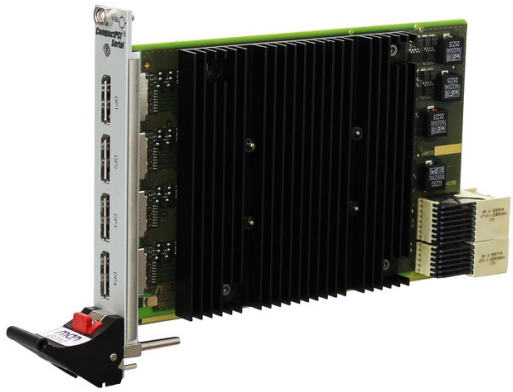
G232

Multi-Display Controller

3U CompactPCI Serial

- AMD Radeon E6465 GPU, 600 MHz
- Low power consumption, max. 20 W
- 160 shaders, 192 GFLOPS (single precision peak)
- 2 GB GDDR5 integrated graphics RAM
- AMD Eyefinity and HD3D technologies
- DirectX 11, OpenGL 4.5, OpenCL 1.1
- 3 DisplayPort 1.2 interfaces
- 1 DisplayPort 1.1a interface
- Max. resolution 2560x2048 at 60 Hz, 30 bpp
- 1 PCIe x8 CPU interface
- PICMG CPCI-S.0 CompactPCI Serial peripheral card



High Resolution and Low Power Consumption

The G232 is a CompactPCI Serial peripheral board based on the AMD Radeon E6465 GPU. The board is an easy way to provide a CompactPCI Serial system with exceptional entry-level desktop graphics features that are not offered by regular CPU chipsets. The supported high resolutions and multi-display output make the board ideal to meet the visual requirements of central control rooms, video surveillance systems or digital signage applications. The board comes with low power consumption which is less than 20 W.

Multiple Display Outputs

AMD Eyefinity multi-display technology supports up to four display outputs: Three DisplayPort 1.2 interfaces with a maximum resolution of 2560x2048 at 60 Hz and 30 bpp and one DisplayPort 1.1a interface with a maximum resolution of 2560x1600 at 60 Hz and 24 bpp are available at the board's front panel. The displays can be combined into one large display via daisy chaining. If the connected panels support the same resolutions, they can be addressed as a "single large surface", effectively functioning as one monitor with high resolution.

