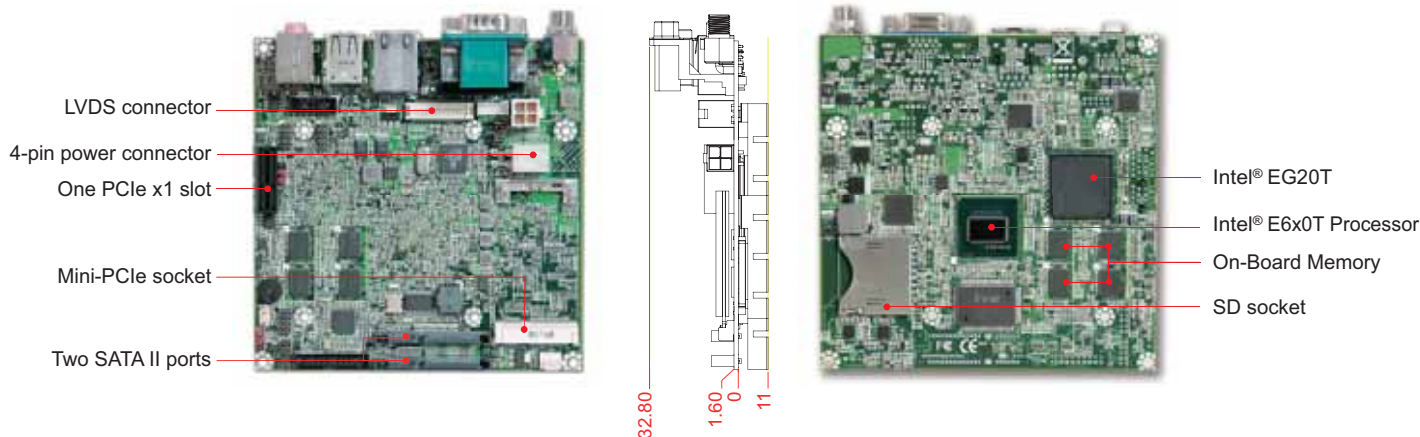


# NANO-6040

Intel® Atom™ E6X0T processor based  
NANO-ITX Board with dual display,  
Gigabit Ethernet, Audio, USB, CAN,  
SD and SATA

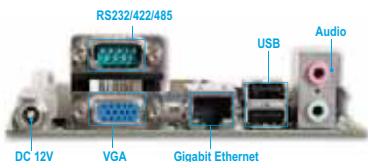


NANO-6040 adopts Intel's latest wide temperature Atom™ processors, which is for the small ultra low power form factor. The new architecture integrates the 3D graphics engine and memory controller making it suitable for critical environments. The board also comes equipped with a CAN bus connector for vehicle application.

## FEATURES

- Intel® Atom™ E6X0T processor based on Intel® EG20T platform
- Dual independent display: VGA and single channel 18/24-bit LVDS
- One SD socket, two SATA II ports, one Gigabit Ethernet
- Supports iTPM function for more secure platforms
- One Mini-PCIe socket and PCIe x1 slot for Expansion
- Supports DC 12V input

## REAR/I/O



## ORDERING GUIDE

AB1-3745	(R).NANO-6040-1600-1024 Nano-ITX ESB.Intel® Tunnel Creek E680T 1.6GHz.w/1GB SDRAM/VGA/LVDS/GbE LAN/ Audio/USB
AB1-3746	(R).NANO-6040L-1000-1024 Nano-ITX ESB.Low profile type.Intel® Tunnel Creek E640T 1.0GHz.w/1GB SDRAM/VGA/ LVDS/GbE LAN/Audio/USB
AB1-3747	(R).NANO-6040L-1600-1024 Nano-ITX ESB.Low profile type.Intel® Tunnel Creek E680T 1.6GHz.w/1GB SDRAM/VGA/ LVDS/GbE LAN/Audio/USB

## PACKING LIST

One NANO-6040 NANO-ITX Main Board
One passive Heatsink
One Installation CD

## GENERAL

Processor	- Intel® Atom™ E620T (600MHz,3.3W), E640T (1.0GHz, 3.6W), E660T(1.33GHz, 3.6W), E680T (1.6GHz, 4.5W) with 512K L2 Cache in FCBGA676 - FSB: 400MHz - Supports Intel® Virtualization Technology (VT-x), Intel® Thermal Monitoring Technology, Enhanced Intel SpeedStep® Technology, Hyper-Threading Technology
Chipset	Intel® Platform Controller Hub EG20T (1.55W)
BIOS	AMI UEFI BIOS
Memory	Supports up to 2GB DDR2 667/800 MHz on-board SDRAM
Storage Devices	- 2x SATA II support 3.0Gb/s data transfer rate - 1x SD socket supports 24MHz (SDIO Revision 1.1)
Watchdog Timer	Programmable via S/W from 1 sec. to 255 sec.
Hardware Monitoring	- Temperature (CPU & System) - Voltage (CPU Vcore, VBAT, 5VSB, 12V, 5V, 3.3V)
Expansion Interface	1x PCI Expressx1 slot (Gen 1, 2.5 GT/s) 1x Mini PCI Express socket (Gen 1, 2.5 GT/s)

## I/O INTERFACE

Super I/O	ITE IT8783F
Audio	- Intel® processor built-in High Definition Audio up to 192-kHz 24-bit - Realtek ALC892-GR HDA codec - Audio Jack on rear I/O with Line-out and Mic-in (NANO-6040) - Audio Jack on rear I/O with Line-out (NANO-6040L) - Audio on board header with Line-out and Mic-in
Ethernet	- Intel® WG82574IT Gigabit Ethernet controller - 1x RJ45 connector on rear I/O
Serial Port	- 1x RS232/422/485 port with DB-9 connector on rear I/O (NANO-6040) - W/o serial port on rear I/O (NANO-6040L)
USB	- 2x USB 2.0 ports on rear I/O - 4x USB 2.0 ports on board with pitch 2.0 header - 480 Mb/s bus handles high-speed/full-speed/low-speed data ranges
GPIO	On board programmable 8-bit Digital I/Os
Others	TPM header, I2C header, CAN bus header

## DISPLAY

Graphic Controller	- Intel® processors integrated graphic engine supports frequency up to 400MHz, OpenGL ES2.0, OpenVG 1.1 - Chrontek CH7317B-TF SDVO to RGB DAC
Display Interface	- LVDS: single channel 18/24-bit LVDS up to 1280x768 (WXGA) - CRT: resolution up to 1280 x1024 (SXGA)

## Mechanical & Environment

Dimension	120(L) x 120(W)mm; 4.72"(L) x 4.72"(W)
Power Supply	DC-12V input
Environment	- Operation Temperature: -40°C to 80°C - Storage Temperature: -40°C to 80°C - Relative Humidity: 5% to 95%, non-condensing
Certification	CE,FCC Class A
MTBF	126,104 hours at 40°C

