MIC-3082A

12U CompactPCI® Enclosure with 21-slot 6U Backplane and Redundant Power Supply (CT Bus and Rear I/O)

Features

- 12U-high enclosure for 6U CompactPCI® boards
- 20-slot 6U CompactPCI backplane-18 node slots/2 fabric slots
- Front-accessible server blades, power and fan modules
- Multiple backplane configuration available for various applications (1/2/4 segments)
- Supports packet switching backplane specification (PICMG® 2.16)
- Supports computer telephony specification (PICMG® 2.5)
- 1960 W + 280 W, 7+1 hot-swappable load-sharing AC/DC power supplies
- Six hot-swappable fans and blower
- Built-in intelligent chassis management module, optional backplane combination (MIC-3924B-A)
- Design for NEBS level 3 and ETSI installations, independent alarm and management module
- Single serial port for emergency dial-out via modem

Introduction

The MIC-3082A 12U general purpose, multi-segment, packet switched CompactPCI enclosure is an extremely flexible, high-availability platform, configurable for both compute-intensive and I/O-intensive applications. It is one of several telecom building blocks from Intel, built on the PICMG 2.16 specification, providing OEM equipment designers with carrier-grade, standards-based solutions. This high-capacity CompactPCI platform features innovative power and cooling. In addition to its high availability features, the MIC-3082A platform is highly modular, scalable, and extremely serviceable. It is designed to operate with Advantech's high-performance CPU boards and packet switched backplane products, and with third-party boards meeting PICMG 2.16 specifications.

Flexible Backplane Configurations

The backplane is flexible and can accommodate multiple configurations.

Blade servers -Supports up to 18 independent servers communicating over the PICMG 2.16-compliant Ethernet backplane (slots 2-19) with dual switch blades.

Single system -One PCI segment with total 18 slots available for your application with optional switch capability.

Dual system -Two independent PCI segments which allow two independent systems.

Quad system -Four independent PCI segments which allow multiple independent systems.

The MIC-3082A has a 64-bit PCI-to- -panel I/O

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Chassis Management Module

The MIC-3082A includes an Advantech chassis management module (CMM), MIC-3924B, which is a 95 x 100 mm removable module that installs and operates in the back of the chassis. MIC-3924B is the central management component for all of Advantech's PICMG 2.16-compliant processor boards.

Redundant Power Subsystems

The MIC-3082A platform supports a redundant, scalable power solution, accommodating up to eight power supplies. MIC-3082A power subsystem supports 7+1 redundant power supplies and receives input power from redundant DC or AC inputs. (see Figure 2).

Cooling Architecture

With 1120 W power supplies, the MIC-3082A platform provides more than 56 W per slot or can house three hot-swappable fan and blower trays,serviceable from the front. The top blower cools the front card cage area, and the middle fan cools the power supplies, sucking cool air into the card cage. The two rear fans complete the cooling. All fans are in a N+1 redundant cooling architecture. (see Figure 3).

