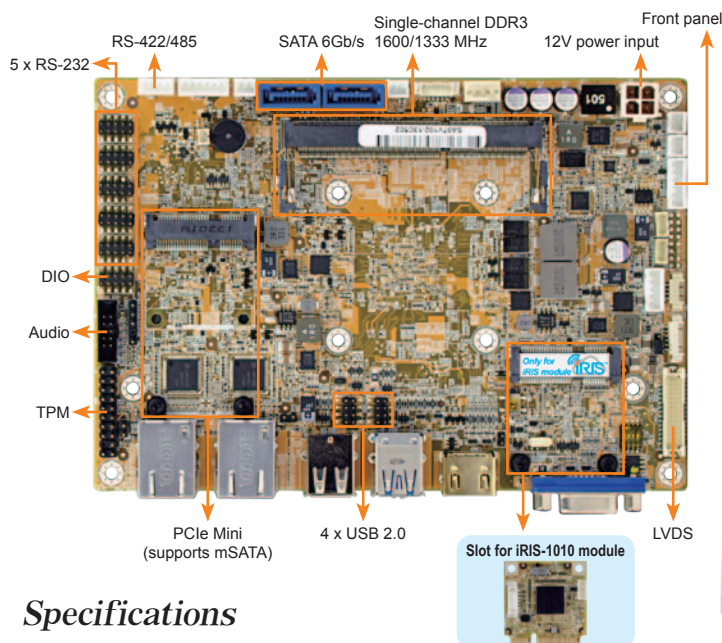


# NANO-SE-i1 KBN-i1

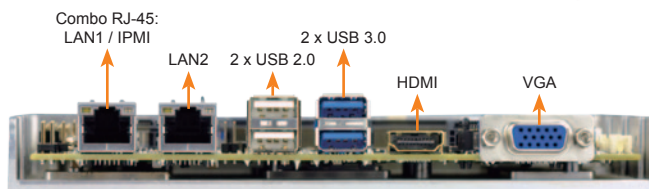
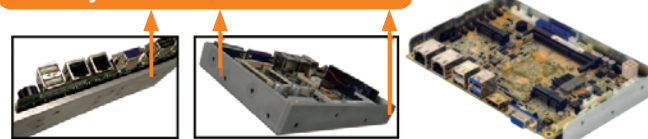
EPIC SBC supports AMD® Embedded G-Series SoC with VGA/HDMI/LVDS, Dual PCIe GbE, USB 3.0, PCIe Mini, SATA 6Gb/s, mSATA, COM, iRIS-1010, HD Audio and RoHS



### Lower thermal design power with high performance

- Upgraded AMD® Embedded G-Series SoC provides lower TDP and higher overall performance-per-watt
- Integrated AMD's next generation graphics core architecture for discrete-class graphic processing
- Available in dual or quad-core processor
- Integrated security solution to protect system at the hardware level

