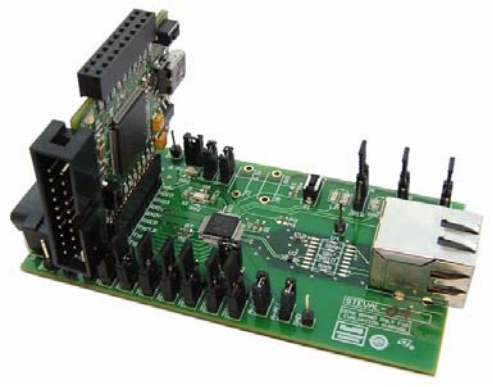
STEVAL-PCC010V1

ST802RT1A Ethernet PHY demonstration board with STM32F107 controller add-on board

Data brief

Features

- ST802RT1A Ethernet PHY demonstration board:
  - ST802RT1A fast Ethernet physical layer transceiver
  - On-board 3.3 V LDO regulator
  - On-board 25 MHz crystal
  - 2 jumpers for boot-strap configuration (MII address, auto-negotiation, loopback, power down, MII/RMII configuration)
  - Several GND test points and jumpers for power consumption measurement
  - Connectors: 20-pin full pitch header connector for debug purposes (compatible with the STM32F107 controller board); 40-pin connector compatible with Spirent Communications SmartBits 200/2000 (SMB-200/ SMB-2000) analysis system
  - RJ45 connector with embedded transformer
  - RoHS compliant
- STM32F107 controller add-on board:
  - STM32F107 connectivity line Cortex™-M3 based microcontroller with embedded Ethernet MAC
  - On-board 3.3 V LDO regulator
  - On-board 25 MHz crystal
  - Reset button, power LED, general-purpose button and two LEDs
  - Connectors: 20-pin full-pitch header connector for debug purposes, compatible with ST802RT1A demonstration board; 20-pin JTAG connector
  - Additional general-purpose 20-pin full pitch header connector; USB device connector (+5 V power supply)
  - RoHS compliant



STEVAL-PCC010V1

Description

The STEVAL-PCC010V1 demonstration kit consists of two boards: the ST802RT1A Ethernet PHY demonstration board and the STM32F107 controller add-on board.

The ST802RT1A demonstration board is designed as an evaluation platform for the ST802RT1A device. It allows the user to easily select the PHY boot options to evaluate the power consumption of the chip, and to attach the device to professional test equipment.

The STM32F107 controller board can extend the ST802RT1A demonstration board with the STM32F107 microcontroller and its embedded MAC.

The system allows immediate evaluation of an Internet appliance based on the embedded microcontroller and Ethernet PHY.

By default, the controller board is pre-Flashed with a web server application for demonstration purposes.

1 Schematic diagrams

Figure 1. ST802RT1 TX mode Ethernet PHY demonstration board schematic (part 1 of 4)