Specifications

Backplane	Node Slot	6U CompactPCI x18, rear transition x18 (80 mm, IEEE1101.11 compatible) support single board computer or peripherals					
	Fabric Slot	6U redundant PICMG 2.16 10/100/1000 Ethernet Fabric x2					
	Bus	Four 32/64-bit, 33/66 MHz PCI bus					
	Dimension VI/O Voltage	3.3 V/5 V					
Bridge module	Controller	Intel DEC21154					
	Bus	32/64-bit, 33/66 MHz					
	VI/O Voltage	3.3 V/5 V (selectable)					
Cooling	Fan	3 (151 CFM) in the middle of middle of chassis (inlet)					
	Blower	3 (40 CFM) on the chassis top (outlet)					
Power Requirement	Input	AC 100 ~ 240 V @ 50 ~ 60 Hz, full range (PFC) DC - 48 V (- 38 ~ - 72 V input range)					
	Output	1960 W + 280 W, 7+1 redundant AC and DC					
	AC (4 Modules)	+3.3 V*	+5 V*	-5 V	+12 V	-12 V	+5 Vsb
	Max. Load	58 A	86 A	2 A	30 A	2 A	3 A
	Min. Load	0.3 A	2.0 A	0.0 A	0.5 A	0.0 A	0.0 A
	DC (4 Modules)	+3.3 V*	+5 V*	-5 V	+12 V	-12 V	+5 Vsb
	Max. Load	58 A	86 A	2 A	30 A	2 A	3 A
	Min. Load	0.3 A	2.0 A	0.0 A	0.5 A	0.0 A	0.0 A
Environment		Operating			Non-Operating		
	Temperature	0 ~ 45 °C (32 ~ 113 °F)			-20 ~ 60 °C (-4 ~ 140 °F)		
	Humidity	20 ~ 90 % @ 40 °C, non-condensing			10 ~ 95 % @ 40 °C, non-condensing		
	Shock	10 G			30 G		
	Vibration (5-500 Hz)	1.0 Grms			2.0 Grms		
Physical Characteristics	Dimensions (W x H x D)	440 x 533 x 431 mm (17.3" x 21" x 17")					
	Weight	40 Kg (88.1 lb)23 kg (50.66 lb)20.0 kg					
Reliability	MTBF	Backplane		Fan module		Power supply	
		800,000 hours		50,000 hours @ 25 °C		100,000 hours @ 70% load	
Serviceability	MTTR	5 minutes					
Compliance	Standard	PICMG 2.0 R3.0 CompactPCI Core Specification PICMG 2.1 R2.0 CompactPCI Hot-Swap Specification PICMG 2.5 R1.0 CompactPCI Computer Telephony Specification PICMG 2.9 R1.0 CompactPCI System Management Specification PICMG 2.16 R1.0 CompactPCI Packet Switching Backplane Specification					
	EMI/Safety	CE, TÜV, UL,FCC					

* Maximum output 520 W for +5 V and +3.3 V for either four AC or DC

Recommended Configurations

Enclosure	CPU Board	Rear I/O Board	Alarm Module
MIC-3082A	MIC-3369A-Mx MIC-3369C-Mx	RIO-3309C-A, RIO-3309S-A2	MIC-3924A/B/L
	MIC-3358A-Mx	RIO-3309C-A, RIO-3309S-A2	MIC-3924A/B/L
	MIC-3368E-A	MIC-3308C-A	MIC-3924A/B/L
	MIC-3358L	RIO-3309L	MIC-3924A/B/L

Ordering Information

Part Number	Power Distribution	PSU P/N
MIC-3082A-AD	1960 W + 280 W (7+1 4AC + 4DC)	AC: 1757984010 DC: 1757984011
MIC-3082A-AA	1960 W + 280 W (7+1)	AC: 1757984010 AC: 1757984010

Flexible Backplane Configurations

Number of PCI segment	Bridge boards	Setting
1	3	Figure 1
2	2	Figure 2
4	0	Figure 3

PS: See detailed setting in manual

Accessories

Part Number	Description
1757984010	Single 280 W AC power supply module
1757984011	Single 280 W DC power supply module
968A390000	MIC-3924A-A intelligent chassis management module
968A390010	MIC-3924B-A intelligent chassis management module with blade server support
968A390020	MIC-3924L-A alarm module

