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Digilent FPGA

Genesys 2 Kintex-7 FPGA Development Board

SKU: 410-300



Product Description

The Digilent Genesys 2 board is an advanced, high-performance, ready-to-use digital circuit development platform based on the powerful Kintex-7™ Field Programmable Gate Array (FPGA) from Xilinx. With its high-capacity, high-speed FPGA, fast external memories, high-speed digital video ports, and wide expansions options, the Genesys 2 is well suited for data and video processing applications. Several built-in peripherals, including Ethernet, audio and USB 2.0 allow a wide range of additional applications. The fully-populated high-speed FMC HPC connector opens the door to great expansion possibilities.

The Kintex-7 FPGA offers more capacity, higher performance, and more resources than the Virtex-5 from the first-generation Genesys.

Features:

Xilinx Kintex-7™ FPGA (XC7K325T-2FFG900C)
50,950 logic slices (up 7x), each with four 6-input LUTs and 8 flip-flops
Close to 16 Mbits of fast block RAM (up 7x)
Ten clock management tiles, each with phase-locked loop (PLL)
840 DSP slices (up 17x)
Internal clock speeds exceeding 450MHz

On-chip analog-to-digital converter (XADC)
Up to 10.3125Gbps gigabit transceivers
1800Mbps DDR3 data rate with 32-bit data width
Commercial -2 speed grade

The Genesys 2 also offers an improved collection of ports and peripherals, including:

Fully-populated 400-pin FMC HPC connector w/ ten GTX lanes
USB-UART Bridge
128x32 pixel OLED
16-bit VGA connector
Pmod connector for XADC signals
Two four-lane DisplayPort connectors
HDMI Sink and HDMI Source
10/100/1000 Ethernet PHY
1GB 1800Mbps on-board DDR3
USB 2.0 Host/Device/OTG PHY
Dedicated USB port for JTAG programming and data transfers
Micro SD card connector
Audio codec w/ four 3.5mm jacks
Serial Flash
Five Pmod ports
USB HID Host for mice, keyboards and USB MSD Host for storage

The Genesys 2 can be programmed from various sources, like USB thumb drive, microSD, the on-board non-volatile Flash or the on-board USB-JTAG programmer circuit.

The Genesys 2 is compatible with Xilinx's new high-performance Vivado® Design Suite as well as the ISE toolset, which includes ChipScope and EDK. Vivado comes with all the required cable drivers, so no separate installation is required. The free "WebPACK" versions of these toolsets do not support the Kintex-7 325T, however for a limited time a voucher with Design Edition will be included with no additional cost.

What's Included:

Genesys 2 Kintex-7 FPGA
Digilent custom cardboard box with protective foam
USB A to Micro-B programming cable and one 12V, 3A wall power supply with US and EU adapters
Vivado Design Suite voucher

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