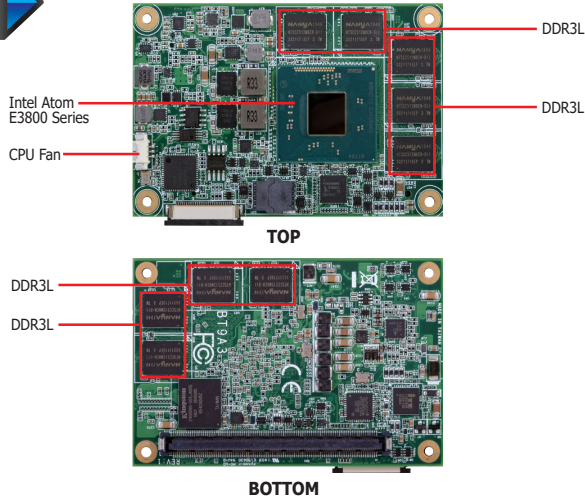




**Intel® Atom™ E3800 Series  
COM Express® Mini**

**BT9A3**

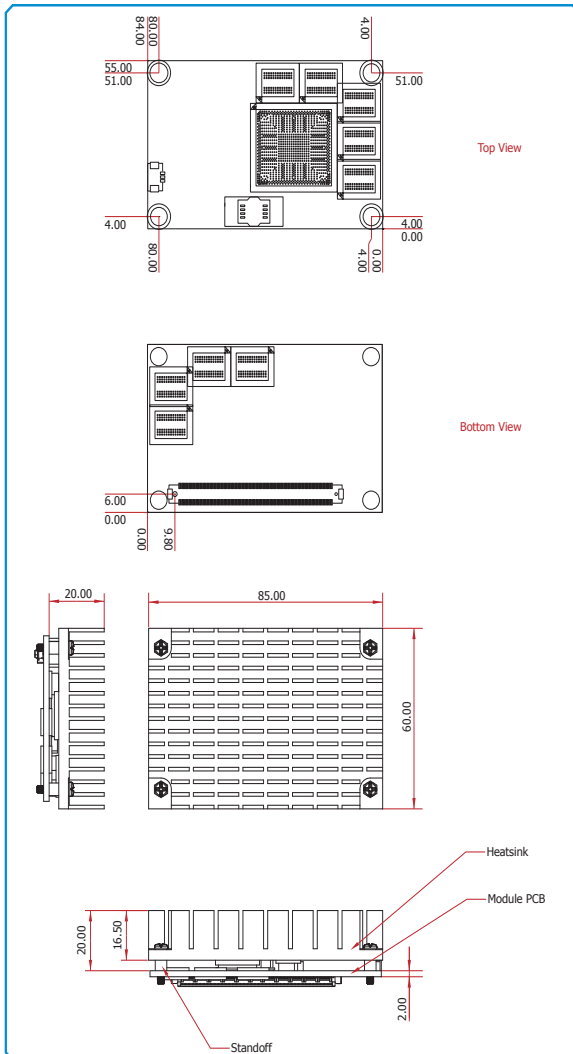


**Features**

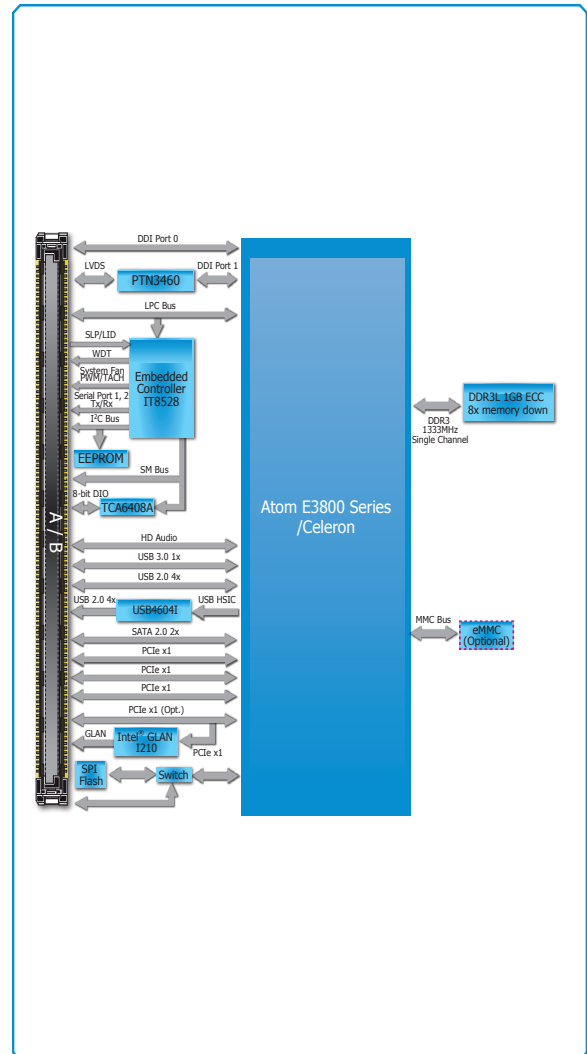
MEMORY	2GB/4GB DDR3L ECC memory down
EXPANSION	3 PCIe x1 1 LPC, 1 SMBus, 1 I <sup>2</sup> C, 2 serial 1 LVDS, 1 DDI (HDMI/DVI/DP) 1 HDA 9 USB: 1 USB 3.0, 8 USB 2.0 2 SATA 2.0 eMMC (optional) 8-bit DIO
LAN	1 LAN
DIMENSIONS	COM Express® R2.1 Mini, Type 10 84mm x 55mm (3.30" x 2.16")



**Mechanical Drawing**



**Block Diagram**





# BT9A3

**Specifications** \* Optional and is not supported in standard model. Please contact your sales representative for more information.

**PROCESSOR**

- Intel® Atom™/Intel® Celeron® processors
  - BGA 1170 packaging technology
  - 22nm process technology
- Please refer to the Ordering Information below

**SYSTEM MEMORY**

- 2GB/4GB DDR3L ECC memory down
- Supports DDR3L 1333MHz (-E45/-E27/-J00/-N30)
- Supports DDR3L 1066MHz (-E15)
- Supports single channel memory interface

**ONBOARD GRAPHICS FEATURES**

- Intel® HD Graphics
- Supports LVDS and DDI interfaces
- LVDS: NXP PTN3460, 18/24-bit, single channel, resolution up to 1366x768 @ 60Hz
- Digital Display Interface: HDMI, DVI and DP
- HDMI, DVI: resolution up to 1920x1080 @ 60Hz
- DP: resolution up to 2560x1600 @ 60Hz
