

# MIC-3082A

## 12U CompactPCI® Enclosure with 20-slot 6U Backplane and Redundant Power Supply (CT Bus and Rear I/O)

NEW



### Features

- 12U-high enclosure for 6U CompactPCI boards
- 20-slots 6U CompactPCI backplane-18 node slots/2 fabric slots
- Multiple backplane configuration available for various applications (1/2/4 segments) Modularized, front-accessible, and hot-swappable fan, power supply, and server board. All front-accessible form factors of sever blades, power modules, and a fan module
- Supports packet switch backplane specification (PICMG 2.16)
- Supports computer telephony specification (PICMG 2.5)
- 1120 W + 1+1 hot-swappable load-sharing AC/DC power supplies
- Six hot-swappable fans and blower
- Build in intelligent chassis management module, optional backplane combination (MIC-3924B-A)
- Design for NEBS level 3 and ETSI installations, independent alarm and management module
- One serial port for emergency dialing out through modem

## Introduction

The MIC-3082A 12U general purpose multi-segment packet switched platform 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 inter operate with Advantech 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 suitable to your applications.

**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 systems in one chassis.

The MIC-3082A has a 64-bit PCI-to-PCI bridge module to extend the number of I/O slots. All slots support IEEE 1101.11, with 80mm-deep transition cards in the rear-panel I/O section, directly behind the backplane. Each node and fabric slot may be independently configured for 3.3V or 5V I/O operation.

System block diagram is shown as Figure 1.

### Chassis Management Module

The MIC-3082A includes one Advantech chassis management module (CMM), MIC-3924B, is an 95 x 100 mm removable module that installs and operates in the back of chassis. The MIC-3924B is the central management component for all Advantech 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, divided into two separate power subsystems. Each power subsystem supports N+N 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).

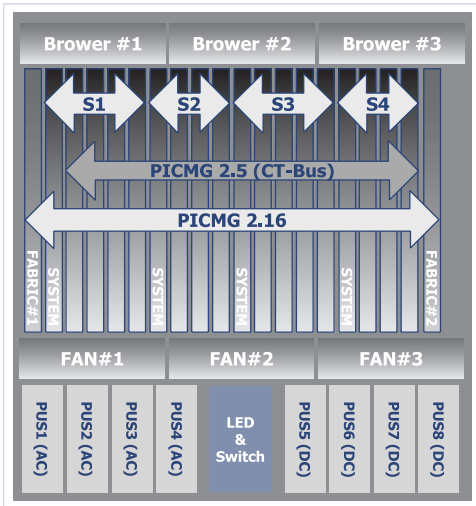


Figure-1: Component Layout of MIC-3082A

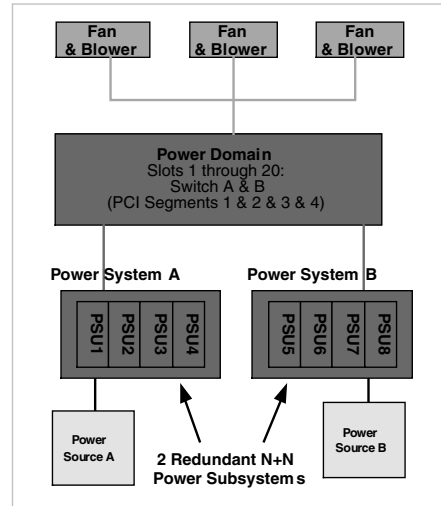


Figure-2: MIC-3082A Power Architecture

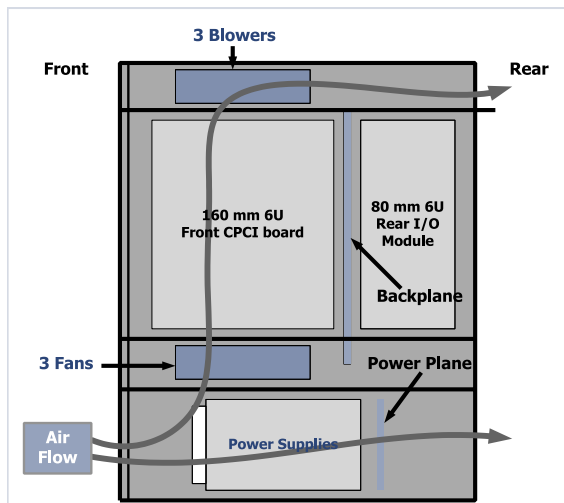
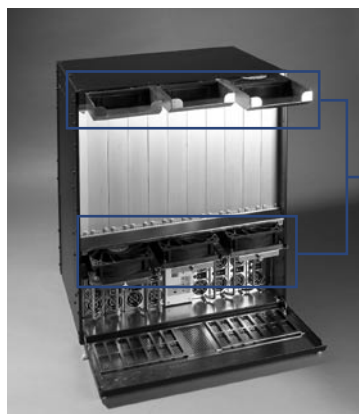


