SMSC
USB Hub

USB Device
Port for Win CE

Typical 3.3V current
with all ports active
is 288 mA (950 mW)

Test pins:
must be as wired as shown

External
Dual USB

Internal USB Headers

Technologic Systems
 Feb. 12, 2011
Title: TS-8100 USB Hub
Rev: Designer Sheet 3 of 10
DIO and LCD and SATA

Warning:
DIO are not 5V tolerant!
Only SPI_MISO is 5V tolerant

Warning:
LCD_D0 thru LCD_D7 are 5V tolerant
LCD_WR#, LCD_RS, and LCD_EN are not!

4.3V Supply

SATA Port
**Input Power**

5.0V to 30V

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**Power Conn.**

- **122 mohm typ.**
- **VIN**
- **CPU_3.3V**
- **GND**
- **5V**

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**Components**

- **C68 must be very near U6**
- **C67 must be very near Q2**
- **C98 not populated**

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**MBS1260T**

- 3.1A @ 85 deg.
- 87 mohm
- 12.5 x 12.5 x 8mm
- 66 cents @ 500

**DR127-220-R**

- 4.0Ams @ 85 deg.
- 59 mohm
- 12.5 x 12.5 x 8mm
- 83 cents @ 350

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**Notes**

- C1608X5R1C474K = .47 uF 16V 0603
- DR127-220-R 83 cent @ 350
- C98 not populated
- MBS1260T 66 cent @ 500

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**Design:**

- Technologic Systems
- Feb. 12, 2011
- Title: TS-8100  5V Power
- Sheet 5 of 10
Board ID = 64 + 7

RTC Battery

Force Boot to SD card

SBC Primary

10/100 Ethernet

LEDs

Push Switch

1.2K should be near ON
16-bit A/D Converter

A/D Header

Four single-ended 0-10V Inputs
Two differential pairs 0-2V range
2nd Ethernet Port and PC Memory

(Both Optional)

16 MB Phase Change Memory

16 MB Phase Change Memory
Two 100-pin Module Connectors

- **Boot Strap**
  - **BUS_DIR**
  - **SBC**
    - 1: NAND Flash
    - 0: SD Card

  - **BUS_DIR** state is validated prior to SBC reset
  - **SBC** has a 10K pull up resistor

- **TS-8100 TS-Socket Connectors**

- **USB Ports**
  - USB_HOSTA_P
  - USB_HOSTA_M

- **USB I2C**
  - Othernet

- **Ethernet**
  - RJ45

- **Serial Ports or DIO**
  - USB_OTG_M
  - USB_OTG_P

- **Power**
  - 5V POWER

- **I2C**
  - I2C_DAT
  - I2C_CLK

- **Serial Coms**
  - UART1_TXD
  - UART1_RXD
  - UART2_TXD
  - UART2_RXD
  - UART3_TXD
  - UART3_RXD

- **Debugging**
  - DEBUG_TXD
  - DEBUG_RXD

- **CAN**
  - CAN2_RXD
  - CAN2_TXD

- **RS-422**
  - TXD0_485
  - RXD0_485
  - TXD4_485
  - RXD4_485

- **RS-232**
  - TXD4_485

- **JTAG**
  - PLD_JTAG_TDI
  - PLD_JTAG_TDO
  - PLD_JTAG_TCK
  - PLD_JTAG_TMS

- **TxEn**
  - TXEN_0
  - TXEN_4

- **ADC**
  - ADC_CLK

- **Misc**
  - BUS_WAIT#
  - BUS_ALE#
  - PLD_JTAG_TDI

- **Resistors**
  - 12K pull up resistor

- **Capacitors**
  - .1uF

- **SBC can supply up to 400 mA of 3.3V power to the base board**