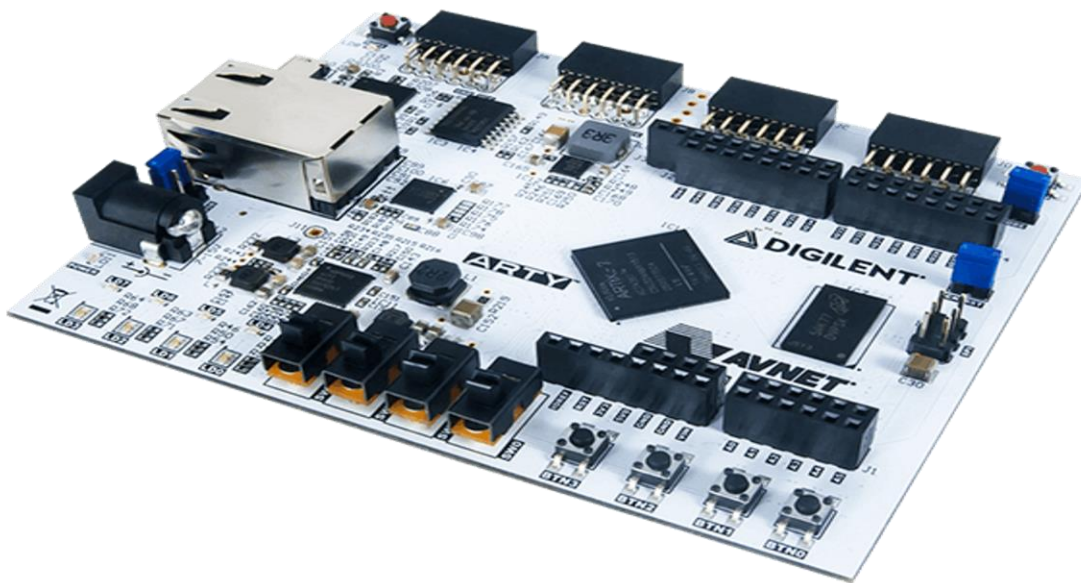# Arty A7-100T: Artix-7 FPGA Development Board

Part Number: 410-319-1

The Arty family of Digilent FPGA/SoC boards was designed with versatility and flexibility in mind. With universally popular Arduino™ headers and multiple Pmod™ ports, an Arty will be the most adaptable FPGA/SoC board in your toolbox.

The Arty A7 is a ready-to-use development platform designed around the Xilinx Artix-7 FPGA family. With the Artix-7 devices, the Arty A7 board provides the highest performance-per-watt fabric, transceiver line rates, DSP processing, and AMS integration in the Arty family. With the MicroBlaze Soft Processor Core from Xilinx, you can create embedded applications with a variety of peripherals, memory, and interfaces.

	Arty A7-100T
FPGA part	XC7A100TCSG324-1
Logic Cells	101,440
DSP Slices	240
Memory (Kbits)	4,860

- FPGA Features
  - Internal clock speeds exceeding 450MHz
  - On-chip analog-to-digital converter (XADC)
  - Programmable over JTAG and Quad-SPI Flash
- System Features
  - 256MB DDR3L with a 16-bit bus @ 333 MHz (667 MT/s)
  - 16MB Quad-SPI Flash
    - Due to supply chain constraints, either the S25FL127S or S25FL128S Flash Memory may be loaded on your board. These parts are not functionally equivalent, but flash programming through Vivado and the QSPI boot mode are not affected. More information can be found in the Arty A7 Reference Manual, available in the Support tab.
  - USB-JTAG Programming circuitry (Micro B USB cable required)
  - Powered from USB or any 7V-15V source

- System Connectivity
  - 10/100 Mbps Ethernet
  - USB-UART Bridge
- Interaction and Sensory Devices
  - 4 Switches
  - 4 Buttons
  - 1 Reset Button
  - 4 LEDs
  - 4 RGB LEDs
- Expansion Connectors
  - 4 Pmod connectors
  - Arduino/chipKIT Shield connector