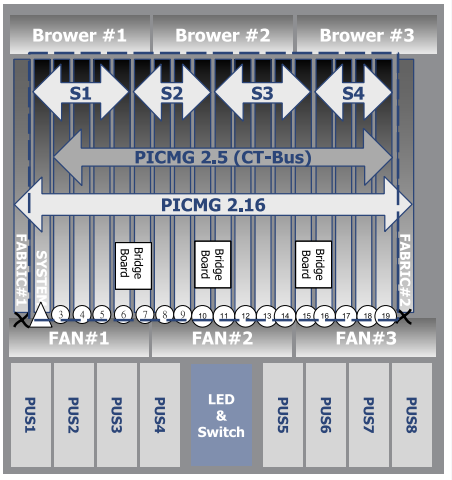

Figure 1: One-segment backplane configuration

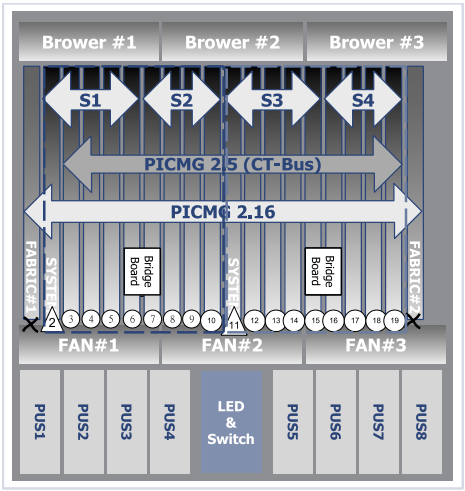

Figure 2: Two-segment backplane configuration

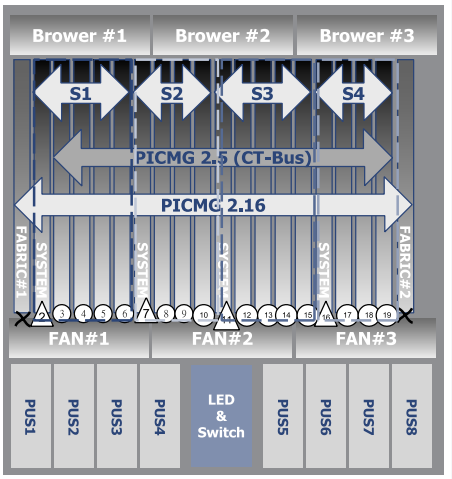

Figure 3: Four-segment backplane configuration

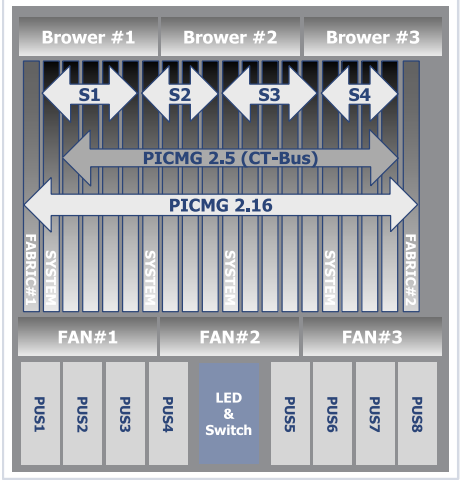

Figure-4: Component layout of MIC-3082A

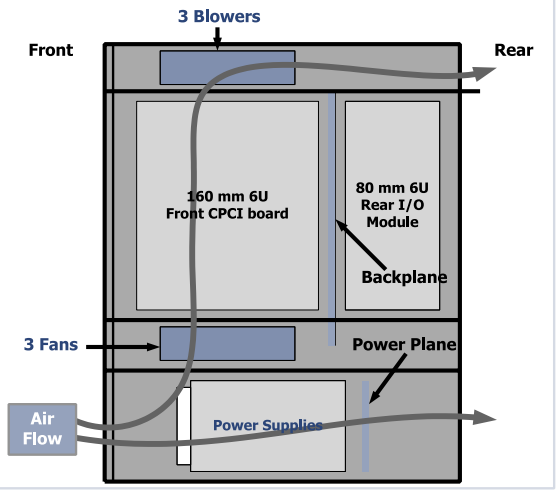

Figure-5: MIC-3082A side view for air-flow

21-slot backplane 18 node slots/
2 fabric slots

1960 W + 280 W, 7+1 hot-swappable
load-sharing AC/DC power supplies

Hot-swappable fans and blowers

Supports IEEE 1101.11 real I/O transition boards

Intelligent alarm module, detecting system
power, fan speed and CPU temperature