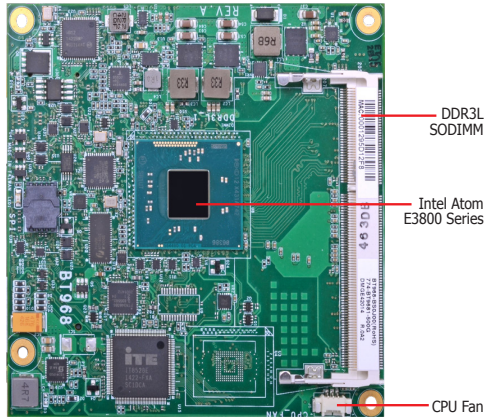


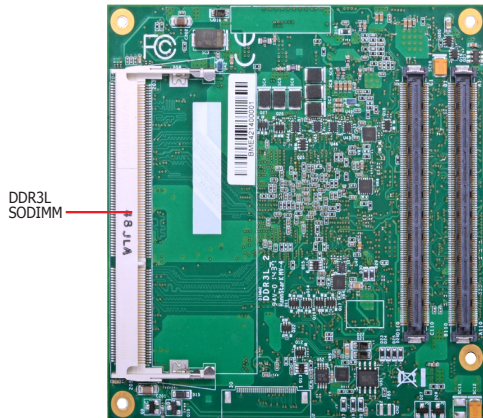


**Intel® Atom™ E3800 Series
COM Express® Compact**

BT968



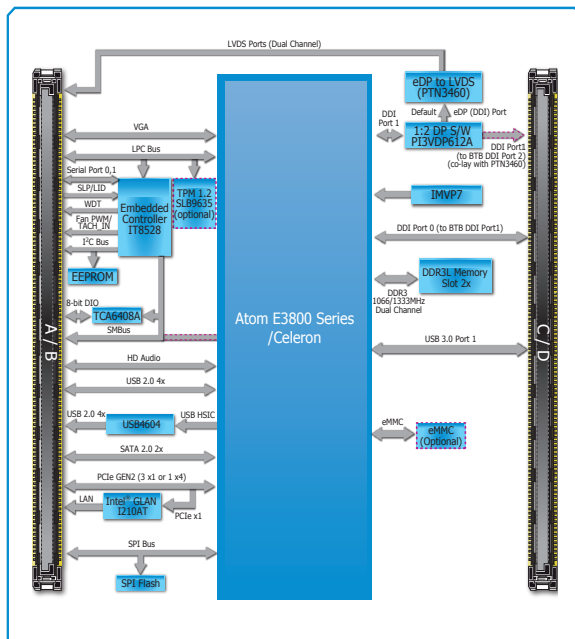
TOP



BOTTOM



Block Diagram

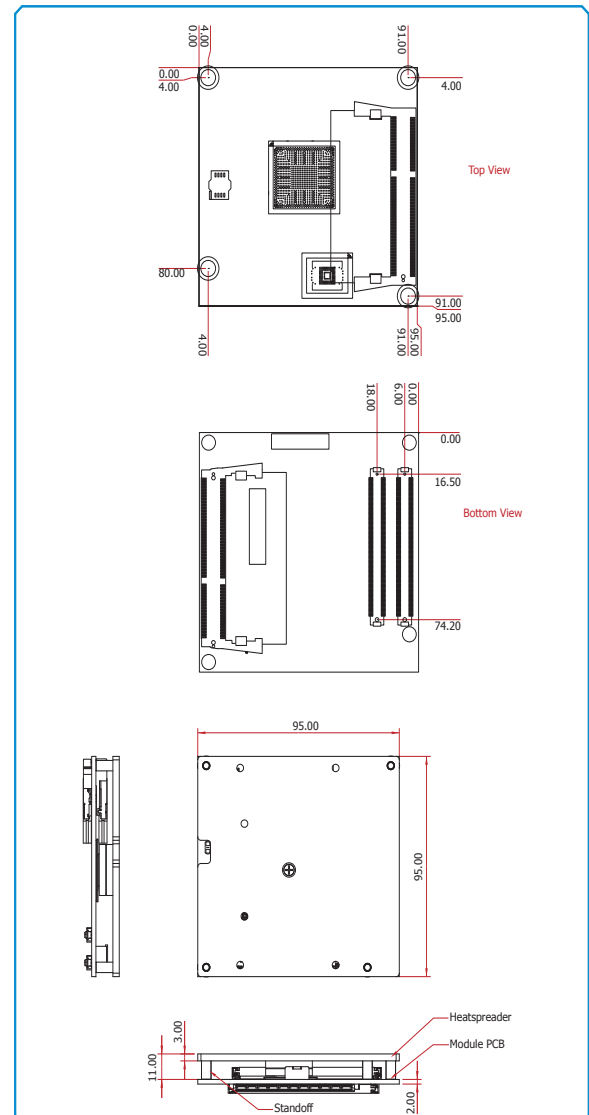


Features

MEMORY	2 DDR3L SODIMM up to 8GB (-E45/-E27/-E26/-J00/-N30) 1 DDR3L SODIMM up to 4GB (-E15)
EXPANSION	3 PCIe x1 1 LPC, 1 SMBus, 1 I ² C, 2 serial 1 VGA, 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 Compact, Type 6 95mm x 95mm (3.74" x 3.74")



