Altera - DK-START-4CGX15N - Cyclone IV GX Transceiver Starter Board

Product Overview:

The Cyclone IV GX transceiver starter board provides a hardware platform for developing and prototyping low-power, high-volume, feature-rich designs as well as to demonstrate the Cyclone IV GX device's on-chip memory, embedded multipliers, and the Nios® II embedded soft processor. The board provides peripherals and memory interfaces to facilitate the development of the Cyclone IV GX transceiver designs.

The Cyclone IV GX transceiver starter board is especially suitable for cost-sensitive applications that require high-speed transceivers and power integrity solutions.

Kit Contents:

The Cyclone IV GX transceiver starter Kit contents are:

- Cyclone IV GX transceiver starter board
- USB cable
- Power adapter and cables
- Complete documentation (User guide, Board schematic & Reference manual)

Key Features:

The Cyclone IV GX transceiver starter board is RoHS compliant and features:

- Cyclone IV GX EP4CGX15BF14C8N FPGA
- Configuration status and set-up elements

    - MAX II CPLD EPM2210 System Controller enabling passive serial (PS) configuration from flash
    - Embedded USB-Blaster for using the Quartus II Programmer
    - JTAG header for external USB-Blaster

- Altera EPCS serial configuration device

- Clocks

    - FPGA clock sources: 50 MHz, 125 MHz, and SMA clock input
    - Other on-board oscillators: 6 MHz, 24 MHz, and 25 MHz

- General user input/output

    - LEDs
    - Two-line character LCD display
    - Push-buttons

- Memory devices

    - 16 MB of flash
    - 2 MB of synchronous SRAM

- Component and interfaces

    - PCI Express edge connector
    - 10/100/1000BASE-T Ethernet PHY with RJ-45 connector or one transceiver to SMA connectors (requires a minor board modification)
    - On-board power measurement circuitry

Ordering Information:

Products:

Part Number	Manufacturer	Farnell P/N	Newark P/N
DK-START-4CGX15N	Altera	1797528	69R7639

Associated Products:

Part Number	Manufacturer	Description	Farnell P/N	Newark P/N
EP4CGX15BF14C8N	Altera	Cyclone IV FPGA	1797527	71R8396
EPM2210F256C5N	Altera	MAX II CPLD	1635103	51R0489
EPM240M100C5N	Altera	MAX II CPLD	1635095	51R0494
LT3510	LTC	Step down regulator	1663572	58M1039
LTC2418CGN	LTC	Analog to Digital Converter	1503408	56M5504

Similar Products:

Part Number	Manufacturer	Description	Support Device	Farnell P/N	Newark P/N
DK-SI-4S100G2N	Altera	Transceiver Signal Integrity Development Kit, Stratix IV	EP4S100G2F 40I1N FPGA	NA	71R4395
DK-SI-4SGX230N	Altera	Transceiver Signal Integrity Development Kit, Stratix IV	EP4SGX230 KF40C2N FPGA	1779068	51R0464

Document List:

Datasheets:

Part Number	Description	Size
EP4CGX15BF14C8N	Cyclone IV FPGA Datasheet	289KB
EPM2210F256C5N	MAX II CPLD	982KB
EPM240M100C5N	MAX II CPLD	982KB
LTC2418CGN	ADC Datasheet	792KB

Application Notes:

File Name	Size
Implementing Dynamic Reconfiguration in Cyclone IV GX Devices	2MB
HST Jitter and BER Estimator Tool for Stratix IV GX and GT Devices	2MB

Hardware & Software:

File Name	Size
Quartus II Web Edition Software v9.1	1.9GB
Nios II Embedded Design Suite	563MB