Figure-3: MIC-3082A Side view for air-flow



20-slots backplane -18 node slots/ 2 fabric slots

1120 W 1+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

## Specifications

Backplane	Node Slot	6U CompactPCI x18, transition x18 (80 mm, IEEE1101.11 compatible) support single board computer or peripherals					
	Fabric Slot	6U redundant PICMG 2.9 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 @ 47 ~ 63 Hz, full range DC - 48 V (- 38 ~ - 72 V input range)					
	Output	1120 W 1+1 redundant AC and DC (w/PFC and dual inputs)					
	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	Dimensions (W x H x D)	440 x 533 x 431 mm (17.3" x 21" x 17")					
	Weight	40 Kg (88.1 lb)					
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					
	EMI/Safety	PICMG 2.16 R1.0 CompactPCI Packet Switching Backplane Specification CE, TUV, 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
MIC-3082A	MIC-3369A-Mx	RIO-3309C-A
	MIC-3358A-Mx	RIO-3309C-A
	MIC-3368E-A	MIC-3308C-A

## 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

## Ordering Information

Part Number	Power Distribution	PSU P/N
MIC-3082A-AD	1120 W AC+DC	4 AC: 1757984010 4 DC: 1757984011
MIC-3082A-AA	1120 W AC + AC	4 AC: 1757984010
MIC-3082A-DD	1120 W DC+DC	4 DC: 1757984011

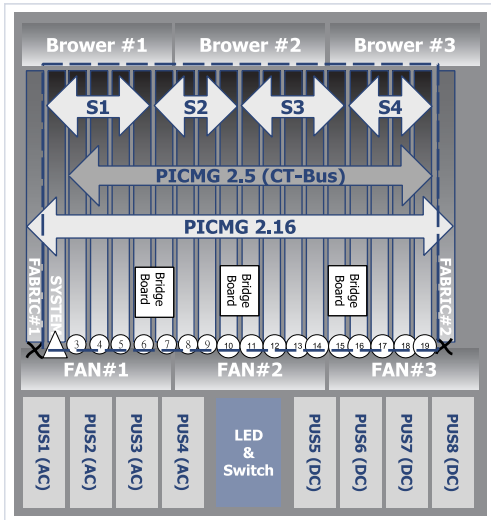


Figure 1

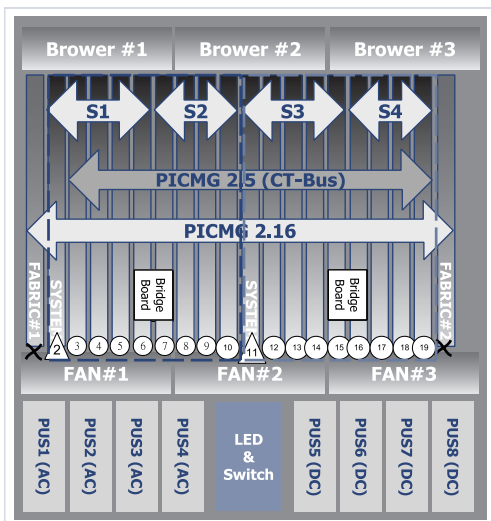


Figure 2

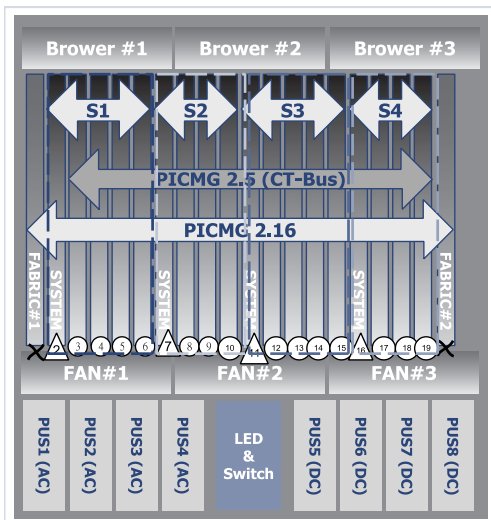


Figure 3