

Ultra96™ is an ARM-based, Xilinx Zynq UltraScale+™ MPSoC development board based on the Linaro 96Boards specification. The 96Boards' specifications are open and define a standard board layout for development platforms that can be used by software application, hardware device, kernel, and other system software developers. Ultra96 represents a unique position in the 96Boards community with a wide range of potential peripherals and acceleration engines in the programmable logic that is not available from other offerings.

Ultra96 boots from the provided Delkin 16 GB MicroSD card, pre-loaded with PetaLinux. Engineers have options of connecting to Ultra96 through a Webserver using integrated wireless access point capability or to use the provided PetaLinux desktop environment which can be viewed on the integrated Mini DisplayPort video output. Multiple application examples and on-board development options are provided as examples.

Ultra96 provides four user-controllable LEDs. Engineers may also interact with the board through the 96Boards-compatible low-speed and high-speed expansion connectors by adding peripheral accessories such as those included in Seed Studio's Grove Starter Kit for 96Boards.

Micron LPDDR4 memory provides 2 GB of RAM in a 512M x 32 configuration. Wireless options include 802.11b/g/n Wi-Fi and Bluetooth 4.2 (provides both Bluetooth Classic and Low Energy (BLE)). UARTs are accessible on a header as well as through the expansion connector. JTAG is available through a header (external USB-JTAG required). I2C is available through the expansion connector.

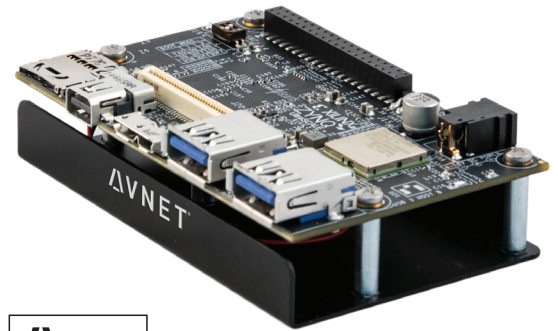
Ultra96 provides one upstream (device) and two downstream (host) USB 3.0 connections. A USB 2.0 downstream (host) interface is provided on the high speed expansion bus. Two Microchip USB3320 USB 2.0 ULPI Transceivers and one Microchip USB5744 4-Port SS/HS USB Controller Hub are specified.

The integrated power supply generates all on-board voltages from an external 12V supply (available as an accessory).

## FEATURES

- Xilinx Zynq UltraScale+ MPSoC ZU3EG A484
- Micron 2 GB (512M x32) LPDDR4 Memory
- Delkin 16 GB MicroSD card + adapter
  - Pre-loaded with PetaLinux environment
- Wi-Fi / Bluetooth
- Mini DisplayPort (MiniDP or mDP)
- 1x USB 3.0 Type Micro-B upstream port
- 2x USB 3.0, 1x USB 2.0 Type A downstream ports
- 40-pin 96Boards Low-speed expansion header
- 60-pin 96Boards High speed expansion header
- 85mm x 54mm form factor
- Linaro 96Boards Consumer Edition compatible

To purchase this kit, visit [www.ultra96.org](http://www.ultra96.org)



## KIT INCLUDES

- Ultra96 development board
- 16 GB pre-loaded MicroSD card + adapter
- Voucher for SDSoc license from Xilinx
- Quick-start instruction card

