# ETX-BT

## ETX Module with Intel® Atom™ Processor E3800 Series System-on-Chip

ETX

NEW

## Features

- Single, dual or quad-core Intel® Atom™ SOC or Celeron® Processor
- Single SODIMM for up to 4GB DDR3L
- Dual channel 24-bit LVDS, analog VGA
- 2 SATA and 2 PATA (M/S), 4x USB 2.0, 10/100 Mbps LAN (GbE via onboard connector)
- Extreme Rugged™ operating temperature: -40°C to +85°C (optional)
- Supports Smart Embedded Management Agent (SEMA) functions

## Specifications

### Core System

| | |
|---|---|
| CPU | Single, dual or quad-core Intel® Atom™ or Celeron® Processor |
| | Atom™ E3845 1.91 GHz 542/792 (Turbo) 10W (4C/1333)<br>Atom™ E3827 1.75 GHz 542/792 (Turbo) 8W (2C/1333)<br>Atom™ E3826 1.46 GHz 533/667 (Turbo) 7W (2C/1066)<br>Atom™ E3825 1.33 GHz 533 (No Turbo) 6W (2C/1066)<br>Atom™ E3815 1.46 GHz 400 (No Turbo) 5W (1C/1066)<br>Celeron® N2930 1.83 GHz, 400/756 (Turbo) 7.5W (4C/1066)<br>Celeron® J1900 2.00 GHz, 688/792 (Turbo) 10W (4C/1333) |
| | Supports: Single, dual or quad Out-of-Order Execution (OOE) processor cores, Intel® VT-x, Intel® SSE4.1 and SSE4.2, Intel® 64 architecture, IA 32-bit , PCLMULQDQ Instruction DRNG, Intel® Thermal Monitor (TM1 & TM2) |
| | Note: Availability of features may vary between processor SKUs. |
| Memory | Single SODIMM socket for up to 4 GB non-ECC 1333/1066 MHz DDR3L memory |
| Embedded BIOS | AMI EFI with CMOS backup in 8MB SPI BIOS |
| Cache | Primary 32 kB, 8-way L1 instruction cache and 24 kB, 6-way L1 write-back data cache |
| Expansion Busses | PCI 32-bit rev 2.3 at 33MHz supporting 4 bus masters<br>ISA 16-bit (through LPC-ISA bridge), no DMA support<br>SMBus (system) , I²C (user) |
| SEMA Board Controller | Supports: Voltage/Current monitoring, Power sequence debug support, AT/ATX mode control, Logistics and Forensic information, Flat Panel Control, General Purpose I²C, Watchdog Timer |
| Debug Headers | 40-pin multipurpose flat cable connector<br>Use in combination with DB-40 debug module providing BIOS POST code LEDs, BMC access, SPI BIOS flashing, power testpoints, debug LEDs |

### Video

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|---|---|
| GPU Feature Support | 7th generation graphics Intel core architecture with four Execution Units, supporting two independent displays |
| | 3D graphics hardware acceleration |
| | Support for DirectX 11, OCL 1.1, OGL ES Halt/2.0/1.1, OGL 3.2 |
| | Video decode hardware acceleration including support for H.264, MPEG2, MVC, VC-1, WMV9 and VP8 |
| | Video encode hardware acceleration including support for H.264, MPEG2 and MVC formats |
| VGA | Analog VGA supporting resolutions of up to 2560 x 1600@60Hz, 24bpp |
| LVDS | Single/dual channel 18/24-bit LVDS from eDP (two lane) |

### Audio

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|---|---|
| Chipset | Intel® HD Audio integrated in SOC |
| Audio Codec | Realtek ALC 262, 4-channel High Definition Audio |

### Ethernet

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|---|---|
| Type | Intel® i211 (MAC/PHY) Ethernet controller |
| Interface | 10/100 Mbps LAN (GbE via onboard connector) |

### Multi I/O and Storage

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|---|---|
| USB | 4 ports USB 2.0 |
| PATA | Two PATA IDE with Master/Slave support |
| SATA | Two SATA 3Gb/s ports |
| SSD | Optional SATA SSD 2~64 GB (occupies one SATA port) |

