



STEVAL-PCC008V1

TFT display demonstration board with Ethernet connectivity based on the STR91

Data brief

Features

- Embedded Ethernet web client based on the STR91 system package
- Board fitted with TFT, microSD card, and keypad
- System pre-programmed
- Can display images from the web
- Includes set of sample images to work with web server
- RoHS compliant

Description

The STEVAL-PCC008V1 demonstration board implements the functionality of an embedded Ethernet web client system, which is based on the STR91xFAW ARM966E-S™ 16/32-Bit Flash MCU with Ethernet microcontroller.

The system is designed to view/monitor JPEG images taken from an HTTP web server or from an IP camera on the network. The images are displayed on the TFT screen, demonstrating the surveillance capability. The system is compatible with web servers which do not require secure socket layer (SSL) support. It uses specific programmed requests to capture images from the specific web servers.

The display is a 2.4" TFT screen which displays images captured from the network by converting them into bitmaps through a JPEG decompression algorithm.

A six-button keypad is provided for navigating through menus.

The availability of a microSD card on the board aids in the handling of large chunks of data from the network.



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Figure 1. Microcontroller circuit schematic

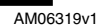
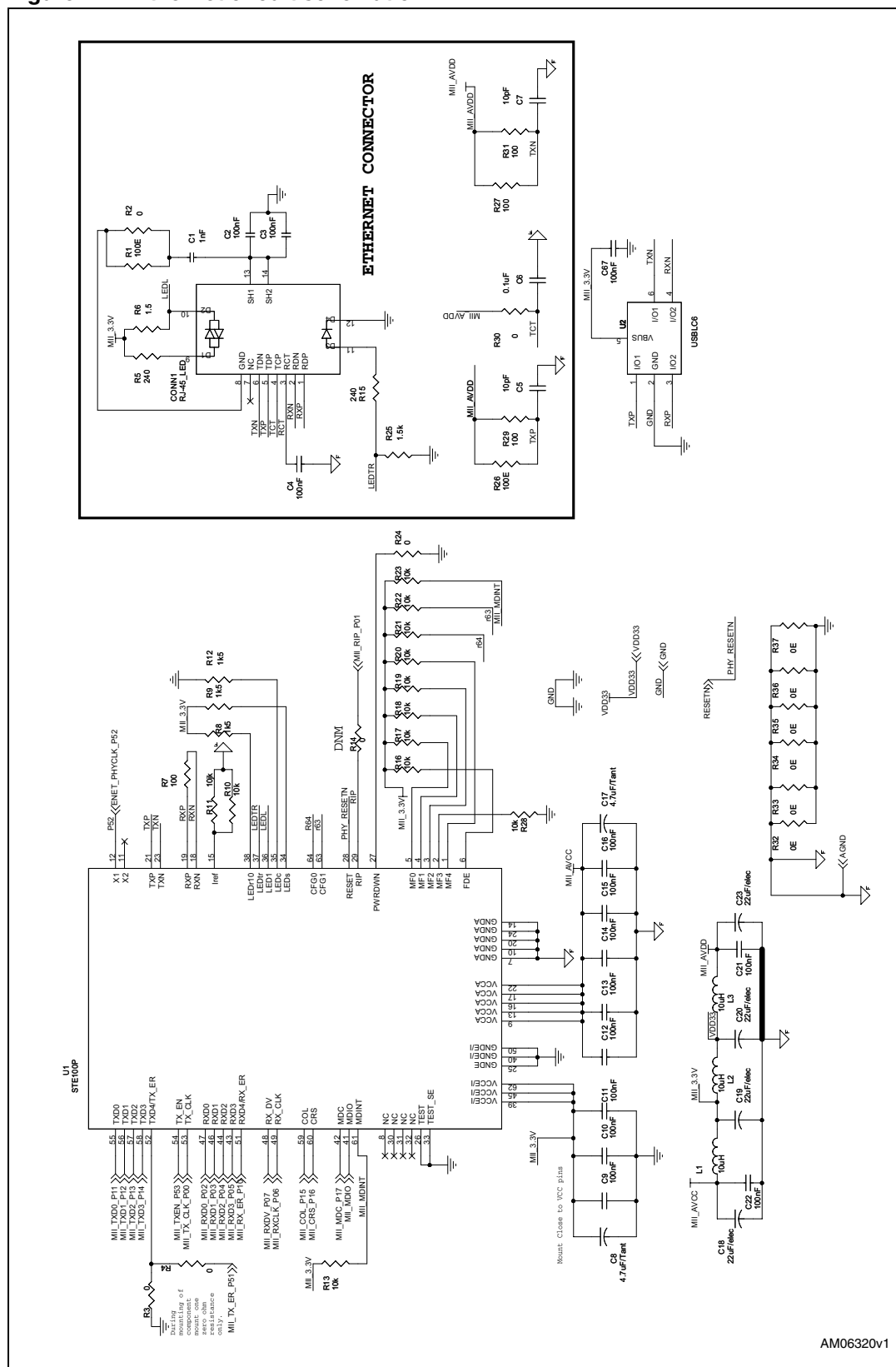


