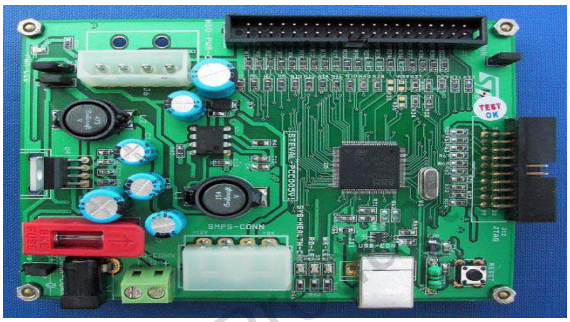
STEVAL-PCC005V1

Hard disk drive (HDD) bridge demonstration board based on the STR9 microcontroller

Data Brief

Features

- Based on the STR912 (ARM966E-S) microcontroller with in-build external memory interface (EMI)
- USB interface available for USB hard disk application
- Acts as mass-storage device using native Microsoft Windows® OS drivers
- On-board power supply for hard disk
- Option of using external power supply
- On-board JTAG connector for microcontroller firmware upgrade and changes
- Additional ESD protection device on USB
- LED indication for power, read and write operation and system health check



STEVAL-PCC005V1

Description

The STEVAL-PCC005V1 works as a USB-based hard disk implemented using the STR912FAW44 microcontroller. The board consists of two main sections: 1) the interface of the hard-disk to the STR912FAW44 through an external memory interface (EMI), and 2) the hard disk, appearing as a removable drive on the PC, which is made possible by USB mass-storage implementation.

The on-board power supply unit can be used for powering the hard disk. The board functions with a PC as the USB host. In addition to the on-board power supply, a separate SMPS power supply can be used to power the board and the hard disk.

The LEDs available on the demonstration board indicate read or write operation.

The board also features a JTAG interface for debugging purpose.

