

# MicroATOM

Intel® Atom™ Low Power PCI/104-Express Computer



The MicroATOM is a highly integrated single board computer on the PCI/104-Express stackable form factor. The MicroATOM is powered by a 4th Generation Intel® Atom™ processor and offers a range of expansion options ideal for building high performance, rugged embedded systems.



The MicroATOM is an industry standard PCI/104-Express form factor module and offers both PCI Express and traditional 32bit PCI interfaces. The MicroATOM has 2Gbytes of DDR3 SDRAM and an on-board 16Gbyte solid state eMMC Flash drive for application and data storage. Off board data storage can be achieved using the high speed SATA drive interface. Dual Gigabit Ethernet interfaces provide extensive connectivity options. A single miniPCIe slot completes the expansion options and allows wireless Ethernet or high speed mobile broadband to be easily added to an embedded system.

The MicroATOM has no built in display, ideal for use in deeply embedded, power constrained headless systems often found in IoT applications. This headless design allows easy use of external display modules eliminating possible conflicts.

The MicroATOM is supported by Windows and Linux.

**PRELIMINARY INFORMATION (Rev A.00)**  
Subject to change without notification

4th generation

Intel® Atom™

Processor

Proven rugged

PCI/104-Express

form factor

**Advanced Micro Peripherals Ltd**  
Cambridge, CB6 2HY, England  
Tel (+44) 1353 659500  
Fax (+44) 1353 659600  
[sales@amp ltd.com](mailto:sales@amp ltd.com)  
<http://www.amp ltd.com>

**Advanced Micro Peripherals Inc**  
New York, NY10007, USA  
Tel (+1) 212 951 7205  
Fax (+1) 212 658 9073  
[sales@amp-usa.com](mailto:sales@amp-usa.com)  
<http://www.amp-usa.com>



# MicroATOM

Intel® Atom™ Low Power PCI/104-Express Computer



**Advanced Micro  
Peripherals**

THE EMBEDDED VIDEO EXPERTS

## Features

4th generation Intel® Atom™ Processor  
PCIe104, miniPCI-e, and PCI-104 expansion  
Dual Gigabit Ethernet  
4x USB2.0 port  
Headless - no integrated graphics  
Integrated audio controller  
Compact and rugged PCI/104-Express form factor  
Windows and Linux Support

## Applications

Industrial Automation Controller  
Portable Test Equipment  
Mission computers  
Backbone communication routers  
Point-of-sale and Kiosk applications  
Security, Transportation, Telematics  
Embedded Internet/Intranet Appliance  
Rugged Harsh Environment Applications

Size, Weight and  
Power optimized for  
demanding  
Embedded / IoT  
Applications

**Advanced Micro Peripherals Ltd**  
Cambridge, CB6 2HY, England  
Tel (+44) 1353 659500  
Fax (+44) 1353 659600  
[sales@amp ltd.com](mailto:sales@amp ltd.com)  
<http://www.amp ltd.com>

**Advanced Micro Peripherals Inc**  
New York, NY10007, USA  
Tel (+1) 212 951 7205  
Fax (+1) 212 658 9073  
[sales@amp-usa.com](mailto:sales@amp-usa.com)  
<http://www.amp-usa.com>