Figure 2. Ethernet circuit schematic



KEY BOARD CONNECTOR

Zigbee Module

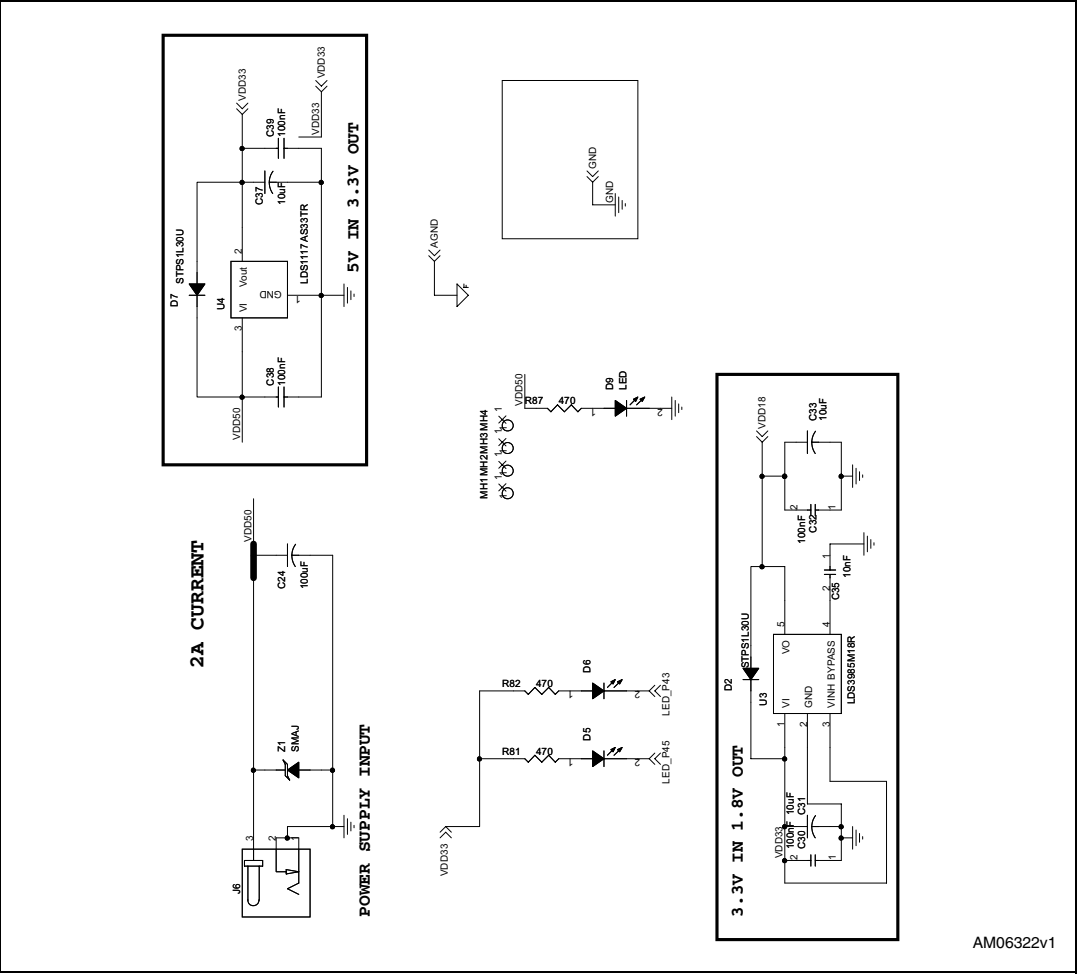
MB542 TFT Connector

The schematic diagram illustrates the internal components and connections of the MB542 TFT Connector. Key components include:

- EEPROM (U10):** An M24C01 EEPROM connected to VDD33 and GND. It has a 100nF capacitor (C71) connected to its VDD pin.
- uSD Connector (J16):** A 10-pin connector for the uSD card. It is connected to VDD33 and GND. The pins are labeled: CS, DATA_IN, DATA_OUT, CD, RSV, COM, VSS, VSSA, VSSB, and VSSC.
- TFT Connector (J25):** A 10-pin connector for the TFT display. It is connected to VDD33 and GND. The pins are labeled: SW_P56, SW_P57, SW_P58, SW_P59, SW_P60, SW_P61, SW_P62, SW_P63, SW_P64, and SW_P65.
- Capacitors:** A 100nF capacitor (C25) is connected to VDD33 and GND. A 100nF capacitor (C71) is connected to the VDD pin of the EEPROM.
- Resistors:** A 100k resistor (R108) is connected to VDD33 and GND. A 500 resistor (R110) is connected to VDD33 and GND.
- Other Components:** A 100nF capacitor (C25) is connected to VDD33 and GND. A 100nF capacitor (C71) is connected to the VDD pin of the EEPROM.

The diagram is labeled "KEY BOARD CONNECTOR" and "Zigbee Module".

Figure 4. Power management circuit schematic



AM06322v1

2 Revision history

Table 1. Document revision history

Date	Revision	Changes
05-Mar-2010	1	Initial release.

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