- Supports hardware acceleration for DirectX 11, OCL 1.2, OGL 4.0, H.264, MPEG2, MVC, VC-1, WMV9 and VP8 (supported version dependent on OS)

**ONBOARD AUDIO FEATURES**

- Supports High Definition Audio interface

**ONBOARD LAN FEATURES**

- Intel® I210 Gigabit Ethernet Controller
- Integrated 10/100/1000 transceiver
- Fully compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab

**SERIAL ATA (SATA) INTERFACE**

- Supports 2 Serial ATA interfaces
- SATA 2.0 with data transfer rate up to 3Gb/s
- Integrated Advanced Host Controller Interface (AHCI) controller

**EXPANSION INTERFACES**

- Supports 1 USB 3.0 port
- Supports 8 USB 2.0 ports
  - 4 integrated USB 2.0 ports
  - 1 USB HSIC for 4 USB 2.0 ports
- Supports 3 PCIe x1 (default); or 1 PCIe x4\* (BOM option)
- Supports LPC interface
- Supports I2C interface
- Supports SMBus interface
- Supports 2 serial interfaces (TX/RX)
- Supports 8-bit Digital I/O

**eMMC\***

- Supports 4GB, 8GB, 16GB and 32GB eMMC onboard
- Supports Windows 8.1 only

**WATCHDOG TIMER**

- Watchdog timeout programmable via software from 1 to 255 seconds

**DAMAGE FREE INTELLIGENCE**

- Monitors CPU/system temperature and overheat alarm
- Monitors Vcore/Vgfx/VDDR/3V3 voltages and failure alarm
- Monitors CPU/system fan speed and failure alarm
- Watchdog timer function