**PC/104**

Embedded PC Modules

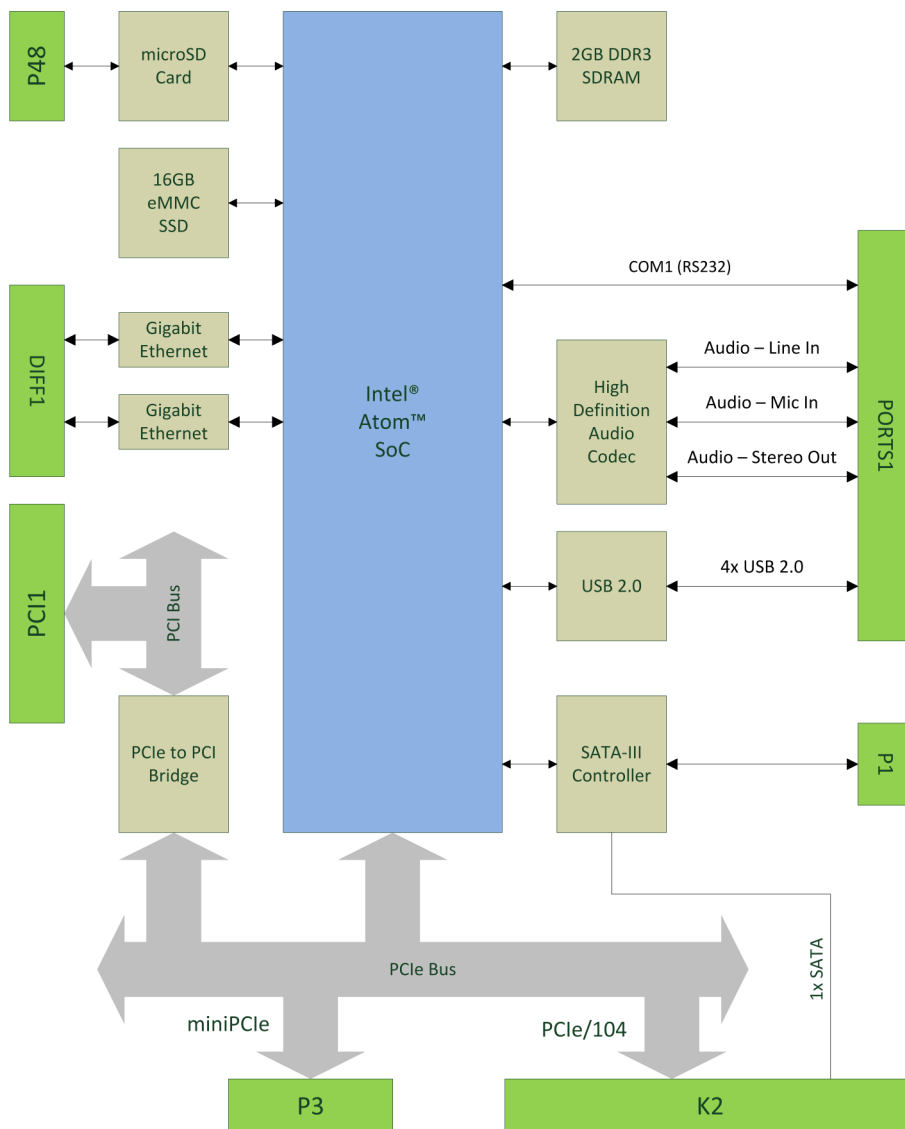
# MicroATOM

Intel® Atom™ Low Power PCI/104-Express Computer



**Advanced Micro Peripherals**

THE EMBEDDED VIDEO EXPERTS



**MicroATOM Function Diagram**

Dual Gigabit Ethernet Ports

Support PCI-104, miniPCle, and PCIe/104 peripheral modules

**Processor**

4th generation E3800 series Intel® Atom™ Processor  
 Dual Core, 1.33GHz  
 1MB L2 Cache

**Main Memory**

Soldered 2GBytes DDR3L 1067MHz

**Storage**

On board soldered 16GB eMMC Flash  
 1x standard SATA 3Gb/s

**Network**

2x Gigabit Ethernet  
 10/100/1000 Auto-negotiation

**Audio**

Intel® HD Audio controller  
 Stereo out, Stereo Line In, Stereo Mic In

**Peripherals**

4x USB 2.0  
 1 x RS-232

**miniPCI-Express Bus**

1x miniPCI-e expansion slot

**PCI/104-Express Bus**

Stackable 156-pin PCIe bus connector  
 Four PCI Express x1 Lanes Gen 2.0

**PCI-104 Bus**

133MB/sec bus bandwidth  
 PCI-104 bus master/initiator  
 Up to 4 Bus master add-on cards capable  
 3.3V or 5V PCI bus signalling

**Power**

+5V Power Supply  
 Power consumption of 12W

**Physical**

PCI/104-Express stackable card form factor.  
 Standard 3.8" x 4.6"

**Environmental**

Operating temperature at 0°C to 60°C  
 (-40°C to +85°C -EXT option)  
 Relative humidity 5% to 95% non-condensing  
 (optional conformal coating)

**Software Support**

Windows 7/8/10  
 Linux

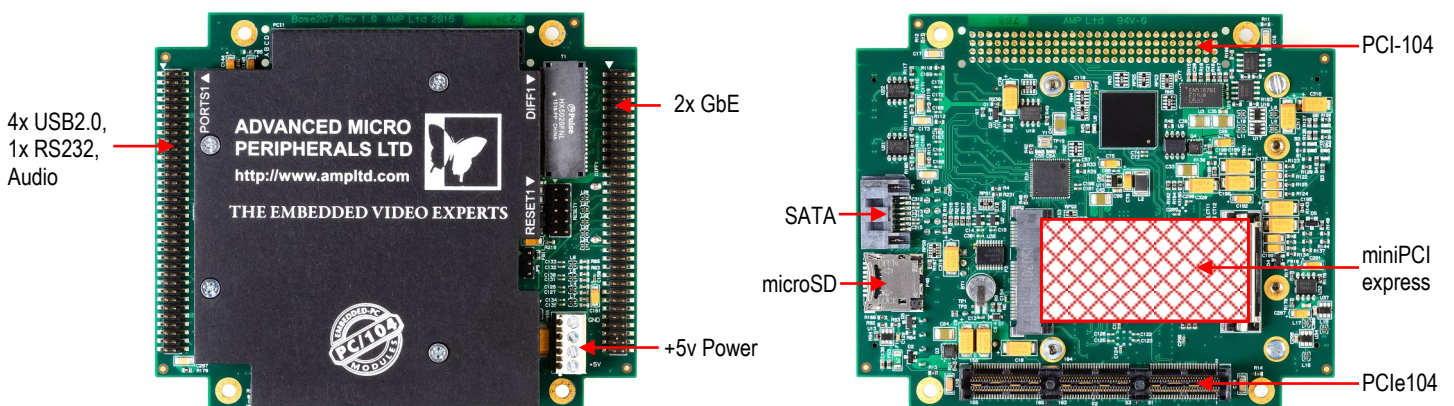
**Ordering Information**

**MicroAtom-DC/16G**

PCI/104-Express Intel® Atom™ SBC (0 to 60°C)

**MicroAtom-DC/16G-Ext**

PCI/104-Express Intel® Atom™ SBC (-40 to 85°C)



**MicroATOM**

