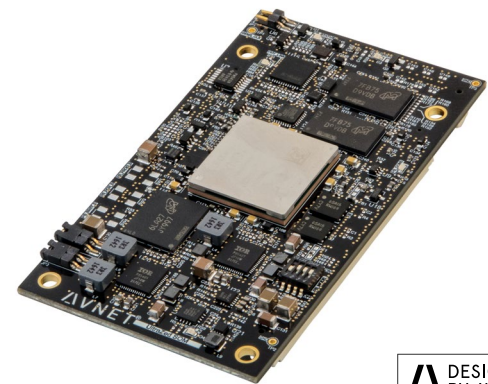# ULTRAZED-EG™ SOM

∧VNET®

UltraZed-EG™ SOM is a highly flexible, rugged, System-On-Module (SOM) based on the AMD Xilinx Zynq® UltraScale+™ MPSoC. Designed in a small form factor, the UltraZed-EG SOM packages all the necessary functions such as system memory, Ethernet, USB, and configuration memory needed for an embedded processing system. The UltraZed-EG provides easy access to 180 user I/O pins, 26 PS MIO pins, and 4 high-speed PS GTR transceivers along with 4 GTR reference clock inputs through three I/O connectors on the backside of the module.

Designers can simply design their own carrier card, plug-in UltraZed-EG SOM, and start their application development with a proven Zynq UltraScale+ MPSoC sub-system. Available with the Zynq UltraScale+ MPSoC XCZU3EG-SFVA625 device, the UltraZed-EG SOM enables designers to build high-performance systems with confidence and ease. By simply plugging the off-the-shelf UltraZed-EG SOM into an application specific carrier card, system bring-up and debug time can be cut in half, while overall system cost can be reduced by 20% or more versus a standard chip-down design.

DESIGNED BY AVNET

Features

- AMD Xilinx Zynq UltraScale+ MPSoC device
    - XCZU3EG-1SFVA625E
    - XCZU3EG-1SFVA625I
- DDR4 SDRAM (2GB, in x32 configuration)
- Dual QSPI Flash (64MB)
- I2C EEPROM (2Kb)
- eMMC Flash (8GB, in x8 configuration)
- USB 2.0 ULPI PHY
- Gigabit Ethernet PHY
- I2C 8-bit I/O expander
- 2-channel I2C switch/mux
- PS reference clock input
- On-board voltage regulators
- Power-On Reset (POR) circuit
- 4-position boot mode DIP switch
- Linux BSP and reference designs

- 3 JX connectors, providing the following:
    - 180 user PL I/O pins
    - 26 user PS MIO pins (one full MIO bank)
    - 4 PS GTR Transceivers (Support SATA 3.1, USB 3.0, PCIe Gen2, Display Port)
    - PS JTAG interface
    - PL SYSMON interface
    - USB 2.0 connector interface
    - Gigabit Ethernet RJ45 connector interface
    - PMBus interface
    - SOM PS VBATT battery input
    - Carrier Card I2C interface
    - SOM Reset input
    - Carrier Card interrupt input
    - Carrier Card Reset output
    - Power Good output
    - SOM to Carrier Card ground pins
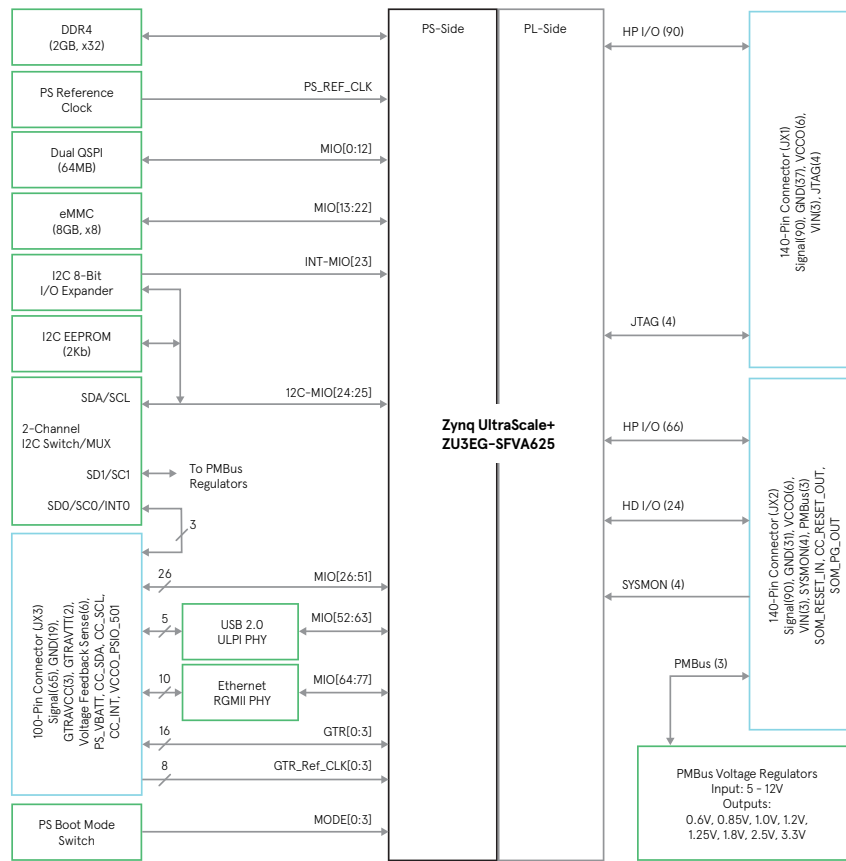   - SOM input voltages and output sense pins

