ADHOC TEKNOLOJİ A.Ş.

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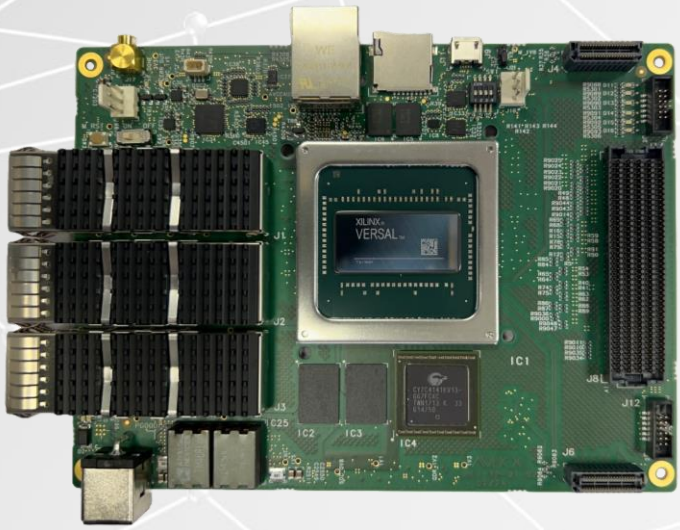
VIMK – High Performance Versal™ Premium Adaptive SoC Board



Highlighted Features

- Low latency interface between programmable logic and Dual-core Arm® Cortex® A72 Processors
- Low Latency QDR-IV SRAM.
- LPDDR4 memory at 4266MHz
- 3xQSFP28 port with 12 low latency GTYP transceivers.
- Multi-board scalability with 216 XPIO pins.
- FMC HPC Extension connector (VITA 57.1)

Features

SoC Unit AMD-Xilinx Versal Premium Series	• VP1202-2, VP1202-3, VP1502-2 or VP1502-3 options are available • Commercial (T_j 0 to 100°C) and Industrial (T_j -40 to 110°C) temperature ranges
DRAM Memory Micron LPDDR4 Memory	• Data Rate 4266 Mb/s • 4GB or 8GB Memory Density
SRAM Memory Cypress QDR-IV SRAM Memory	• 667MHz Max. Clock Rate • RL:5, WL:3 Clock Cycle • 1334 MT/s Total Random Transaction Rate • 144Mb (4Mx36) or 288 Mb Memory Density
Flash Memory Micron QSPI Flash Memory	• 2x 1Gb Dual Parallel QSPI • Boot or Storage
SDHC Interface Micro-SD Card Socket	• Boot or Storage • SD 3.0 Auto-direction
Clock TI-LMK Series Ultra-Low Jitter Clock Generator	• 1.5 ppm TCXO Clock Source • Less than 100 fs rms Jitter at Output Clocks
Operating System	• Linux • Baremetal

Interfaces

QSFP28	• 3x QSFP28 with x12 GTYP supporting to 12x10/25 (3x40/100) Gbps
VITA 57.1 FMC HPC	• x8 GTM supporting to 10/25Gbps and JESD204B/C, • x68 1.5V(1.2V) Compatible SE I/O or x34 LVDS I/O LA[0:33] • x48 1.5V(1.2V) Compatible SE I/O or x24 LVDS I/O HA[0:23] • I2C and JTAG
Board-to-Board High Speed Parallel I/F	• 2x Samtec ADM6 AcceleRate®High-Density 4-Row Terminal for multi-board scalability • 2x Samtec ADF6 AcceleRate®High-Density 4-Row Socket for multi-board scalability • x108 1.5V(1.2V) Compatible SE I/O or x54 LVDS I/O
Debug I/F	• On board USB-JTAG and x2 UART
Control I/F	• I2C and SPI 4-wire with 1 SS
C&M	• 1x 10/100/1000 Mbps Ethernet Port
Clock	• 1-PPS Out
Power	• 5.5x2.5 mm Power Socket, Operating Voltage Range 10V-16.8V

Mechanical

Size	• 150 mm x 111 mm (5.91” x 4.36”)
Board Thickness	• 1.59mm(62.5 mil) ±5%
Cooling	• Active Cooling