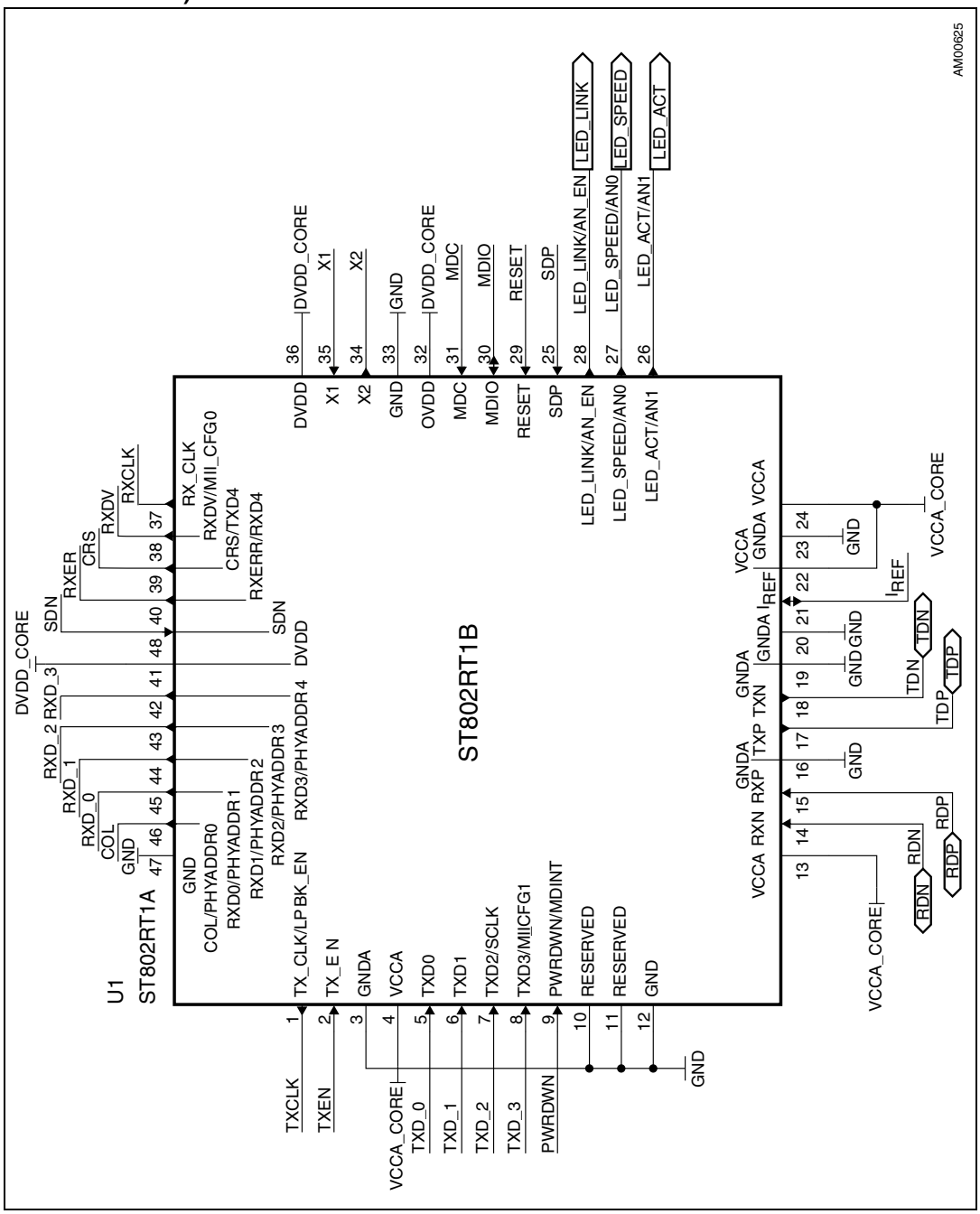


Figure 2. ST802RT1 TX mode Ethernet PHY demonstration board schematic (part 2 of 4)

