

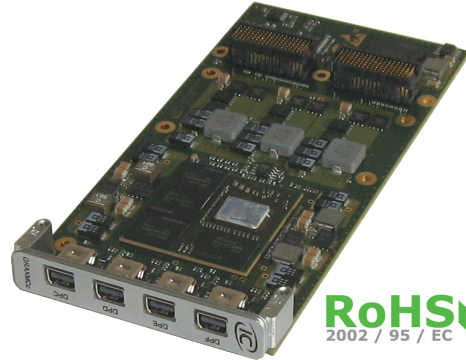
IC-GRA-XMCc

AMD E8860 XMC Graphics board

With the **IC-GRA-XMCc**, Interface Concept provides the rugged military and aerospace market with the latest generation of AMD based graphic board.

Available with long term support program for temperature screened AMD E8860 GPU, the **IC-GRA-XMCc** is a versatile solution dedicated to critical general purpose computing on graphic units (GPGPU) applications.

With doubled GFLOPS performances compared with the E4690 (M96) and significantly higher performance per watt than power-comparable competitor GPUs, the E8860 also allows frequency scalling to further optimize power consumption in regard of the expected features.



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Description

The **IC-GRA-XMCc** is a VITA XMC compliant board, offering a x8-lane PCI Express® bus interface with the host. The autonegotiation capability allows also to work with a x1, x2 or x4 link.

The AMD Mobility Radeon™ e8860 is a 28-nanometer process GPU. Its advanced 3D graphics engine and programmable shader architecture support Microsoft® DirectX® 11.1 technology for superior graphics rendering. Its third generation unified video decoder enables dual HD decode of H.264, VC-1, MPEG4 and MPEG2 compressed video streams.

Thanks to the AMD Eyefinity multi-display technology, the **IC-GRA-XMCc** can drive up to six displays through integrated interfaces including RGB, single-/duallink DVI, single-/dual-link LVDS, HDMI 1.4a and DisplayPort 1.1a/1.2..

Additionally to the standard VGA interface of the E8860, the **IC-GRA-XMCc** implements:

- an additional TV encoder providing TV interfaces (Composite or S-Video), and
- a Stanag 3350 B & C compliant interface,

thus providing a graphic platform for legacy military aircraft applications.

Moreover, because embedded applications claim for more and more computation, the 768 GFLOPs of peak single precision floating point performance delivered by the embedded E8860 GPU and the support for OpenCL™ 1.2 programming language standard make the **IC-GRA-XMCc** an ideal platform for general purpose graphics processing unit (GPGPU) applications such as ultrasound, radar or video surveillance.

Installed on carriers (3U/6U) for XMC boards, the **IC-GRA-XMCc** can provide these features for VPX applications, in air cooled and conduction cooled configurations. With advanced carrier such as the **IC-CMC-VPX6a**, we offer the open platform for even more enhanced functionalities such as additional VGA or Stanag interfaces, frame grabber, Arinc 818, etc (refer to **IC-GRA-VPX6a** datasheet for details).

Main features

Graphic Processor Unit:

- ▶ AMD Radeon E8860
- ▶ 2GB on-chip GDDR5 memory (1GHz 128-bit)
- ▶ PCI-Express 2.1 (x8 lanes on Pn5 connector)

Outputs:

- ▶ 6 independant display controllers

2 of them can be configured as legacy displays allowing the following configurations (1) :

- VGA + 5 DisplayPorts,
- Single-Link DVI + 5 DisplayPorts
- VGA + Single-Link DVI + 4 DisplayPorts
- 2 Single-Link DVI + 4 DisplayPorts
- 1 Dual-Link DVI + 4 DisplayPorts

Pn6 :

- ▶ digital interfaces :
 - 6 TMDS/DisplayPorts
- ▶ one VGA interfaces (2), configurable as :
 - RGB (Sync on green, composite or seperated sync)
 - STANAG3350B/C
 - Composite or S-Video (NTSC/PAL)

Front :

- 4 mini DisplayPorts (option)

Notes

- (1): some of the configurations require factory settings
(2): exclusive with one digital interfaces

The **IC-GRA-XMCc** supports resolutions from VGA (640x480) up to WQUXGA (4096 x 2160 @ 30Hz).

The **IC-GRA-XMCc** is available in air cooled and conduction cooled grades. Please contact us for details and customized versions.

