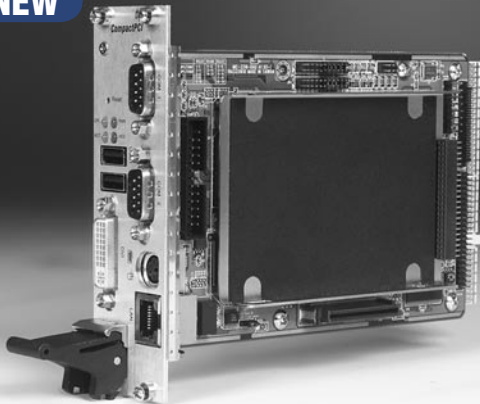# MIC-3316

3U CompactPCI® Ultra Low Voltage
Intel® Celeron® 650 MHz CPU board
2-slot with MIC-3316 basic function

NEW

Features

- Build-in Ultra Low Voltage Intel® Celeron® 650 MHz
- Support up to 384 MB SDRAM
- Two on-board CompactFlash® Socket
- Two RS-232/422/485 ports
- Two USB ports
- One 10/100 Mbps Ethernet port
- Watchdog timer
- One DVI-I interface
- One PCI-to-PCI bridge drives up to 7 Masters
- Battery-backup 512K RAM
- Timer IRQ
- Support AC97-audio, Line in, Line out, MIC in
- Rear I/O support (MIC-3316R only)

CE

Introduction

MIC-3316 is a 3U-sized CompactPCI® all-in-one single board computer that is optimized for its Ultra Low Voltage Intel® Celeron® 650 MHz processor. On-chip 256 KB L2 cache provides high performance, while the fanless design increases reliability. The CPU is also designed for a wide operating temperature range.

MIC-3316 has compliance with the PICMG 2.0 R2.1 CompactPCI specifications and provides very powerful functions on a 3U-sized board for demanding applications like real-time machine control and industrial automation.

Compact Mechanical Design

MIC-3316 offers many functions on 2 or 3-slot width. Advantech provides a CPU heat sink specially designed for the Ultra Low Voltage Intel® Celeron® 400/650 MHz and Low Voltage Intel® Pentium® III 800/933 MHz processors, enabling the MIC-3316 to operate without a cooling fan on the heat sink. It only needs external cooling air from the chassis fans for ventilation. This enables the MIC-3316 to use the Ultra Low Voltage Intel® Celeron® 400/650 MHz and Low Voltage Intel® Pentium® III 800/933 MHz processors within a mere 2-slot wide space.

Specifications

Standard SBC functions

- **CPU**
  MIC-3316 supports Ultra Low Voltage Intel® Celeron® 650 MHz
  Options: Celeron® 400 MHz ULV or Pentium® 800/933 MHz LV

- **BIOS**
  Award 4Mb flash memory

- **Chipset**
  Intel® 82815E Graphics and Memory Controller Hub (GMCH)
  Intel® 82801BA I/O Controller Hub (ICH2)

- **Front Side Bus**
  100 MHz (Ultra Low Voltage Intel® Celeron® 400/650 MHz)
  133 MHz (Low Voltage Intel® Pentium® III Processor 800/933)

- **2nd level cache**
  Built-in 256 KB on Ultra Low Voltage Intel® Celeron®
  Built-in 512KB on Low Voltage Intel® Pentium® III Processor 800/933

- **RAM**
  Up to 384 MB in one 144-pin DIMM socket and soldered SDRAM
  128MB (On-board) soldered SDRAM (no ECC)
  And one 144-pin SODIMM Socket supports up to 256 MB (Optional)
  Supports PC100/ PC133-compliant SDRAMs
  ECC (parity) DRAM not supports

- **Enhanced IDE interface**
  In second slot, One IDE channel have two connectors (One IDE connector and space reserved for embedded 2.5" HDD and one external 44-pin (2 mm) connector for external IDE Device). Supports PIO mode 4 (16.67 MB/s data transfer rate) and Ultra ATA 100/66/33 (100/66/33 MB/s data transfer rate). BIOS enabled/disabled

- **CompactFlash Socket**
  Two sockets, One IDE CompactFlash® socket on board. 3-slot model has one USB Hot-swapable CompactFlash® Reader

- **Enhanced Parallel Port**
  In 3-slot Configurable to LPT1, LPT2, LPT3, or disabled. Standard DB-25 female connector provided. Supports EPP/SPP/ECP

- **Serial Ports**
  Four RS-232/422/485 (jumper selectable) ports with 16C550 UARTs (or compatible) with 16-byte FIFO buffer.
  Two port are autoflow support in 2-slot,and Two port in rear I/O are not autoflow support in Rear I/O.Supports speeds up to 115.2 Kbps. Ports can be individually configured to COM1, COM2 , COM3,COM4 or disabled