1 Block diagram

Figure 1. Schematic - STR9 -USB hard disk

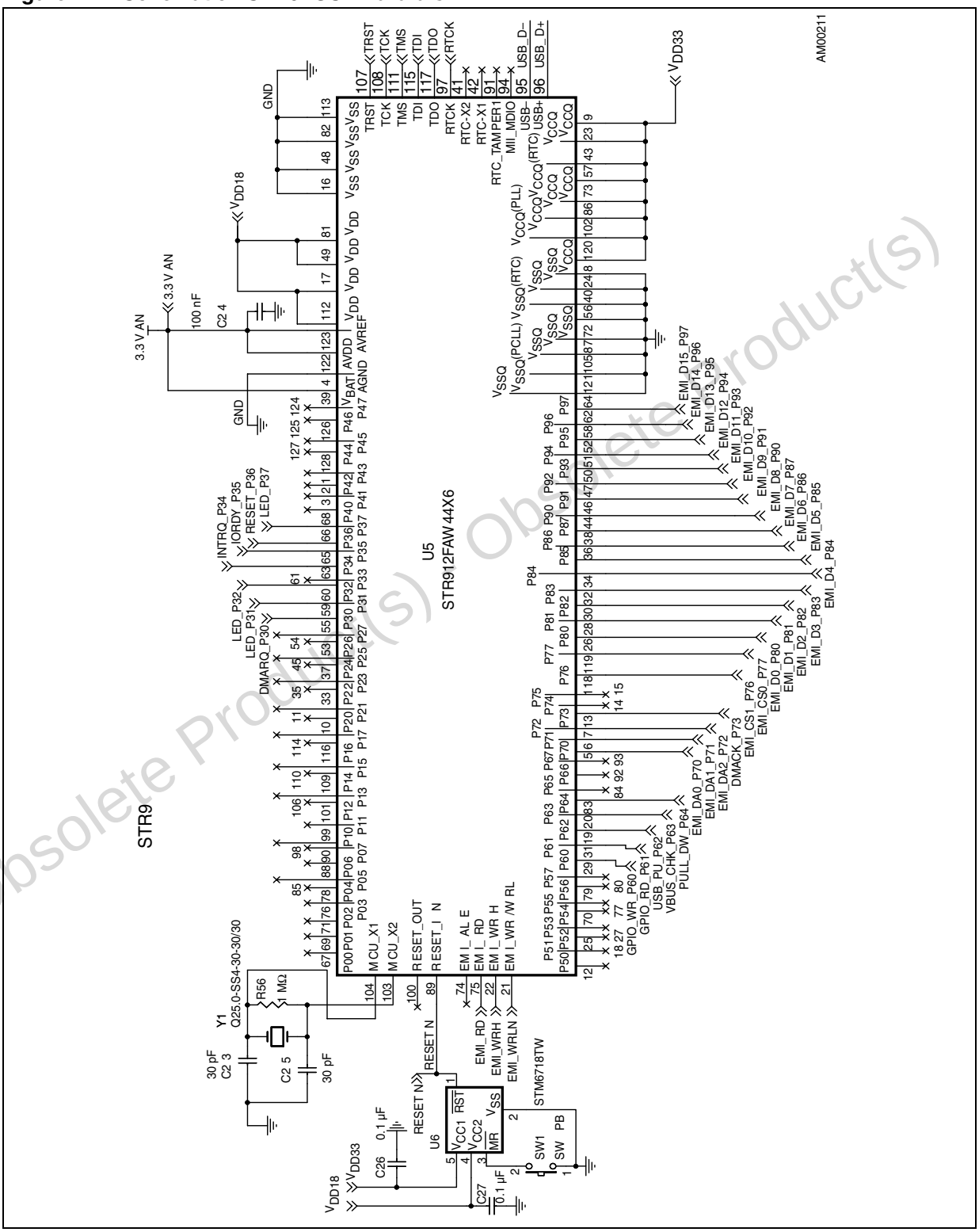


Figure 2. Schematic - USB, JTAG connectors

