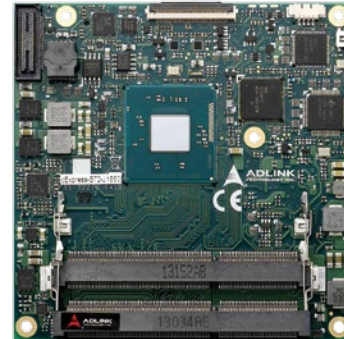


cExpress-BT2

COM Express[®] Compact Size Type 2 Module with
Intel[®] Atom[™] E3800 series or Celeron[®] Processor SoC

Features

- Single, dual, quad-core Intel[®] Atom[™] or Celeron[®] Processor SoC
- Up to 8GB Dual Channel DDR3L at 1333MHz
- VGA and dual channel 18/24-bit LVDS
- Two PCIe x1, and 32-bit PCI bus
- GbE, one SATA 3Gb/s, one PATA IDE, seven USB 2.0
- Supports Smart Embedded Management Agent (SEMA[®]) functions
- Extreme Rugged operating temperature: -40°C to +85°C (build option)



Specifications

Core System

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|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU | Single, dual, quad-core Intel [®] Atom [™] or Celeron [®] Processor Atom [™] E3845 1.91 GHz 542/792 Gfx (Turbo) 10W Atom [™] E3827 1.75 GHz 542/792 Gfx (Turbo) 8W Atom [™] E3826 1.46 GHz 533/667 Gfx (Turbo) 7W Atom [™] E3825 1.33 GHz 533 Gfx (No Turbo) 6W Atom [™] E3815 1.46 GHz 400 Gfx (No Turbo) 5W Celeron [®] N2930 1.83 GHz, 400/756 Gfx (Turbo) 7.5W Celeron [®] J1900 2 GHz, 688/792 Gfx (Turbo) 10W 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 | Dual channel non-ECC 1333/1066 MHz DDR3L memory up to 8GB in dual stacked SODIMM sockets |
| 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 2MB for E3845, N2920 and J1900 1MB for E3827, E3826 and E3825 512K for E3815 |
| Expansion Buses | 2 PCI Express x1 Gen 2 (AB): lanes 0/1 PCI Bus 33 MHz Rev. 2.3 LPC bus, SMBus (system), I ² C (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 I ² C, Failsafe BIOS (dual BIOS), Watchdog Timer and Fan Control |
| Debug Headers | 40-pin multipurpose flat cable connector Use in combination with DB-40 debug module providing BIOS POST code LED, BMC access, SPI BIOS flashing, power test points, debug LEDs 60-pin XDP header for ICE debug of CPU/chipset |

Video

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|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GPU Feature Support | 7th Gen Intel [®] graphics core architecture with four execution units supporting two independent displays 3D graphics hardware acceleration Supports for DirectX 11, OpenCL 1.1, OpenGL ES Haili/2.0/1.1, OGL 3.2 Video decode hardware acceleration including support for H.264, MPEG2, MVC, VC-1, WMV9 and VP8 formats Video encode hardware acceleration including support for H.264, MPEG2 and MVC formats |
| VGA | Analog VGA supporting resolutions of up to 2560 x 1600 x 24bpp @60 |
| LVDS | Single/dual channel 18/24-bit LVDS from eDP (two lanes) |

Audio

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|-------------|-----------------------------------------------|
| Chipset | Intel [®] HD Audio integrated in SOC |
| Audio Codec | Located on carrier Express-BASE |

Ethernet

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|--------------------------------------|---------------------------------------------------------------------------------------|
| Intel [®] MAC/PHY Interface | Intel [®] i210LM (MAC/PHY) Ethernet controller 10/100/1000 GbE connection |
|--------------------------------------|---------------------------------------------------------------------------------------|

I/O Interfaces

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|------|------------------------------------------------------------------------------------------------------------|
| USB | 7x USB 1.1/2.0 (port 3~6 from USB hub) |
| SATA | One SATA 3 Gb/s ports (build option 2 ports: lose PATA) |
| PATA | Single PATA IDE (Master only) through SATA to PATA IC. |
| eMMC | Build option soldered on-module bootable eMMC flash storage 8 to 32GB, eMMC feature may vary between OS |
| GPIO | 4 GPO and 4 GPI |

Note: "Build option" indicates an alternative BOM configuration to support additional or alternative functions that are not available on the standard product.
Be aware that part numbers for SKUs with "build options" will need to be created and may cause production lead times.

Specifications

Super I/O

On carrier if needed (standard support for W83627DHG-P)

TPM

Chipset Atmel AT97SC3204 (build option)
Type TPM 1.2

Power

Standard Input ATX = 12V±5% / 5Vsb ±5% or AT = 12V±5%
Wide Input ATX = 5~20 V / 5Vsb ±5% or AT = 5 ~20V
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

