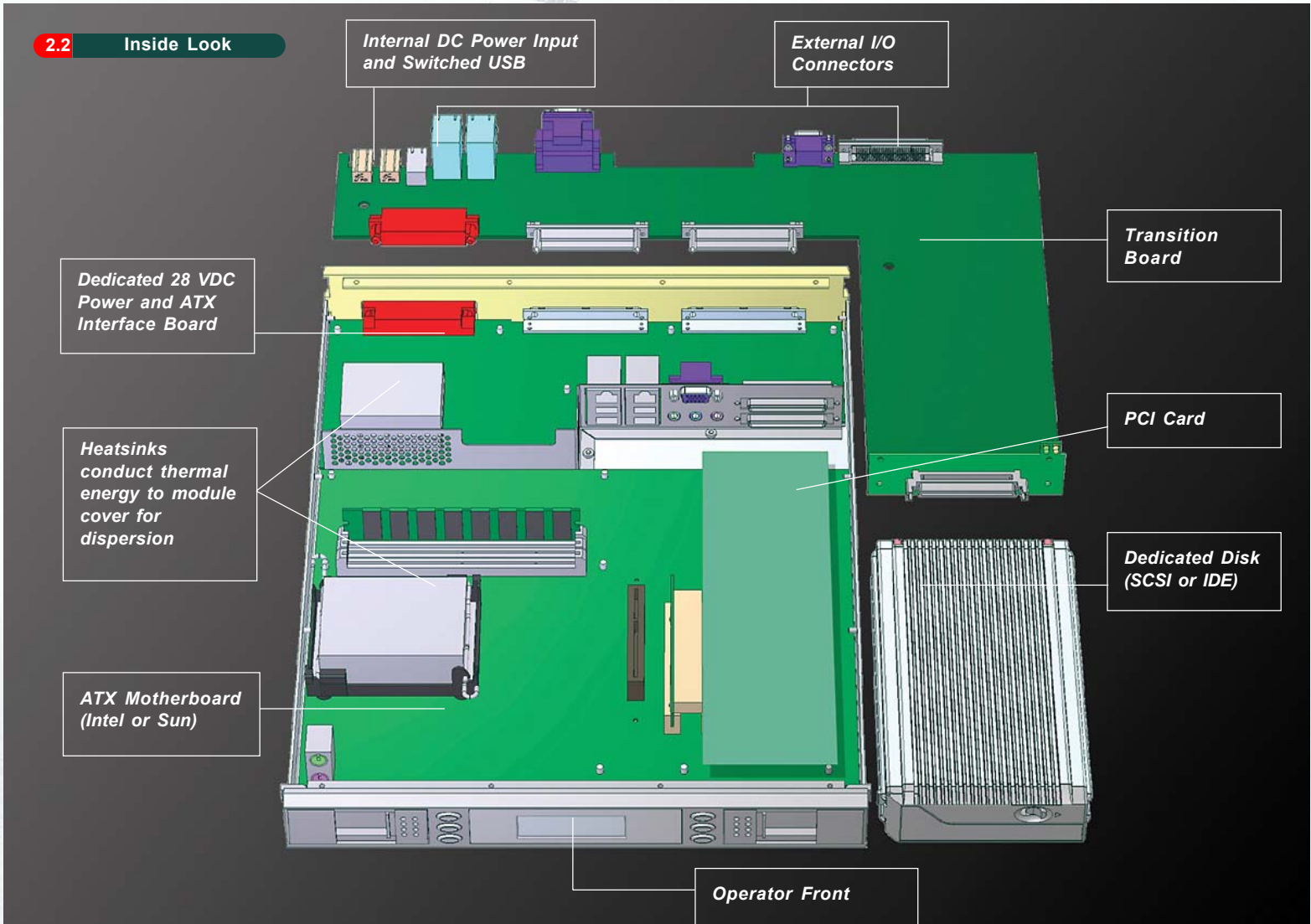
Each computer has two independent USB busses that are matrix-switched to the array of USB peripherals.

Component Overview

2.0   **TranzPak 7**

2.1   **SCM**

Hot swap TranzPak 7 Modules contain environmentally sealed IDE or SCSI hard drives.

Hot swap SCM's contain environmentally sealed COTS motherboards. Keep your configurations current with the latest Intel/Sun motherboards.

