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TRIA ZUB-1CG-DK ZUBoard Boot Linux from eMMC



Product Usage Instructions

- **Step 1: Preparation**

- Ensure you have the DP-eMMC HSIO add-on module and ZUBoard ready.

- **Step 2: Setup**

- Connect the DP-eMMC HSIO add-on module to the ZUBoard following the provided guidelines.

- **Step 3: Boot Linux from eMMC**

- Follow the instructions outlined in the project webpage to boot Linux from the eMMC Flash.

- **Step 4: Additional Support**

- If you encounter any issues or need further assistance, visit the provided forum or contact an Avnet Field Application Engineer (FAE).

PRODUCT INFORMATION

ZUBOARD 1CG

The ZUBoard 1CG provides the flexibility and versatility for engineers to experiment with and learn the AMD Zynq® UltraScale+™ architecture. The affordable ZU1CG device features 81K programmable logic cells with a Dual-core Arm® Cortex®-A53 MPCore™ and Dual-core Arm Cortex-R5F MPCore, as well as cache and on-chip memory. The board also features 1GB of ISSI LPDDR4 with non-volatile boot options in the 256Mb ISSI QSPI Flash or a microSD card slot. Microchip PHYs enable both 10/100/1000

Ethernet and USB 2.0 Host. A microUSB port provides on-board JTAG/UART access. Microchip oscillators and ECS crystals provide clocking to the ZU1 device, the on-chip real-time clock, JTAG, and communication interfaces. Power the board through USB-C with a Microchip controller and TDK μ POL™ power modules. A combination of slide switches, push buttons, mono- and RGB-LEDs allow user interaction with the board. Both temperature and pressure sensors from STMicroelectronics add environmental data to the system. Additionally, all four ZU+ PS GTR transceivers, 18 PS MIO, and 69 PL I/Os are exposed through Samtec expansion connectors and one Click Board™ site. With a Vivado-enabled board definition file and PetaLinux BSP, you will be up and running in no time! Whether you want to explore bare metal, Linux, or Vitis AI accelerators, the ZUBoard 1CG will give you a base foundation to experiment.

Features

- AMD ZU+ MPSoC ZU1CG
 - Dual A53 APU and Dual R5 RPU
 - 256KB On-chip Memory
 - 81,900 FPGA Logic Cells
- ISSI 1GB LPDDR4 with on-chip ECC
- Boot from ISSI 256Mb QSPI or microSD card
- PetaLinux environment available for download
- Microchip 10/100/1000 Wired Ethernet PHY and MAC ID EEPROM
- Microchip USB 2.0 PHY
- Microchip USB-C input power control
- Dialog GreenPAK™ on/off controller and power sequencer
- TDK μ POL™ power modules
- On-board JTAG and UART debug interface
- STMicroelectronics Temperature and Pressure Sensors
- Battery-backed Real-Time Clock and FPGA Bitstream Security enabled with ECS and Custom Power
- Expansion enabled by three Samtec connectors
- User RGB and Monochrome LEDs
- User Slide Switch and Push Button I/O

Kit includes

- ZUBoard 1CG
- Quick-start card
- Free downloadable AMD Vitis and Vivado ML Standard Edition
- Free downloadable PetaLinux BSP and reference designs