### Super I/O

| | |
|---|---|
| Chipset | Nuvoton W83627DHG-PT |
| Serial | Two high speed RS-232C ports (COM1/COM2) |
| IrDA | Supports IrDA 1.0 SIR protocol or Sharp ASK-IR protocol |
| Parallel | SPP, ECP and EPP mode support (LPT1) |
| Keyboard Mouse | PS/2 type keyboard and mouse |

### Power

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|---|---|
| Standard Input | ATX = 5V±5% / 5Vsb ±5% or AT = 5V±5% |
| Management | ACPI 4.0 compliant, Smart Battery support |
| Power States | C0, C1, C1E, C4, C6; S0, S3, S4, S5 (Wake on USB S3/S4, WOL S3/S4/S5) |
| ECO mode | Supports deep S5 (ECO mode) for power saving |

### Mechanical and Environmental

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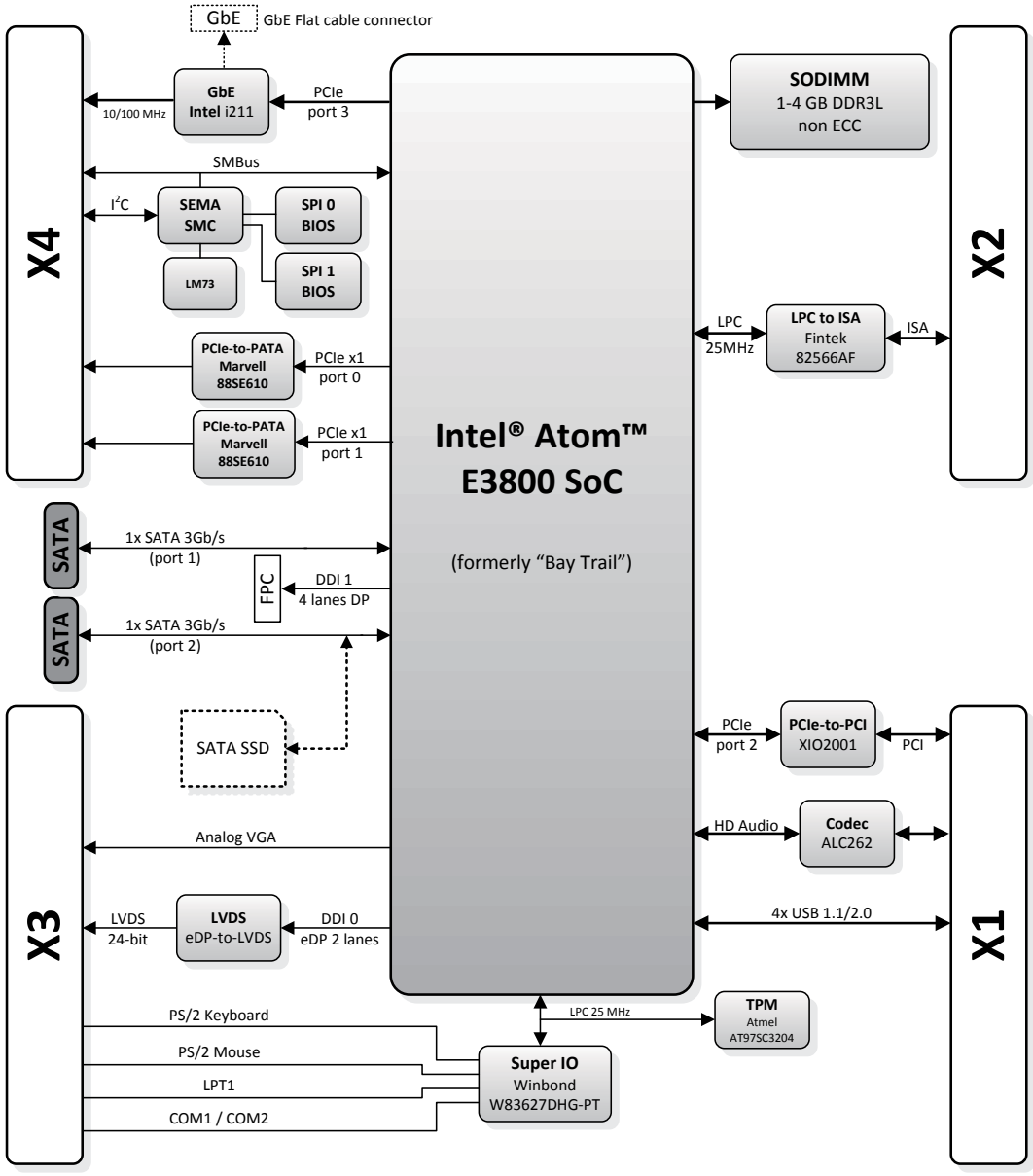
|---|---|
| Form Factor | ETX Rev 3.02 |
| Dimension | 114 mm x 95 mm |
| Operating Temperature | Standard Operating Temperature: 0°C to +60°C |
| | Screened Extreme Rugged™ Operating Temperature: -40°C to +85°C (optional) |
| Humidity | 5-90% RH operating, non-condensing |
| | 5-95% RH storage (operating with conformal coating) |
| Shock and Vibration | IEC 60068-2-64 and IEC-60068-2-27 |
| | MIL-STD-202F, Method 213B, Table 213-I, Condition A and Method 214A, Table 214-I, Condition D |
| HALT | Thermal Stress, Vibration Stress, Thermal Shock and Combined Test |

