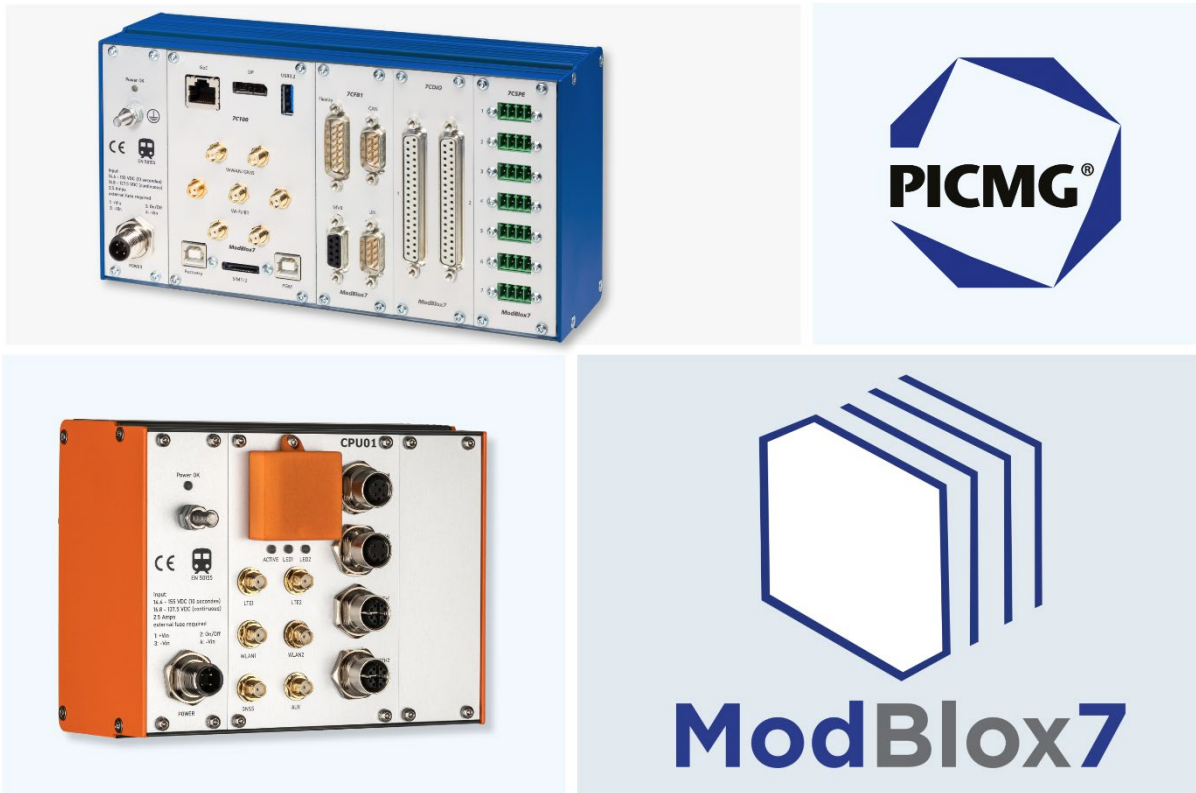


New PICMG® ModBlox7™ Specification for Standardized Box PCs Ratified



Hamm, 01-03-2024: Just in time for Embedded World 2024, a new PICMG standard will see the light of day and is designed to make industrial box PCs more modular and cost-efficient: ModBlox7™. The specification standardizes the structure of the hardware into individual functional units and thus guarantees interoperability between different providers. The current members of the ModBlox7 working group are Ci4Rail GmbH, EKF Elektronik GmbH, ELTEC Elektronik AG, Elma Electronic, Embeck Co, Ltd, ept GmbH, HEITEC AG, Hirose Electric Europe B.V., nVent/Schroff GmbH, Phoenix Contact GmbH & Co. KG, Samtec, Inc, Sealevel Systems, Inc, UBER Co Ltd, FASTWEL Group Co Ltd, and Tews Technologies GmbH.

Robust and Flexible: Box PCs for Transportation, Industry or Healthcare

ModBlox7 is designed for edge computing, data acquisition, communications and control applications in transportation, automation, avionics, medical, agriculture and other demanding markets.

"With ModBlox7, we combine the advantages of modular standards such as CompactPCI and CompactPCI Serial with the typical box PC requirements such as cost efficiency, small form factor and low weight," explains Mathias Beer, CEO of Ci4Rail GmbH and member of the PICMG ModBlox7 working group. "By bringing all these aspects together in one PICMG specification, ModBlox7 meets the design requirements of our customers and avoids dependence on individual vendors."



Smart Modularity: Architecture of ModBlox7

A typical ModBlox7 system consists of Power Units, Processing Units, and PCIe or USB 2.0/3.0 Input and Output Units (IOUs), each of which measures 1.4" or 7 HP wide. Units can also be extended in 7HP increments to 14 HP, 21 HP, and so on and remain compatible with the specification.

This modular, scalable architecture eliminates the need for a backplane, enabling cost-efficient, freely configurable production in small, medium and large quantities.

"The ModBlox7 standard defines a direct board-to-board interconnect in a box format to realize cost-effective system solutions," says Bernd Kleeberg, CEO and Head of Sales at EKF Elektronik GmbH and chair of the PICMG ModBlox7 working group. "Thanks to native support for redundancy, ModBlox7 is also recommended for high-availability solutions."

Power Unit blocks convert external supply voltage into a 12V internal voltage and connect to Processing Units via terminal wire-to-board or board-to-board connectors. Processing Units support an overall thermal design power (TDP) of up to 150W and interface with IOUs over high-speed board-to-board connectors.

Further information on the ModBlox7 can be found on the EKF website:

https://ekf.de/modblox7/flyer_2023.pdf

7L600: Single Pair Ethernet Switch on ModBlox7

EKF can already present the first ModBlox7-based Single Pair Ethernet (SPE) switch: the 7L600. With seven 100 BASE-T1 ports and two 1000BASE-T uplinks in accordance with IEC 63171-6, the SPE ports are hi-pot isolated and fully compatible with the "Open Alliance BroadR-Reach" (OABR) standard. Inside the switch is the 88Q5072 Ethernet controller from Marvell, which supports AVB and TSN and also enables uncomplicated configuration via local or remote management functions.

Technical data sheet 7L600:

<https://ekf.de/modblox7/7l600/7l600.html>

Visit us in Hall 1, Stand 406 and discover these and other ModBlox7 products from our partner Ci4Rail!

**About EKF:**

EKF Elektronik GmbH is a leading manufacturer of modular, ruggedised embedded boards and systems for demanding industrial sectors such as transport and traffic, IIoT and Industry 4.0, robotics, energy, industrial automation and medical technology.

From the high-performance CompactPCI® serial standard to modular and cost-effective box and board-level assemblies (EKF Embedded Blue®/Gold series and PICMG ModBlox7 standard), EKF offers flexible embedded solutions that are precisely tailored to customer requirements.

With product designs based on the latest CPU platforms from Intel, NVIDIA and ARM, cloud-based software solutions and modular product families that build on each other, the company manages the balancing act between innovation and long-term availability.

Development and production take place exclusively at the company's own headquarters in Hamm, Germany. A three-year guarantee on all products emphasises the company's quality standards.

EKF is an active member of renowned technology partners such as the Intel Partner Alliance, PICMG, PCI-SIG, EtherCat Technology Group and Single Pair Ethernet Industrial Partner Network, where it actively promotes the development of the latest product standards.