



Altera - DK-DEV-1AGX60N - Arria GX Development Kit

Product Overview:

The Arria® GX FPGA Development Kit delivers a complete environment for the development and testing of designs implementing high-speed serial interfaces in Arria GX FPGAs. This development kit is built on a PCIe form-factor card and targets the development of designs utilizing PCI Express x1 and x4, Gigabit Ethernet, and/or the Serial RapidIO® (SRIO) standard protocols.



Kit Contents:

The Arria GX FPGA Development Kit is RoHS compliant and features the following:

- Arria GX development board
 - Arria GX EP1AGX60DF780C6N FPGA
 - PCI Express x4 edge connector
 - One HSMC connector for Gigabit Ethernet or SRIO connectivity via optional
 - HSMC-based daughter cards
 - Power and analog devices from Linear Technology
 - 32-MByte x 16 DDR2 SDRAM operating at 233 MHz
 - Switches and indicators
 - Configuration circuitry
- Quartus® II Web Edition design software
- PCI Express Development Kit, Arria GX Edition CD ROM
 - PCI Express reference design
 - Complete documentation
- Support for OpenCore Plus intellectual property (IP) mega functions
 - PCI-Express Compiler: x1 and x4
 - Triple-Speed Ethernet
 - Serial RapidIO

- Cable and accessories
 - USB-Blaster TM download cable
 - External AC adapter power supply
 - Power cord (including support for UK, Europe)

Key Features:

- TriMatrix™ memory consisting of three RAM block sizes to implement true dual-port memory and first-in first-out (FIFO) buffers with performance up to 380 MHz
- Up to 16 global clock networks with up to 32 regional clock networks per device
- High-speed DSP blocks provide dedicated implementation of multipliers, multiply-accumulate functions, and finite impulse response (FIR) filters
- Up to four enhanced PLLs per device provide spread spectrum, programmable bandwidth, clock switch-over, and advanced multiplication and phase shifting
- Support for numerous single-ended and differential I/O standards
- High-speed source-synchronous differential I/O support on up
- Support for source-synchronous bus standards, including SPI-4 Phase 2 (POS-PHY Level 4), SFI-4.1, XSBI, UTOPIA IV, NPSI, and CSIX-L1
- Support for high-speed external memory including double data rate (DDR and DDR2) SDRAM, and single data rate (SDR) SDRAM
- Support for multiple intellectual property mega functions from Altera® MegaCore® functions and Altera Mega function Partners Program (AMPPSM)

Ordering Information:

Products:

Part Number	Manufacturer	Farnell P/N	Newark P/N
DK-DEV-1AGX60N	Altera	1560818	94M6866

Associated Products:

Part Number	Manufacturer	Description	Farnell P/N	Newark P/N
EP1AGX20CF484I6N	Altera	Programmable Logic IC	1549331	94M7203
EP1AGX50DF1152C6N	Altera	Programmable Logic IC	1549328	94M7206
EPCS16SI16N	Altera	Serial Config Memory, 16M, SOIC16	1453493	80P4115
EPCS4SI8N	Altera	Serial Config Memory, 4M, SOIC8	1453496	58M5866

LTC4416EMS-1#PBF	Linear	Battery Management IC TSSOP10	NA	56M9540
LTC3026EDD#PBF	Linear	LDO REG, 1.5A, 10DFN	1663705	56M7306
LT1963AEQ#PBF	Linear	VREG, LDO ADJ, D2-PAK-5	1273625	57M7443
LTC3728LEUH-1	Linear	SMPS Controller, LLCC32,PLASTIC	NA	56M8241

Similar Products:

Part Number	Manufacturer	Description	Support Device	Farnell P/N	Newark P/N
EK-OXPCIE840	Oxford	OXPCle840 evaluation board	OXPCle840	1642225	08P1102
EK-OXPCIE952	Oxford	OXPCle952 evaluation board	OXPCle952	1642221	08P1103
EK-OXPCIE954	Oxford	OXPCle954 evaluation board	OXPCle954	1642222	08P1104
EK-OXPCIE958	Oxford	OXPCle958 evaluation board	OXPCle958	1642223	08P1105

Document List:

Datasheets:

Part Number	Description	Size
Arria GX	Arria GX Device Data Sheet	3.23MB
EP1AGX20CF484I6N	Arria GX Device Handbook (All Sections)	10MB
LTC4416	LTC4416 - 36V, Low Loss Dual PowerPath Controllers for Large PFETs	-
LTC3026	LTC3026 - 1.5A Low Input Voltage VLDO Linear Regulator	-
LT1963A	LT1963A - 1.5A, Low Noise, Fast Transient Response LDO Regulators	-
LTC3728L-1 - Dual	LTC3728L-1 - Dual, 550kHz, 2-Phase Synchronous Regulator	-
EPCS16SI8N	EPCS16SI8N Serial Configuration Device Datasheet	-
EPCS4SI8N	EPCS4SI8N Serial Configuration Device Datasheet	-

Application Notes:

File Name	Size
Quick Start Guide	-
Users Guide	-
Arria GX Development Board Reference Manual	-
Arria GX Development Kit Getting Started User Guide	-

Hardware & Software:

File Name	Size
Board Assembly	-
Board Mechanicals	-
Board Schematic	-
Bill of Materials	-
Quartus II Web Edition Software	-