### Operating Systems

| | |
|---|---|
| Standard Support | Windows 7/8 32/64-bit, Linux 32/64-bit |
| Extended Support (BSP) | WES7/8, WEC7/8, Linux, VxWorks |

## Functional Diagram




## Ordering Information

### Modules

| Model Number | Description/Configuration |
|---|---|
| **ETX-BT-E3845** | ETX Module with Intel® Atom™ E3845, 1.91 GHz 542/792 (Turbo), 10W (4C/1333) |
| **ETX-BT-E3827** | ETX Module with Intel® Atom™ E3827, 1.75 GHz 542/792 (Turbo), 8W (2C/1333) |
| **ETX-BT-E3826** | ETX Module with Intel® Atom™ E3826, 1.46 GHz 533/667 (Turbo), 7W (2C/1066) |
| **ETX-BT-E3825** | ETX Module with Intel® Atom™ E3825, 1.33 GHz 533 (No Turbo), 6W (2C/1066) |
| **ETX-BT-E3815** | ETX Module with Intel® Atom™ E3815, 1.46 GHz 400 (No Turbo), 5W (1C/1066) |
| **ETX-BT-E3805** | ETX Module with Intel® Atom™ E3805, 1.33 GHz 3W (2C/1067) |
| **ETX-BT-J1900** | ETX Module with Intel® Atom™ J1900, 2 GHz, 688/792 (Turbo), 10W (4C/1333) |
| **ETX-BT-N2807** | ETX Module with Intel® Celeron® N2807, 2.16 GHz 4.5W (2C) |
| **ETX-BT-N2930** | ETX Module with Intel® Atom™ N2930, 1.86 GHz, 400/756 (Turbo), 7.5W (4C/1066) |

### Accessories

| Model Number | Description/Configuration |
|---|---|
| **Heat Spreaders** | |
| HTS-eBT-B | Heatspreader for ETX-BT with threaded standoffs for bottom mounting |
| HTS-eBT-BT | Heatspreader for ETX-BT with through-hole standoffs for top mounting |
| **Passive Heatsinks** | |
| THS-eBT-B | Low profile heatsink for ETX-BT with threaded standoffs for bottom mounting |
| THS-eBT-BT | Low profile heatsink for ETX-BT with through-hole standoffs for top mounting |
| **Active Heatsink** | |
| THSH-eBT-B | High profile heatsink for ETX-BT with threaded standoffs for bottom mounting |

Note: All specifications are subject to change without further notice.

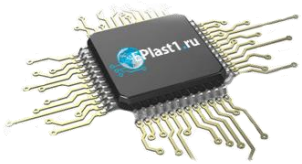
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.




**Как с нами связаться**

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