



Features

- Intel® Atom™ Processor E6xxT from 600 MHz up to 1.6 GHz
- 1-2 GB soldered industrial grade 800MHz DDR2 SDRAM
- 24-bit LVDS and SDVO support
- PCI Express x1 lanes
- Intel® Platform Controller Hub EG20T for USB, LAN, SDIO, Serial & CAN bus and SATA
- Optional Solid State Drive up to 16 GB
- COM Express® COM.0 R2.1 Type 10 Pinout
- 50% Thicker PCB for high vibration environments
- Extreme Rugged™ operating temperature: -40°C to +85°C

Specifications

Core System

| | |
|-------------------|--|
| CPU | Intel® Atom™ E680T, 1.6 GHz, 3.9 W TDP Intel® Atom™ E660T, 1.3 GHz, 3.3W TDP Intel® Atom™ E620T, 600 MHz, 2.7W TDP All versions support -40°C to +85°C wide operating temperature range All processors support Intel® Hyper-Threading and Intel® Virtualization Technology |
| L2 cache | 512 KB on all processors |
| Memory | Soldered 1GB DDR2 at 800MHz (optional for 512MB or 2GB) |
| BIOS | License-free bootloader or AMI UEFI BIOS |
| Hardware Monitor | Supply voltages and CPU temperature |
| Debug Interface | XDP SFF-26 extension for ICE debug |
| Embedded Features | Instant on with Intel Bootloader support, Board Info & Statistics, ACPI 3.0, Smart Battery Management support, Watchdog with programmable timer ranges |
| Expansion Busses | 2 PCI Express x1 available (0/1, port 2 used by GbE, port 3 used for EG20T PCH) LPC Bus, SMBus (system), I ² C (user) 4 GPI and 4 GPO SPI (supports BIOS only) |

Video

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|----------------------|---|
| 2D/3D Graphic Engine | Integrated in Intel® Atom™ Processor E6xx |
| Decoding | MPEG2, MPEG4, VC1, WMV9, H.264 and DivX |
| Encoding | MPEG4, H.264 (baseline at L3) |
| LVDS Interface | Single channel 18- or 24-bit pixel color depths with maximum resolution of up to 1280x768 @ 60 Hz. Pixel clock rate between 19.75 MHz (minimum) and 80 MHz (maximum). |
| SDVO | Serial digital video output supporting devices for DVI, TV-out, analog VGA. Maximum resolution of up to 1280x1024 @ 85Hz and pixel clock rate up to 160 MHz. |

Audio

| | |
|-----------------------|--|
| High Definition Audio | Integrated in Intel® Atom™ Processor E6xx |
| Characteristics | Multi-channel audio stream, 32-bit sample depth, sample rate up to 192 kHz |
| Audio Codec | On carrier (standard support for ALC886) |

I/O Interfaces

| | |
|------------------------------|---|
| Chipset | Integrated in Intel® PCH EG20T |
| USB | Six USB 2.0 host ports and one USB 2.0 client port |
| SATA | Two ports supporting SATA 1.5 Gb/s and 3 Gb/s |
| Solid State Drive (optional) | 4GB, 8GB or 16GB capacity; occupies 1 SATA port when populated |
| Serial and CAN | Two RS-232 (optional one RS-232 (RX/TX) and one CAN (AX/RX) port) Bosch CAN Protocol Version 2.0B Active 1 (standard and extended format) |

Ethernet

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|----------|--|
| Ethernet | Intel® 82574IT Gigabit Ethernet Controller |
| Speed | 10/100/1000 Mbps |

Power

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|-----------------------|---|
| Input Power | 4.75 V-21 V wide range, supports AT mode and ATX mode (with additional 5 Vsb) |
| Power States | Supports S0, S1, S3, S4, S5 |
| Power Consumption | 5W at 5V typical, 3W idle |
| Smart Battery Support | Yes |

