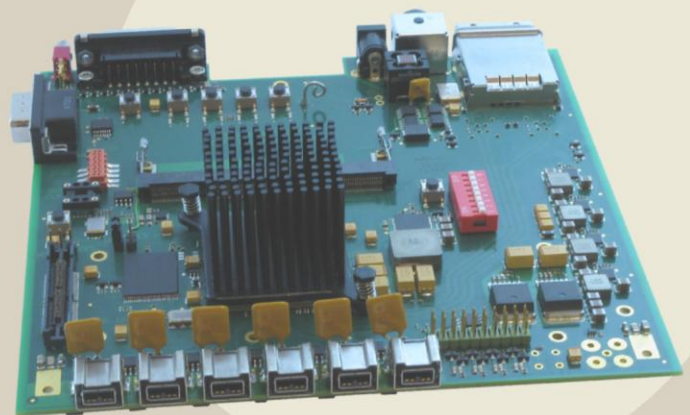




1394 IP SOLUTIONS

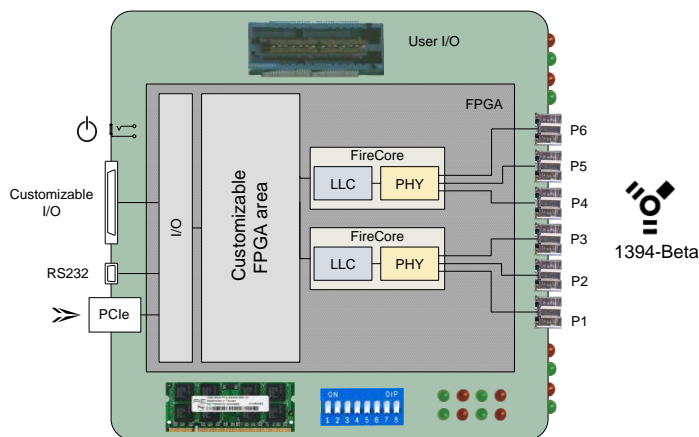
FireESDK



## PRODUCT OVERVIEW:

In order to foster the market adoption of S1600 DapTechnology has released a dedicated embedded system development kit **FireESDK™**. It is aimed at providing a suitable HW and FW reference platform for rapid embedded systems prototyping of various products with a high speed serial bus interface.

**FireESDK™** utilizes the innovative 1394 IP solution FireCore™ (i.e. the combined IP building blocks for LLC IP (FireLink®) and PHY IP (FireGate™) and thus creates a very flexible, customizable and expandable reference platform for any embedded systems design. Therefore the new platform represents a streamlined SOC development platform and allows combining FireCore™ with other embedded systems components (e.g. data compression and encryption mechanisms, onboard data processing, etc)



Example of a dual-lane (PHY and LLC) SOC with 3 ports per PHY

## DESIGN FEATURES AND BENEFITS:

There are several advantages when using FPGAs to implement a complete 1394 I/O interface. Some of these are:

**Single-chip solution:** Combination of PHY IP and Link Layer IP thus creating smaller solutions. Additional components can be added to create a System-On-Chip (SOC) solution.

**Flexible number of ports:** Architecturally the HW support up to 6 PHY ports with flexible routing.

**Flexible number of nodes:** FireCore can be run multiple times within the FPGA thus creating the design possibility for devices with redundant bus interfaces (essential for deterministic and high reliability systems) or multilane devices for even higher bandwidth requirements.

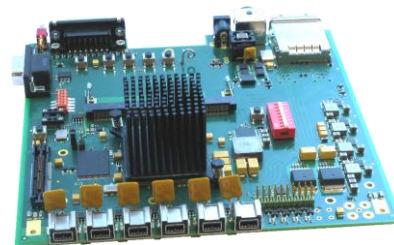
**Optional debug and test features:** Optionally, the user can include debug and test features like BERT (Bit Error Rate Test) Low level data monitoring and recording

**Field-upgradable:** The used FPGAs are field upgradable thus allowing the addition of new features or bug fixes, even if the device is already in the field.

**Cost effective ASICs:** Once a design is finalized an IP solution offers a very cost effective path to rendering a custom ASIC.

## HARDWARE PLATFORM:

A special Embedded Systems Design Kit Platform based on the Xilinx Virtex-6 is available. It provides a development environment for embedded system designs that demand high-performance, serial bus connectivity and advanced memory interfacing. The ESDK may be connected to a host computer via the PCI Express interface.



<b>FPGA Device</b>	XC6VLX130T-2FFG1156C
<b>Onboard Memory</b>	1GB DDR2 SO-DIMM (expandable)
<b>1394 PHY / LLC</b>	FireCore (FireGate + FireLink)
<b>Configurable I/Os and indicators</b>	8 DIP switches, 6 pushbuttons, 16 LEDs 76-pin High Speed User IO connector (16 differential I/O, 3 differential clocks, 5 single ended I/O, 3.3V power)
<b>Standard Interfaces</b>	RS232, DB9 connector PCI Express x4 Cable Connector 6x 1394b (Beta) connectors
<b>Package Content</b>	ESDK1600 Development Platform Universal AC/DC Adapter 1394 Cable
<b>PartNumber</b>	ESDK1600

Check directly with DapTechnology for availability of Altera platforms.

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