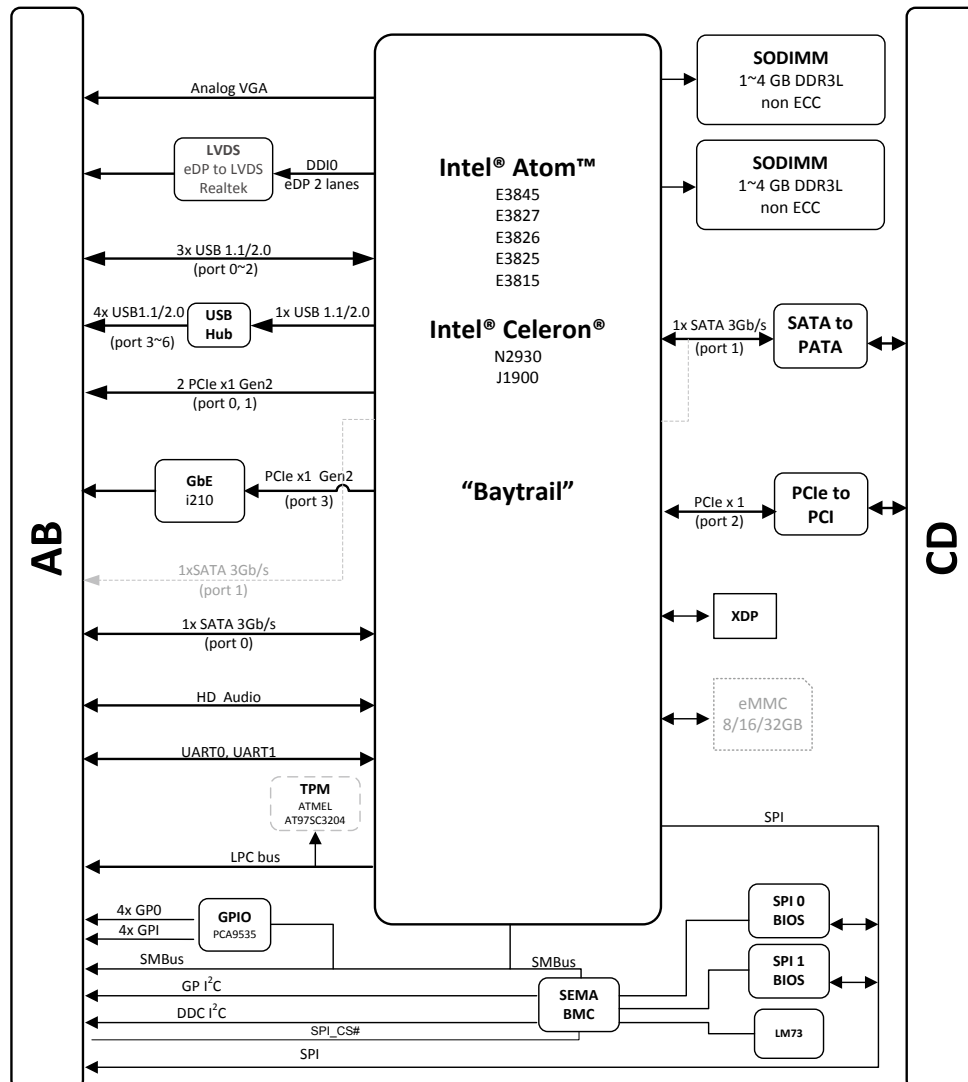
| | |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Specification | PICMG COM.0: Rev 2.1 Type 2 |
| Form Factor | Compact size: 95 mm x 95 mm |
| Operating Temperature | Standard: 0°C to +60°C Extreme Rugged™: -40°C to +85°C (build option, Atom™ E38xx series only) |
| Humidity | 5-90% RH operating, non-condensing 5-95% RH storage (and 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, Linux, VxWorks 32/64-bit
WEC7 32-bit

Note: "Build option" indicates an alternative BOM configuration to support additional or alternative functions that are not available on the standard product.
Be aware that part numbers for SKUs with "build options" will need to be created and may cause production lead times.

Functional Diagram



Ordering Information

Modules

| Model Number | Description/Configuration |
|--------------------|--------------------------------------------------------------------------------|
| cExpress-BT2-E3845 | COM Express® Compact Size Type 2 Module with Intel® Atom™ E3845 at 1.91 GHz |
| cExpress-BT2-E3827 | COM Express® Compact Size Type 2 Module with Intel® Atom™ E3827 at 1.75 GHz |
| cExpress-BT2-E3826 | COM Express® Compact Size Type 2 Module with Intel® Atom™ E3826 at 1.46 GHz |
| cExpress-BT2-E3825 | COM Express® Compact Size Type 2 Module with Intel® Atom™ E3825 at 1.33 GHz |
| cExpress-BT2-E3815 | COM Express® Compact Size Type 2 Module with Intel® Atom™ E3815 at 1.46 GHz |
| cExpress-BT2-J1900 | COM Express® Compact Size Type 2 Module with Intel® Celeron® J1900 at 2.00 GHz |
| cExpress-BT2-N2930 | COM Express® Compact Size Type 2 Module with Intel® Celeron® N2930 at 1.83 GHz |

Accessories

| Model Number | Description/Configuration |
|--------------------------|---------------------------------------------------------------------------------------------|
| Heat Spreaders | |
| HTS-cBT2-B | Heatspreader for cExpress-BT2 with threaded standoffs for bottom mounting |
| HTS-cBT2-BT | Heatspreader for cExpress-BT2 with through hole standoffs for top mounting |
| Passive Heatsinks | |
| THS-cBT2-B | Low profile heatsink for cExpress-BT2 with threaded standoffs for bottom mounting |
| THSH-cBT2-B | High profile heatsink for cExpress-BT2 with threaded standoffs for bottom mounting |
| Active Heatsink | |
| THSF-cBT2-B | High profile heatsink with Fan for cExpress-BT2 with threaded standoffs for bottom mounting |

Starter Kit

| | |
|--------------------------------|---------------------------------------------------------------------------------------------|
| COM Express Type 2 Starter Kit | COM Express formfactor starter kit with Express-BASE board, power supply, and accessory kit |
|--------------------------------|---------------------------------------------------------------------------------------------|



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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