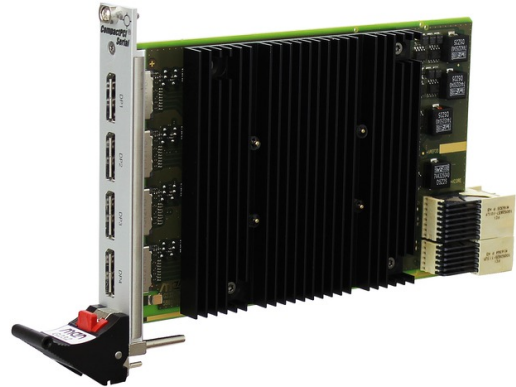


G232

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

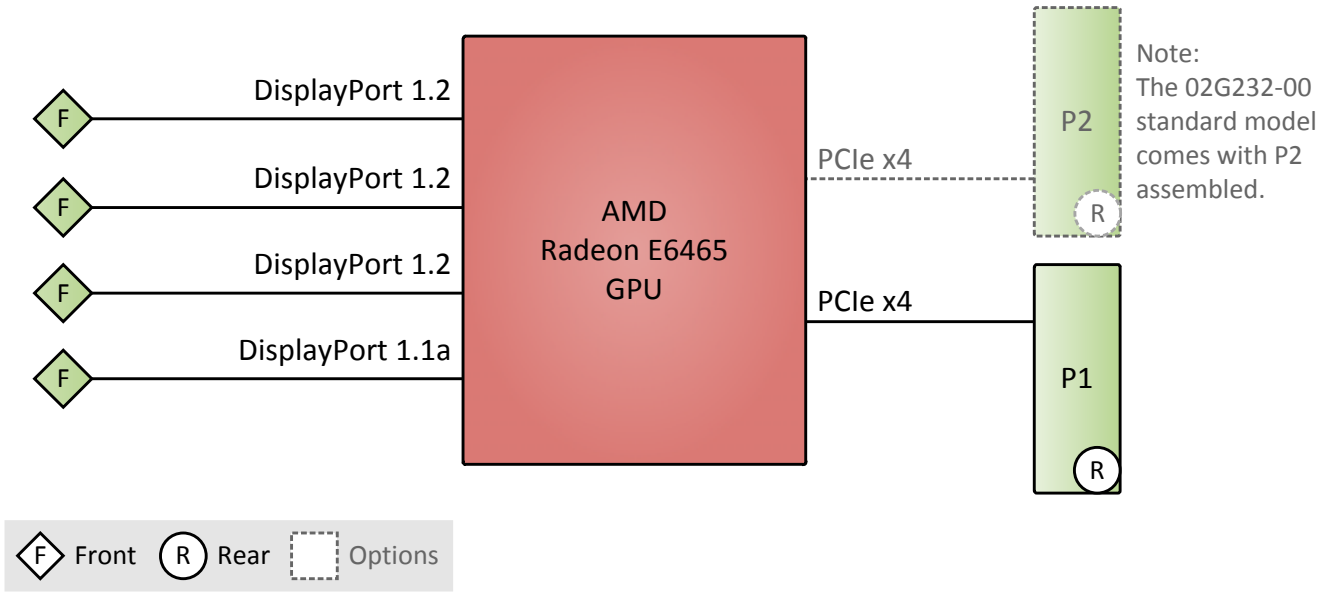
AMD Eyefinity multi-display technology supports up to four display outputs: Three DisplayPort 1.2 interfaces with a maximum resolution of 2560x2048 at 60 Hz and 30 bpp and one DisplayPort 1.1a interface with a maximum resolution of 2560x1600 at 60 Hz and 24 bpp are available at the board's front panel. 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.



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.

Germany

MEN Mikro Elektronik GmbH

Neuwieder Straße 3-7
90411 Nuremberg
Phone +49-911-99 33 5-0

sales@men.de
www.men.de

USA

MEN Micro Inc.

860 Penllyn Blue Bell Pike
Blue Bell, PA 19422
Phone 215-542-9575

sales@menmicro.com
www.menmicro.com

France

MEN Mikro Elektronik SAS

18, rue René Cassin
ZA de la Châtelaine
74240 Gaillard
Phone +33-450-955-312

sales@men-france.fr
www.men-france.fr

China

MEN Mikro Elektronik (Shanghai) Co., Ltd.

Room 808-809, Jiaxing Mansion, No. 877 Dongfang Road
200122 Shanghai
Phone +86-21-5058-0961

sales@men-china.cn
www.men-china.cn

Up-to-date information, documentation and ordering information:
www.men.de/products/g232/

The date of issue stated in this data sheet refers to the Technical Data only. Changes in ordering information given herein do not affect the date of issue. All brand or product names are trademarks or registered trademarks of their respective holders.

MEN is not responsible for the results of any actions taken on the basis of information in the publication, nor for any error in or omission from the publication.

MEN expressly disclaims all and any liability and responsibility to any person, whether a reader of the publication or not, in respect of anything, and of the consequences of anything, done or omitted to be done by any such person in reliance, whether wholly or partially, on the whole or any part of the contents of the publication.

The correct function of MEN products in mission-critical and life-critical applications is limited to the environmental specification given for each product in the technical user manual. The correct function of MEN products under extended environmental conditions is limited to the individual requirement specification and subsequent validation documents for each product for the applicable use case and has to be agreed upon in writing by MEN and the customer. Should the customer purchase or use MEN products for any unintended or unauthorized application, the customer shall indemnify and hold MEN and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim or personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that MEN was negligent regarding the design or manufacture of the part.

In no case is MEN liable for the correct function of the technical installation where MEN products are a part of.

© 2017 MEN Holding