Kit includes

- UltraZed-EG SOM

Target apps

- Embedded system-on-module (SOM)
- Embedded vision
- Test & measurement
- Motor control
- Industrial automation

For more information visit: avnet.me/ultrazed-eg
For custom features, email customize@avnet.com

/ULTRAZED™

DDR4
(2GB, x32)

PS Reference Clock — PS_REF_CLK

Dual QSPI (64MB) — MIO[0:12]

eMMC (8GB, x8) — MIO[13:22]

I2C 8-Bit I/O Expander — INT-MIO[23]

I2C EEPROM (2Kb)

SDA/SCL — I2C-MIO[24:25]

2-Channel I2C Switch/MUX

SD1/SC1 — To PMBus Regulators

SD0/SC0/INT0 — 3

100-Pin Connector (JX3) Signal(65), GND(19), GTRAVCC(3), GTRAVTT(2), Voltage Feedback Sense(6), PS_VBATT, CC_SDA, CC_SCL, CC_INT, VCCO_PSIO_501

26 — MIO[26:51]

5 — USB 2.0 ULPI PHY — MIO[52:63]

10 — Ethernet RGMII PHY — MIO[64:77]

16 — GTR[0:3]

8 — GTR_Ref_CLK[0:3]

PS Boot Mode Switch — MODE[0:3]

PS-Side | PL-Side

Zynq UltraScale+ ZU3EG-SFVA625

HP I/O (90)

140-Pin Connector (JX1) Signal(90), GND(37), VCCO(6), VIN(3), JTAG(4)

JTAG (4)

HP I/O (66)

HD I/O (24)

SYSMON (4)

140-Pin Connector (JX2) Signal(90), GND(31), VCCO(6), VIN(3), SYSMON(4), PMBus(3), SOM_RESET_IN, CC_RESET_OUT, SOM_PG_OUT

PMBus (3)

PMBus Voltage Regulators
Input: 5 – 12V
Outputs:
0.6V, 0.85V, 1.0V, 1.2V, 1.25V, 1.8V, 2.5V, 3.3V

Featured manufacturers

AMD XILINX   Micron   Infineon   MICROCHIP   TE connectivity

Parts

Part number	Description	Price and availability
AES-ZU3EG-1-SOM-G	UltraZed-EG SOM (Extended Temp)	avnet.me/ultrazed-eg-som-pdp
AES-ZU3EG-1-SOM-I-G	UltraZed-EG SOM (Industrial Temp)	avnet.me/ultrazed-eg-som-i-pdp

Related parts

Part number	Description	Price and availability
AES-ZU-IOCC-G	UltraZed IO Carrier Card	avnet.me/ultrazed-eg-iocc-pdp
AES-ZU-PCIECC-G	UltraZed PCIe Carrier Card	avnet.me/ultrazed-eg-pcie-pdp

Countries available for purchase: Americas, EMEA, Asia, Japan

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