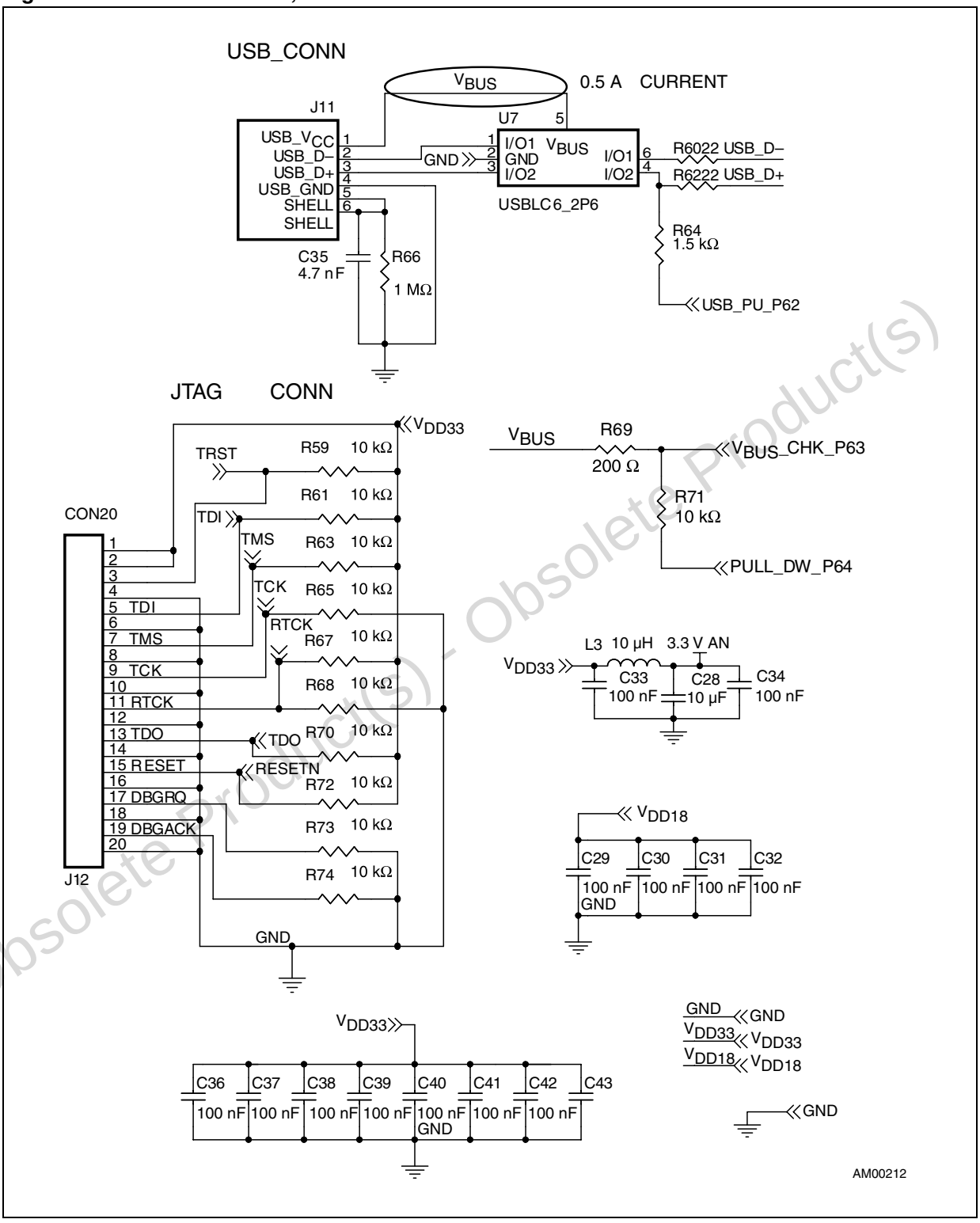


Figure 3. Schematic - STR9 hard disk interface

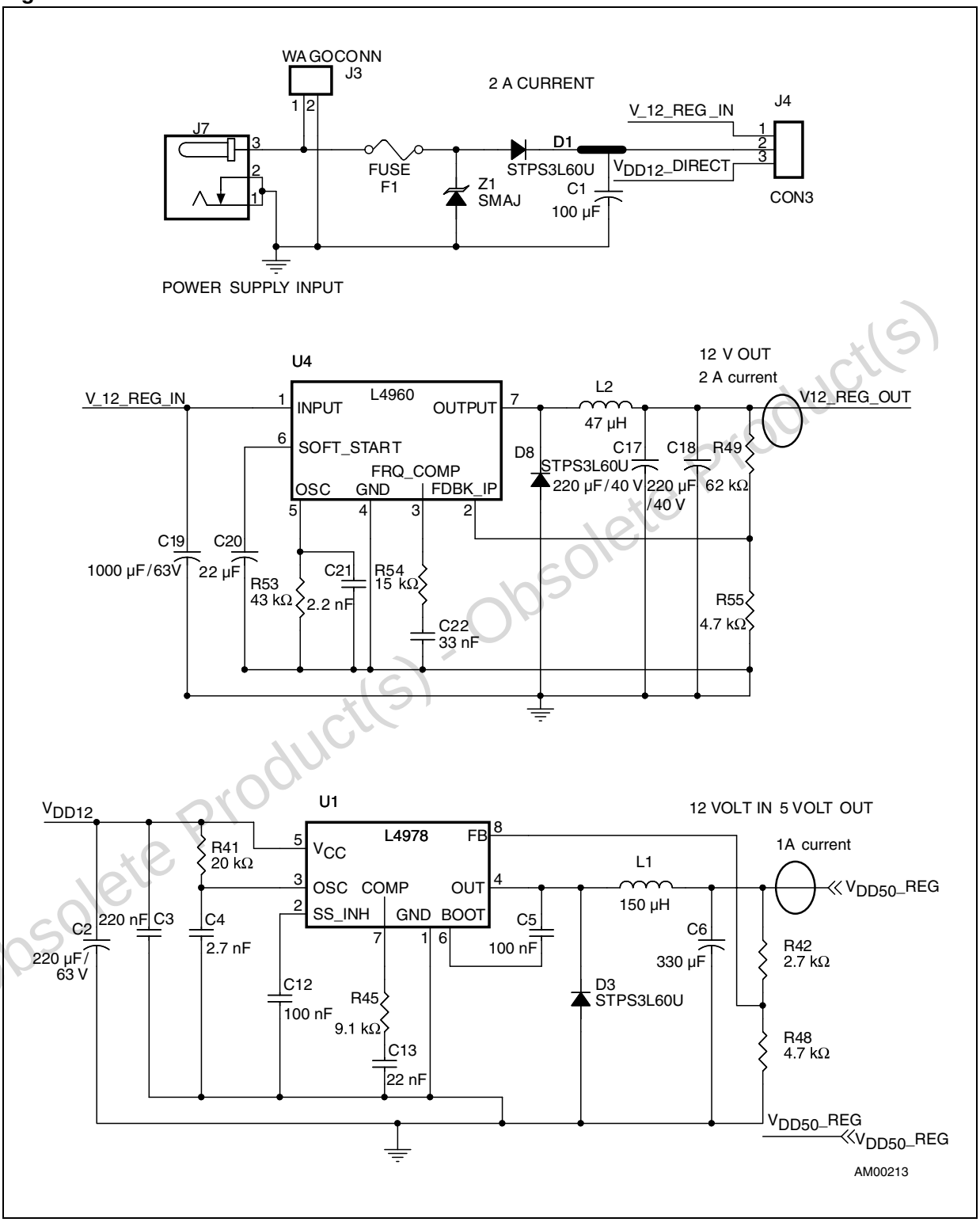


