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Overview

Chameleon, able to change how it presents itself to the world by adapting to the environment.

The Chameleon96™ board, based on Intel® Cyclone V SoC FPGA, is a member of 96Boards community and complies with Consumer Edition board specifications. The Chameleon96™ meets all 96Boards mandatory specifications (excluding MIPI SDI Interface) and most optional specifications. The Chameleon96™ features Dual ARM Cortex-A9 processors and a set of peripherals allow direct interfacing and connecting to MMC/SD card, HDMI out, USB, WLAN and BLE. Two expansion connectors provide additional interfaces to cameras, USB, UARTs, I2C, SPI and GPIOs. The use of the FPGA fabric for the video processing allows development of custom IPU/GPU/VPU solutions on this platform.

Specifications

Processor

- Intel ® Cyclone V SoC FPGA
- Dual ARM ® Cortex-A9
- 110K Logic Elements FPGA fabric

Memory/Storage

Kit Contents

- CV 96Boards - Chameleon96™
- SD card with Linux image
- Power supply
- UART to USB cable
- Micro USB cable for on-board Blaster II
- Quick Start Guide

Design Resources

- Schematic
- BOM
- Assembly Drawings
- Gerber Files
- HDL and SPL design files/sources
- Linux Virtual Machine with all sources and tool-chain.
- SVN server for latest code updates

Support Resources

- Chameleon96™ User Guide
- Chameleon96™ Software Manual
- Chameleon96™ Initial Network Setup
- NovTech YouTube channel
- Arrow Support
- NovTech Support support@novtech.com

- 512MB DDR3L (support to 1GByte)
- 4 to 64 GByte microSD

Video Out

- Graphics based on Intel ® Video Suite for FPGA
- Up to 1080p@60fps HD video through a HDMI interface

Camera Support

- MIPI CSI interface (Mobile Industry Processor Interface - Camera Serial Interface) 2x lane. (requires a custom IP for the FPGA)

Audio

- HDMI Audio
- Bluetooth Audio
- I2S 4Wire interface via expansion connector

Connectivity

- WLAN 802.11 b/g/n 2.4GHz
- Bluetooth 4.1
- One USB 2.0 OTG micro AB [1]
- Two USB 2.0 HOST
- 1 USB 2.0 Host via expansion connector
- Integrated USB-Blaster II JTAG cable

I/O Interfaces

- One 40-pin Low Speed (LS) expansion connector
    - UART x2, SPI, I2S, I2C x2, GPIO x12 and DC power.
- One 60-pin High Speed (HS) expansion connector
    - SDHC/SDIO, 2L-MIPI DSI, 2L-MIPI CSI, I2C, USB 2.0 HOST & USB 2.0 HOST HSIC
- The board can be made compatible with Arduino using an add-on mezzanine board.

External Storage

- Micro SD card slot

User Interface

- Power Button
- Reset Button
- 6 LED Indicators

Ordering Information

Chameleon96™ can be ordered from NovTech authorized distributor, Arrow Electronics here.

Contact Details

Sales: (954) 507-4471, sales@novtech.com

Additional Resources

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Similar Products

iMX7 96Boards - Meerkat™

NOVSOM®CV

NOVSOM®CVLite

- 4 – user controllable
- 2 – for radios (BT and WLAN activity)

OS-Support

- Linux OS, terminal base (BuildRoot build)
- Linux OS, GUI (Yocto build)

Power, Mechanical and Environmental

- +5V to +42VDC (exceeding 96Boards specifications)
- Dimensions: 54mm x 85mm meeting 96Boards™ Consumer Edition standard dimensions specifications
- Operating Temperature: 0°C to +70°C
- RoHS and Reach compliant

[1] Based on a DIP Switch selection, USB operates as a single OTG port or three USB host ports

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