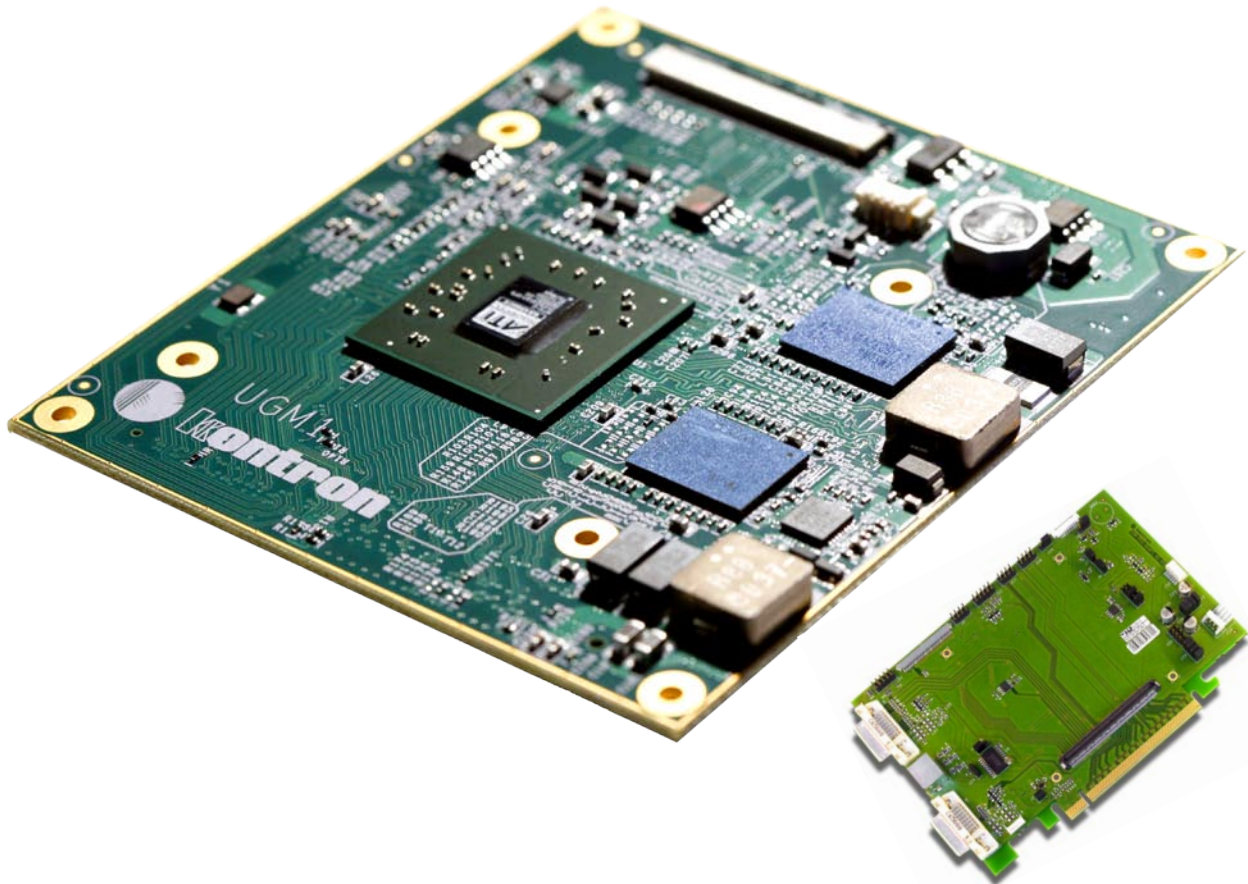




UGM-M72

The “Universal Graphics Module”



optional PEG-Adapter board

- First modular graphic card for Computer-on-Modules
- High graphic performance with ATI M72 (ATI Radeon™ HD2400)
- For low profile designs
- Longterm availability
- 2 and more displays possible
- Passive Cooling

➤ Product Overview

In 2007, Kontron listened and responded to customer's needs in the development of the **Universal Graphic Module (UGM)** concept and formation of the UGM consortium. More and more, the embedded market has to control and feed many high-end displays with tons of information without sacrificing excellent 3D graphic performance. The UGM standard - the first standard for embedded graphic cards - defines a 95 x 84 mm universal graphics-on-module which supplies monitors with all current and future graphic card signals in demand.

