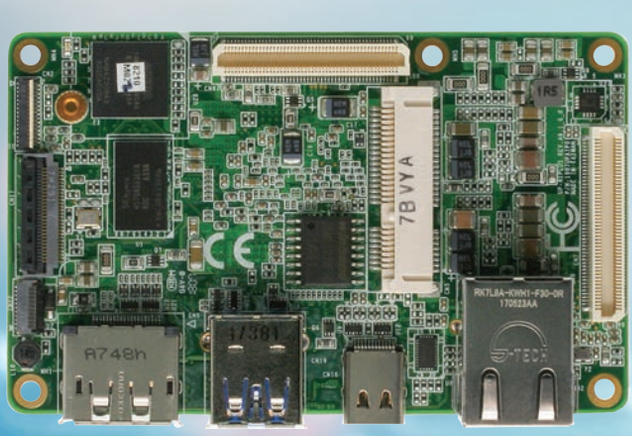
UP AI PLUS

bridge the gap

specification



AI PLUS

The UP Core Plus expansion with Intel® Cyclone® 10 GX for high performance on the edge!

AI Plus is a carrier board expansion specifically design the the new UP Core Plus board. Make use of the flexible FPGA platform of the Intel® Cyclone® 10 GX while maintaining the super small form factor of UP Core Plus. High performance with a seamless integration in most of the industrial computing edge devices.

With a high speed Gbit Ethernet port, two USB 3.x ports (one Micro USB Type C) and HDMI Input, AI Plus gives you all the tools you need to enable intelligence on the edge.

The Intel Cyclone 10 GX FPGA features includes:
- 12.5 Gbps chip-to-chip transceiver I/O support and 6.6 Gbps backplane support
- High-performance 1,866 Mbps external memory interface 1.434 Gbps LVDS I/Os
- IEEE 754-compliant hard floating-point digital signal processing (DSP) blocks

AI Core Plus combined with AI Plus will benefit all forms of AI and Machine learning in markets examples such as Machine vision, Smart vision cameras, Industrial robotics, Industrial programmable logic controllers, Pro-AV systems and more

UP AI Plus - Specifications

FPGA	Intel® Cyclone™ 10GX F672 (105KLE, 150KLE, 220KLE) MAX 10 V36 PWR Sequence
Memory	Onboard DDR3 Single Channel x32 Max 2GB
Storage	1x SPI-Flash 512 Mb
Ethernet	1x Gigabit Ethernet (Realtek 8111G) to main board,
Video input	1x HDMI IN, 1x DP IN, 1x LVDS IN 1x MIPI-CSI (4 lanes)
USB	1x USB 3.0 Type A to main board, 1x USB 3.1 Type C
Expansion Slot	1x Mini card (full-size) SATA-PCI-e colay
Docking	2x Docking connector 100-pin to UP Core Plus
Power	12V DC
Form Factor	90 mm x 56.5 mm
Operating temps	0~60°C
Operating humidity	10%~90%RH non-condensing
Certification	CE/FCC Class B
OS Support*	Windows 10, Linux Ubuntu, Yocto

2X Higher Performance for Up to Half the Cost	Intel® Cyclone® 10 GX FPGAs are the first low-cost devices built on a high-performance 20 nm process, offering a performance advantage for cost-sensitive applications
Applications	Intel® Cyclone® 10 10 GX FPGAs are ideal for a broad array of applications requiring increasing levels of core and I/O performance as the need for scalable processing and acceleration increases system requirements
Increase Productivity, Integration, and Decrease Time to Market	- State-of-the-art compile times for 20 nm devices combined with an advanced design environment for low-cost FPGAs - Advanced features support, such as partial reconfiguration and single event upset (SEU) for error correction and detection - Short compile times enable faster design iterations and faster timing closure - Intel FPGA SDK for OpenCL™ – C-based design entry offers a design environment that is easy to implement on FPGAs - Platform Designer (formerly Qsys) – System-level design environment - DSP Builder for Intel FPGAs – Model-based DSP environment within the MATLAB*/Simulink* environment - Intel Enpirion® PowerSoCs offer customers small footprint, high performance, low system power, high reliability and efficiency, and faster time to market to power Intel Cyclone 10 FPGAs

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Established in 1992, AAEON is one of the leading designers and manufacturers of advanced industrial and embedded computing platforms today. Committed to innovative engineering, AAEON provides integrated solutions, hardware and services for premier OEM/ODMs and system integrators worldwide.

With a continuous pursuit of innovation and excellence, AAEON became a member of the ASUS group in 2011, further strengthening its leadership fueled by advanced technology from ASUS and leveraging resources within the group. AAEON is posed to offer more diversified embedded products and solutions at higher quality standards to meet world-class design and manufacturing demands in the years to come.

For more information about AAEON, please visit:
www.aaeon.com

UP is a brand of AAEON Europe, an associate company of ASUS group, focused on Embedded, Internet Of Things, Industry 4.0. UP's mission is to spread the intelligence in all the world around us. UP bridges the gap between the world of prototypes and the world of high-grade mass-produced embeddedsystems solutions.UP gives affordable and easily accessible and support of all the latest technologies to embeded industry.

For more information about UP, please visit:
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Artifical Intelligence on the edge

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