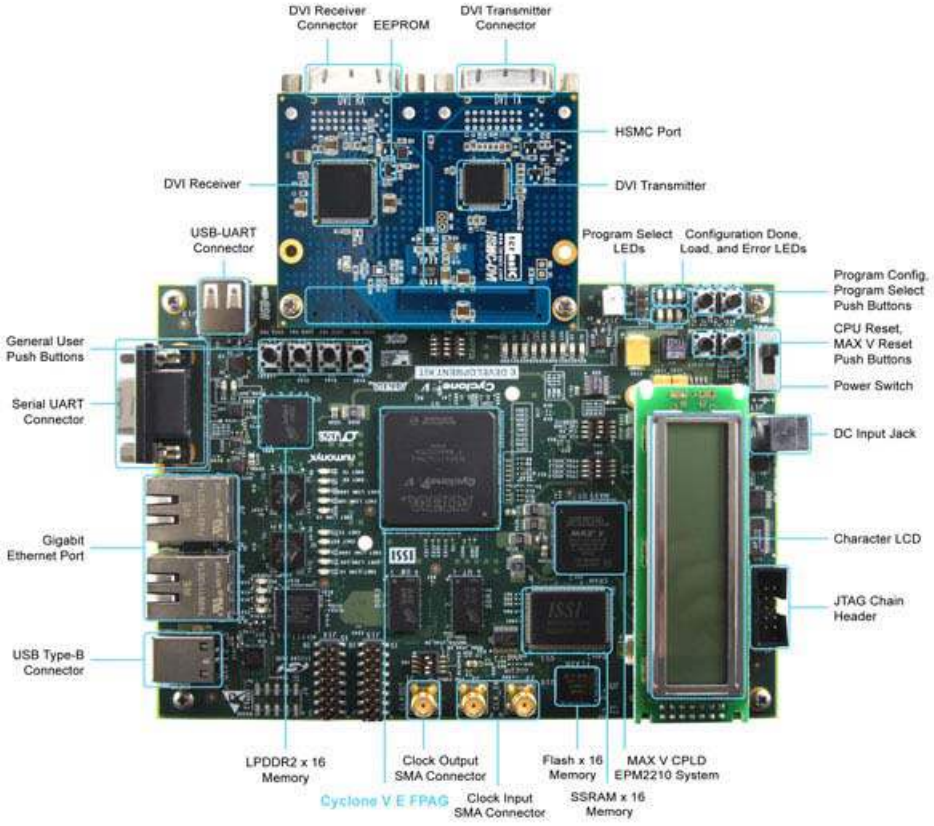
Cyclone V E Video Development System

The Cyclone V E Video Development System is an ideal video processing platform for high-performance, cost-effective video applications. The Cyclone® V E Development Kit offers a comprehensive general purpose development platform for many markets and applications. With multiple banks of DDR3 and LPDDR2 memory, this kit provides the ideal low-cost platform for high-bandwidth video processing. Additional features include an LCD character display, LEDs, user switches, USB and RJ-45 connectors.

The DVI-HSMC daughter card part of the bundled package will allow developers to access high quality and high resolution video signals that can support resolution up to 1600x1200. A complete DVI video controller design with source code is provided.

Terasic recognized for its strong design expertise in high-end video, imaging and multimedia products have made available a video development package that targets video processing development. The platform can also allow users to experience advanced image processing designs incorporating VIP (Altera’s Video and Image Processing Suite MegaCore Functions).

Cyclone V E Video Development System



Cyclone V E Video Development System

Altera Cyclone V E Video Development System

Featured devices:

- Cyclone V E FPGA - 5CEFA7F31C7NES
- MAX V CPLD - 5M2210ZF256I5N (system controller)
- MAX II CPLD - EPM240M100I5N (embedded USB Blaster II)

Configuration:

- On-board USB-Blaster™ II cable (USB, PHY, Max®V CPLD)
- JTAG direct via JTAG header

Memory devices

- DDR3 x32 at 300 MHz (soft memory controller)
- LPDDR2 x16 (soft memory controller)
- Flash (512 Mb)
- SSRAM (18 Mb)
- EEPROM (64 Kb)

General user input/output

- User control
- Four pushbuttons
- Five LEDs
- Four DIP switches
- 2x Resets (CPU reset, Dev Clear)
- LCD: Character LCD (16x2)