- **Keyboard and PS/2 Mouse Connector**
  One 6-pin mini-DIN connector is located on the mounting bracket for easy connection to a keyboard or PS/2 mouse. An on-board keyboard pin header connector is also available

ADVANTECH | CompactPCI Systems

- **USB Ports** — Four USB ports with fuse protection comply with USB specification 1.1
One for 3-slot CompactFlash® reader, and one for rear I/O USB connector,two for front panel
- **PCI-to-PCI Bridge** — One PERICOM PI7C8150 controller chip, drives up to seven bus master peripherals.
- **Watchdog Timer** — Provides system reset and software control. Time interval is programmable from 1 to 255 seconds/minutes.
- **Ethernet LAN** — 10/100Base-TX Ethernet Interface
- **Controller Chips** — One Intel® 82551QM Ethernet controller chips provides one ports, one front RJ-45 LAN port 10 Mbps, 100 Mbps auto-switching
One RTC8100 Ethernet on Rear I/O, supports 10/100 Mbps
- **VGA Interface**
- **Controller** — Intel 815E chipset integrated
- **Display Memory** — Shared from system memory up to 11 MB SDRAM
2D Graphics- Up to 1600 X 1200 in 8-bit color at 85 Hz refresh
3D Graphics- Up to 1024 X 768 in 16-bit color at 85 Hz refresh
VGA-RGB CRT, One CRT on Rear I/O
Digital Video Output-DVI
SiI 164 Scaleable Bandwidth: 25 - 165 MHz
Flexible Graphics Controller Interface: 12-bit
- **Audio** — AC'97 Compliant Audio IN 3-slot -Line IN, Line OUT, MIC IN
- **Battery-backup RAM** — 512 KB
- **Timer IRQ**
- **Input /Output Bus Interface** — PCI 2.2 compliant, 32 bit/33 MHz
- **PICMG 2.1 CompactPCI Hot Swap Specification R1.0 Compliant**
- **Board Size** — 160 x 100 mm (3U size), 2 or 3-slot (8TE) wide.
- **Max. Power Requirements** — CPU ULV C650 MHz
+5 V (4.75 ~ 5.25 V) @ 2.3 A
+3.3 V (4.75 ~ 5.25 V) @ 1.9 A
+12 V (4.75 ~ 5.25 V) @ 44 mA
CPU LV P3 933 MHz
+5 V (4.75 ~ 5.25 V) @ 2.5 A
+3.3 V (3.1 ~ 3.5 V) @ 2.7 A
+12 V (11.0 ~ 13.0 V) @ 44m A
- **Operating Temperature** — 0 ~ 60° C (32 ~ 140° F)
- **Storage Temperature** — -20 ~ 80° C (-4 ~ 176° F)
- **Humidity (operating and storage)** — 5 ~ 95% (non-condensing)
- **Operating System** — Windows® 2000/XP
- **Rear I/O** — Transition Board for MIC-3316R Series

COM	COM3, COM4
LAN	10/100 Mbps Lan
USB	1 (USB 1.1)
VGA	RGB-CRT (shared)
KB/MS	Yes (shared)

Ordering Information

- **MIC-3316** — 3U CompactPCI® Ultra Low Voltage Intel® Celeron® 650 MHz CPU board 2-slot with MIC-3316 basic function and 128 MB on-board SDRAM
- **MIC-3316P** — 3U CompactPCI® Ultra Low Voltage Intel® Celeron® 650 MHz CPU board 3-slot with a parallelport and 128 MB on-board SDRAM
- **MIC-3316F** — 3U CompactPCI® Ultra Low Voltage Intel® Celeron® 650 MHz CPU board 3-slot with AC97 Audio and CF Card Reader and 128 MB on-board SDRAM
- **MIC-3316R** — 3U CompactPCI® Ultra Low Voltage Intel® Celeron® 650 MHz CPU board 2-slot with MIC-3316 basic function and 128 MB on-board SDRAM and Rear I/O support
- **MIC-3316PR** — 3U CompactPCI® Ultra Low Voltage Intel® Celeron® 650 MHz CPU board 3-slot with a parallelport and 128 MB on-board SDRAM and Rear I/O support
- **MIC-3316FR** — 3U CompactPCI® Ultra Low Voltage Intel® Celeron® 650 MHz CPU board 3-slot with AC97 Audio and CF Card Reader and 128 MB on-board SDRAM and Rear I/O support
- **MIC-3516** — Rear I/O Module for MIC-3316R

Front View of MIC-3316

MIC-3316   MIC-3316P

MIC-3316F   MIC-3516