2.2   **Inside Look**

Internal DC Power Input and Switched USB

External I/O Connectors

Transition Board

Dedicated 28 VDC Power and ATX Interface Board

Heatsinks conduct thermal energy to module cover for dispersion

PCI Card

Dedicated Disk (SCSI or IDE)

ATX Motherboard (Intel or Sun)

Operator Front

Each docking slot has a transition board that mates with the removable SCM and its dedicated TranzPak 7 disk module. Inside each SCM an interface board generates the required voltages and transitions the motherboard's I/O signals to the outside world.

3.0 Peripheral Sharing
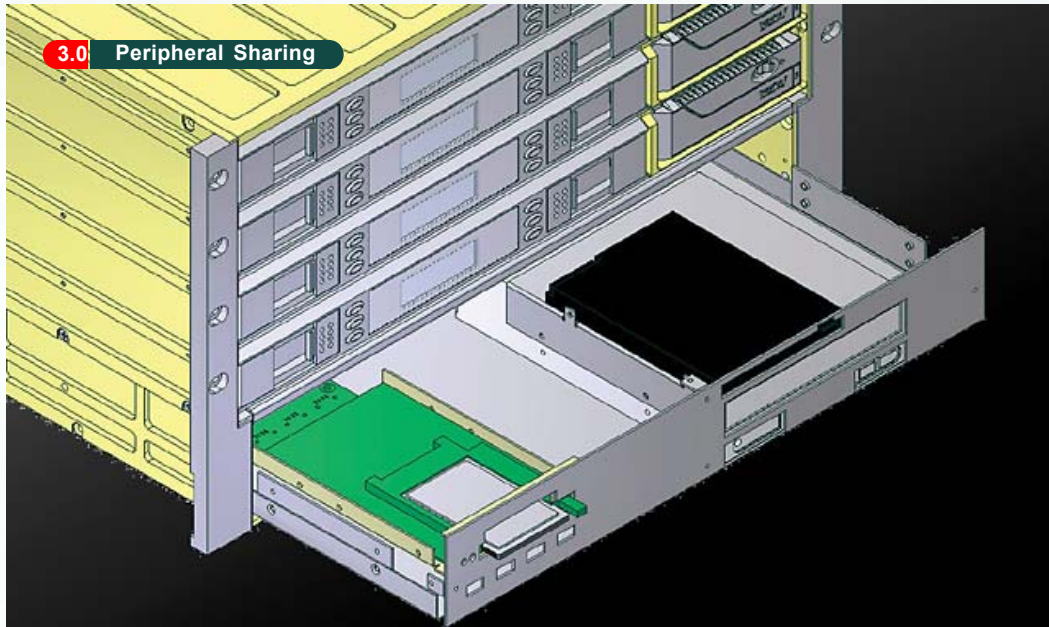
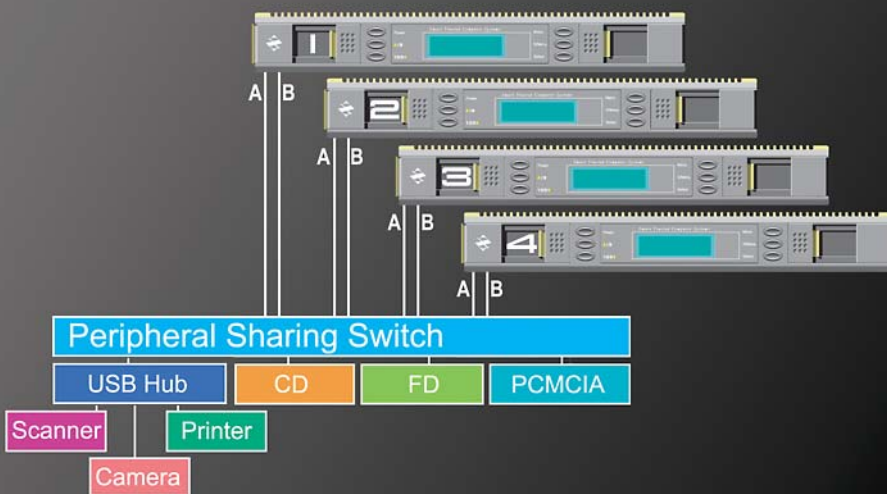- **Shared Peripheral Clusters**

The Peripheral Device Layer organizes an array of the most popular USB devices (CDW, floppy, PCMCIA) and an external hub into four switchable clusters that can be individually and dynamically switched to any SCM.