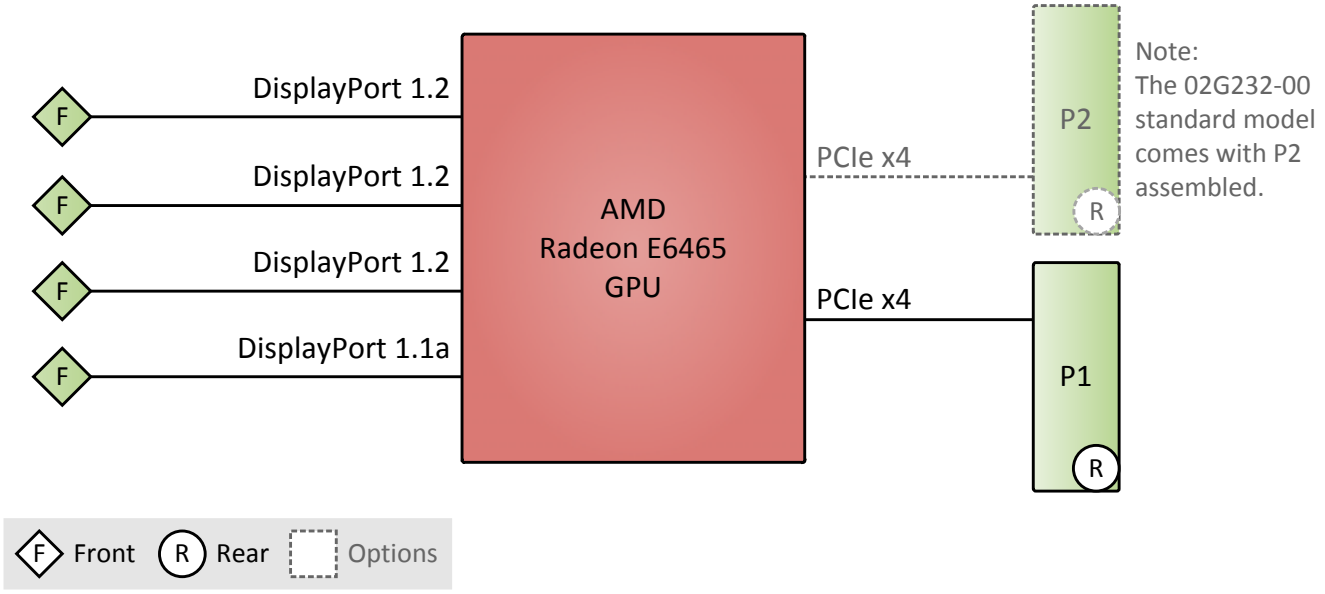
Advanced Technology

The advanced, programmable 3D graphics engine of the AMD Radeon E6465 supports Microsoft DirectX 11 and comes with a third generation unified video decoder, enabling dual HD decode of H.264, VC-1, MPEG4 and MPEG2 compressed video streams. The GPU is also an ideal solution for embedded applications requiring compute general purpose graphics processing unit (GPGPU) capabilities. With 160 processing elements, it delivers up to 192 GFLOPS peak single precision floating point performance for entry level applications. The GPGPU capabilities are enabled by AMD Accelerated Processing (APP) technology, the industry standard OpenCL programming language and the AMD APP Software Development Kit (SDK).

Connectivity Options

Using passive DisplayPort adapters, up to two HDMI or DVI-D monitors can be connected. Single-link DVI-D and HDMI 1.4a are supported. With active adapters, all four DisplayPort interfaces can be used. Active adapters are also available for dual-link DVI-D and VGA.

Data Sheet


DisplayPort 1.2
DisplayPort 1.2
DisplayPort 1.2
DisplayPort 1.1a
F
F
F
F
AMD
Radeon E6465
GPU
PCIe x4
PCIe x4
P2
R
P1
R
Note:
The 02G232-00
standard model
comes with P2
assembled.
F Front
R Rear
Options

Diagram

Graphics

- AMD Radeon E6465 graphics processor
  - 600 MHz max. graphics engine operating frequency
- Maximum resolution (with PCIe x8 host connection)
  - 2560x2048 pixels at 30 bpp / 60 Hz (DisplayPort 1.2)
  - 2560x1600 pixels at 24 bpp / 60 Hz (DisplayPort 1.1a)
- 160 shaders
- Floating Point Performance (single precision, peak): 192 GFLOPS
- Display Engine: AMD Eyefinity, AMD HD3D technologies
- DirectX 11
- Shader Model 5.0
- OpenGL 4.5
- OpenCL compliant: AMD APP, OpenCL 1.1, DirectCompute 11
- Unified Video Decoder 3 for H.264, VC-1, MPEG-2, MPEG-4 part 2 decode

Memory

- 64-bit wide, 2 GB, GDDR5
- Operating frequency: 800 MHz / 3.2 Gbps

Front Interfaces

- Three DisplayPort 1.2 interfaces
- One DisplayPort 1.1a interface

Supervision and Control

- Temperature sensor
- Reset via CompactPCI Serial connector

Backplane Standard

- Compliance with CompactPCI Serial PICMG CPCI-S.0 Specification
- Peripheral slot
- Host Connection:
  - One PCI Express x4 link, PCIe 2.1, or
  - One PCI Express x8 link, PCIe 2.1

Electrical Specifications

- Supply voltage
  - +12 V (9 to 16 V)
- Power consumption
  - 20 W max.

Mechanical Specifications

- Dimensions
  - 3U, 4 HP
- Weight
  - 268 g (with heat sink) (model 02G232-00)

Environmental Specifications

- Temperature range (operation):
  - 0°C to +60°C
  - Airflow: min. 1.0 m/s
- Temperature range (storage): -40°C to +85°C
- Cooling concept
  - Air-cooled, or
  - Conduction-cooled in MEN CCA frame
- Relative humidity (operation): max. 95% non-condensing
- Relative humidity (storage): max. 95% non-condensing
- Altitude: -300 m to +3000 m
- Shock: EN 50155 category 1 class B
- Vibration: EN 50155 category 1 class B
- Conformal coating; optional

Reliability

- MTBF: 966 248 h @ 40°C according to IEC/TR 62380 (RDF 2000) (model 02G232-00)

Safety

- Electrical Safety
  - EN 62368-1
  - EN 50155
  - EN 50153
- Flammability (PCBs)
  - UL 94 V-0

EMC

- EN 55022 class B (emission)
- EN 50121-3-2 (emission)
- EN 55024 (immunity)
- EN 50121-3-2 (immunity)

Software Support

- Windows
- Linux
- For more information on supported operating system versions and drivers see Software.

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www.men.de/products/g232/

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