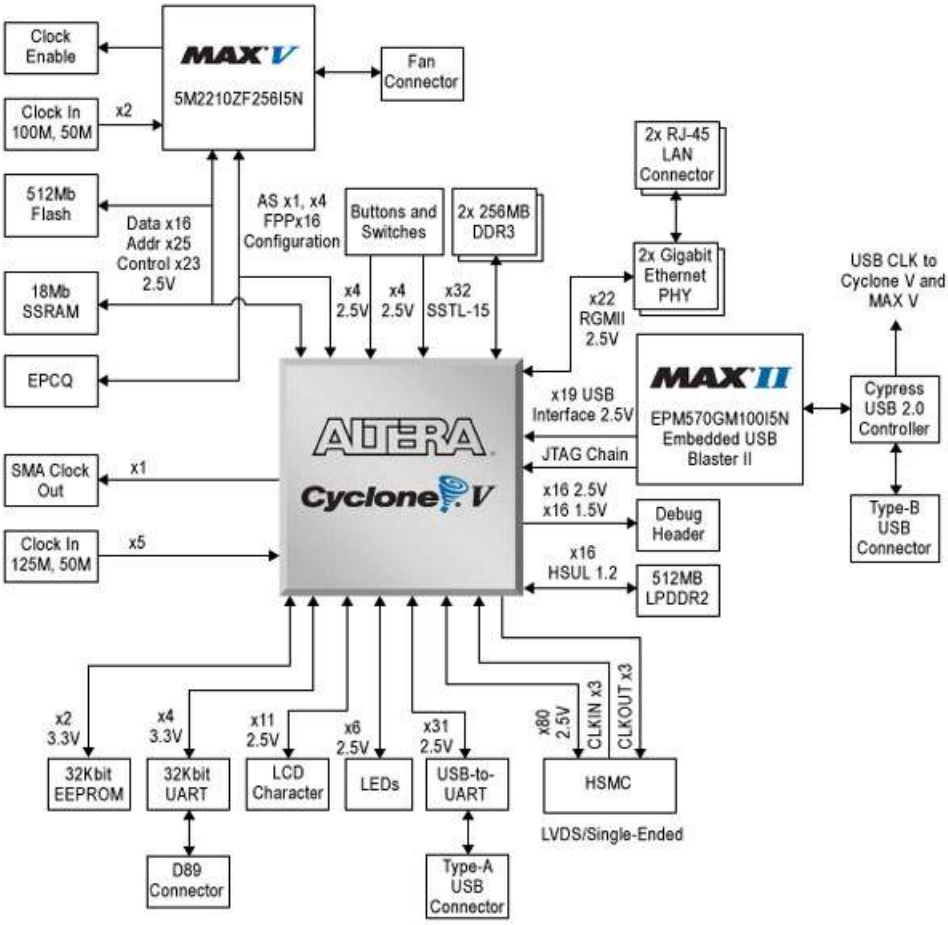
Components and interfaces

- RJ45 for Ethernet
- UART interface

Quartus®II design software information

- Quartus II Web Edition Software

Altera Cyclone V E FPGA Development Board Block Diagram



Terasic DVI-HSMC Card

Digital Transmitter

- One DVI transmitter with single transmitting port
- Digital Visual Interface (DVI) Compliant
- Supports resolutions from VGA to UXGA (25 MHz – 165 MHz Pixel Rates)
- Universal Graphics Controller Interface
    - 12-Bit, Dual-Edge and 24-Bit, Single-Edge Input Modes
    - Adjustable 1.1 V to 1.8 V and Standard 3.3 V CMOS Input Signal Levels
    - Fully Differential and Single-Ended Input Clocking Modes
    - Standard Intel 12-Bit Digital Video Port Compatible as on Intel™ 81x Chipsets
- Enhanced PLL Noise Immunity
    - On-Chip Regulators and Bypass Capacitors for Reducing System Costs
- Enhanced Jitter Performance
    - No HSYNC Jitter Anomaly
    - Negligible Data-Dependent Jitter
        - Programmable Using I²C Serial Interface
        - Single 3.3-V Supply Operation

Digital Receiver

- One DVI receiver with single receiving port

- Supports UXGA Resolution (Output Pixel Rates Up to 165 MHz)
- Digital Visual Interface (DVI) Specification Compliant
- True-Color, 24 Bit/Pixel, 16.7M Colors at 1 or 2-Pixels Per Clock
- Laser Trimmed Internal termination Resistors for Optimum Fixed Impedance Matching
- 4x Over-Sampling
- Reduced Ground Bounce Using Time Staggered Pixel Outputs
- Lowest Noise and Best Power Dissipation Using TI PowerPAD™ Packaging

TOP

News & Events | About Terasic | Products | Turnkey Solutions | Training | FAQ | Contact Us | Forum | Facebook | YouTube

TEL : +886-3-5750880 FAX : +886-3-5726690 E-MAIL : sales@terasic.com