

QUANTUM-AMD SBCs



PCI/104-Express AMD G-Series SBCs

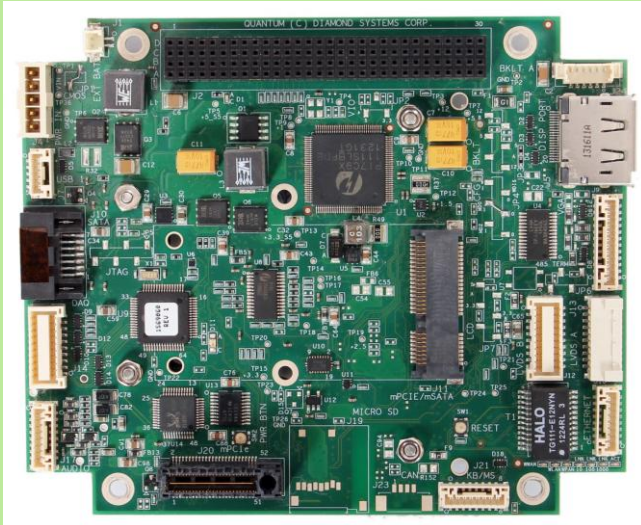
With On-board Data Acquisition and DC/DC Power Supply



PCI + PCIe



CPU+DAQ+PS



High Feature Density

The Quantum-AMD SBCs come with a QSeven COM offering a 1GHz AMD G-Series T40E CPU with advanced Radeon HD 5260 graphics. Quantum SBCs include an on-board DC power supply and a data acquisition circuit with analog input and digital I/O, resulting in a highly integrated single board computer that can replace up to 3 individual PC/104 modules.

Rugged Design

Quantum-AMD SBCs feature an operating temperature of -40°C to +85°C, soldered DDR3 SDRAM, wide voltage input, and high tolerance for shock and vibration, making it an ideal choice for vehicle, outdoor and harsh environment applications. The processor is located on the bottom side with a conduction cooling heat spreader to efficiently transfer the heat away from the SBC.

Flexible I/O Expansion

Quantum SBCs offer several methods for I/O expansion:

- 1 PCIe MiniCard socket
- 1 PCIe/104 single-bank connector
- 1 PCI-104 connector

The PCIe/104 single-bank connector lowers cost while still providing high performance PCIe expansion with 2 x1 lanes for a wide range of PCIe/104 I/O modules.

CPU FEATURES

- ◆ 3-in-1 design (CPU + DAQ + Power) reduces size and cost, increases ruggedness and reliability
- ◆ 1GHz AMD Fusion G-T40E QSeven CPU module
- ◆ 2GB DDR3 SDRAM on-board

I/O FEATURES

- ◆ 1 Gigabit Ethernet
- ◆ 5 USB 2.0 ports
- ◆ 1 SATA port for external mass storage
- ◆ 2 RS-232/422/485 ports & 1 RS-232 port
- ◆ Dual channel 18/24-bit LVDS LCD support
- ◆ VGA output & 1 Display Port
- ◆ High definition audio
- ◆ PS/2 keyboard & mouse
- ◆ Watchdog timer
- ◆ mSATA flashdisk socket
- ◆ RTC backup battery

DATA ACQUISITION FEATURES

- ◆ 4 12-bit analog inputs
- ◆ 10 digital I/O lines
- ◆ 2 counter / timers
- ◆ 4 pulse width modulators

I/O EXPANSION

- ◆ PCI/104-Express expansion
(compatible with PCI-104 & PCIe/104 I/O modules)
- ◆ PCIe MiniCard socket

GENERAL

- ◆ +6 to +32VDC wide voltage power input
- ◆ PC/104 form factor (4.550" x 3.775")
- ◆ -20°C to +71°C operating temperature

Specifications

Processor	1GHz AMD Fusion G-T40E CPU
Cooling	Heat spreader or fan-less heat sink
Memory	2GB 1.3MHz DDR3 SDRAM on-board
Display type	Dual channel 18 or 24-bit LVDS LCD
Display type	VGA from integrated AMD Radeon HD6250 1 DDI port
Display resolution	1600 X 1200 maximum
USB ports	5 USB 2.0
Serial ports	2 RS-232/422/485; 1 RS-232
Networking	1 Gigabit Ethernet from Realtek RTL8111E
Keyboard/Mouse	PS/2
Audio	HD audio from Realtek ALC262
Mass storage	mSATA socket * 1 SATA port
Analog inputs	4 12-bit A/D
Digital I/O	10 lines
PWM	4 channels
Counter / timers	2 programmable
RTC	RTC with battery backup
Utility signals	WDT trigger; Reset; Power switch; Sleep; Battery low alarm; Ethernet LEDs PCIe MiniCard socket *
I/O expansion	PCI-104 non-stackthrough PCIe/104 1-bank
Input power	+6 to +32V DC power supply or +5VDC +/-5%
Operating temp	-20°C to +71°C (-4°F to +160°F)
Shock & Vibration	VITA 47 compatible
Dimensions	4.550" x 3.775" (PCI-104 form factor)

* Shared socket with auto-sensing

Development Kits

System Development Kits are available with all the components you need for your embedded design project. The kit contains a Quantum SBC, flashdisk with Linux or Windows 7 pre-loaded, cable kit, AC adapter, and software CD.

Software Support

Quantum SBCs run Linux, Windows Embedded Standard 7, and Windows XP. Linux and Windows Embedded Standard 7 Software Development Kits are available with bootable images and drivers to get you started on your design project right out of the box.

Cable Kit

The Quantum Cable Kit includes cables for most of the on-board I/O. A cable kit is strongly recommended for first-time buyers, as many cables are non-standard.

Ordering Information

QUA-GT40E-2GE	Quantum SBC, 1GHz AMD G-T40E CPU, 2GB RAM, full data acquisition
CK-QUA-01	Quantum Cable Kit for most on-board I/O

