COM Connectors and Headers

2nd CAN Transceiver

14.3 MHz Osc.

5V --> 3.3V

Provides 5V Tolerance
SMSC
USB Hub

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

External Dual USB

Internal USB Headers

Technologic Systems
Title: TS-8100 USB Hub
Rev: Designer Sheet 3 of 10
Nov. 3, 2010
**DIO and LCD and SATA**

**DIO Port**

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

**LCD Port**

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

**4.3V Supply**

**SATA Port**

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Technologic Systems

Title: TS-8100  DIO, LCD, SATA

Rev: Designer  Sheet 4 of 10

Nov. 3, 2010
Input Power

4.7V to 5.4V
or
6.0V to 30V

Power Conn.

122 mohm typ.

Warning:

When Vin is between 5.4V and 6.0V
The 5V rail can fall below 4.5V
This means the SBC may reset

5V Power Supply (3.0 Amps)

5V Regulator Bypass

Turns FET on when Vin < 5.5V nominal
16-bit A/D Converter

A/D Header

Four single-ended 0-10V Inputs

Two differential pairs 0-2V range
2nd Ethernet Port
(Optional)
Two 100-pin Module Connectors

Boot Strap

<table>
<thead>
<tr>
<th>BUS_DIR</th>
<th>SBC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NAND Flash</td>
</tr>
<tr>
<td>0</td>
<td>SD Card</td>
</tr>
</tbody>
</table>

- BUS_DIR state is loaded prior to OFF BD_RESET#
- BUS_DIR has a 12K pull up resistor on the SBC module
- Use 1.2K ohm resistor to OFF BD_RESET# to strap logic low

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