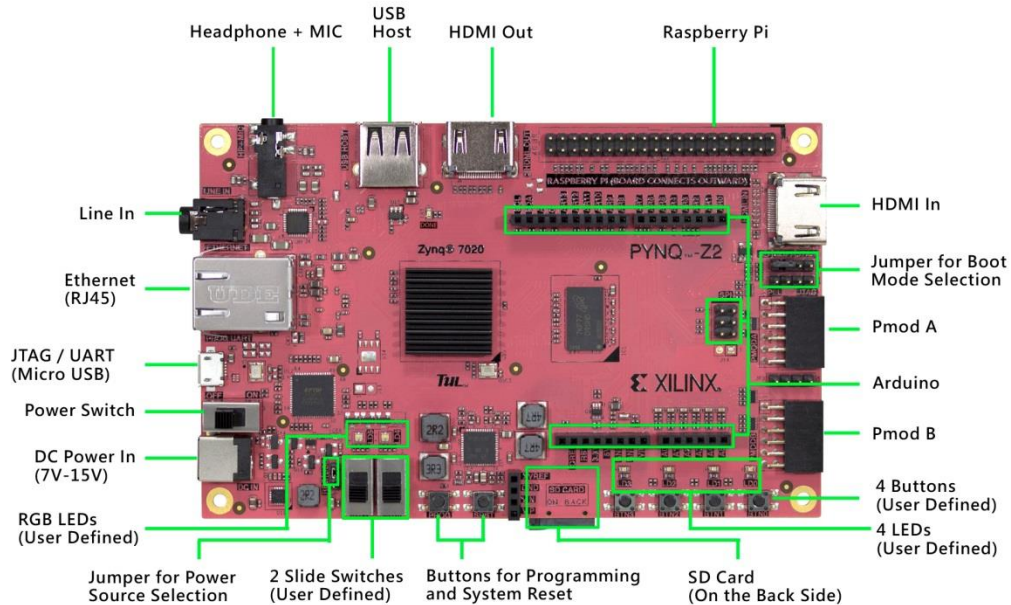


# Introducing TUL PYNQ™-Z2



## ZYNQ XC7Z020-1CLG400C

- 650MHz dual-core Cortex-A9 processor
- DDR3 memory controller with 8 DMA channels and 4 High Performance AXI3 Slave ports
- High-bandwidth peripheral controllers: 1G Ethernet, USB 2.0, SDIO
- Low-bandwidth peripheral controller: SPI, UART, CAN, I2C
- Programmable from JTAG, Quad-SPI flash, and microSD card
- Programmable logic equivalent to Artix-7 FPGA
  - 13,300 logic slices, each with four 6-input LUTs and 8 flip-flops
  - 630 KB of fast block RAM
  - 4 clock management tiles, each with a phase-locked loop (PLL) and mixed-mode clock manager (MMCM)
  - 220 DSP slices
  - On-chip analog-to-digital converter (XADC)

### Memory

- 512MB DDR3 with 16-bit bus @ 1050Mbps
- 16MB Quad-SPI Flash with factory programmed 48-bit globally unique EUI-48/64™ compatible identifier
- microSD slot

### Power

- Powered from USB or 7V-15V external power source

## USB and Ethernet

- Gigabit Ethernet PHY
- Micro USB-JTAG Programming circuitry
- Micro USB-UART bridge
- USB 2.0 OTG PHY (supports host only)

## Audio and Video

- HDMI sink port (input)
- HDMI source port (output)
- I2S interface with 24bit DAC with 3.5mm TRRS jack
- Line-in with 3.5mm jack

## Switches, Push-buttons and LEDs

- 4 push-buttons
- 2 slide switches
- 4 LEDs
- 2 RGB LEDs

## Expansion Connectors

- Two standard Pmod ports
  - 16 Total FPGA I/O (8 shared pins with Raspberry Pi connector)
- Arduino Shield connector
  - 24 Total FPGA I/O
  - 6 Single-ended 0-3.3V Analog inputs to XADC
- Raspberry Pi connector
  - 28 Total FPGA I/O (8 shared pins with Pmod A port)

# TUL PYNQ-Z2

## Product Specification

## Photos of Product

Part number	1M4-M000127000
EAN	TUL PYNQ-Z2   4713436170785
Processor:	Dual-Core ARM Cortex-A9
FPGA:	1.3M reconfigurable gates
Memory:	512MB DDR3 / 128Mbit FLASH
Storage:	Micro SD card slot
Video:	HDMI In / HDMI Out
Audio:	HP+Mic, Line in, ADAU1761 AUDIO codec
Network:	10/100/1000 Ethernet
Expansion:	USB Host connected to ARM PS
Interfaces GPIO:	Arduino Shield connector, Raspberry Pi connector, 2 Pmod ports
Other I/O:	6 User LEDs, 4 Push-buttons, 2 Slide Switches
Dimensions:	87mm x 140mm

