Xylon d.o.o.

Fallerovo setaliste 22
10000 Zagreb, Croatia
Phone: +385 1 368 00 26
Fax: +385 1 365 51 67
E-mail: support@logicbricks.com
URL: www.logicbricks.com

Features

- Xilinx® Spartan®-6 XC6LX45T FGG484
- Small form factor 165mm x 125mm (6.5”x5”)
- 2 x 128MB/16-bit DDR2 SDRAM
- 2 x 8MB SPI Multi I/O QSPI Flash
- 2 GB SD Card
- 2x simultaneous video inputs selectable from 4x CVBS or 2x S-Video video inputs
- LVDS differential pairs directly connected to the FPGA
- 2x high-speed LVDS Gbit/s MGTs with Rosenberger connectors
- Configurable DVI or VGA video output
- 4x LVDS camera interface (suitable for surround vision)
- Communication interfaces:
  - SATA
  - Parallel IO (84 FPGA pins, 4 expansion connectors, shared signals)
  - CAN
  - CAN single wire
  - LIN
  - RS232
  - JTAG
  - Interface to external Bluetooth module
  - iPod control interface
- Touch-screen controller (4-wire resistive)
- 4x stereo audio and 1x microphone inputs
- 2x stereo line, 2x headphones, 2x IR headphones audio outputs
- Power and control output for CCFL backlight inverters and LCD backlights available through add-on boards
- Connectors for standard PC power supply
- Reference FPGA design and demo applications