The concept is similar to the **COM Express™** concept: Via the rugged AMP/TYCO connector, UGM cards connect to max. PCI Express x16. With its own independent frame buffer memory, the graphics processing unit (GPU) generates the output video signals available on the rugged 220pin module connector. Thus, no breakout cables are required. To control more than 2 displays independently, UGM-M72 allows for sharing PCI Express to several graphic modules.

To learn more about the **open standard** and their members, please visit: <http://www.universal-graphics-module.org>

➤ Key benefits

- ✓ High 3D and video performance – offloading the CPU significantly
- ✓ Display Wall capable – 2 or more displays
- ✓ Simplified design – Lowers design risk dramatically on a high dynamic graphics market
- ✓ Complementarity to customized solutions with COM Express™ modules
- ✓ Scalability – more flexibility and exchangeability – just plug in the required graphic power
- ✓ UVD Video Engine with BluRay Support
- ✓ Specification is an open standard

➤ Target Applications

- ✓ Infotainment, Gaming, Media-Entertainment, Medical

➤ Technical Information

Graphic processor	ATI-M72 (ATI Radeon™ HD2400) GPU
System Connector	UGM is fully connected to the system via a rugged 220-pin AMP/ Tyco 3-6318490-6 connector.
Power Consumption	uses a 12 - 22V +/- 5% power supply exclusively. Max. power consumption 15W
Host Interface	PCI Express x16, incl. x8, x4, x2 and x1
Memory	GDDR3-RAM
Resolutions	2048x1536 (VGA, LVDS), 1920x1200 (DVI, HDMI, TV)

Display Interfaces	2 x RGB analog (VGA), 10 Bit color depth, 400MHz bandwidth optional TV out (using 2nd RGB port), Component, YuC and CVBS, support HDTV1080i 1 x single link TMDS, DVI / HDMI support 1 x LVDS single- / dual-link, 18-, 24-Bit support 1 x Video Capture Port (VIP), ITU-656 compatible, 150MHz
Form Factor	UGM concept: 84 x 95 mm
Temperature (*)	operation: 0° to 60°C, storage: -30° to 85°C
Humidity	operation: 10% to 90%, storage: 5% to 95% (non condensing)

(*) Ask about extended temperature ranges

➤ Ordering Information

Article	Part.-No.	Description
UGM-M72	41001-1280-00-0	High End Graphic Module based on ATI M72 with 128 MB RAM
UGM-M72	41001-2560-00-0	High End Graphic Module based on ATI M72 with 256 MB RAM
UGM-PEG-ADAPT	41101-0000-00-0	Adapter to connect UGM-Module to a standard PEG-interface (e.g. on motherboard)
UGM-M72-COOLER1	41001-0000-99-0	Passive Heatspreader Kit for UGM-M72, all memory versions. Mandatory for the UGM-M72 module.
COM Express™ - UGM Evaluation Board	41100-0000-00-0	UGM Evaluation Board for COM Express™ modules

➤ Corporate Offices

Europe, Middle East & Africa
Oskar-von-Miller-Str. 1
85386 Eching / Munich
Germany
Tel.: +49 (0)8165/ 77 777
Fax: +49 (0)8165/ 77 219
sales@kontron.com

North America
14118 Stowe Drive
Poway, CA 92064-7147
USA
Tel.: +1 888 294 4558
Fax: +1 858 677 0898
sales@us.kontron.com

Asia Pacific
17 Building,Block #1,ABP.
188 Southern West 4th Ring Road
Beijing 100070,P.R.China
Tel.: + 86 10 63751188
Fax: + 86 10 83682438
kcn@kontron.cn

Kontron Embedded Modules GmbH
Flatpanel Solutions
Hamburger Straße 181
22083 Hamburg - Germany
Tel.: +49(40)200090-0
Fax: +49(40)200090-10
sales@kontron.com