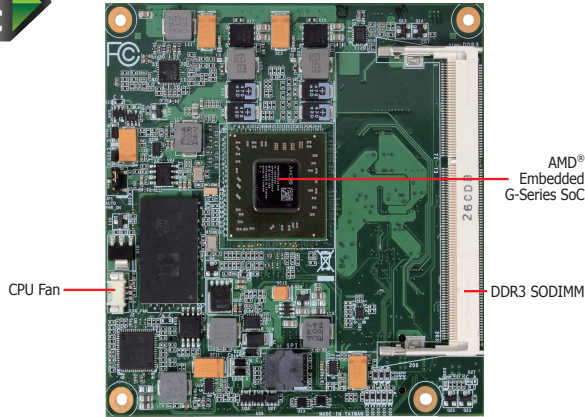




**AMD® Embedded G-Series SoC
COM Express® Compact**

KB968

**G-Series
SoC**

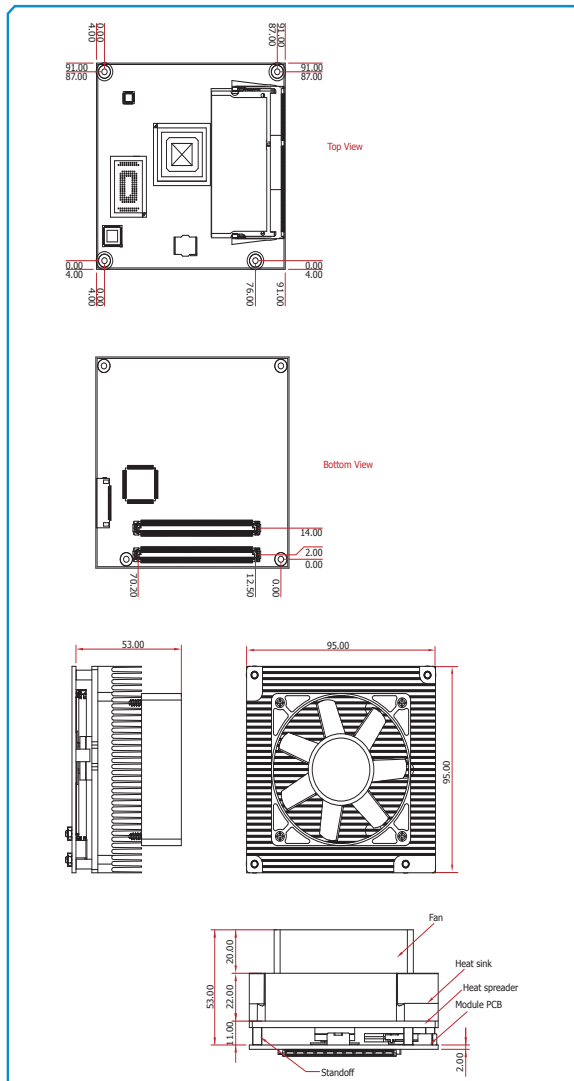


Features

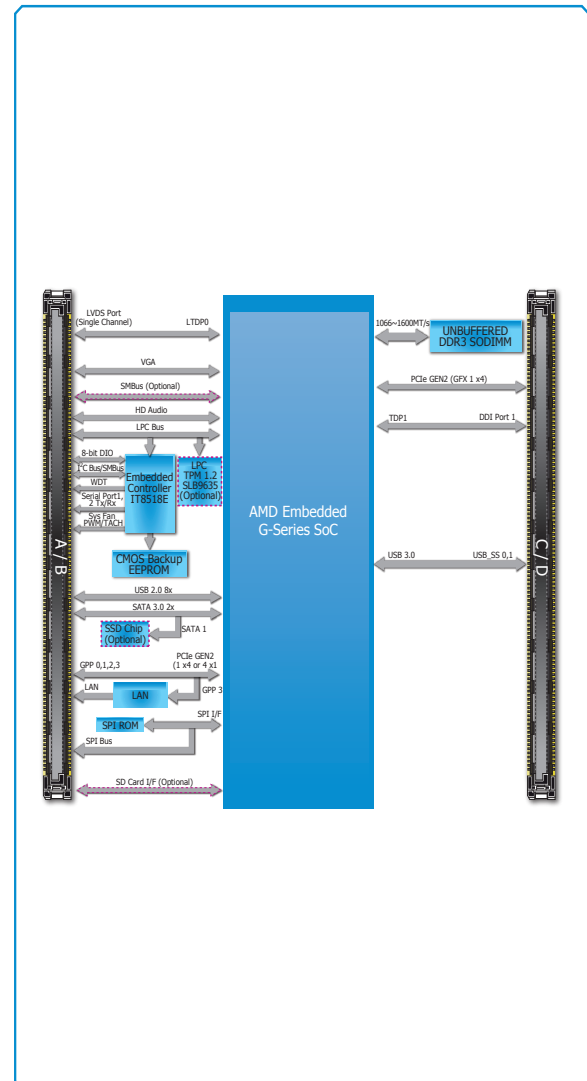
MEMORY	1 DDR3 SODIMM up to 8GB
EXPANSION	1 PCIe x4, 4 PCIe x1 1 LPC, 1 I ² C, 1 SMBus, 2 serial 1 VGA, 1 DP/LVDS, 1 DP 8 USB: 2 USB 3.0/2.0, 6 USB 2.0 2 SATA 3.0 8-bit DIO
LAN	1 LAN
DIMENSIONS	COM Express® R2.1 Compact, Type 6 95mm x 95mm (3.74" x 3.74")



Mechanical Drawing



Block Diagram





KB968

Specifications * Optional and is not supported in standard model. Please contact your sales representative for more information.