**BIOS**

- AMI BIOS
- 64Mbit SPI BIOS

**POWER CONSUMPTION**

- TBD

**OS SUPPORT**

- Windows 7 Ultimate x86 & SP1 (32-bit)
  - Windows 7 Ultimate x64 & SP1 (64-bit)
  - Windows 8.1 Enterprise x86 (32-bit)
  - Windows 8.1 Enterprise x64 (64-bit)
- Note: Windows 10 will be available upon request. Please contact DFI for more information.

**TEMPERATURE**

- Operating
  - : 0°C to 60°C - Atom, Celeron (Fanless)
  - : -40°C to 85°C - Atom (Fanless with air flow)
- Storage: -40°C to 85°C

**HUMIDITY**

- 5% to 90%

**MTBF**

- 800,542 hrs @ 25°C; 406,343 hrs @ 45°C
- Calculation model: Telcordia Issue 2, Method I Case 3
- Environment: GB, GC – Ground Benign, Controlled

**POWER INPUT**

- 4.75V~20V, 5VSB, VCC\_RTC (ATX mode)
- 4.75V~20V, VCC\_RTC (AT mode)

**PCB**

- Dimensions
  - COM Express® Mini
  - 84mm (3.30") x 55mm (2.16")
- Compliance
  - PICMG COM Express® R2.1, Type 10

**CERTIFICATION**

- CE, FCC Class B, RoHS

**Ordering Information**

Model Name	P/N	Processor	Memory	eMMC	Power	Thermal	Temperature
BT9A3-T24-E15	770-BT9A33-D00G	Intel® Atom™ E3815, Single Core, 0.5M Cache, 1.46GHz, 5W	2GB ECC Bundle	4GB	ATX/AT	Fanless	-40°C to 85°C
BT9A3-T40-E45	770-BT9A33-E00G	Intel® Atom™ E3845, Quad Core, 2M Cache, 1.91GHz, 10W	4GB ECC Bundle	None	ATX/AT	Fanless	-40°C to 85°C
BT9A3-B40-E45	770-BT9A33-I00G	Intel® Atom™ E3845, Quad Core, 2M Cache, 1.91GHz, 10W	4GB ECC Bundle	None	ATX/AT	Fanless	0°C to 60°C
BT9A3-B40-J00	770-BT9A33-H00G	Intel® Celeron® J1900, Quad Core, 2M Cache, 2GHz (2.41GHz), 10W	4GB ECC Bundle	None	ATX/AT	Fanless	0°C to 60°C
BT9A3-B48-E45	770-BT9A33-S00G	Intel® Atom™ E3845, Quad Core, 2M Cache, 1.91GHz, 10W	4GB ECC Bundle	8GB	ATX/AT	Fanless	0°C to 60°C

The following specifications will be available upon request. Please contact your sales representative for more information.

Model Name	Temperature	Memory Down	eMMC	Processors
BT9A3	- B B: 0°C to 60°C T: -40°C to 85°C	2: 2GB 4: 4GB	0: None 4: 4GB 8: 8GB 1: 16GB 3: 32GB	- E45 E45: Intel® Atom™ E3845, Quad Core, 2M Cache, 1.91GHz, 10W E27: Intel® Atom™ E3827, Dual Core, 1M Cache, 1.75GHz, 8W E15: Intel® Atom™ E3815, Single Core, 0.5M Cache, 1.46GHz, 5W J00: Intel® Celeron® J1900, Quad Core, 2M Cache, 2GHz (2.41GHz), 10W N30: Intel® Celeron® N2930, Quad Core, 2M Cache, 1.83GHz (2.16GHz), 7.5W

**Packing List**

- 1 BT9A3 board
- 1 DVD
- 1 Heat sink: A71-011055-000G

**Optional Items**

- COM100-B carrier board kit: 770-COM104-000G
- Heat sink with fan: A71-111020-000G
- Heat spreader: A71-011052-000G

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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