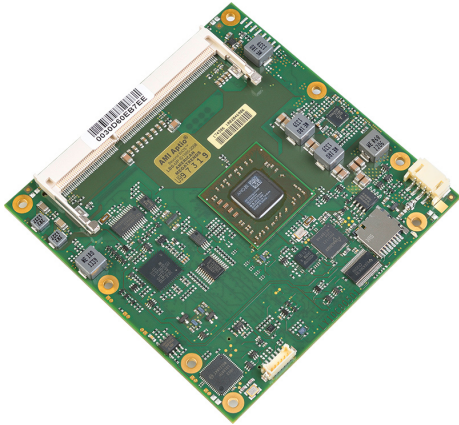


MSC C6C-GX**AMD Embedded G-Series SOC**

95 x 95



12 / 30W



0 +85

**COM  Express****Description**

The MSC C6C-GX module is based on AMD's Embedded G-Series SOC platform, a high-performance, low-power System-on-Chip (SOC) solution with outstanding HD graphics and multimedia capabilities for embedded applications. The G-Series SOC brings dual independent display support, DirectX 11.1, fast DDR3 memory and USB 3.0 on a compact, power saving and cost-efficient module. Different G-Series SOC with dual- and quad-core processors are supported by this design. Besides an extensive set of interfaces and features, the MSC C6C-GX offers hardware based security compliant to the requirements of TCG (Trusted Computing Group). The new Type 6 pin-out allows direct access to the latest digital display interfaces like DisplayPort 1.2, HDMI 1.4a and DVI. USB 3.0 interfaces support the fastest peripheral devices currently available.

Highlights

- AMD GX-420CA quad-core 2.0GHz, 25W TDP, Radeon HD 8400E
- AMD GX-415GA quad-core 1.5GHz, 15W TDP, Radeon HD 8330E
- AMD GX-217GA dual-core 1.65GHz, 15W TDP, Radeon HD 8280E
- AMD GX-210HA dual-core 1.0GHz, 9W TDP, Radeon HD 8310E
- Integrated AMD HD 8000E graphics
- Up to 16GB DDR3 SDRAM, dual-channel
- Two SATA 3Gb/s mass storage interfaces
- MicroSD card socket
- DisplayPort/HDMI/DVI interface
- LVDS/Embedded DisplayPort interface
- VGA interface
- Two independent displays supported
- DirectX 11.1, OpenGL 4.2, OpenCL 1.2
- Two USB 3.0 and six USB 2.0 interfaces
- UEFI Firmware

Technical Data - MSC C6C-GX

Technology	x86
Formfactor	COM Express Compact
CPU	AMD GX-420CA quad-core 2.0GHz, 25W TDP, Radeon HD 8400E, AMD GX-415GA quad-core 1.5GHz, 15W TDP, Radeon HD 8330E, AMD GX-217GA dual-core 1.65GHz, 15W TDP, Radeon HD 8280E, AMD GX-210HA dual-core 1.0GHz, 9W TDP, Radeon HD 8310E
Chipset	SOC
RAM	up to 16GB DDR3 (1333/1600), 2x 204 pin SO-DIMM
Flash	MicroSD card socket
Storage Interfaces	2x SATA 3Gb/s
USB	6 x USB 2.0, 2 x USB 3.0
Bus Interfaces	3x PCI Express x1, 1x PCI Express Graphics (PEG) x4, LPC bus (Low Pin Count bus)
Display Controller	AMD Radeon 8000E series
Display Memory	UMA
Display Interfaces	1x Digital Display Interface (DP 1.2, DVI, HDMI 1.4a), 4096 x 2160 @ 30Hz, 2560 x 1600 @ 60Hz, 1x Embedded DisplayPort 1.3 (shared with LVDS), 2560 x 1600 @ 60Hz, Analog up to 2048 x 1536 @ 60Hz, LVDS 24 bit, dual channel (shared with Embedded DisplayPort), 1920 x 1200 @ 60Hz
Network Interface	10/100/1000Base-TX (Intel i210)
Audio Interface	High Definition Audio
Security Device	TPM 1.2
Miscellaneous	Watchdog Timer: Initiates system reset, programmable Fan Supply: 4-pin header (12V) for CPU fan, PWM speed controlled and PWM speed control for system fan supported RTC battery: external System Monitoring: voltage, temperature, CPU fan, system fan
Feature Highlights	Type 6 pin-out
Firmware	AMI Aptio UEFI
OS Support	Windows 7 (embedded) BSP for Linux on request EAPI (HW Programming Interface)

Power Requirement	+12V+/-10%, 5V Stby optional, 12 W (typ.) up to 30 W (typ.)
Environment	Ambient Temperature; 0° ... 60°C (operating), -25° ... 85°C (storage) Humidity: 5 ... 95% (operating, non-condensing), 5 ... 95% (storage, non-condensing)
Dimensions	95mm x 95mm
Certificates	UL / CE
Cooling	Passive heat sink Active heat sink with fan Heat spreader with threaded or non-threaded standoffs
Carrier	Small carrier board as part of a starter kit; Evaluation board in ATX form factor
Memory	DDR3 SODIMMS 2GB or 4GB