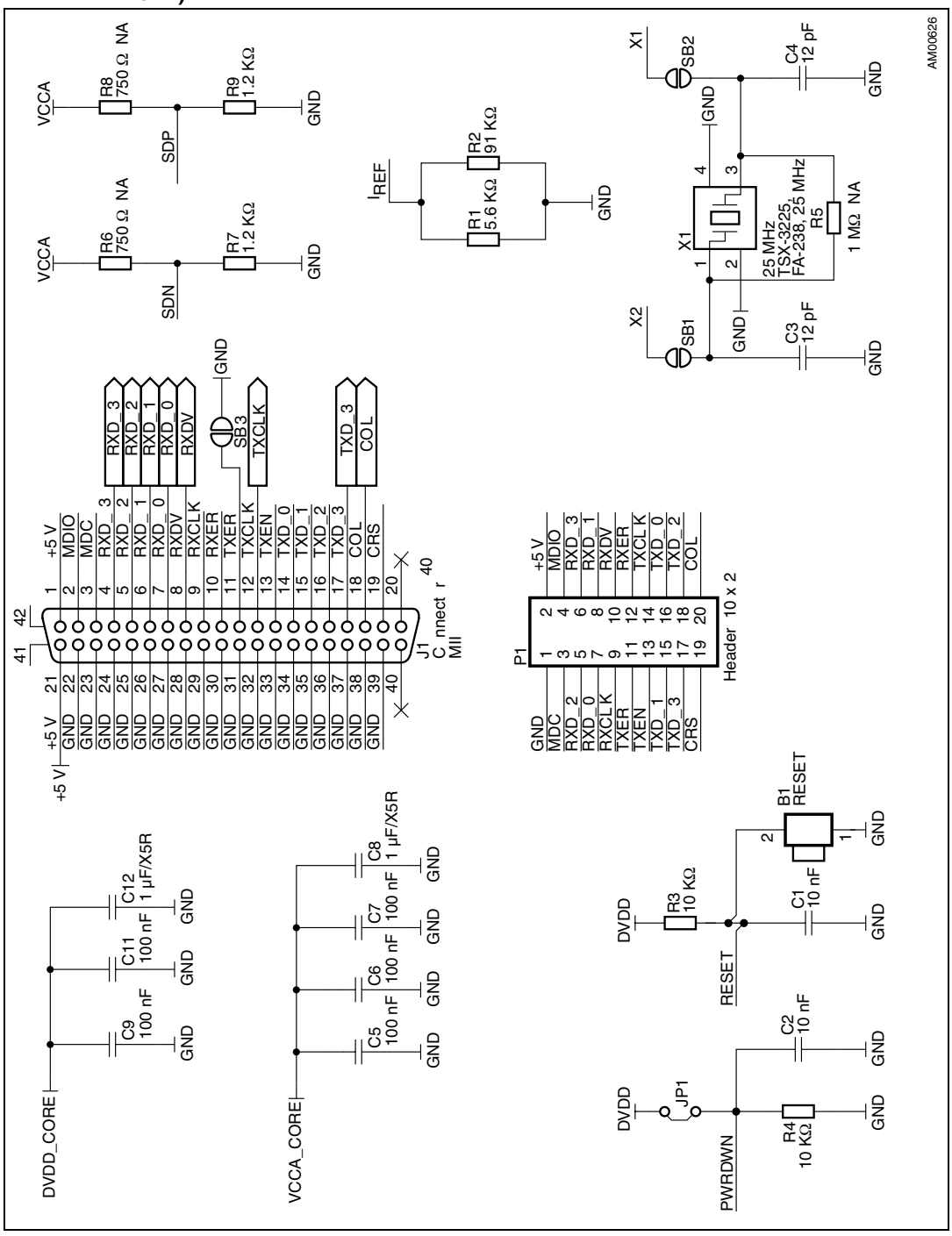


Figure 3. ST802RT1 TX mode Ethernet PHY demonstration board schematic (part 3 of 4)

