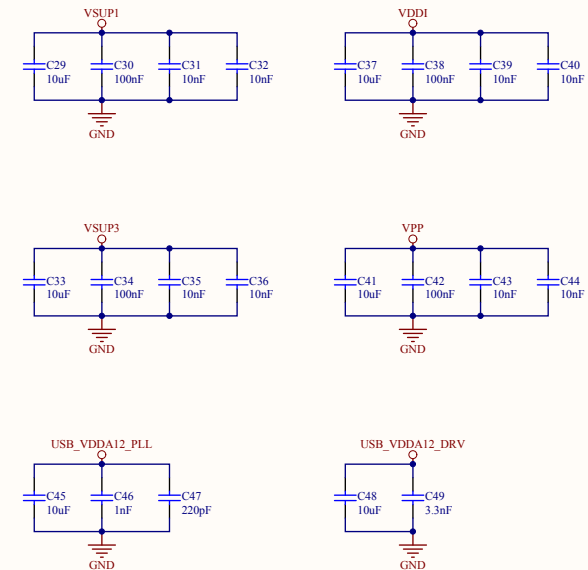
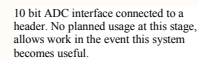



Relevant drawings	Diagram title	Description
	PAYL0001	PC GMSK
	PAYL0002	PC JTAG
	PAYL0003	PC Memory
	PAYL0004	PC Microcontroller I/O Interfaces
	PAYL0005	PC Microcontroller Power
	PAYL0006	PC Overview Block
	PAYL0007	PC Power

Title <b>Payload Computer Overview</b>				<div>BLUESAT Project Room 419 School of EE&amp;T UNSW, NSW 2052 Australia</div> <div><b>BLUESAT</b> UNSW STUDENT SATELLITE PROJECT</div>
Description: Payload computer overview				
Author: <b>Matt Brindley</b>		Drawing No: 0-1 PAYL0006		
Size: A3		Version: 1.0		
Date: 10/1/2011    Time: 9:36:28 PM		Sheet: 1 of 1		
File: C:\Users\Thien Nguyen\Documents\BLUESAT\Documentation\SVN\Payload\Payload Development Board\PAYL0006_PC_Overview_Block				

High Z state is for power on modes.  $V_{PP} > 2.3V$  cause spontaneous burning/corruption if VDDI has not yet reached minimum nominal V.



<b>Title</b> <i><b>Payload Computer - Microcontroller Power</b></i>		<div style="text-align: center;">  <p><b>BLUESAT</b> UNSW STUDENT SATELLITE PROJECT</p> </div>
<b>Description:</b> Power supply for a microcontroller		
<b>Author:</b> <b>Matt Brindley</b>	<b>Drawing No.:</b> PAYL0005	
<b>Size:</b> A3	<b>Version:</b> 1.0	
<b>Date:</b> 10/1/2011 <b>Time:</b> 9:36:29 PM		<b>Sheet:</b> 1 of 1
<b>File:</b> C:\Users\Then Naumen\Documents\BLUESAT\Documentation\SVN\Payload\Payload Development\Board\PAYL0005_PC_Microcontroller_Power_Sch.D		