3.1 Peripheral Cluster

- **Maximum Flexibility**

Each SCM has two independent internal USB busses that are assignable to any of the four peripheral clusters.

Peripheral assignments can be made locally using the front panel or remotely via the SysAdmin network facility.

3.2 Remote SysAdmin
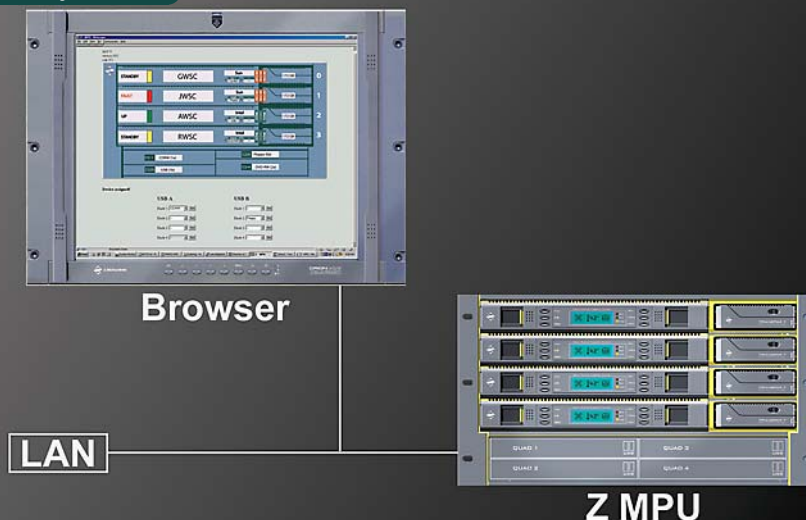
- **Web Based SysAdmin**

An embedded multiprocessor monitors system health and watch-dog activity.

An HTML web page provides network capability for remote monitoring and system administration.

The ability to independently control power, reboot, monitor environmental performance, execute failover strategies, and administer system functions across the network allows the system to be located in "lights out" inaccessible locations.

6.0 System Architecture **FUTURE PROOF TECHNOLOGY INSERTION**

TranzPak 7 removable disk module

(SCM) Sealed computer module stack

External connector transition board

DC Power In

Quad modulated fan array provides front to back cooling

Fan array control board

Switched peripheral and power distribution backplane

Peripheral clusters

17.48

FAN 1

FAN 2

SCSI RS-232
SCSI RS-232
SCSI RS-232
SCSI RS-232

Video
Line Out Line In Mic
Video
Line Out Line In Mic
Video
Line Out Line In Mic
Video
Line Out Line In Mic

Ethernet Ethernet
USB USB
Ethernet Ethernet
USB USB
Ethernet Ethernet
USB USB
Ethernet Ethernet
USB USB

To open- Pull Handle Rotate 90

28 VDC
ON
OFF

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2.65

0

Rear View

16.67

22.89

Side View

19.00

10.25
9.50
7.75
6.00
4.25

0

Front View

Motherboards	Intel and Sun ATX form factor	Shipping Humidity	5% to 95% Non condensing
Storage Options	SCSI and/or IDE	Non Op. Altitude	-1,300 to 40,000 ft.
Dimensions	10.5" H x 17.5" W x 22" D	Operating Altitude	-1,300 to 10,000 ft.
Net Weight	110 lbs. (depending on device)	Operating Vibration	Wheeled and tracked vehicles, fixed and rotary wing aircraft. Mil-Std-167 (in transit case)
Power		Shock Operating	Mil-Std-810E, Method 516, 30g's
DC Voltage:	22 – 29 VDC	Fungus	Non Nutrients / contaminants
DC Current:	18A @ 28VDC Typ.	**Reliability**	
AC Voltage:	85 – 264 VAC @ 47-63 Hz	Operating Life	10 years
AC Current :	5.6A @ 120VAC Typ.	Maintainability	<20 minutes
Environmental		**Regulatory**	
Operating Temp.	5º to + 50º Celsius	Safety	UL 1950
Non Op. Temp.	-40º to + 65º Celsius	EMI	FCC Class A
Operating Humidity	5% to 95% Non condensing	Quality/Workmanship	IPC / ISO 9002 and applicable section of MIL-HDBK-454
Non Op. Humidity	5% to 95% Non condensing		

Z MPU 2X

Z MPU 4X

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