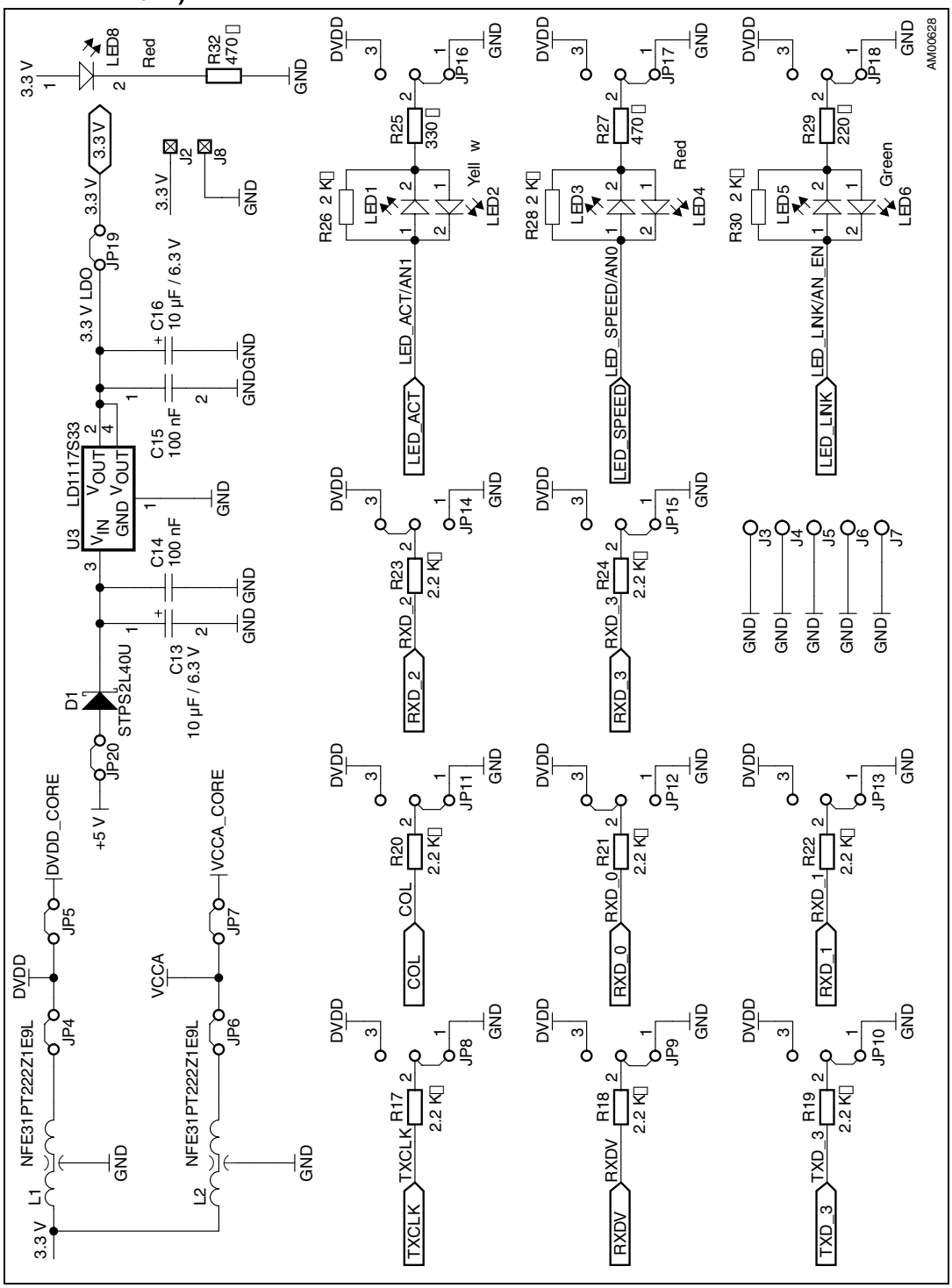


Figure 4. ST802RT1 TX mode Ethernet PHY demonstration board schematic (part 4 of 4)