A

B

C

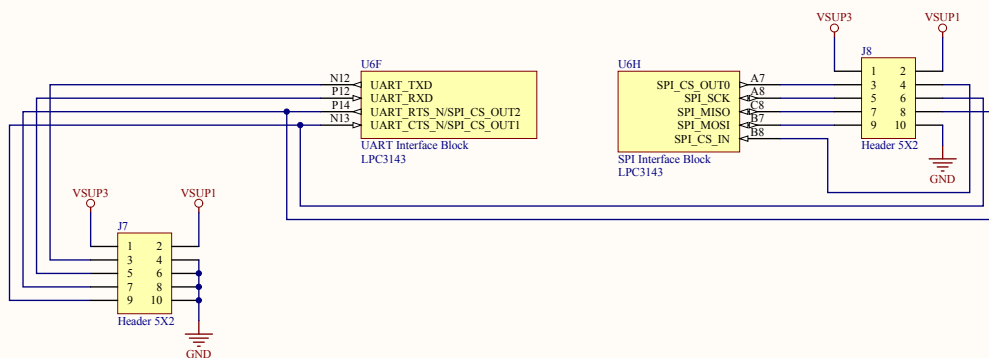
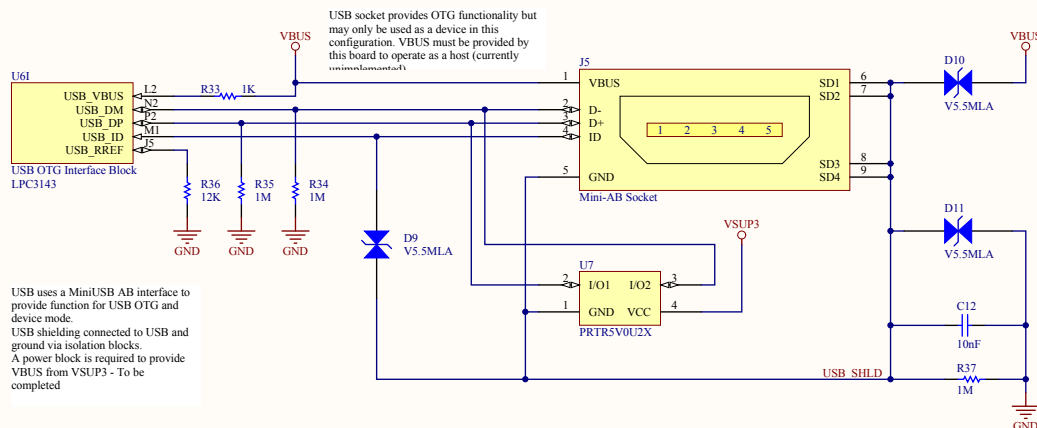
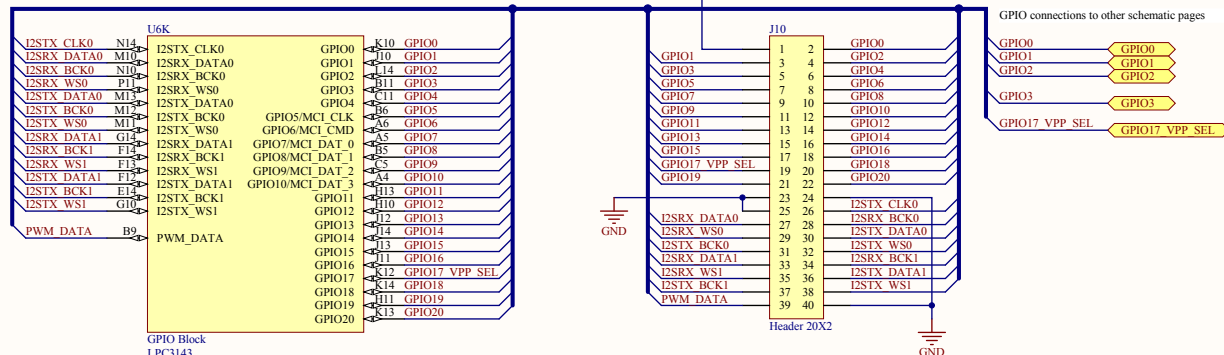
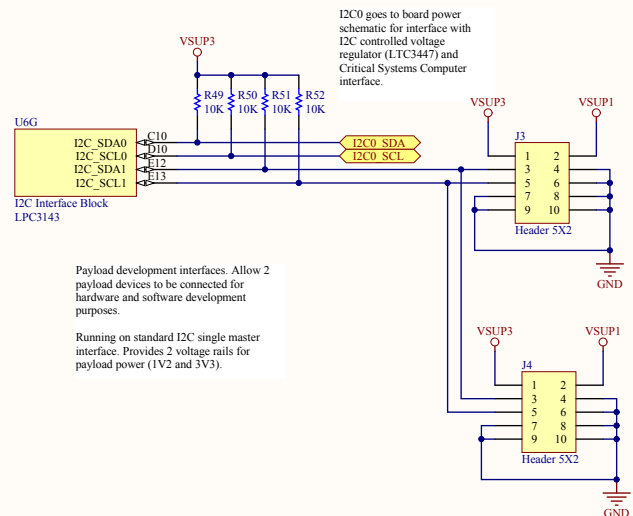
D

