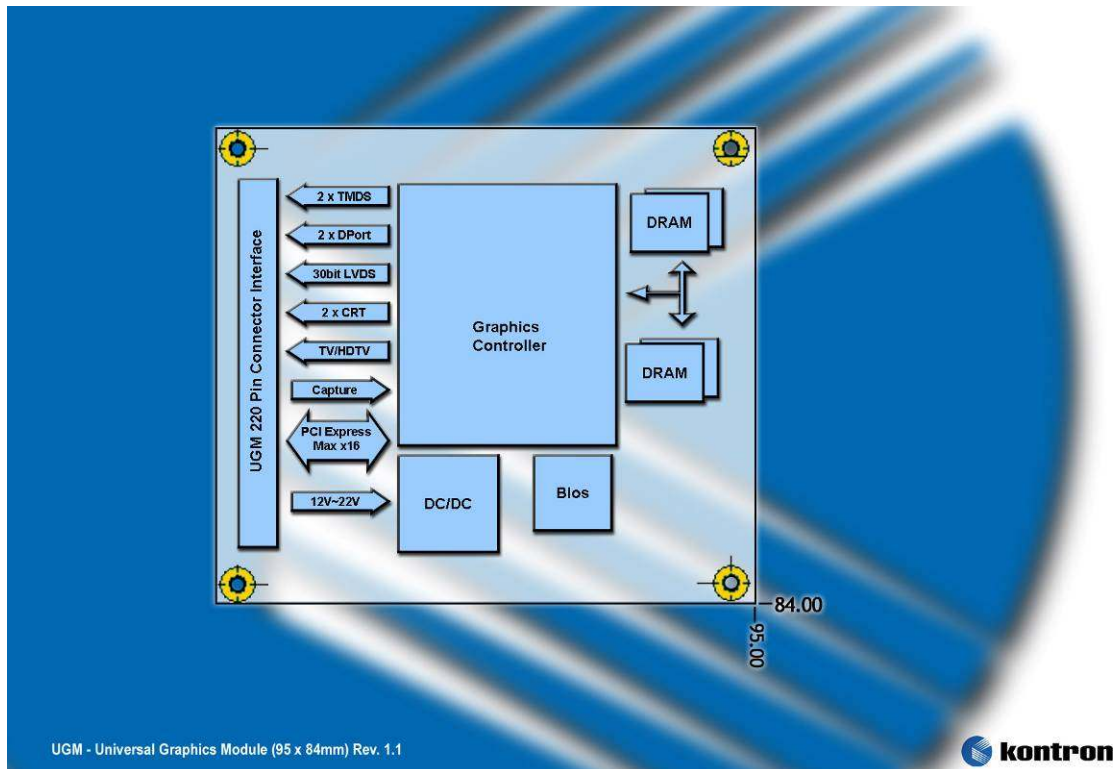


## Kontron publishes updated UGM standard for Graphic-on-Modules

*UGM Revision 1.1 incorporates COM.0 compatible height for optimized system design and costs*



**Eching/Germany, July 22, 2008** – Kontron announces revision 1.1 of the Universal Graphics Module (UGM) standard for long-term available and custom scalable high-end PEG graphics.

This new revision optimizes system design and reduces costs by defining the height of UGM Graphic-on-Modules in accordance with the PICMG-defined COM Express™ specification. This enables designers working with COM Express™ modules and UGM Graphic-on-Modules to use a single heat sink for their entire design. The result is an extremely flat solution that maintains Computer-on-Module scalability within the design as well as reduced development and production costs and the fastest time-to-market.

Developers also benefit from enhanced DisplayPort mapping in UGM rev. 1.1 that implements DisplayPort and LVDS/TMDS on the same pinouts. This double assignment enables developers to easily use either DisplayPort or the LVDS/TMDS format for implementing designs based on the latest generation GPUs. Support for dual link TMDS in this updated revision of the UGM standard doubles the power of transmission and provides greater speed and bandwidth for higher resolutions. Other enhancements include improved definition of PCI Express TX/RX to remove any potential confusions

**2 of 3**  
**Kontron publishes**  
**updated UGM standard**  
**for Graphic-on-Modules**

regarding the sink and source as well as holes for standard-sized M2.5 screws for easier mounting on the carrier board.

UGM revision 1.1 retains all the benefits of the original specification that was launched at the end of 2007 such as mounting the 84x 95 mm UGM module parallel to the carrier board and long-term availability of the UGM graphics module of at least three to five years as well as especially simple and quick implementation of the graphics functions in customized designs, including the necessary time-consuming BIOS. Via the 220 pins of the connector that is like the one used for COM Express Computer-on-Modules, UGM cards receive PCI-Express signals, over 1, 4, 8, or 16 lanes (PEG) and video signals, process them – including video capture functions – and then deliver the converted signals back to the carrier board, also via the 220-pin connector. For playback devices, the UGM specification currently supports dual LVDS, dual TMDS, dual CRT and TVout.

