



STEVAL-IFW002V1

Real-time Ethernet Xilinx FPGA extension board for the STEVAL-IFW001V1

Data Brief

Features

- Xilinx Spartan-3E FPGA device for Ethernet RT IP
- Platform Flash (XCF04S)
- CN1, CN2 connectors for plug-in connection with STEVAL-IFW001V1 demonstration board
- P1 programming connector for FPGA platform Flash (6-pin)
- P6 connector for RS485 communication through the ST3485EB transceiver
- 8 general-purpose LEDs
- 8-bit DIP switch for general configuration (e.g. device address)

Description

The STEVAL-IFW002V1 is an FPGA extension of the STEVAL-IFW001V1. This extension board was designed to handle a real-time (RT) Ethernet IP (e.g. RT HUB for Powerlink, IEEE1588, EtherCAT IP, etc.). It can also be used for evaluation of other IPs connected to the STR912FA microcontroller, such as timers, communication I/Fs. Communication between the STR912FA demonstration board and the extension can be achieved through a medium independent interface (MII), external memory interface (EMI), SPI™, GPIOs or by other methods.

RT Ethernet evaluation requires both the STEVAL-IFW001V1 demonstration board and STEVAL-IFW002V1 extension board.

Typically, the STR912FA microcontroller communicates with the on-extension real-time Ethernet logic which, in turn, communicates with the two on-board Ethernet transceivers and the microcontroller.