A

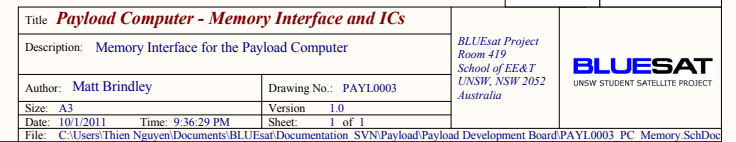
B

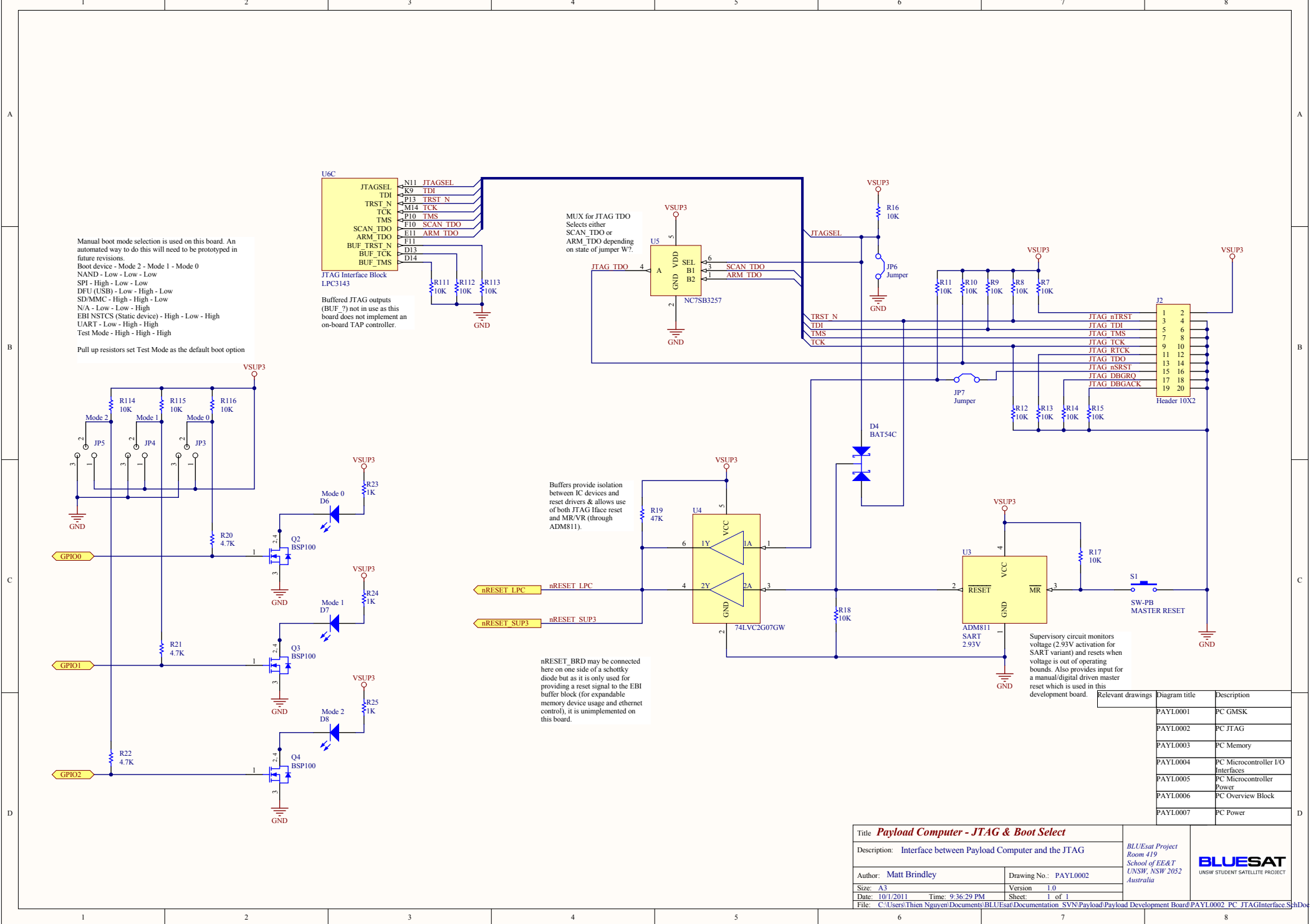
C

D



Relevant drawings	Diagram title	Description
PAYL0001	PC GMSK	
PAYL0002	PC JTAG	
PAYL0003	PC Memory	
PAYL0004	PC Microcontroller I/O Interfaces	
PAYL0005	PC Microcontroller Power	
PAYL0006	PC Overview Block	
PAYL0007	PC Power	





Manual boot mode selection is used on this board. An automated way to do this will need to be prototyped in future revisions.  
Boot device - Mode 2 - Mode 1 - Mode 0  
NAND - Low - Low - Low  
SPI - High - Low - Low  
DFU (USB) - Low - High - Low  
SD/MMC - High - High - Low  
N/A - Low - Low - High  
EBI NSTCS (Static device) - High - Low - High  
UART - Low - High - High  
Test Mode - High - High - High

Pull up resistors set Test Mode as the default boot option

MUX for JTAG TDO  
Selects either  
SCAN\_TDO or  
ARM\_TDO depending  
on state of jumper W?.