### Multiple screw mounting holes provide flexibility for all thermal solutions.



## Specifications

- ◆ SoC
  - » AMD® Embedded G-Series "Steppe Eagle" SoC
    - GX-424CC on-board Soc (2.4GHz, quad-core, 2MB cache, TDP=25W)
    - GX-412HC on-board Soc (1.2GHz, quad-core, 2MB cache, TDP=7W)
    - GX-212JC on-board Soc (1.2GHz, dual-core, 1MB cache, TDP=6W)
    - GX-411GA on-board Soc (1.0GHz, quad-core, 2MB cache, TDP=15W)
    - GX-209HA on-board Soc (1.0GHz, dual-core, 1MB cache, TDP=9W)
  - » AMD® Embedded G-Series "eKabini" SoC
    - GX-415GA on-board Soc (1.5GHz, quad-core, 2MB cache, TDP=15W)
    - GX-210HA on-board Soc (1.0GHz, dual-core, 1MB cache, TDP=9W)
    - GX-420CA on-board Soc (2.0GHz, quad-core, 2MB cache, TDP=25W)
    - GX-217GA on-board Soc (1.65GHz, dual-core, 1MB cache, TDP=15W)
- ◆ BIOS: AMI UEFI BIOS
- ◆ Memory
  - One 204-pin 1600/1333 MHz single-channel DDR3 & DDR3L SDRAM unbuffered SO-DIMM slot supports up to 8 GB
- ◆ Graphics Engine
  - Support DX11.1, OpenGL 4.1 and OpenCL1.2
  - UVD4.2 decode for H.264, MPEG2/4, VC1, MVC
  - VCE 2.0 encode for H.264, VCE
- ◆ Display Output
  - Dual independent display
  - VGA (up to 2048x1536@60Hz)
  - HDMI (up to 3840x2160@60Hz)
  - 18/24-bit dual-channel LVDS by CH7511B DP to LVDS converter (up to 1920x1200@60Hz)
- ◆ Ethernet
  - LAN1: Intel® I210-AT PCIe controller with NCSI support
  - LAN2: Intel® I211-AT PCIe controller
- ◆ Super I/O: Fintek F81866
- ◆ External I/O Interface
  - 2 x USB 2.0
  - 2 x USB 3.0
- ◆ Internal I/O Interface
  - 1 x KB/MS (1x6 pin) 4 x USB 2.0 (2x4 pin, P=2.0)
  - 1 x RS-422/485 (1x4 pin, P=2.0) 5 x RS-232 (2x5 pin, P=2.0)
  - 2 x SATA 6G/s with 5V SATA power connector (no RAID)
- ◆ iRIS Remote Management Module: 1 x iRIS-1010 slot
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I<sup>2</sup>C: 1 x I<sup>2</sup>C (1x4 pin)
- ◆ Audio
  - Realtek ALC892 HD Audio codec
  - 1 x S/PDIF (1x4 pin)
  - 1 x Analog audio (2x5 pin)
- ◆ Front Panel
  - 1 x Power LED & HDD LED (1x6 pin)
  - 1 x Power button (1x2 pin)
  - 1 x Reset button (1x2 pin)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ Expansion: 1 x Full-size PCIe Mini card slot (supports mSATA co-lay SATA port 2)
- ◆ Watchdog Timer: Software programmable, support 1~255 sec. system reset
- ◆ Digital I/O: 1 x 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector: 1 x System smart fan (1x4 pin)
- ◆ Power Supply
  - 12V only DC input
  - 1 x Internal power connector (2x2 pin)
  - Support AT/ATX mode
- ◆ Power Consumption
  - 12V@1.02A (AMD GX-415GA 1.5GHz CPU with 1600 MHz 8 GB DDR3 memory)
- ◆ Operating Temperature: 0°C ~ 60°C
- ◆ Storage Temperature: -10°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 115mm x 165mm
- ◆ Weight: GW:850g / NW:350g



## Features

- EPIC SBC supports AMD® Embedded G-Series SoC
- Dual independent display support
- 1.35V DDR3L 1600/1333 MHz SDRAM supports up to 8 GB
- HD Audio supported by S/PDIF
- Support IPMI 2.0 with iRIS-1010 module
- COM, USB 3.0, SATA 6Gb/s PCIe Mini, mSATA and audio supported
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

## Packing List

1 x NANO-KBN/SE-i1 single board computer with enclosure heatsink	
1 x Audio cable	
1 x Power cable	1 x One Key Recovery CD
2 x RS-232 cable	1 x QIG (Quick Installation Guide)
2 x SATA with power cable kit	1 x Utility CD

## Ordering Information

Part No.	Description
NANO-SE-i1-4241-R10	EPIC SBC supports AMD® 28nm quad core GX-424CC 2.4GHz (25W) on-board SoC with VGA/HDMI/LVDS, Dual PCIe GbE, USB 3.0, Dual PCIe Mini, SATA 6Gb/s, mSATA, COM and Audio, iRIS-1010 and RoHS
NANO-KBN-i1-4151-R10	EPIC SBC supports AMD 28nm quad-core GX-415GA 1.5GHz (15W) on-board SoC with VGA/HDMI/LVDS, Dual PCIe GbE, USB 3.0, PCIe Mini, SATA 6Gb/s, mSATA, COM, iRIS-1010, HD Audio and RoHS
NANO-KBN-i1-2101-R10	EPIC SBC supports AMD 28nm dual-core GX-210HA 1.0GHz (9W) on-board SoC with VGA/HDMI/LVDS, Dual PCIe GbE, USB 3.0, PCIe Mini, SATA 6Gb/s, mSATA, COM, iRIS-1010, HD Audio and RoHS
iRIS-1010-R10	IPMI 2.0 adapter card with AST1010 BMC chip (w/o KVM over IP function) for PCIe Mini socket interface
32000-023800-RS	PS/2 KB/MS cable, 135mm, P=2.0
32001-008600-200-RS	Dual-port USB cable, 210mm, P=2.0
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
TPM-IN01-R11	20-pin Infineon TPM module, software management tool, firmware v3.17

Note: Models with other CPUs not listed in the table are requested by MOQ - 100 pcs/lot.