1 Extension board schematic

Figure 1. Mobile connectors, LEDs and device address schematic

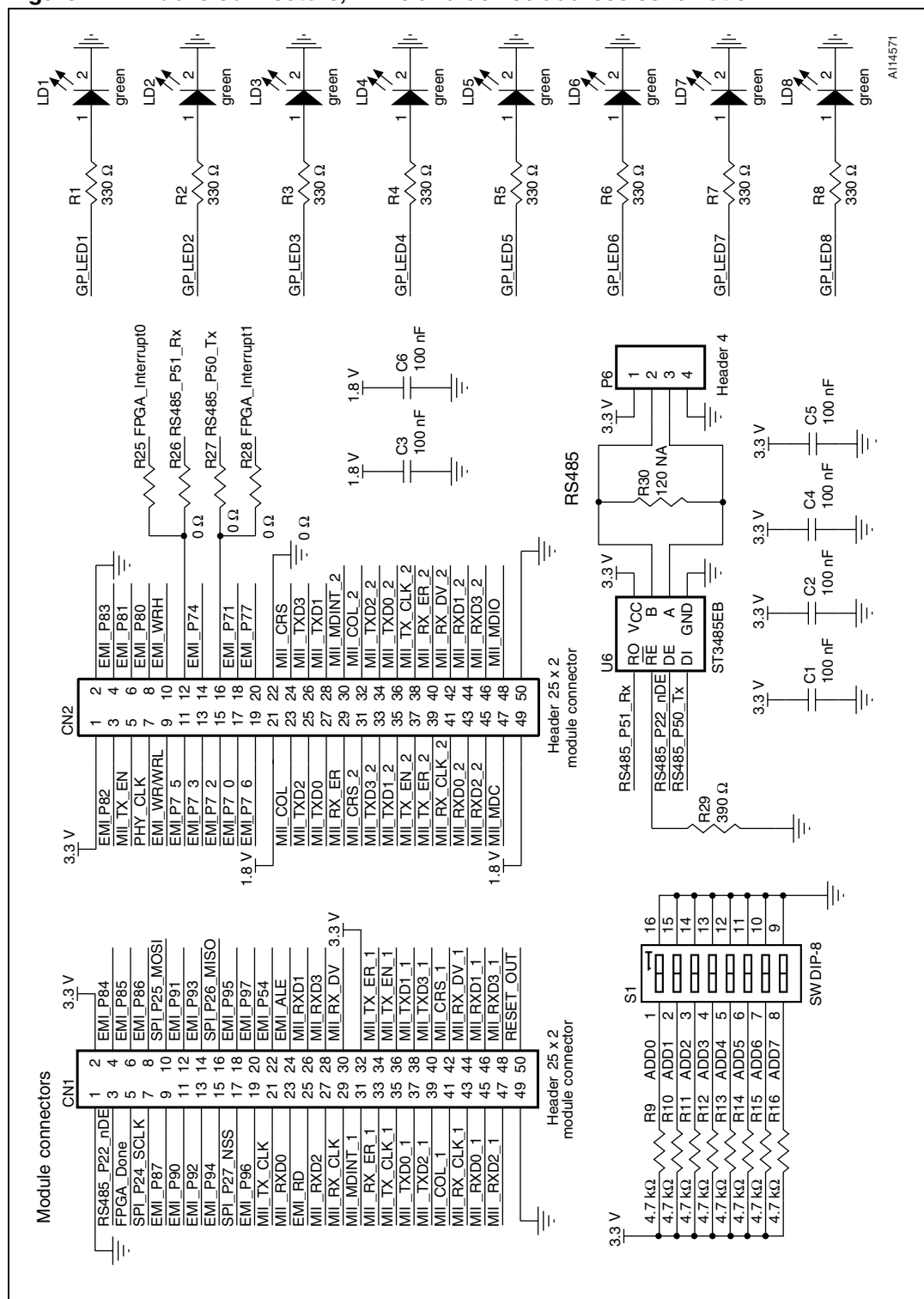


Figure 2. JTAG, Flash schematic