Figure 4. Schematic - STR9 hard disk interface

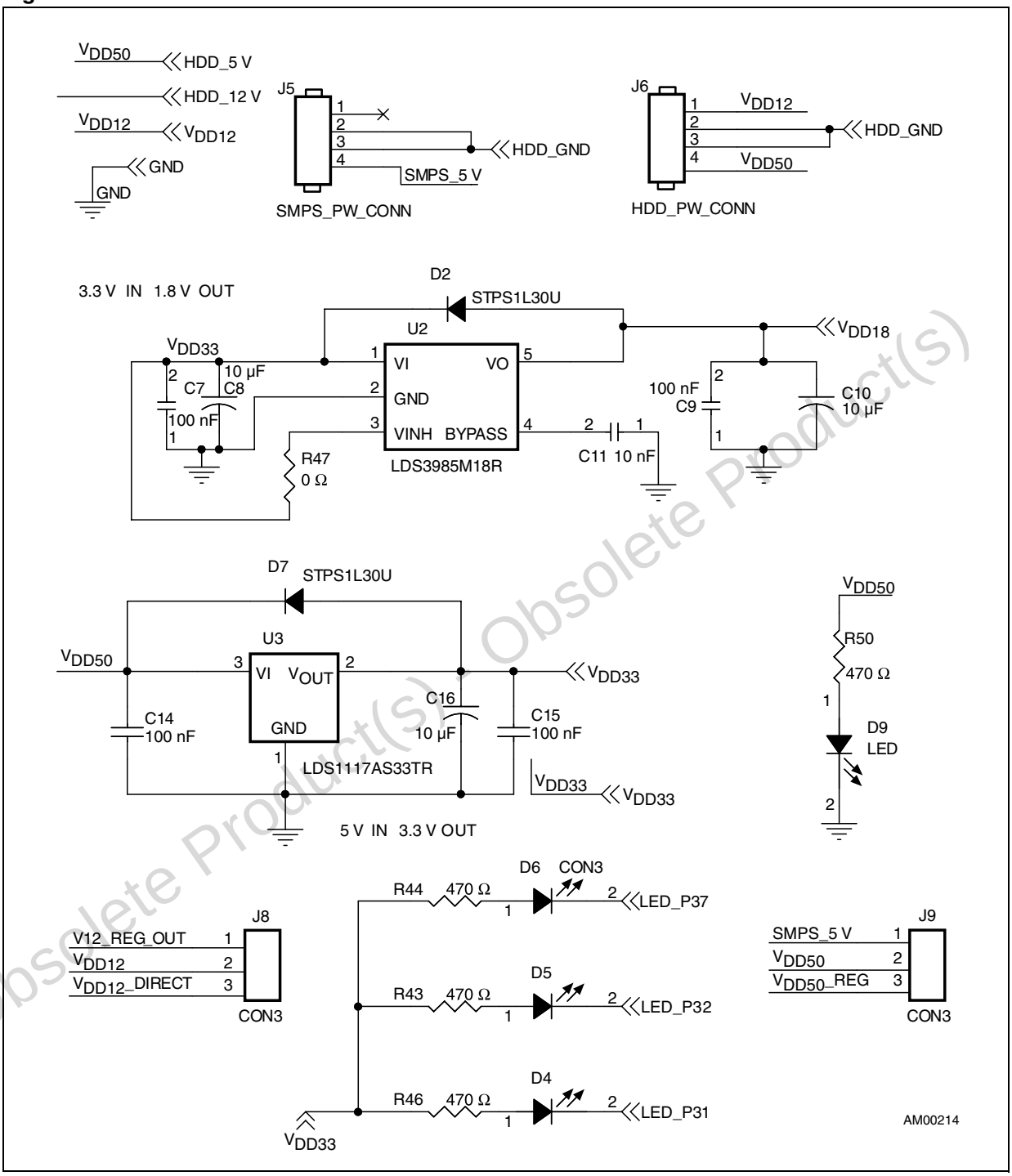
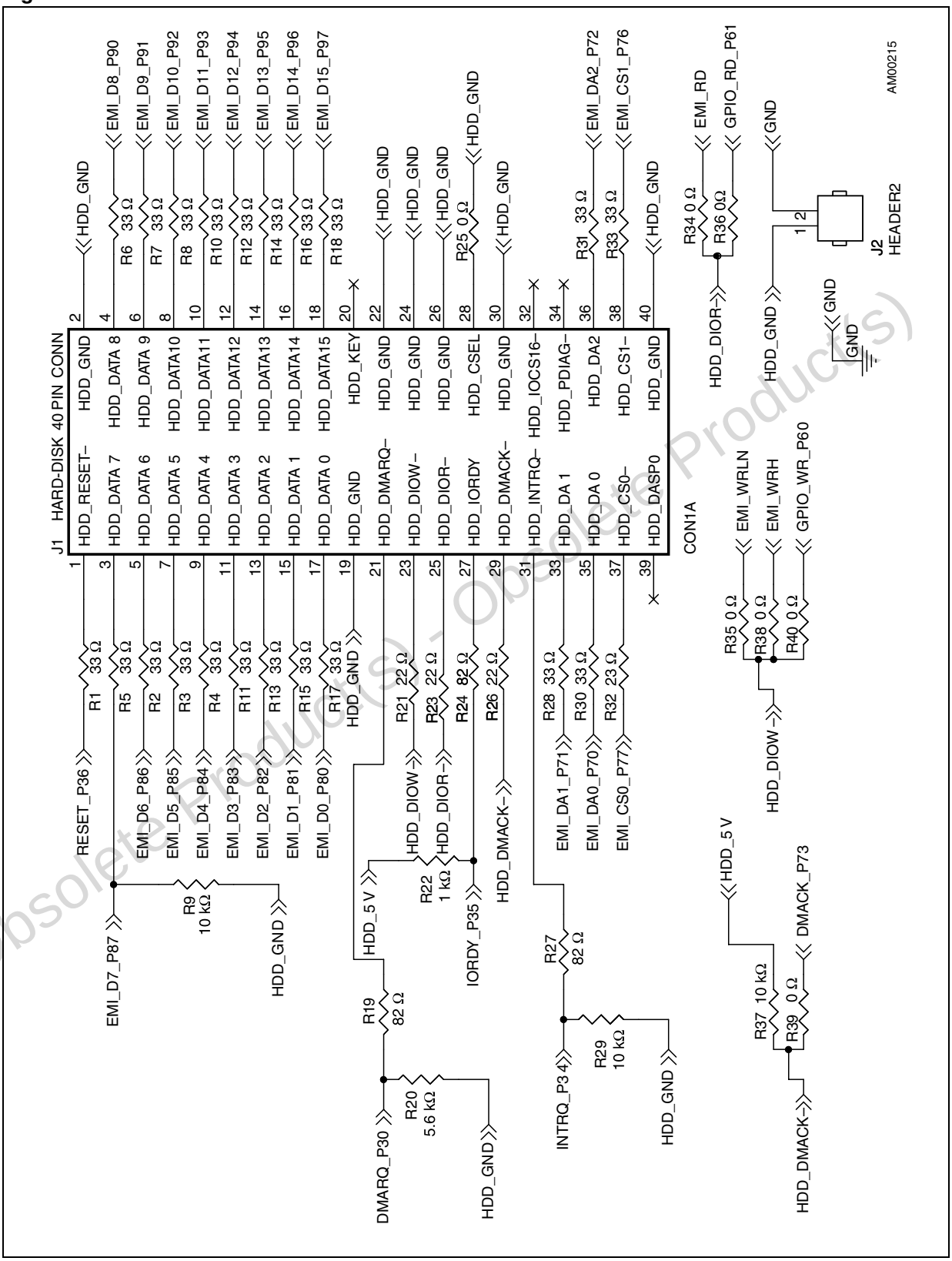


Figure 5. Schematic -hard disk connector with termination resistor



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
02-Sep-2008	1	Initial release