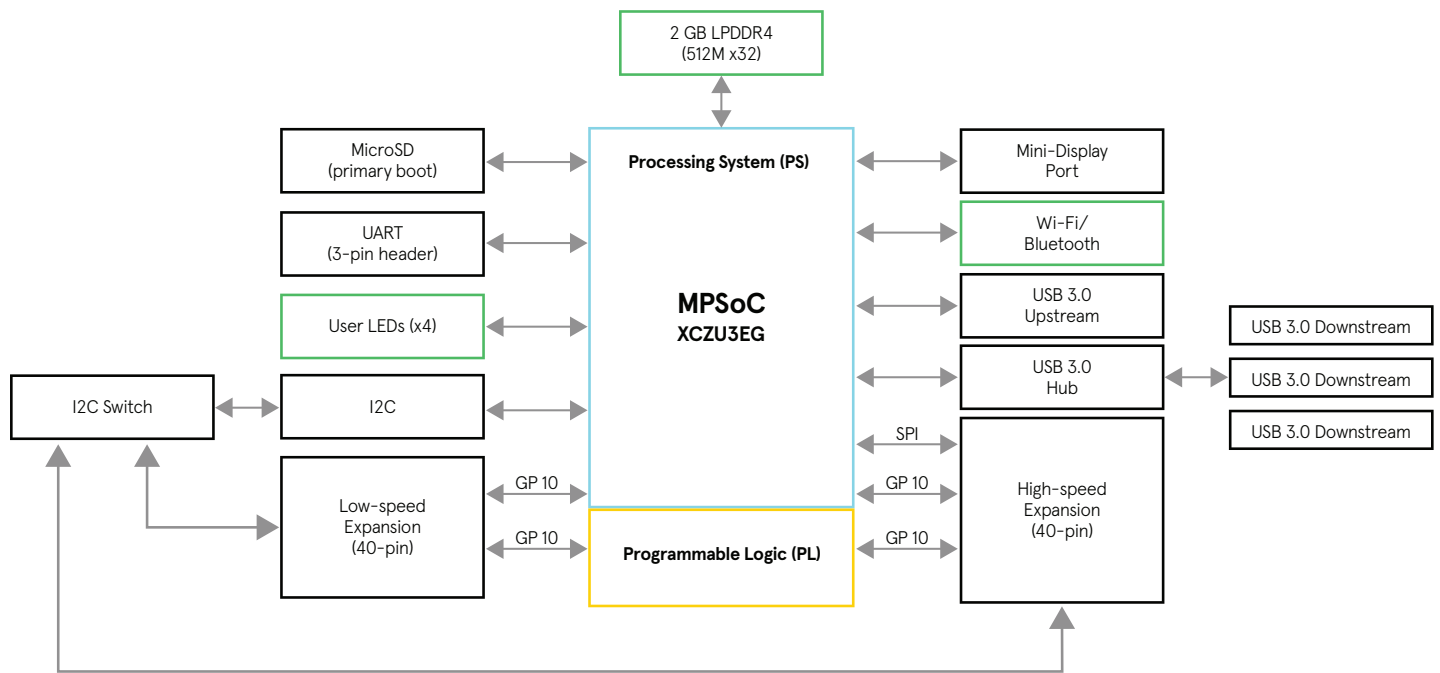
## OPTIONAL ADD-ON ITEMS

- External 12V @ 2.0A power supply
- USB-to-JTAG/UART pod
- Seed Studios Grove Starter Kit for 96Boards
- Accessories package

## TARGET APPLICATIONS

- Artificial Intelligence
- Machine Learning
- IoT/Cloud connectivity for add-on sensors
- Embedded Computing
- Robotics
- Entry level Zynq UltraScale+ MPSoC development environment
- Training, prototyping and proof-of-concept demo platform
- Wireless design and demonstrations using Wi-Fi and Bluetooth

## BLOCK DIAGRAM



## FEATURED MANUFACTURERS

**Amphenol**

**DELKIN DEVICES**  
Rugged Controlled Storage.

**maxim integrated™**

**MICROCHIP**

**Micron®**

**muRata**  
Innovator in Electronics

**OSRAM**  
Opto Semiconductors

**samtec**

**TE**  
connectivity

**XILINX**  
ALL PROGRAMMABLE.

## PARTS

Part Number	Description
AES-ULTRA96-G	Ultra96 Zynq UltraScale+ ZU3EG Development Board

## RELATED PARTS

Part Number	Description
AES-ACC-U96-PWR	External 96Boards compliant power supply kit (12V, 2A, US plug)
AES-ACC-U96-JTAG	USB-to-JTAG/UART pod for Ultra96
AES-ACC-U96-PAK	Wireless keyboard/mouse, MiniDP-to-DP cable, MiniDP-to-HDMI adapter
52AC3171	Grove Starter Kit for 96Boards

Countries Available for Purchase: Americas, EMEA, Japan

## CONTACT INFORMATION

**North America**  
2211 S 47<sup>th</sup> Street  
Phoenix, Arizona 85034  
United States of America  
eval.kits@avnet.com  
1-800-585-1602

**Europe**  
Gruber Str. 60c  
85586 Poing  
Germany  
marketing@silica.com  
+49-8121-77702

**Europe (EBV)**  
Im Technologiepark 2-8  
85586 Poing  
Germany  
http://ebv.com/contact

**Japan**  
Yebisu Garden Place Tower, 23F  
4-20-3 Ebisu, Shibuya-ku  
Tokyo 150-6023 Japan  
eval-kits-jp@avnet.com  
+81-(0)3-5792-8210

**Asia**  
151 Lorong Chuan  
#06-03 New Tech Park  
Singapore 556741  
XilinxAPAC@avnet.com  
+65-6580-6000