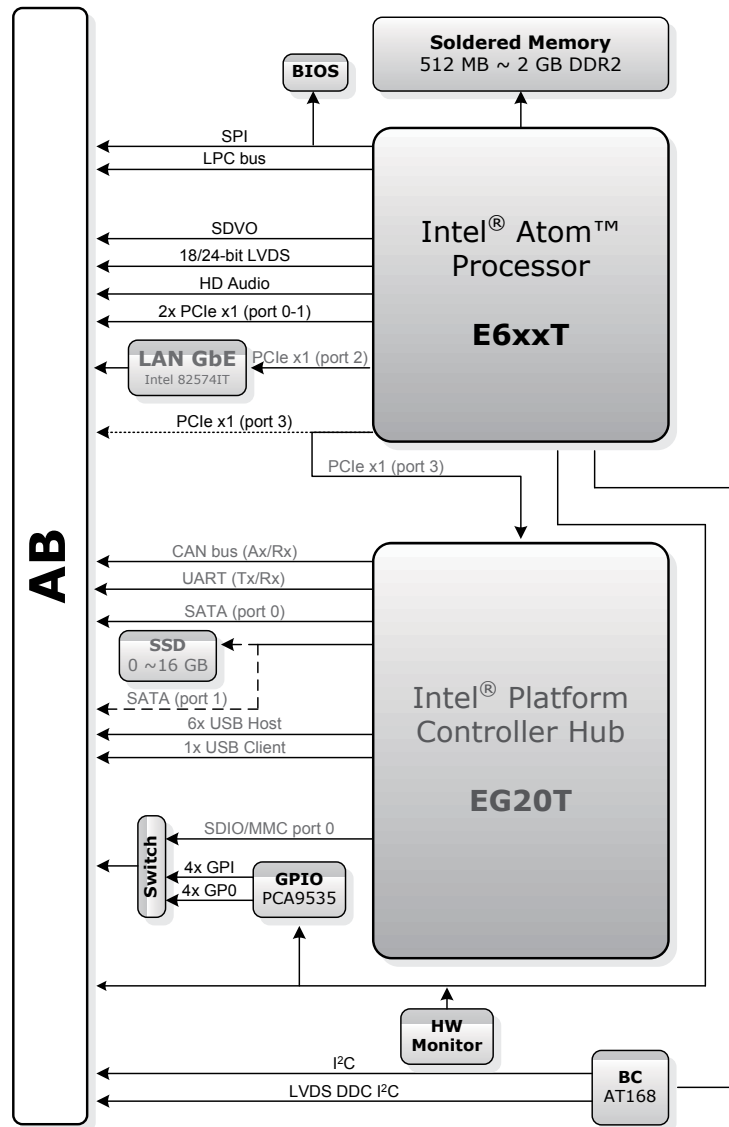
Mechanical and Environmental

| | |
|-----------------------|--|
| Specification | PICMG COM.0: Rev 2.1 Type 10 |
| Form Factor | Mini size: 84 mm x 55 mm |
| Board Thickness | 0.093" (2.3mm) |
| Operating Temperature | Standard: -20°C to +70°C Extreme Rugged™: -40°C to +85°C (optional) |
| Storage Temperature | -55°C to +85°C |
| Humidity | 90% at +60°C |
| Shock | 50G peak-to-peak, 11ms duration, MIL-STD-202G Method 213B |
| Vibration | Operating: 11.96 Grms, 50-20,000 Hz, each axis, MIL-STD-202G Method 214A |
| Compatibility | PICMG COM Express® COM.0 R2.1 Type 10 |
| Certifications | CE, FCC, HALT |

Operating Systems

| | |
|------------------------|--|
| Standard Support | Windows XP/Windows 7, Linux |
| Extended Support (BSP) | Windows XP Embedded, WinCE 6.0, VxWorks 6.x, QNX, AIDI Library |

Functional Diagram



Ordering Information

Modules

| Model Number | Description |
|------------------------|--|
| nanoX-TCR-E620T-1G | Extreme Rugged™ nanoX-TCR, Intel® Atom™ E620T 0.6GHz, 1GB DDR2 SDRAM |
| nanoX-TCR-E640T-1G | Extreme Rugged™ nanoX-TCR, Intel® Atom™ E640T 1.0GHz, 1GB DDR2 SDRAM |
| nanoX-TCR-E660T-1G | Extreme Rugged™ nanoX-TCR, Intel® Atom™ E660T 1.3GHz, 1GB DDR2 SDRAM |
| nanoX-TCR-E680T-1G | Extreme Rugged™ nanoX-TCR, Intel® Atom™ E680T 1.6GHz, 1GB DDR2 SDRAM |
| nanoX-TCR-E680T-1G/4GB | Extreme Rugged™ nanoX-TCR, Intel® Atom™ E680T 1.6GHz, 1GB DDR2 SDRAM, 4GB SSD |
| nanoX-TCR-E620T-2G | Extreme Rugged™ nanoX-TCR, Intel® Atom™ E620T 0.6GHz, 2GB DDR2 SDRAM |
| nanoX-TCR-E640T-2G | Extreme Rugged™ nanoX-TCR, Intel® Atom™ E640T 1.0GHz, 2GB DDR2 SDRAM |
| nanoX-TCR-E680T-2G | Extreme Rugged™ nanoX-TCR, Intel® Atom™ E680T 1.6GHz, 2GB DDR2 SDRAM |
| nanoX-TCR-E660T-2G | Extreme Rugged™ nanoX-TCR, Intel® Atom™ E660T 1.3GHz, 2GB DDR2 SDRAM |

Accessories

| Model Number | Description |
|-------------------------|---|
| Heat Spreaders | |
| HTS-nXTCR-B | Heatspreader for nanoX-TCR with threaded hole standoffs for bottom mounting |
| HTS-nXTCR-BTF | Heatspreader for nanoX-TCR with through hole standoffs for top mounting |
| Passive Heatsink | |
| THS-nXTCR-B | Heatsink nanoX-TCR with threaded hole standoffs for bottom mounting |

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



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- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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