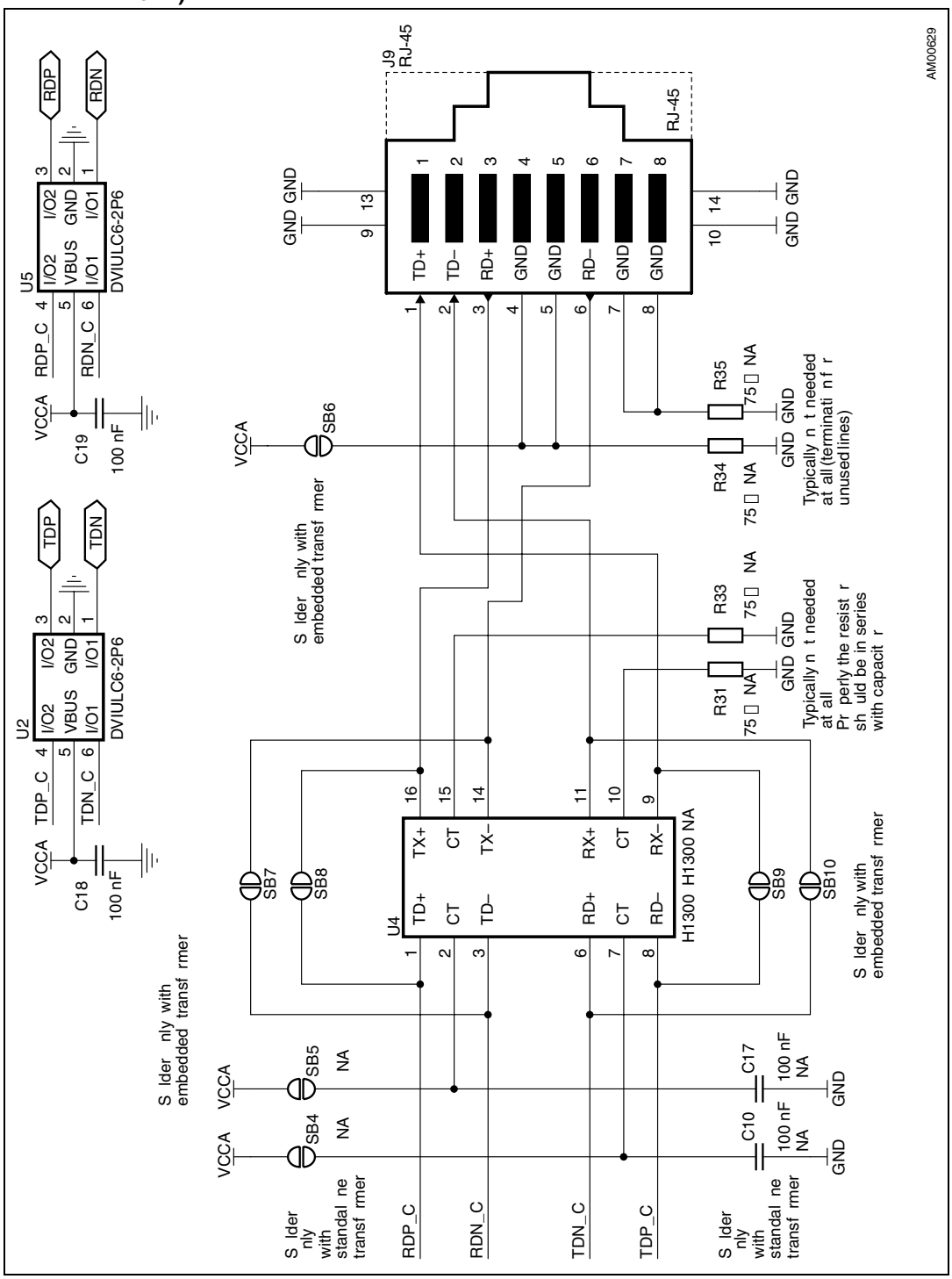


Figure 5. STM32F107 controller demonstration board schematic (part 1 of 2)