Mechanical Drawing



Intel® Atom™ E3800 Series COM Express® Compact



BT968

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

- Two 204-pin DDR3L SODIMM sockets (-E45/-E27/-E26/-J00/-N30)
 - Supports up to 8GB system memory
 - dual channel memory interface
- One 204-pin DDR3L SODIMM sockets (-E15)
 - Supports up to 4GB system memory
 - single channel memory interface
- Supports DDR3L 1333MHz (-E45/-E27/-J00/-N30)
- Supports DDR3L 1066MHz (-E26/-E15)
- DRAM device technologies: 1Gb, 2Gb and 4Gb DDR3L DRAM technologies are supported for x8 and x16 devices, unbuffered, non-ECC

ONBOARD GRAPHICS FEATURES

- Intel® HD Graphics
- Supports VGA, DDI, LVDS (default) or DDI* interfaces
- Supports 2 display interfaces at the same time
- VGA: 24-bit, resolution up to 1920x1200 @ 60Hz
- LVDS: NXP PTN3460, 24-bit, dual channel, resolution up to 1920x1200 @ 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 3.2, H.264, MPEG2, MVC, VC-1, WMV9 and VP8

ONBOARD AUDIO FEATURES

- Supports High Definition Audio interface

ONBOARD LAN FEATURES

- Intel® I210AT 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 interfaces
- Supports 8 USB 2.0 interfaces
 - 4 integrated USB 2.0 interfaces
 - 1 USB HSIC for 4 USB 2.0 interfaces
- Supports 3 PCIe x1 (default); or 1 PCIe x4 (PCIe port 3, by default, is shared with the onboard LAN)*
- Supports LPC interfaces
- Supports I²C interfaces
- Supports SMBus interfaces
- 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

TRUSTED PLATFORM MODULE (TPM)*

- Provides a Trusted PC for secure transactions
- Provides software license protection, enforcement and password protection

DAMAGE FREE INTELLIGENCE

- Monitors CPU temperature
- Monitors Vcore/Vgtx/VDDR/1V0/VBAT voltages
- Monitors CPU/system fan speed
- Watchdog timer function

BIOS

- AMI BIOS
- 64Mbit SPI BIOS

WATCHDOG TIMER

- Watchdog timeout programmable via software from 1 to 255 seconds

POWER CONSUMPTION

- BT968-TS0-E45: 15.88W with E3845 at 1.91GHz and 2x 4GB DDR3L SODIMM

OS SUPPORT

- Windows 7 Ultimate x86 & SP1 (32-bit)
- Windows 7 Ultimate x64 & SP1 (64-bit)
- Windows 8 Enterprise x86 (32-bit)
- Windows 8 Enterprise x64 (64-bit)
- Windows 8.1 Enterprise x86 (32-bit)
- Windows 8.1 Enterprise x64 (64-bit)
- Windows 10 Enterprise x86 (32-bit)
- Windows 10 Enterprise x64 (64-bit)

TEMPERATURE

- Operating
 - 0°C to 60°C - Atom, Celeron (Fanless)
 - 20°C to 70°C - Atom (Fanless with air flow)
 - 40°C to 85°C - Atom (Fanless with air flow)
- Storage: -40°C to 85°C

HUMIDITY

- 5% to 90%

MTBF

- 777,906 hrs @ 25°C; 394,833 hrs @ 45°C
- Calculation model: Telcordia Issue 2, Method I Case 3
- Environment: GB, GC – Ground Benign, Controlled

POWER INPUT

- 12V, 5VSB, VCC_RTC (ATX mode)
- 12V, VCC_RTC (AT mode)

PCB

- Dimensions
 - COM Express® Compact
 - 95mm (3.74") x 95mm (3.74")
- Compliance
 - PICMG COM Express® R2.1, Type 6

CERTIFICATE

- CE, FCC Class B, RoHS

Ordering Information

Model Name	Processor	Memory	eMMC	Power	Thermal	Temperature
BT968-BS0-N30	Intel® Celeron® N2930, Quad Core, 2M Cache, 1.83GHz (2.16GHz), 7.5W	2 SODIMM	None	ATX/AT	Fanless	0°C to 60°C
BT968-BS0-J00	Intel® Celeron® J1900, Quad Core, 2M Cache, 2GHz (2.41GHz), 10W	2 SODIMM	None	ATX/AT	Fanless	0°C to 60°C
BT968-TS4-E15	Intel® Atom™ E3815, Single Core, 0.5M Cache, 1.46GHz, 5W	1 SODIMM	4GB	ATX/AT	Fanless	-40°C to 85°C
BT968-TS0-E27	Intel® Atom™ E3827, Dual Core, 1M Cache, 1.75GHz, 8W	2 SODIMM	None	ATX/AT	Fanless	-40°C to 85°C
BT968-TS8-E27	Intel® Atom™ E3827, Dual Core, 1M Cache, 1.75GHz, 8W	2 SODIMM	8GB	ATX/AT	Fanless	-40°C to 85°C
BT968-TS0-E45	Intel® Atom™ E3845, Quad Core, 2M Cache, 1.91GHz, 10W	2 SODIMM	None	ATX/AT	Fanless	-40°C to 85°C

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

Model Name	Temperature	Memory	eMMC	Processor
BT968	B B: 0°C to 60°C E: -20°C to 70°C T: -40°C to 85°C	S S: Socket	0 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 E26: Intel® Atom™ E3826, Dual Core, 1M Cache, 1.46GHz, 7W 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 BT968 board
- 1 DVD
- 1 Heat spreader: A71-011039-000G

Optional Items

- COM331-B carrier board kit: 770-COM331-000G
- Heat sink: A71-011054-000G
- Heat spreader with heat sink and fan: 761-BT9681-000G

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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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