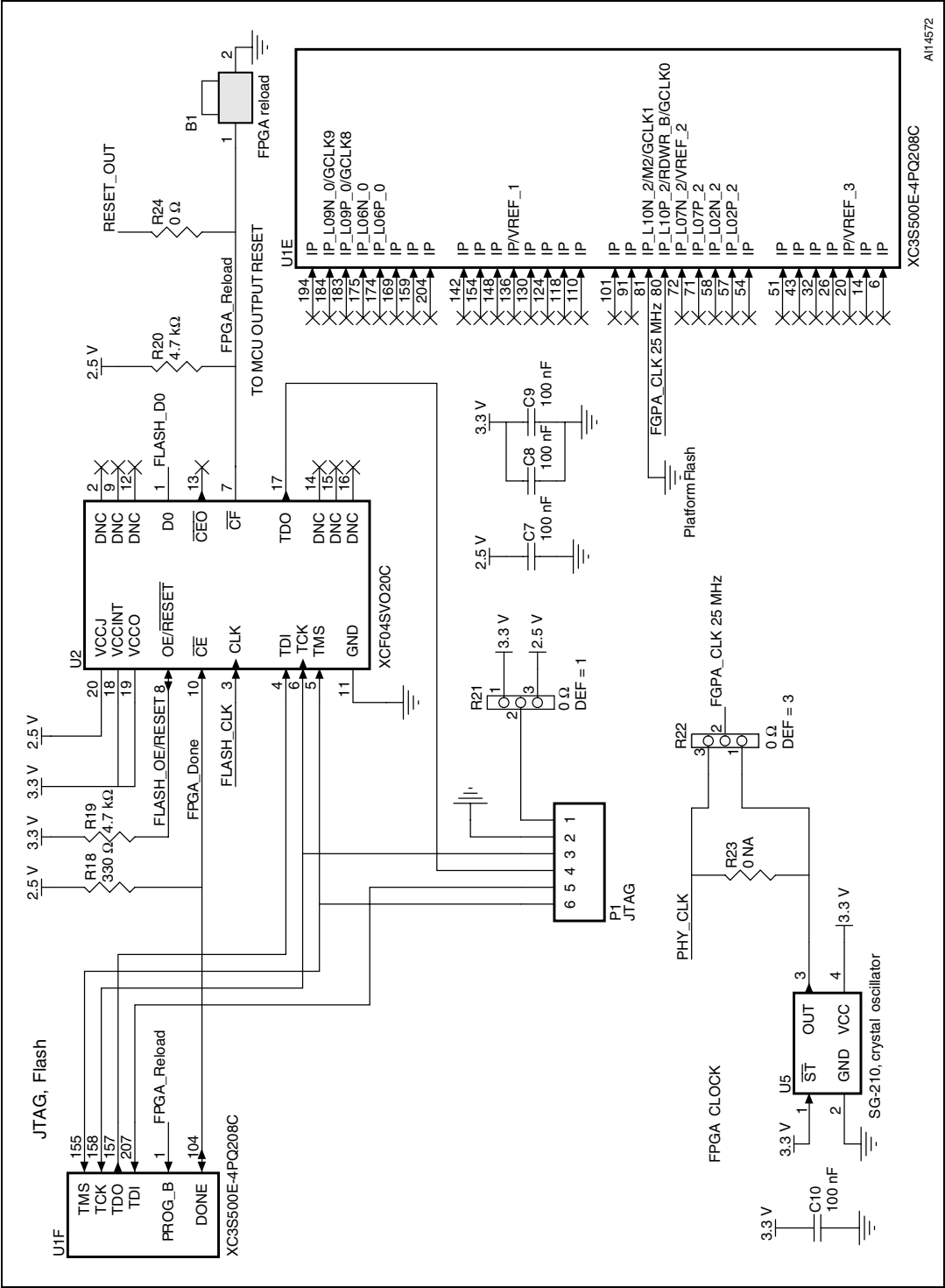
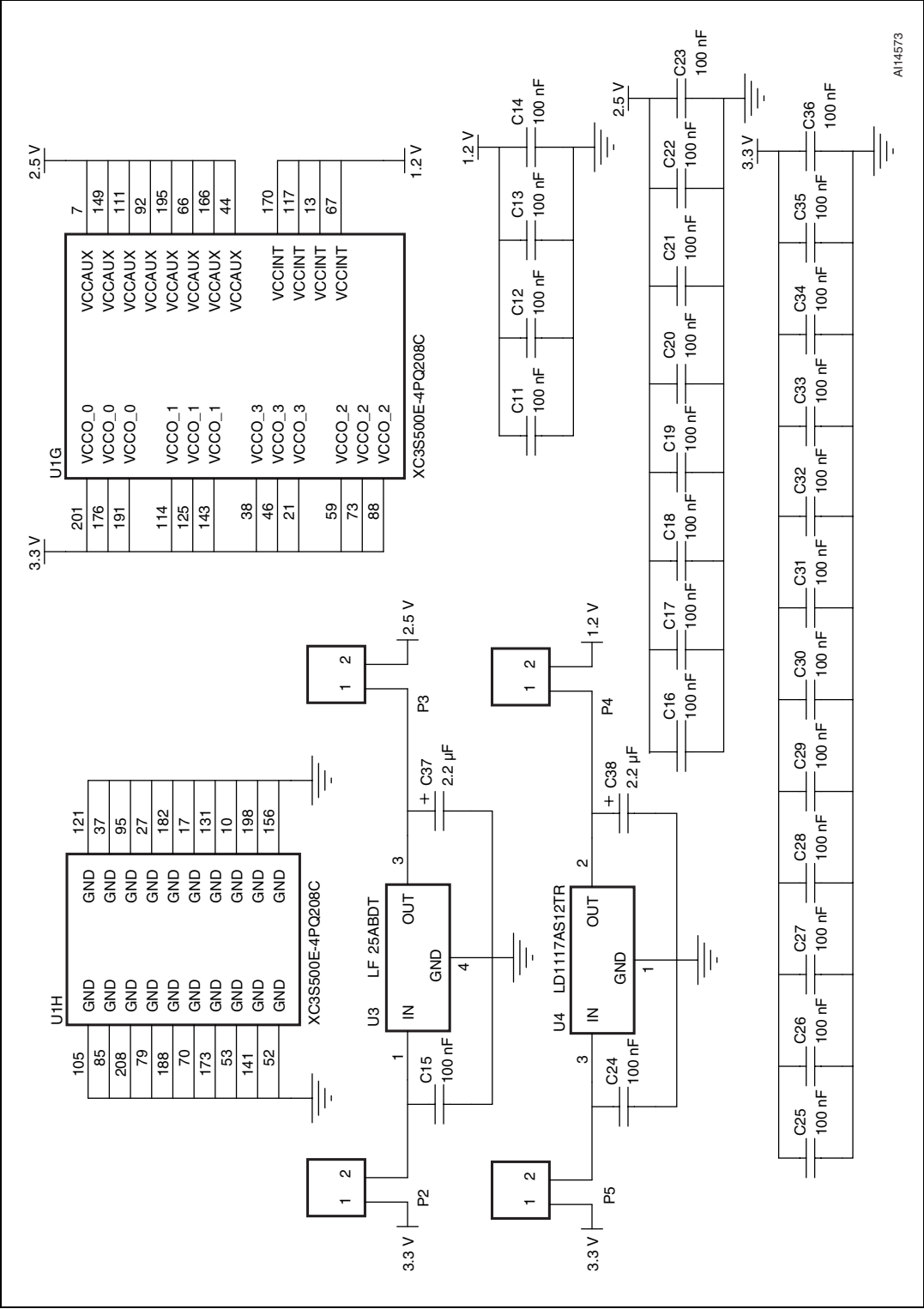
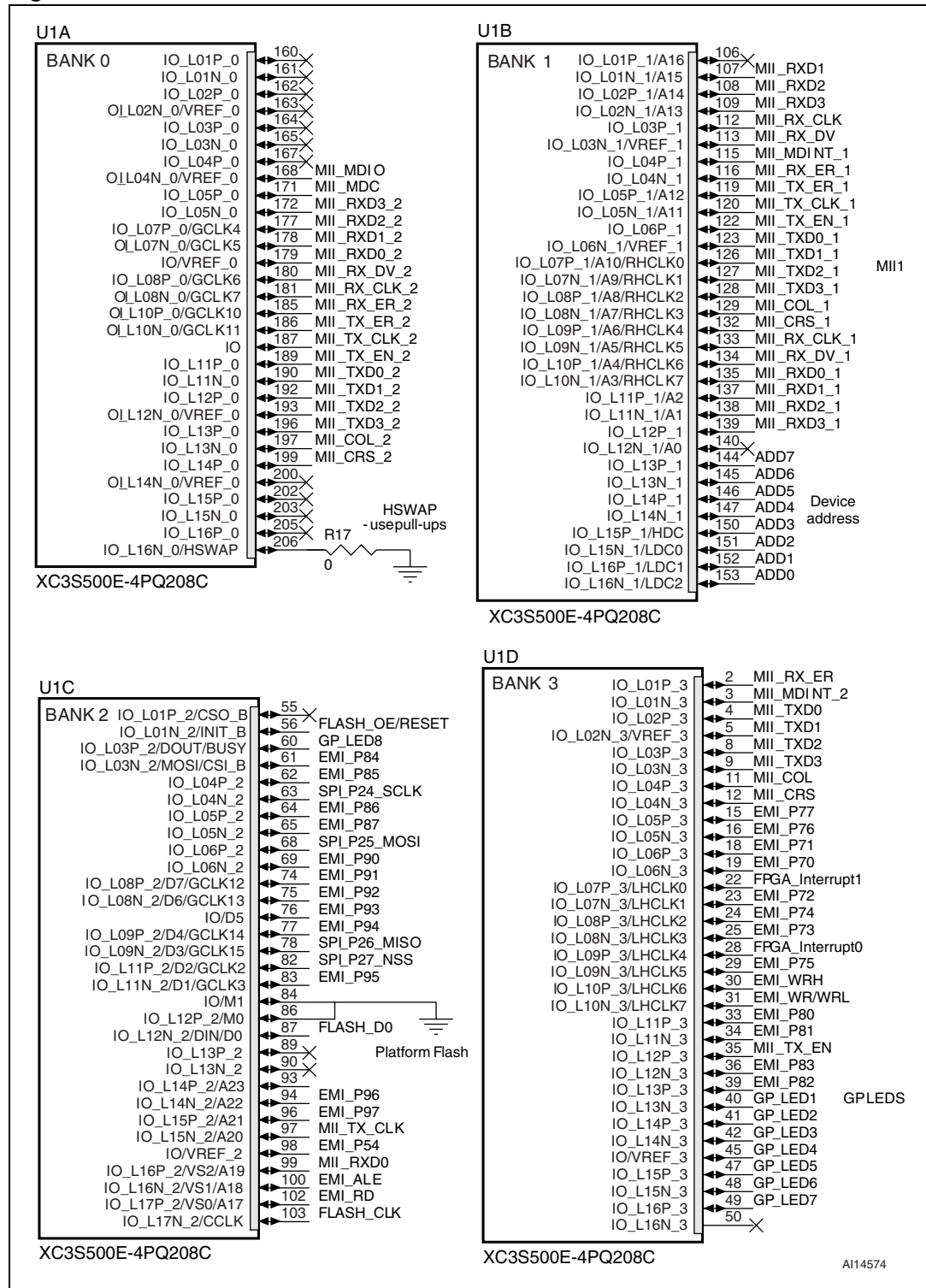


Figure 3. Power supply schematic



AI14573

Figure 4. FPGA schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
15-Sep-2008	1	Initial release

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