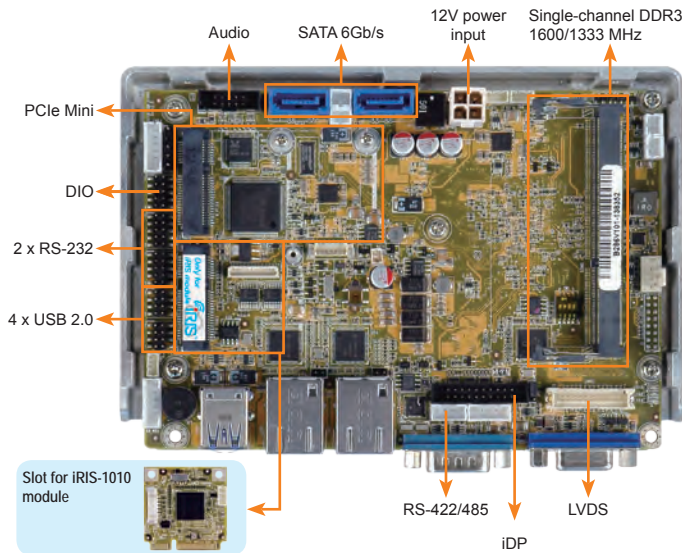


# WAFER-KBN-i1

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



## Multimedia Features

### Unified Video Decoder 4.2

H.264, MPEG-2, VC-1, MPEG4 (DivX), and WMV



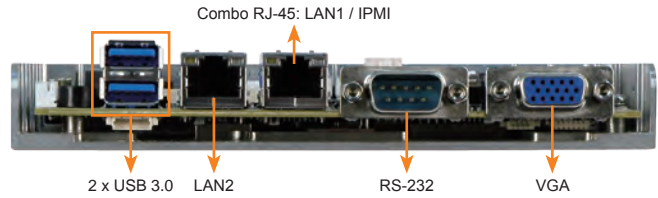
Outstanding graphics performance and power saving through integrated advanced graphics and hardware

### Video Compression Engine 2.0

Video conferencing, wireless display, H.264, SVC



Fast HD transcoding, low latency encoding conclusions, power efficient video conferencing



## Specifications

- ◆ SoC
  - AMD® Embedded G-Series 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 dual-channel DDR3 & DDR3L SDRAM SO-DIMM slot supports up to 8 GB
- ◆ Graphics Engine
  - GPU frequency 500 MHz (Radeon™ HD 8330E) for GX-415GA
  - GPU frequency 300 MHz (Radeon™ HD 8310E) for GX-210HA
  - GPU frequency 600 MHz (Radeon™ HD 8400E) for GX-420CA
  - GPU frequency 450 MHz (Radeon™ HD 8280E) for GX-217GA
  - Support DX11.1, OpenGL 4.1 and OpenCL 1.2
  - UVD4.2 decode for H.264, MPEG2/4, VC1, MVC
  - VCE 2.0 encode for H.264, VCE
- ◆ Display Output
  - 1 x VGA (up to 2048x1536@60Hz)
  - 1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
  - 1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 2560x1600@60 Hz)
- ◆ Ethernet
  - LAN1: Intel® I210-AT PCIe controller with NCSI support
  - LAN2: Intel® I211-AT PCIe controller
- ◆ External I/O Interface
  - 1 x RS-232
  - 2 x USB 3.0
- ◆ Internal I/O Interface
  - 1 x KB/MS (1x6 pin)
  - 1 x RS-422/485 (1x4 pin, P=2.0)
  - 2 x RS-232 (2x5 pin, P=2.0)
  - 2 x SATA 3Gb/s with 5V SATA power connector
  - 4 x USB 2.0 (2x4 pin, P=2.0)
- ◆ iRIS Remote Management Module: 1 x iRIS-1010 slot
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I<sup>2</sup>C: 1 x I<sup>2</sup>C (1x4 pin)
- ◆ Audio
  - Realtek ALC892 HD codec
  - 1 x Front audio (2x5 pin)
  - 1 x S/PDIF (1x4 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)
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector: 1 x 4-pin system fan connector
- ◆ Watchdog Timer: Software programmable, support 1~255 sec. system reset
- ◆ Power Supply
  - 12V only DC input
  - 1 x Internal power connector (2x2 pin)
  - Support AT/ATX mode
- ◆ Power Consumption
  - 12V@2.12A (AMD GX-415GA 1.5GHz CPU with one 4 GB 1333 MHz DDR3 memory)
- ◆ Operating Temperature: 0°C ~ 60°C
- ◆ Storage Temperature: -10°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 146mm x 102mm
- ◆ Weight: GW: 600g/ NW: 250g



## Features

- 3.5" form factor with AMD® Embedded G-Series SoC
- 12V only single voltage design with AT/ATX mode
- 18/24-bit dual-channel LVDS for high resolution panel
- Dual independent display by VGA, LVDS and iDP
- Support IPMI 2.0 with iRIS-1010 module
- Support full-size PCIe Mini card slot for mSATA, wireless card and DOM
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

## Packing List

1 x WAFER-KBN single board computer with Enclosure Heatsink	
1 x Audio cable	
1 x Power cable	1 x One Key Recovery CD
1 x RS-232 cable	1 x QIG
2 x SATA with 5V output cable kit	1 x Utility CD

## Ordering Information

Part No.	Description
WAFER-KBN-i1-4151-R10	3.5" SBC supports AMD 28nm quad-core GX-415GA 1.5GHz (15W) on-board SoC with VGA/LVDS, Dual GbE, PCIe Mini, USB 3.0, SATA 6Gb/s, iRIS-1010, HD Audio and RoHS
WAFER-KBN-i1-2101-R10	3.5" SBC supports AMD 28nm dual-core GX-210HA 1.0GHz (9W) on-board SoC with VGA/LVDS, Dual GbE, PCIe Mini, USB 3.0, SATA 6Gb/s, 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/110mm, 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
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)

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