Accessories

Power Adapter	• 12V Wall Adapter
16 GB micro-SD card	• Petalinux prebuilt, includes BOOT.bin, kernel, rootfs

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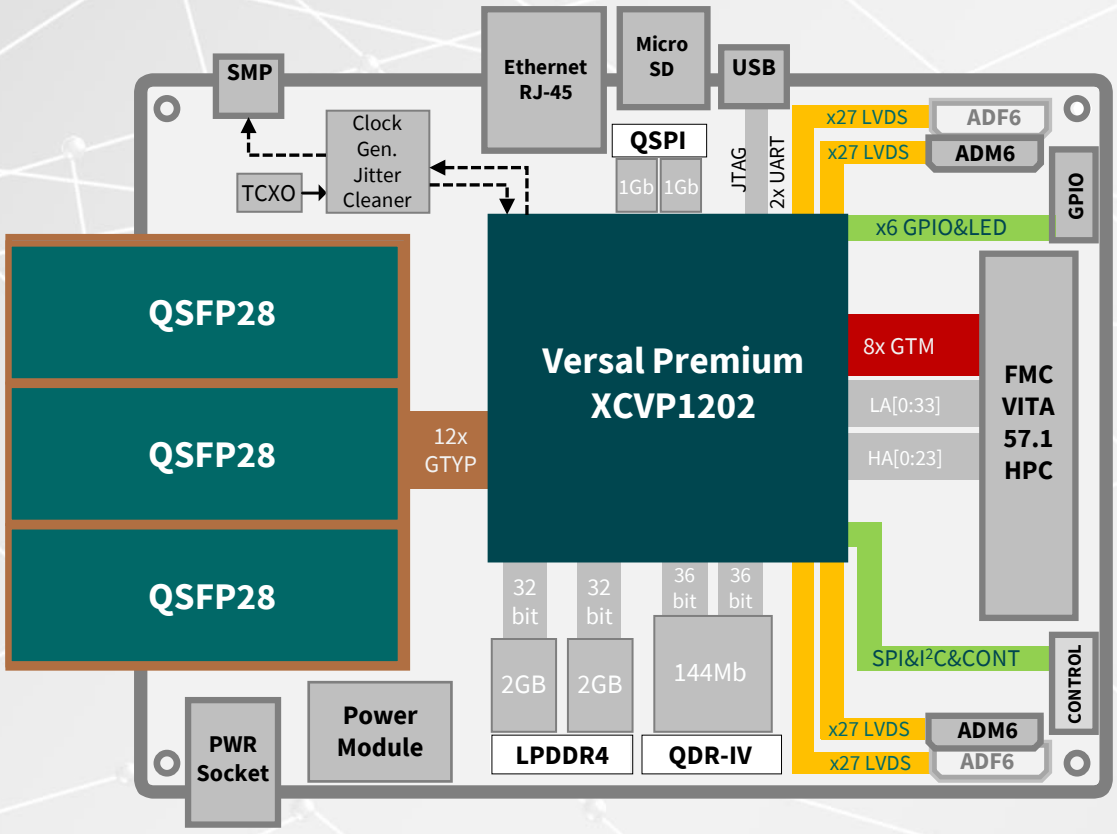

Target Applications

- Ultra Low Latency Applications (High Frequency Trading)
- Wired & Wireless Communication
- High Performance Computing Accelerator
- High Performance Edge Computing

Support Services

- Highly motivated and skilled engineering team for custom development

Customization

- VP1202-2, VP1202-3, VP1502-2 or VP1502-3 FPGA options are available
- Advanced Analog Front End (AFE) accessory board for wireless communication

IPs and Solutions

- Ready-to-use platform for software development with Linux SDK
- Ready-to-use several IP solutions to reduce risk for development and deployment

Adhoc Teknoloji A.Ş. is a startup engineering company located in Ankara, Türkiye. The company specializes in high-performance communication solutions, driven by its highly motivated engineering team.

In addition to design services, Adhoc Teknoloji A.Ş. is currently focusing on its High Frequency Trading Solutions, which include FPGA-based Tick-to-Trade systems, Accelerators, Market Data Simulators, and Precision Network Measurement & Analysis tools.

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