IC-GRA-XMCC

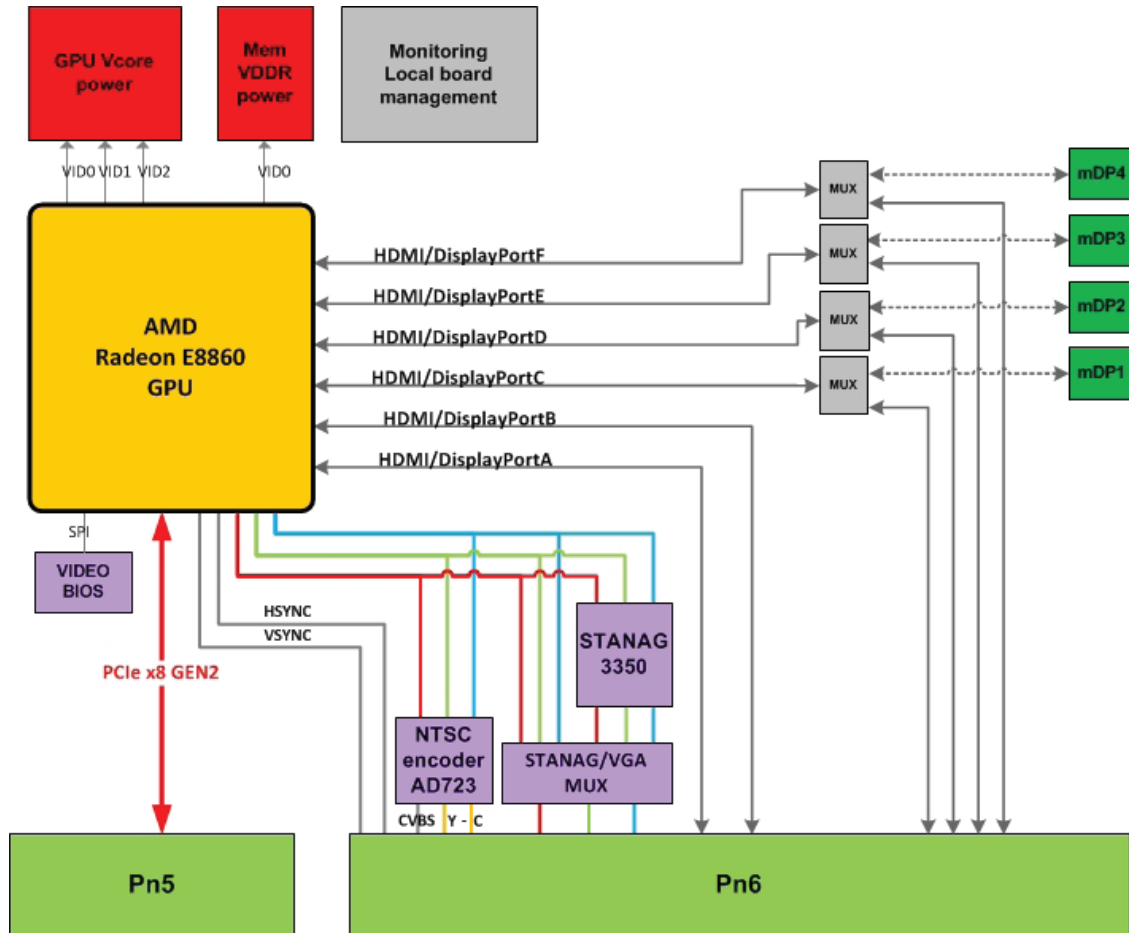
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Drivers

For x86 architecture, the IC-GRA-XMCC board is compatible with the Linux and Windows 32/64bits editions of the Catalyst drivers provided by AMD.

For other configurations - architectures / OS (Linux/OpenSource, VxWorks, Integrity, etc) - please consult us.

Block Diagram



Board specifications

- IEEE STD 1386 Common Mezzanine Card (CMC) specification
- VITA 42.0 XMC Switched Mezzanine Card Auxiliary Standard
- VITA 42.3 specification (XMC PCI-express protocol layer)
- PCI-express specification R2.1

Power requirements

from 15 to 40 W depending on Graphic applications (2D/3D) and performance profiles (

Environnement Specifications:

Please consult the IC-GRA-XMCC page at www.interfaceconcept.com.

Ordering Information:

Please contact our sales department : tel. +33 (0)2 98 577 176 - email : info@interfaceconcept.com

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