On the carrier board itself, the developer can decide which signal combinations ultimately will be made available to the external connector, such as HDMI, DVI-I and VGA. This reduces the effort required for the graphics layout and BIOS development for the allocation of the appropriate circuits, the plug, and any peripheral components necessary for additional features, such as HDCP copy protection. The graphics processing core is already finished and all necessary firmware is already implemented. For a taste of these capabilities, Kontron offers the UGM-M72 module.

This design also completely eliminates the need for cables to link the graphic module with the rest of the system. Thus, UGM differs from current standard graphics cards, in which interfaces are led out via breakout cables because the narrow expansion card slot bracket does not offer enough room for external interfaces. Furthermore, with a 22V DC power supply, up to 132 W power input is allowed in accordance with the UGM specification. As a result, the UGM can perfectly support even high-end games with the highest frame rates and all graphics optimization algorithms.

For more information, please visit: <http://www.universal-graphic-module.org/>

More information of the Kontron UGM-M72:

<http://www.kontron.com/products/computeronmodules/universal+graphics+module/ugmm72.html>

###

## Kontron publishes updated UGM standard for Graphic-on-Modules

### About Kontron

Kontron designs and manufactures standard-based and custom embedded and communications solutions for OEMs, systems integrators, and application providers in a variety of markets. Kontron engineering and manufacturing facilities, located throughout Europe, North America, and Asia-Pacific, work together with streamlined global sales and support services to help customers reduce their time-to-market and gain a competitive advantage. Kontron's diverse product portfolio includes: boards and mezzanines, Computer-on-Modules, HMIs and displays, systems, and custom capabilities. Kontron is a Premier member of the Intel® Embedded and Communications Alliance. The company is a recent three-time VDC Platinum vendor for Embedded Computer Boards. Kontron is listed on the German TecDAX stock exchange under the symbol "KBC". For more information, please visit: [www.kontron.com](http://www.kontron.com).

For more information:

#### Reader contact EMEA:

Kontron AG  
Oskar-von-Miller-Strasse 1 /  
85386 Eching/Munich  
Germany  
Tel: +49 (8165) 77-777  
Fax: +49 (8165) 77-279  
<http://www.kontron.com>  
[sales@kontron.com](mailto:sales@kontron.com)

#### Editor company contact EMEA:

Norbert Hauser  
Kontron AG  
Oskar-von-Miller-Strasse 1 /  
85386 Eching/Munich  
Germany  
Tel: +49 (8341) 803-0  
Fax: +49 (8341) 803-499  
[norbert.hauser@kontron.com](mailto:norbert.hauser@kontron.com)

#### Editor agency contact EMEA:

Michael Hennen  
SAMS Network  
Zeichenstraße 29  
52146 Wuerselen  
Germany  
Tel: +49 (2405) 45267-20  
Fax: +49 (2405) 45267-21  
[michael.hennen@sams-network.com](mailto:michael.hennen@sams-network.com)

#### Reader contact Americas:

Kontron America Inc.  
14118 Stowe Dr  
Poway, CA 92064-7147  
United States of America  
Tel: +1 (888)-294-4558  
Fax: +1 (858) 677-0898  
[sales@us.kontron.com](mailto:sales@us.kontron.com)  
[www.kontron.com](http://www.kontron.com)

#### Editor company contact Americas:

Richard Pugnier  
Kontron America Inc.  
14118 Stowe Dr  
Poway, CA 92064-7147  
United States of America  
Tel:+1 (858) 623-3006  
Fax:+1 (858) 677-0615  
[richard.pugnier@us.kontron.com](mailto:richard.pugnier@us.kontron.com)

#### Editor agency contact Americas:

Annette Keller  
Keller Communications  
United States of America  
Tel:+1 (949) 640-4811  
[annetekeller@sbcglobal.net](mailto:annetekeller@sbcglobal.net)

All rights reserved.

Kontron is a trademark or registered trademark of Kontron AG. All other brand or product names are trademarks or registered trademarks or copyrights by their respective owners and are recognized.

PICMG and COM Express are trademarks of the PCI Industrial Computers Manufacturers Group.

All data is for information purposes only and not guaranteed for legal purposes. Subject to change without notice. Information in this press release has been carefully checked and is believed to be accurate; however, no responsibility is assumed for inaccuracies.