

TinyATOM

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



The TinyATOM is a highly integrated single board computer on the PCI/104-Express stackable form factor. The TinyATOM 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 TinyATOM is an industry standard PCI/104-Express form factor and offers both PCI Express and traditional 32bit PCI interfaces. The TinyATOM has 4Gbytes of DDR3 SDRAM and an on-board 8Gbyte solid state eMMC Flash drive for application and data storage. Off board data storage can be achieved using either the high speed SATA drive interface or the USB 3.0 port. 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 TinyATOM 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

Dragontech Systems LTD.
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Features

4th generation Intel® Atom™ Processor
PCIe104, miniPCI-e, and PCI-104 expansion
Dual Independent displays
Dual Gigabit Ethernet
1x USB3.0 port
4x USB2.0 port
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
Applications

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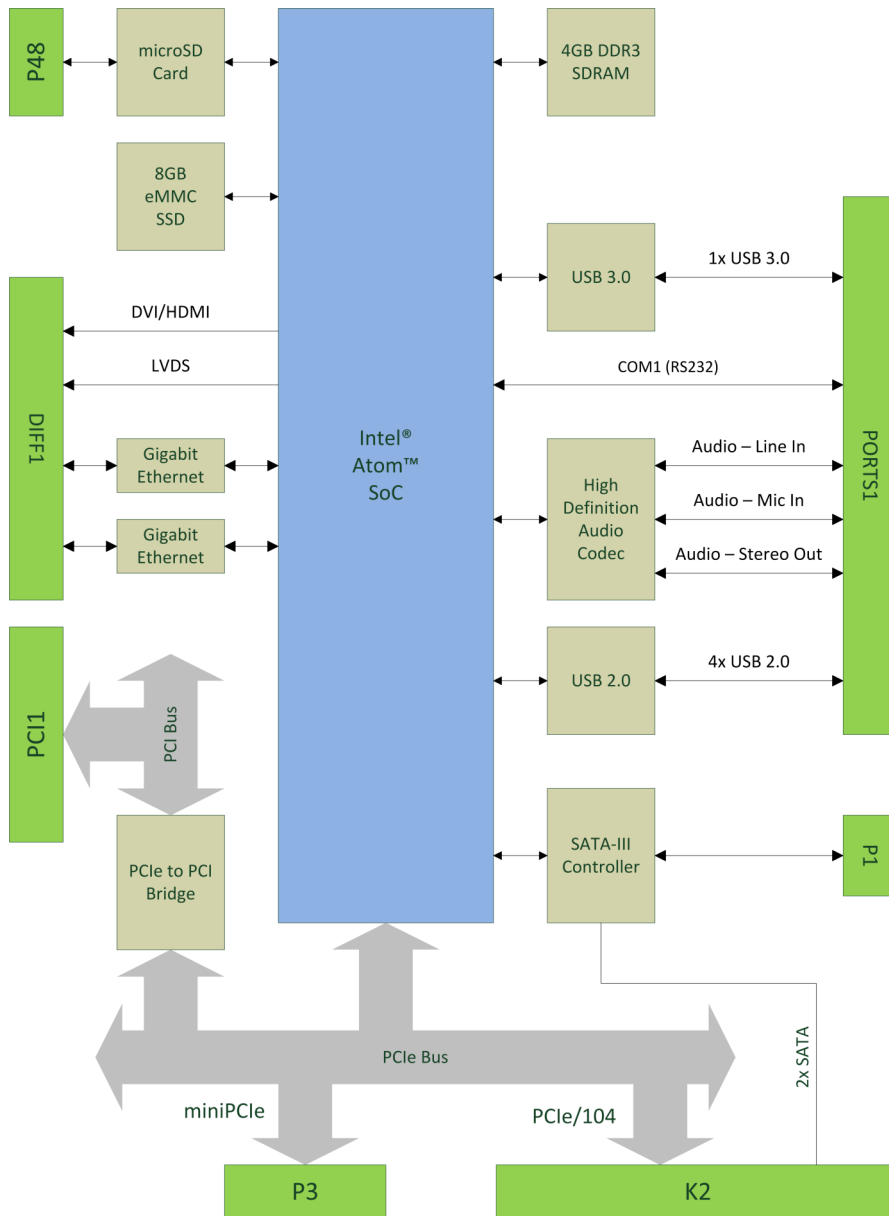
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TinyATOM Function Diagram

Dual Gigabit Ethernet Ports

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

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Processor

4th generation E3800 series Intel® Atom™ Processor
Dual Core, 1.46GHz
1MB L2 Cache

Main Memory

Soldered 4GBytes DDR3L 1067MHz

Storage

On board soldered 8GB eMMC
1x standard SATA 3Gb/s

Display

7th generation Intel® graphics core architecture
Supports two independent displays
HDMI/DVI (up to 1920 x 1200)
Dual-channel 24bit LVDS
2D and 3D graphics hardware acceleration
Support for DirectX 11.1, OGLS 2.0, OGL 3.2
Video decode HW acceleration for H.264, MPEG2, VC1, VP8

Audio

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

Network

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

Peripherals

1x USB 3.0
4x USB 2.0
1 x RS-232

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

miniPCI-Express Bus

1x miniPCI-e expansion slot

Power

+5V Power Supply

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
Linux

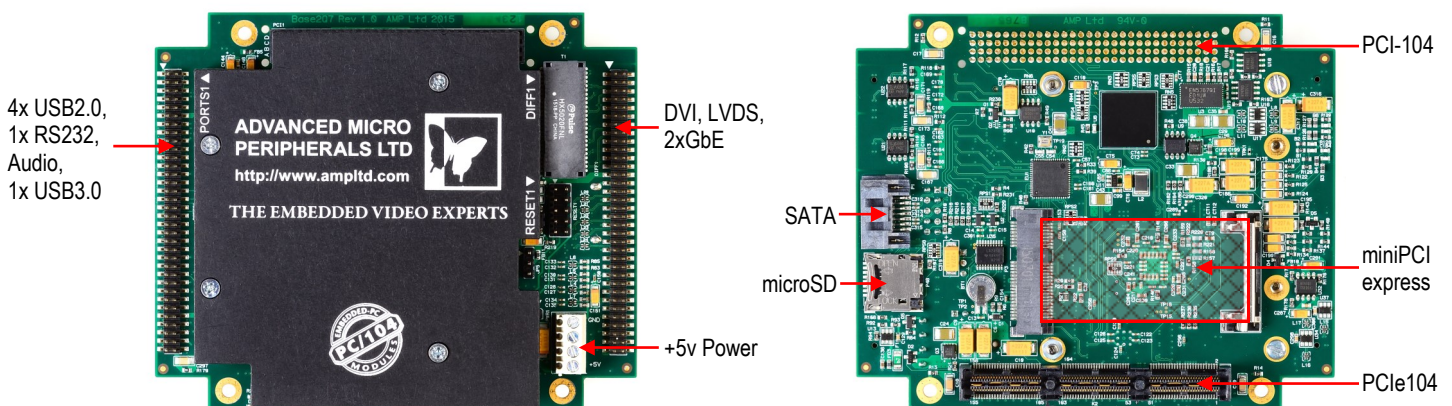
Ordering Information

TinyAtom-DC/8G

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

TinyAtom-DC/8G-Ext

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



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