APU (Accelerated Processing Unit)

- AMD® Embedded G-Series SoC FT3 BGA
 - 28nm process technology
- Please refer to the Ordering Information below*

SYSTEM MEMORY

- One 204-pin DDR3 SODIMM socket
- Supports DDR3 1066/1333/1600MHz
- Supports single channel memory interface
- Supports up to 8GB system memory
- DRAM device technologies: 1Gb, 2Gb, 4Gb and 8Gb DDR3 DRAM technologies are supported for x8 and x16 devices, unbuffered, non-ECC

ONBOARD GRAPHICS FEATURES

- Advanced discrete-level GPU integrated in the processor
- Supports VGA, DP/LVDS and DP interfaces
- VGA: resolution up to 2048x1536 @ 60Hz
- LVDS: 18-bit, single channel, resolution up to 1600x900 @ 60Hz
- DP: resolution up to 4096x2160 @ 30Hz
- Supports hardware acceleration for DirectX 11.1, H.264, MPEG-2, MPEG-4 AVC, VC-1 and WMV

ONBOARD AUDIO FEATURES

- Supports High Definition Audio interface

ONBOARD LAN FEATURES

- Intel® WG1210AT Gigabit Ethernet Controller
- Integrated 10/100/1000 transceiver
- Fully compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab

SERIAL ATA (SATA) INTERFACE

- Supports 2 Serial ATA interfaces
- SATA 3.0 with data transfer rate up to 6Gb/s
- Integrated Advanced Host Controller Interface (AHCI) controller

SSD*

- 2GB/4GB/8GB/16GB/32GB/64GB
- Write: 30MB/sec (max), Read: 70MB/sec (max)
- SATA to SSD onboard

TRUSTED PLATFORM MODULE (TPM)*

- Provides a Trusted PC for secure transactions
- Provides software license protection, enforcement and password protection

WATCHDOG TIMER

- Watchdog timeout programmable via software from 1 to 255 seconds

EXPANSION INTERFACES

- Supports 8 USB 2.0 ports (first 2 USB ports support up to USB 3.0)
- Supports 1 PCIe x4 (GFX)
- Supports 4 PCIe x1 (GPP, GPP3 is connected to onboard LAN by default)
- Supports LPC interface
- Supports I²C interface
- Supports SMBus interface
- Supports 2 serial interfaces (TX/RX)
- Supports 8-bit Digital I/O

DAMAGE FREE INTELLIGENCE

- Monitors APU temperature
- Monitors APU fan speed
- Monitors APU_VDD/APU_VDDNB/APU_VDDIO_SUS/1V8/0V95 voltages
- Watchdog timer function

BIOS

- 32Mbit SPI BIOS

POWER CONSUMPTION

- KB968-GX420BBS: 28.58 W with GX-420CA at 2.0GHz and 1x 4GB DDR3 SODIMM

OS SUPPORT

- Windows 7 Ultimate x86 & SP1 (32-bit)
- Windows 7 Ultimate x64 & SP1 (64-bit)
- Windows 8 Enterprise x86 (32-bit)
- Windows 8 Enterprise x64 (64-bit)

TEMPERATURE

- Operating: 0°C to 60°C
- Storage: -20°C to 85°C

HUMIDITY

- 5% to 90%

POWER INPUT

- 12V, 5VSB, VCC_RTC (ATX mode)
- 12V, VCC_RTC (AT mode)

PCB

- Dimensions
 - COM Express® Compact
 - 95mm (3.74") x 95mm (3.74")
- Compliance
 - PICMG COM Express® R2.1, Type 6

Ordering Information

Model Name	Processor	SODIMM	SSD	Power	Thermal	Temperature
KB968-GX415BBS	AMD® GX-415GA, Quad Core, 2M Cache, 1.5GHz, 15W	2 (8GB DDR3)	None	ATX/AT	Cooler	0°C to 60°C
KB968-GX420BBS	AMD® GX-420CA, Quad Core, 2M Cache, 2.0GHz, 25W	2 (8GB DDR3)	None	ATX/AT	Cooler	0°C to 60°C
KB968-GX217BBS	AMD® GX-217GA, Dual Core, 1M Cache, 1.65GHz, 15W	2 (8GB DDR3)	None	ATX/AT	Cooler	0°C to 60°C
KB968-GX210HBBS	AMD® GX-210HA, Dual Core, 1M Cache, 1.0GHz, 9W	2 (8GB DDR3)	None	ATX/AT	Cooler	0°C to 60°C
KB968-GX210JBBS	AMD® GX-210JA, Dual Core, 1M Cache, 1.0GHz, 6W	2 (8GB DDR3)	None	ATX/AT	Cooler	0°C to 60°C
KB968-GX416BBS	AMD® GX-416RA, Quad Core, 2M Cache, 1.6GHz, 15W, without GPU	2 (8GB DDR3)	None	ATX/AT	Cooler	0°C to 60°C

Packing List

- 1 KB968 board
- 1 DVD
- Heat spreader with heat sink and fan: 761-KB9680-000G

Optional Items

- COM331-B carrier board kit: 770-COM331-000G

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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