Order Reference - MSC C6C-GX

Order Number	Description	Reference	Cat
45965	COM Express Type 6 Compact module (95mm x 95mm); CPU: AMD GX-210HA dual-core 1.0GHz, 9W TDP; Graphics: integrated Radeon HD 8310E; various display interfaces; Ethernet: Intel i210 Gbit; Infineon TPM; HD audio; 2x SATA, 2x USB3, 6x USB2, 3x PCIe x1, PCIe x4 PEG; 2x socket for DDR3 SO-DIMM; MicroSD card socket.	MSC C6C-GX-001 PCBFTX	PV
45967	COM Express Type 6 Compact module (95mm x 95mm); CPU: AMD GX-217GA dual-core 1.65GHz, 15W TDP; Graphics: integrated Radeon HD 8280E; various display interfaces; Ethernet: Intel i210 Gbit; Infineon TPM; HD audio; 2x SATA, 2x USB3, 6x USB2, 3x PCIe x1, PCIe x4 PEG; 2x socket for DDR3 SO-DIMM; MicroSD card socket.	MSC C6C-GX-002 PCBFTX	OR
45969	COM Express Type 6 Compact module (95mm x 95mm); CPU: AMD GX-415GA quad-core 1.5GHz, 15W TDP; Graphics: integrated Radeon HD 8330E; various display interfaces; Ethernet: Intel i210 Gbit; Infineon TPM; HD audio; 2x SATA, 2x USB3, 6x USB2, 3x PCIe x1, PCIe x4 PEG; 2x socket for DDR3 SO-DIMM; MicroSD card socket.	MSC C6C-GX-003 PCBFTX	PV
45971	COM Express Type 6 Compact module (95mm x 95mm); CPU: AMD GX-420CA quad-core 2.0GHz, 25W TDP; Graphics: integrated Radeon HD 8400E; various display interfaces; Ethernet: Intel i210 Gbit; Infineon TPM; HD audio; 2x SATA, 2x USB3, 6x USB2, 3x PCIe x1, PCIe x4 PEG; 2x socket for DDR3 SO-DIMM; MicroSD card socket.	MSC C6C-GX-004 PCBFTX	PV

Accessories

Order Number	Description	Reference
Carrier Options		
41886	COM Express Type 6 Small Test and Evaluation Board with one PCI Express socket, USB 3.0, GbE, SATA, DisplayPort, HDMI, VGA and HD audio interfaces	MSC C6-AD-T6T2 PCBFTX
67295	COM Express Type 6 Evaluation Carrier Board with PCI Express x4/x16 slot, USB 3.0/2.0, GbE, SATA, DisplayPort, eDP/LVDS, VGA and HD audio interfaces; Mini PCI Express socket, SD card slot, ATX power connector and single 12V power jack. Dimensions: 170mm x 170mm (Mini-ITX form factor)	MSC C6-MB-EV-001 PCBFTX
41857	COM Express Type 6 Evaluation Carrier Board with various PCI Express x1, x4 and x16 slots, USB 3.0/2.0, GbE, SATA, DisplayPort, HDMI, LVDS, eDP, VGA, HD audio interfaces; mSATA and Mini PCI Express sockets, POST code display, ATX power connector. Dimensions: 305 x 244 mm (ATX form factor)	MSC C6-MB-EVA PCBFTX
Cooling Options		
1116262	Active Heatsink for C6C-GX, consisting of a single-piece aluminum profile with fins, pressed in standoffs without thread (2.7mm inner diameter), screws and thermopads for the thermal contact to SOC. PWM fan 80x80x15mm.	MSC C6C-GX-01 HSF-001
1116263	Passive Heatsink for C6C-GX, consisting of a single-piece aluminum profile with fins, pressed in standoffs without thread (2.7mm inner diameter), screws and thermopad for the thermal contact to SOC.	MSC C6C-GX-01 HSI-001
1116261	Heatspreader for C6C-GX. Single-piece aluminum profile, pressed in standoffs without thread (2.7mm inner diameter), screws and thermopad for the thermal contact to SOC.	MSC C6C-GX-01 HSP-001
1122652	Heatspreader for C6C-GX. Single-piece aluminum profile, pressed in threaded standoffs (M2.5), screws and thermopad for the thermal contact to SOC.	MSC C6C-GX-02 HSP-001
Memory Options		
1081140	DDR3 SODIMM, 2GB, 256Mx64, PC1333	M471B5773DH0-CH9
1124891	DDR3L SODIMM, 2GB, PC1600, 1.35V	MSC3S2G1600B2LSQSC
1128244	4GB DDR3-1600 SoDimm, 512Mx8 based, 1.5V	MSC3S4G1600B2-SESC
1128243	4GB DDR3-1600 SoDimm, 512Mx8 based, 1.35V	MSC3S4G1600B2LSESC
1080971	4GB PC1333 DDR3 SODIMM 512Mx64, 204pin, 1.5V, 256Mx8 based, 2rank	NT4GC64B8HB0NS-CG

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