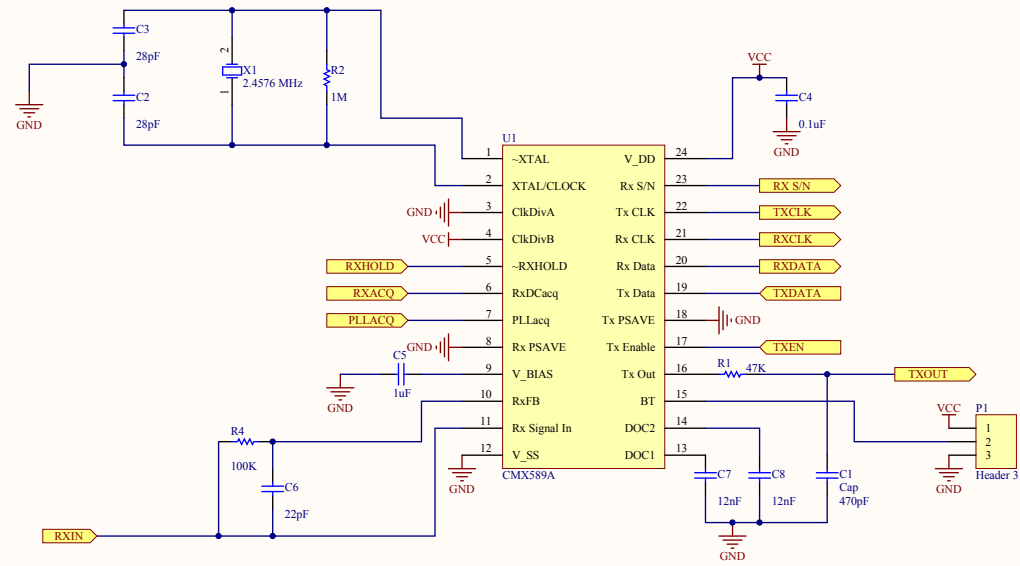
Buffers provide isolation  
between IC devices and  
reset drivers & allows use  
of both JTAG iface reset  
and MR/VR (through  
ADM811).

nRESET\_BRD may be connected  
here on one side of a schottky  
diode but as it is only used for  
providing a reset signal to the EBI  
buffer block (for expandable  
memory device usage and ethernet  
control), it is unimplemented on  
this board.

Supervisory circuit monitors  
voltage (2.93V activation for  
SART variant) and resets when  
voltage is out of operating  
bounds. Also provides input for  
a manual/digital driven master  
reset which is used in this  
development board.

Relevant drawings	Diagram title	Description
PAYL0001	PC GMSK	
PAYL0002	PC JTAG	
PAYL0003	PC Memory	
PAYL0004	PC Microcontroller I/O	
PAYL0005	PC Microcontroller	
PAYL0006	Power	
PAYL0007	PC Overview Block	

Title <b>Payload Computer - JTAG &amp; Boot Select</b>		<div>BLUEsat Project Room 419 School of EE&amp;T UNSW, NSW 2052 Australia</div> <div><b>BLUESAT</b> UNSW STUDENT SATELLITE PROJECT</div>
Description: Interface between Payload Computer and the JTAG		
Author: <b>Matt Brindley</b>	Drawing No.: <b>PAYL0002</b>	
Size: <b>A3</b>	Version: <b>1.0</b>	
Date: <b>10/1/2011</b>	Time: <b>9:36:29 PM</b>	
Sheet: <b>1</b> of <b>1</b>		
File: <b>C:\Users\Thien Nguyen\Documents\BLUEsat\Documentation\SVN\Payload\Payload Development Board\PAYL0002_PC_JTAGInterface.SchDoc</b>		



Relevant drawings	Diagram title	Description
	PAYL0001	PC GMSK
	PAYL0002	PC JTAG
	PAYL0003	PC Memory
	PAYL0004	PC Microcontroller I/O
	PAYL0005	PC Microcontroller Interfaces
	PAYL0006	PC Microcontroller Power
	PAYL0007	PC Overview Block

Title <b>BLUEsat GMSK Modem</b>		<div>BLUEsat Project Room 419 School of EE&amp;T UNSW, NSW 2052 Australia</div> <div><b>BLUESAT</b> UNSW STUDENT SATELLITE PROJECT</div>
Description: GMSK Modem based on CML CMX589 IC		
Author: M. WENKE, T. FISK	Drawing No.: PAYL1001	
Size: A3	Version: 1.0	
Date: 10/1/2011	Time: 9:36:29 PM	
File: C:\Users\Thien Nguyen\Documents\BLUEsat\Documentation\SVN\Payload\PAYL0001_GMSK_SchDoc		Sheet: 1 of 1