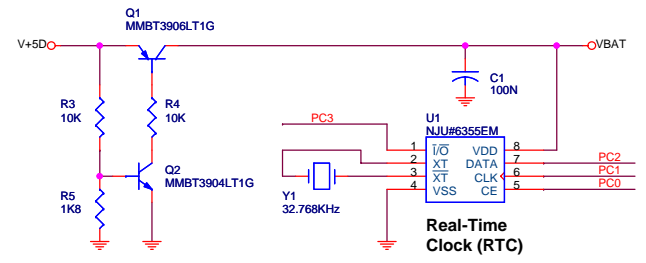
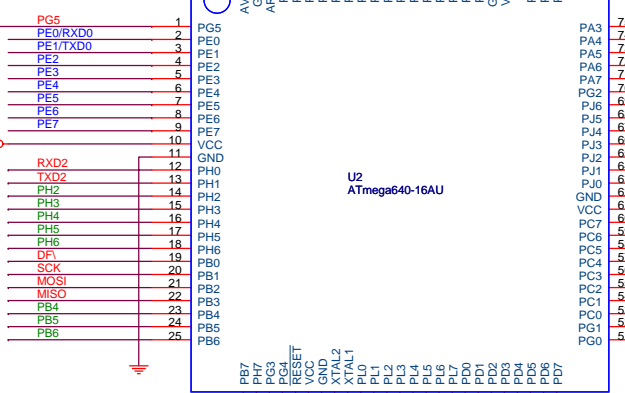
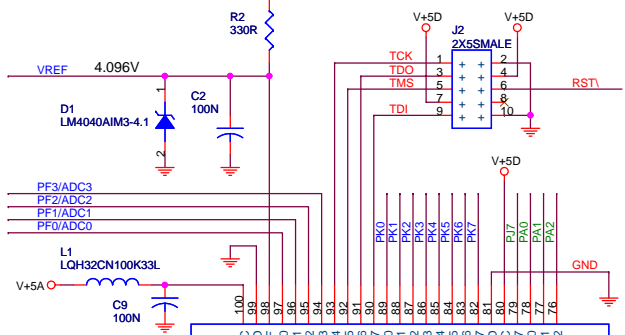
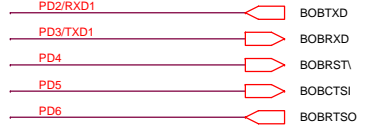
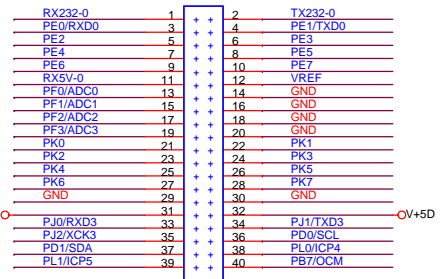


Optional (backside) 2mm I/O headers - see notes.

Optional JTAG TAP (backside)



GPIO Port



DESIGN NOTES:

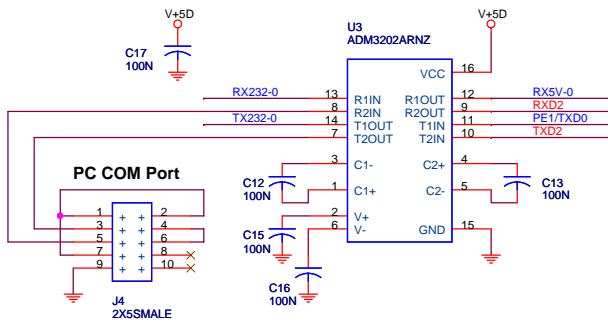
VREF is +4.096V within 0.1% at 25C. Do not exceed 2mA maximum load on this pin (J3 pin 12).

BOBRST \bar{I} (PD4) must not be driven active-high! Do not drive BOBCTSI \bar{I} (PD5) high until BOB module comes out of reset mode.

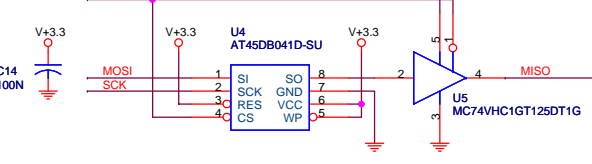
J9 & J10 are optional backside I/O headers; 2mm pitch, 2 rows of 10 pins. Example: Sullins PRPN102PAEN-RC

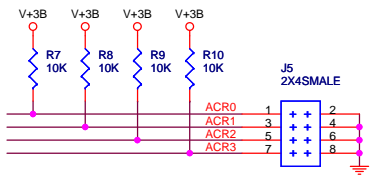
PC COM port pinout allows hookup with ribbon cable and IDC connectors. Link 2x5 socket pin 1 to DB9 female pin 1; trim 10th conductor away at DB9 end.

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Title BUD-1H Processor & I/O		
Size BUD.DSN	Document Number BUD.DSN	Rev 1.0
Date: Friday, January 30, 2009	Sheet 1	of 2

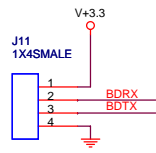


Optional Data Memory (Atmel AT45 series DataFlash)

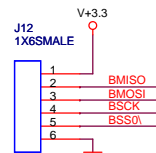




BOB Configuration Header

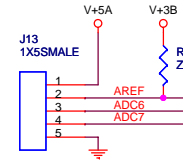


Optional BOB Debug port (backside)

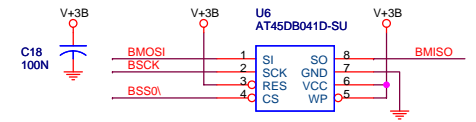


Optional BOB SPI port (backside)

Font memory expansion may not be used simultaneously with optional SPI slave port (J12).