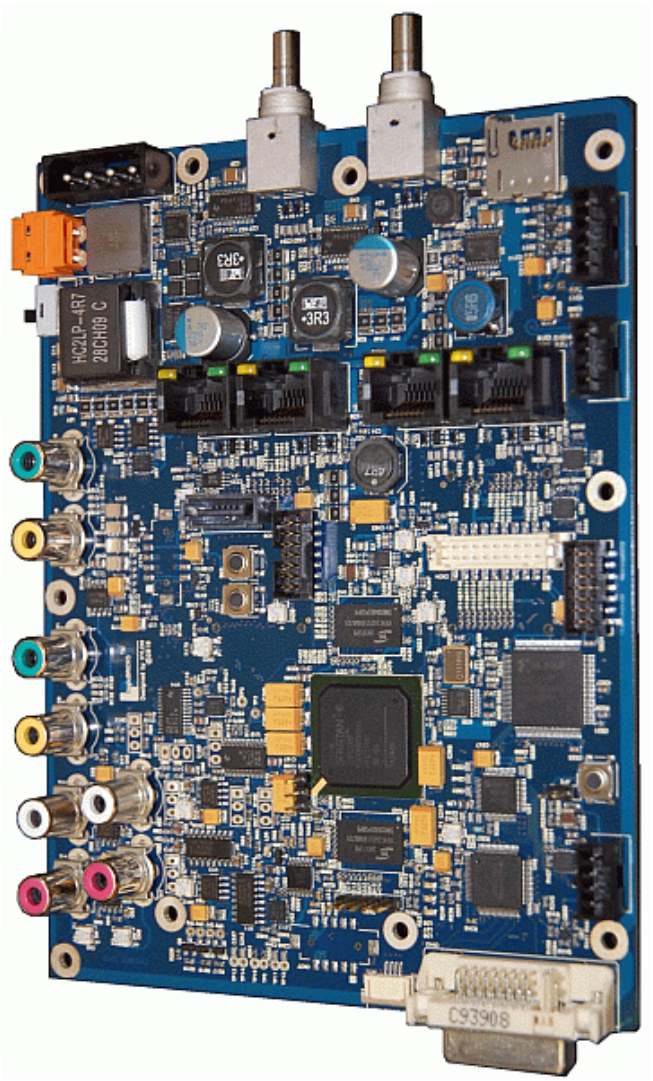

Figure 1: The logiCRAFT6 Platform

Applications

- Automotive, Medical, Consumer, Industrial
- Defense/Aerospace, and others

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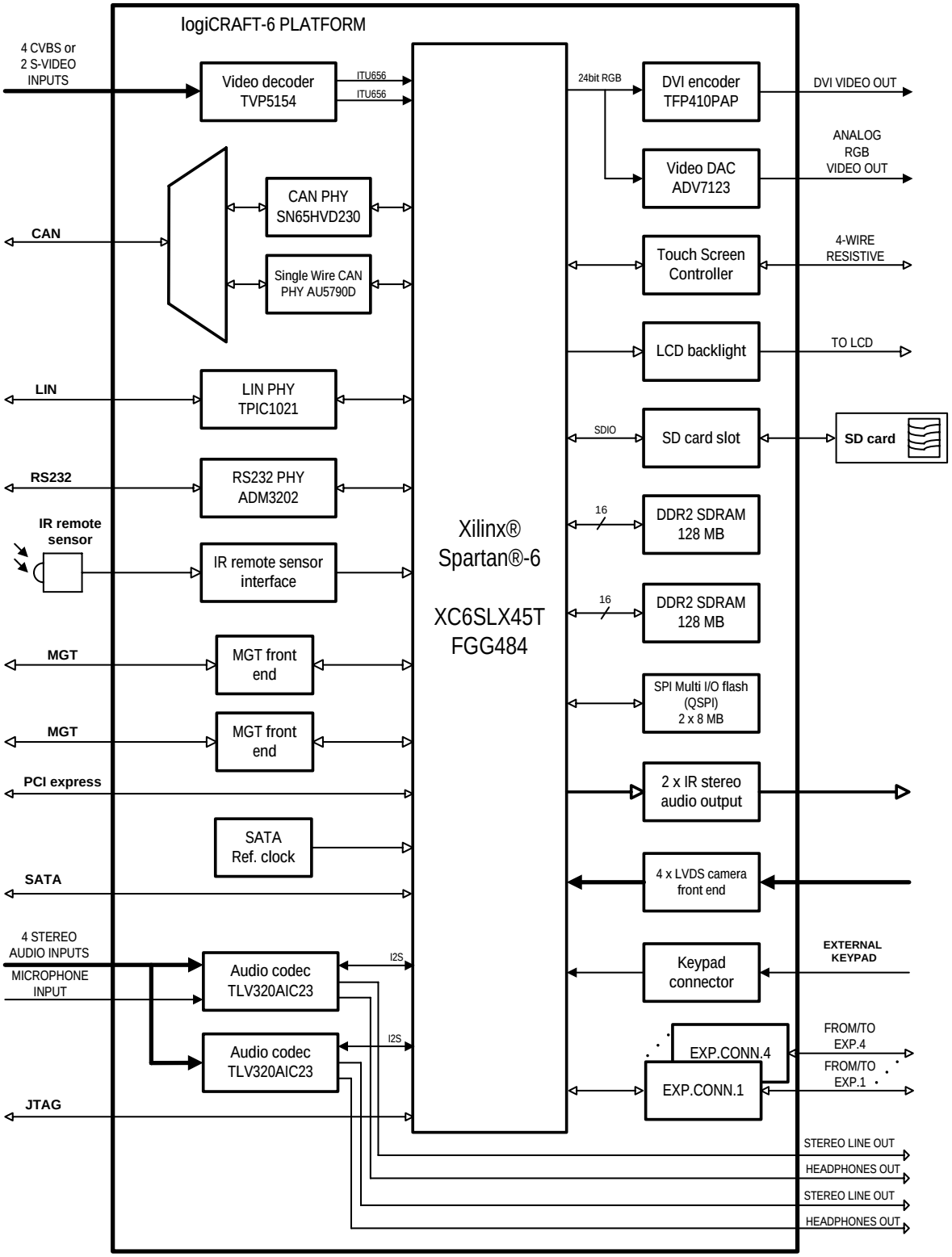

Figure 2: logiCRAFT6 Block Diagram

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General Description

The logiCRAFT6 Compact Multimedia Display Development Platform (Fig.1) is Xilinx Spartan-6 based board primarily aimed at electronic applications which handle various multimedia contents. The platform is designed to support a wide variety of audio and video sources, and to be able to handle a variety of display types.