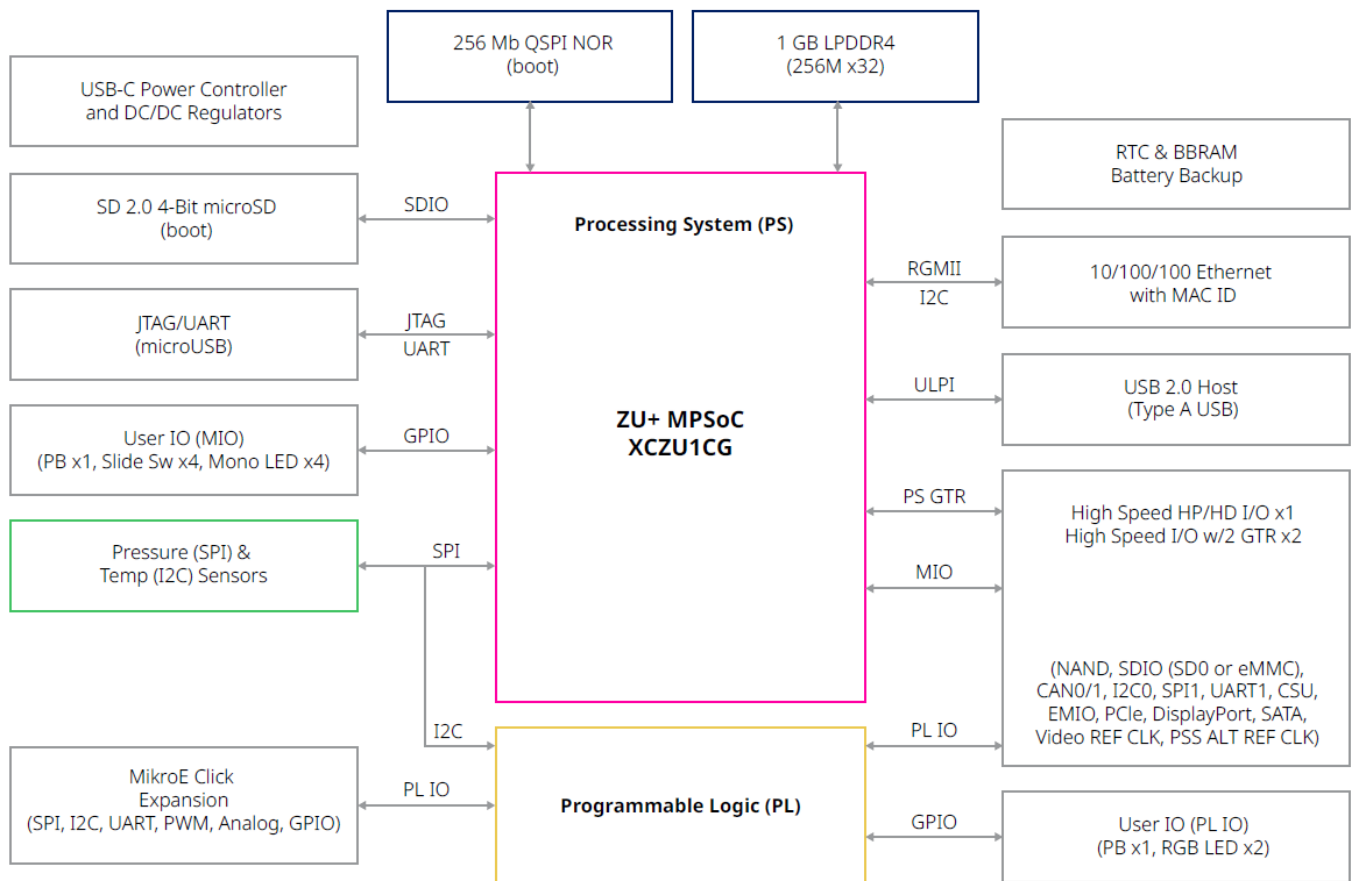
Target apps

- Artificial intelligence
- Machine learning
- Embedded Vision
- Embedded processing
- Robotics

Markets

- Communications
- Healthcare
- Embedded Vision
- Home & Building Automation
- Industrial
- Lighting
- Security & Surveillance
- IoT Design
- Electronic Component Engineering

Block diagram



Featured manufacturers



Parts

Part number	Description	For More Information
AES-ZUB-1CG-DK-G	ZUBoard 1CG development board with ZU+ MPSoC (ZU1CG)	avnet.me/zuboard-1cg

Related parts

Part number	Description	For More Information	
AES-ACC-DPE MMC-G	DisplayPort & eMMC High Speed Mezzanine	avnet.me/dpemmc	

AES-ACC-DUALCAM-G	Dual Camera High Speed I/O Module	avnet.me/dualcam-hsio-module
AES-ACC-HSIO-M2-G	M.2 High Speed I/O Module	avnet.me/m2-hsio-module
S408APGE9-U1000-3	8GB Utility microSD card	
SDSDQAF3-032G-XI	32GB Industrial microSD card	
PSA-A45WM-U	USB-C AC/DC Power Supply, NA, 2-Pin, ITE, 1 Output, 45 W, 20 V, 2.25 A	

C06026-00013	USB Cable, Shielded, 3.0A, USB Type C Plug, 1m, 3.3ft, USB 2.0 White	
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Regions available for purchase: EMA, EMEA

CONTACT INFORMATION

- Global Headquarters
- Tria Technologies
- Industriestr. 16, 76297 Stutensee
- tria-technologies.com
- Worldwide Distributor: Avnet
- Online sales: Farnell
- 1.800.332.8638 / avnet.com
- <https://tria-technologies.com/>
- For more information, visit: avnet.me/zuboard-1cg

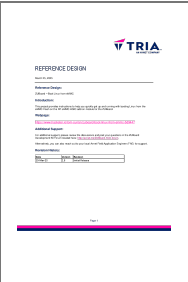
FAQs

- **Q: How do I know if my ZUBoard is compatible with the DP-eMMC HSIO add-on**

module?

- A: The DP-eMMC HSIO add-on module is specifically designed for use with ZUBoard. Ensure you have the correct hardware for compatibility.
- **Q: Can I boot other operating systems apart from Linux using this module?**
 - A: The primary functionality of this module is to boot Linux from eMMC. While it may be possible to boot other operating systems, it is recommended to refer to the project webpage for specific guidance.

Documents / Resources

	TRIA ZUB-1CG-DK ZUBoard Boot Linux from eMMC [pdf] User Guide ZUB-1CG-DK, ZUB-1CG-DK ZUBoard Boot Linux from eMMC, ZUB-1CG-DK, ZUBoard Boot Linux from eMMC, Boot Linux from eMMC, Linux from eMMC, eMMC
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References

- [User Manual](#)

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Boot Linux from eMMC, eMMC, Linux from eMMC, tria, ZUB-1CG-DK, ZUB-1CG-DK ZUBoard Boot Linux from eMMC, ZUBoard Boot Linux from eMMC

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