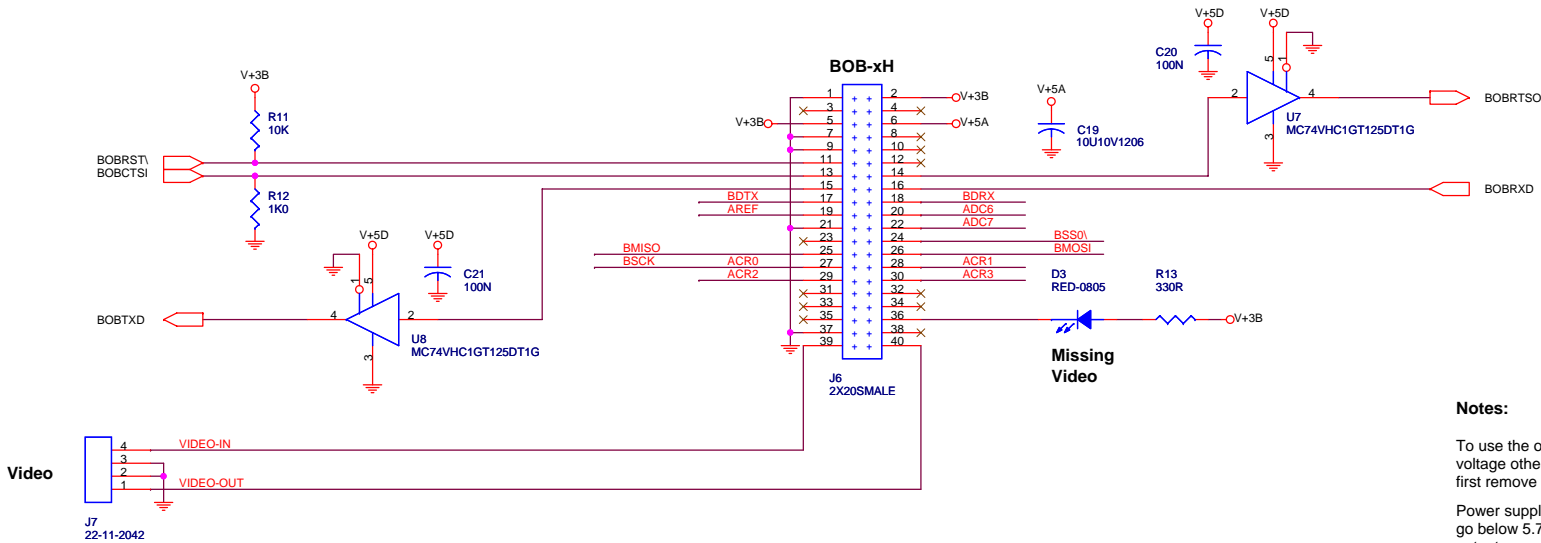
Optional BOB ADC port (backside)



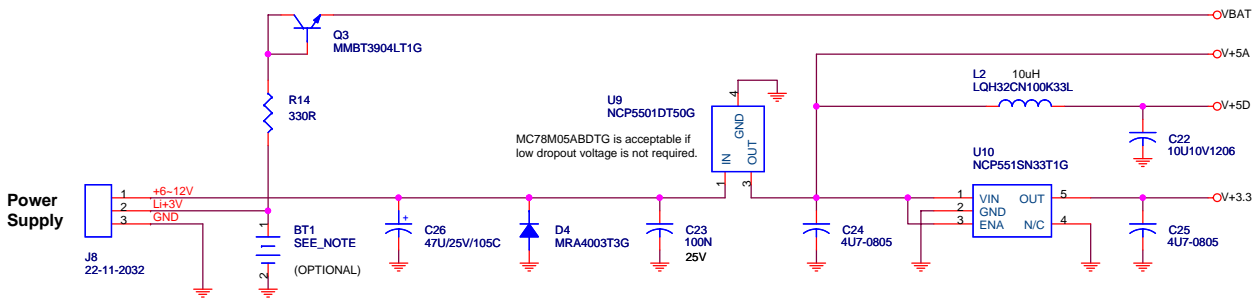
Optional Font Memory Expansion

Use Atmel AT45 series DataFlash chip. See list in BOB-4 Application Guide.

Font memory expansion may not be used simultaneously with optional SPI slave port (J12).



Video
J7
22-11-2042



Power Supply
J8
22-11-2032

Notes:

To use the optional BOB ADC input port (J13) with a reference voltage other than BOB's local 3.3V regulator (2% accuracy), first remove the zero-ohm resistor (R15)!

Power supply input voltage must not exceed 16V, and must not go below 5.7V to maintain regulation. Loading on regulated 5V outputs must be considered together with regulator heat dissipation issues. See NCP5501 docs.

BUD-1H power supply current is about 133mA with BOB-4H module installed, or 43mA without.

NCP5501 needs at least one square inch of 1oz copper to dissipate one watt at 90C ambient, which allows about 150mA total load current with 12V input.

BT1 may be used to keep the real-time clock IC operating when the main power supply is off. It's a 3V lithium coin cell mounted backside in Eagle Plastic Devices 122-2820-GR. Use 20mm coin cell type BR2032 (Panasonic) or equivalent.

Passive components are 0603 size unless otherwise marked. 100N capacitors must carry 25V minimum rating.

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Title BUD-1H Power Supply & BOB Interface		
Size	Document Number BUD.DSN	Rev 1.0
Date:	Friday, January 30, 2009	Sheet 2 of 2