With several standard communication interfaces you can easily integrate the logiCRAFT6 platform into larger systems. The platform provides plenty of different type memory devices. Different kinds of LCD displays can be interfaced by provided connectors. In addition, integrated DVI/VGA video output connector enables work with standard PC monitors.

Good examples of targeted applications are advanced automotive applications such as navigation, infotainment, rear seat entertainment (RSE), and different driver assistance (DAS) applications. Other multimedia applications are equally applicable, such as medical, measurement instrumentation, consumer, or factory automation applications.

Application examples can be found at http://www.logicbricks.com/Markets.aspx.

Figure 2 shows logiCRAFT6 platform's functional blocks. A wide variety of system interfaces such as A/V I/Os, line drivers, general purpose I/Os, power supplies, etc., makes this platform extremely versatile. The logiCRAFT6, with its support for high speed Gbit/s digital serial links (Xilinx MGT transceivers connected to high-speed Rosenberger connectors), dramatically reduces the complexity and cost of the end application's wiring.

The logiCRAFT6 provides 4 LVDS camera interfaces, which are extremely useful for multi-camera applications.

This platform replaces older Xylon's logiCRAFT3 platform, and makes a basis for the new edition of Xylon's logiTAP (http://www.logicbricks.com/Products/logiTAP.aspx). Transition to the latest Xilinx Spartan-6 FPGA family provides more design freedom to embedded system designers using Xilinx FPGA and Xylon products.

Xylon provides the reference FPGA design as a part of the logiCRAFT6 kit. The provided reference design is equal to the logiTAP reference design. The installation package can be downloaded from Xylon's FTP, as well as the SD card image. The provided applications can be controlled through the serial port which replaces functionality of the touch screen. The PC monitor can be used as the video output device.

Package Content

Xylon provides the logiCRAFT6 hardware platform (PCB, SD card, adapter cable for the power supply, serial cable) with the referent FPGA design utilizing Xilinx LogiCORE® and Xylon logicBRICKS IP cores, software demo application and IP drivers, and documentation.

Recommended Design Experience

The user should have experience in the following areas:

- Xilinx design tools
- C programming

The logicBRICKS IP cores are fully supported by the Xilinx Platform Studio and the EDK, and their use does not require any particular skills beyond general Xilinx tools knowledge.

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Related Xylon Products

Xylon logicBRICKS IP cores can be evaluated on Xylon logiCRAFT6 platform, which demonstrates modularity on all levels: software, board, FPGA, and IP cores. The platform makes an excellent development tool appropriate for the development of different embedded systems, including systems with strong graphics capabilities.

To learn more about the logicBRICKS IP library, contact Xylon or visit the web:

Email: support@logicbricks.com
URL: http://www.logicbricks.com/logicBRICKS-IP-Library.aspx

Xylon's logiTAP platform, based on the logiCRAFT6, provides a complete design framework to designers of embedded GUI applications. The logiTAP includes high-resolution LCD touch-display and other system parts in a single Plexiglas casing.

To learn more about the logiTAP Platform for Embedded GUI System Developments, contact Xylon or visit the web:

Email: support@logicbricks.com
URL: http://www.logicbricks.com/Products/logiTAP.aspx

To learn more about the logiCRAFT6 and other Xylon development platforms, contact Xylon or visit the web:

Email: support@logicbricks.com
URL: http://www.logicbricks.com/Products/Hardware-Platforms.aspx

Ordering Information

This product is available directly from Xylon. Please visit our web shop or contact Xylon for pricing and additional information:

Email: sales@logicbricks.com
URL: www.logicbricks.com

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Related Information

Xilinx Programmable Logic

For information on Xilinx programmable logic or development system software, contact your local Xilinx sales office, or:

Xilinx, Inc.
2100 Logic Drive
San Jose, CA 95124
Phone: +1 408-559-7778
Fax: +1 408-559-7114
URL: www.xilinx.com

Revision History

Version	Date	Note
1.00.	29.04.2010	Initial Xylon's release.

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