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-

-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
  - DC (4 Modules) +3.3 V* +5 V* -5 V +12 V -12 V -5 Vsb
  - PS: Maximum output 520 W for +5 V and +3.3 V for either four AC or DC

**Environment**
- **Temperature**
  - Operating: 0 ~ 45 °C (32 ~ 113 °F)
  - Non-Operating: -20 ~ 60 °C (-4 ~ 140 °F)
- **Humidity**
  - Operating: 20 ~ 90 % @ 40 °C, non-condensing
  - Non-Operating: 10 ~ 95 % @ 40 °C, non-condensing
- **Shock**: 10 G
- **Vibration (5-500 Hz)**: 1.0 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)

**Reliability**
- **MTBF**: 800,000 hours
- **MTTR**: 5 minutes

**Compliance**
- **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**

**Recommended Configurations**

<table>
<thead>
<tr>
<th>Enclosure</th>
<th>CPU Board</th>
<th>Rear I/O Board</th>
<th>Alarm Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIC-3082A</td>
<td>MIC-3369A-Mx</td>
<td>RIO-3309C-A</td>
<td>MIC-3924A/B/L</td>
</tr>
<tr>
<td></td>
<td>MIC-3369C-Mx</td>
<td>RIO-3309S-A2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIC-3358A-Mx</td>
<td>RIO-3309C-A</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RIO-3309S-A2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIC-3368E-A</td>
<td>MIC-3308C-A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIC-3358L</td>
<td>RIO-3309L</td>
<td></td>
</tr>
</tbody>
</table>

**Flexible Backplane Configurations**

<table>
<thead>
<tr>
<th>Number of PCI segment</th>
<th>Bridge boards</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>Figure 1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Figure 2</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>Figure 3</td>
</tr>
</tbody>
</table>

**Accessories**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1757964010</td>
<td>Single 280 W AC power supply module</td>
</tr>
<tr>
<td>1757964011</td>
<td>Single 280 W DC power supply module</td>
</tr>
<tr>
<td>968A3900000</td>
<td>MIC-3924A-A intelligent chassis management module</td>
</tr>
<tr>
<td>968A3900010</td>
<td>MIC-3924B-A intelligent chassis management module with blade server support</td>
</tr>
<tr>
<td>968A390020</td>
<td>MIC-3924L-A alarm module</td>
</tr>
</tbody>
</table>

**Ordering Information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Power Distribution</th>
<th>PSU P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIC-3082A-AD</td>
<td>1960 W + 280 W (7+1 4AC + 4DC)</td>
<td>AC: 1757964010 DC: 1757964011</td>
</tr>
<tr>
<td>MIC-3082A-AA</td>
<td>1960 W + 280 W (7+1)</td>
<td>AC: 1757964010 AC: 1757964010</td>
</tr>
</tbody>
</table>
MIC-3082A

- 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