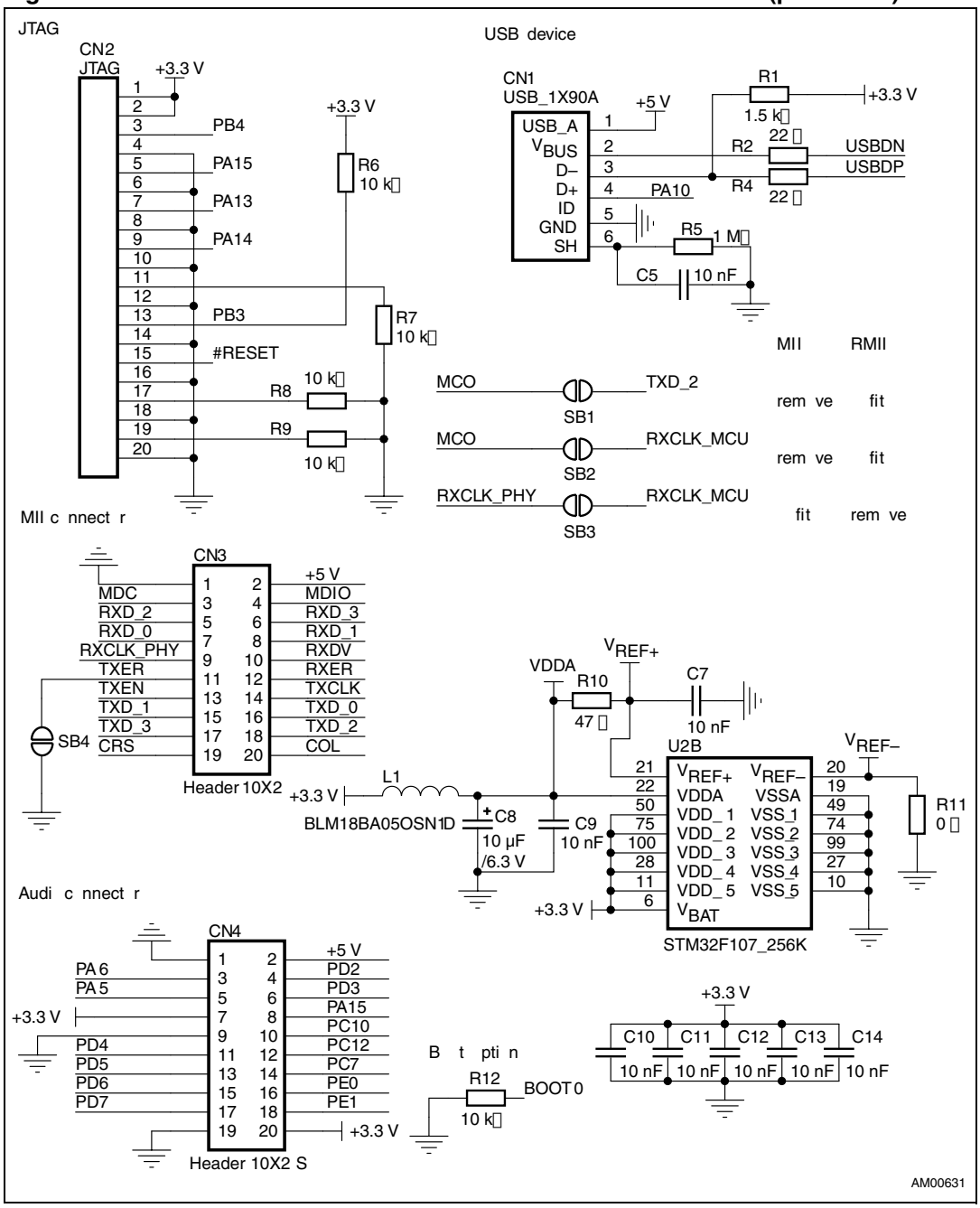
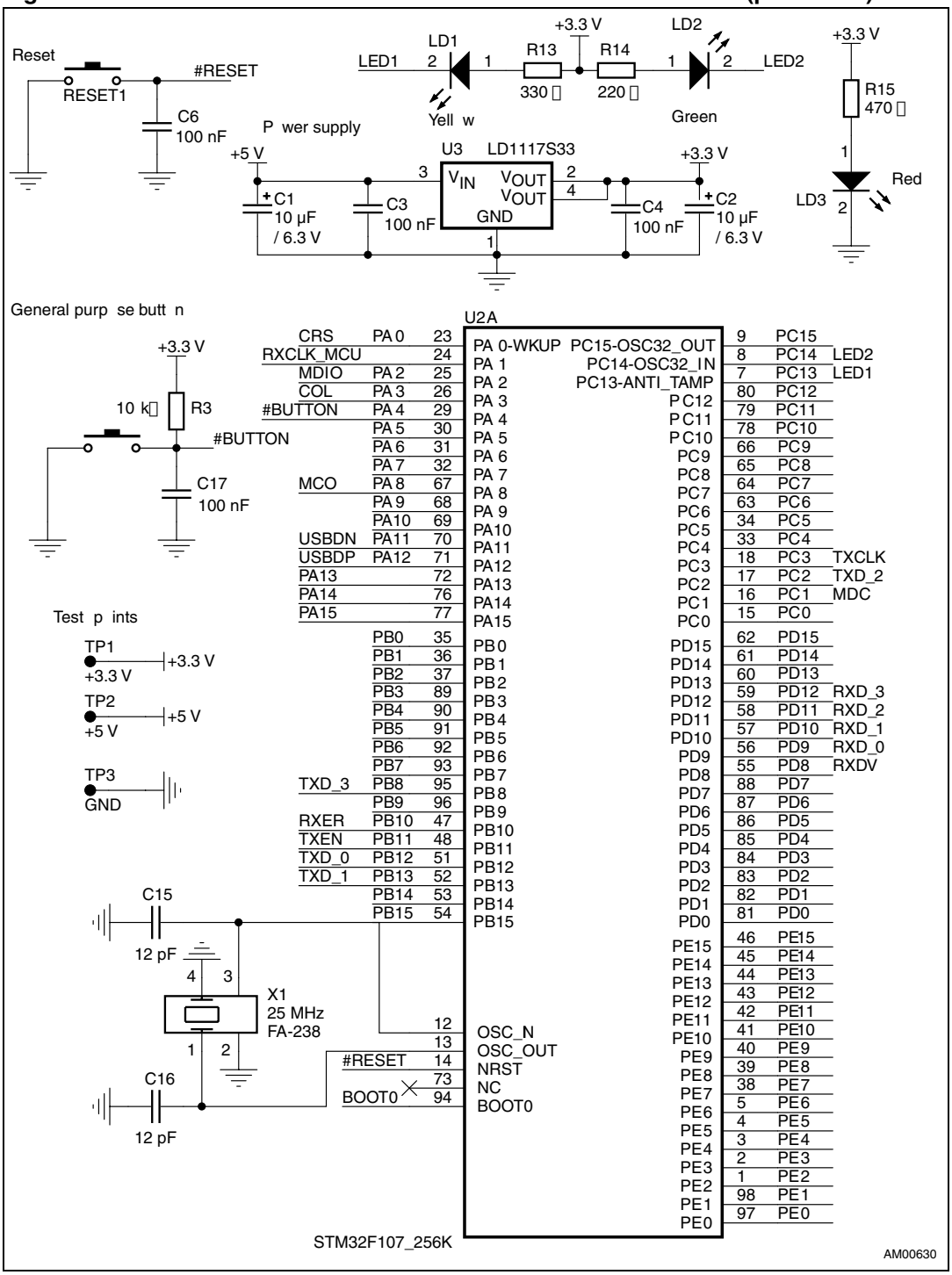


Figure 6. STM32F107 controller demonstration board schematic (part 2 of 2)



2 Revision history

Table 1. Document revision history

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