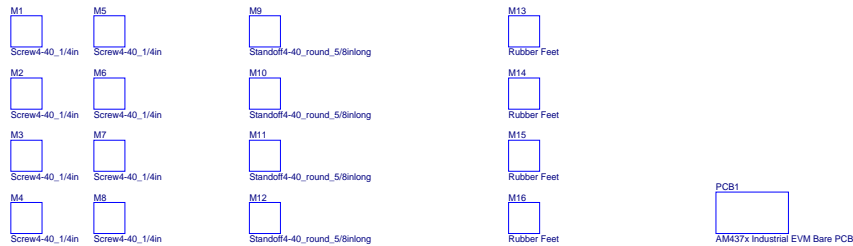
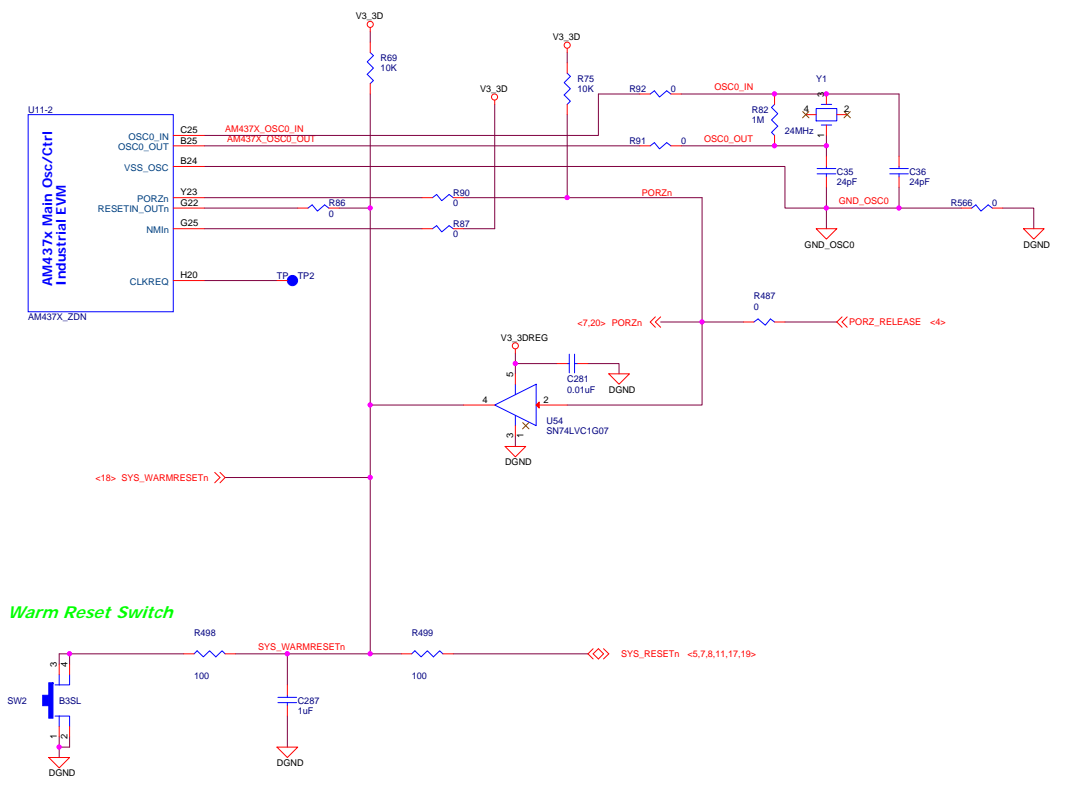


# ARM MPU AM437X Industrial EVM ZDN Package

- See the Hardware User Guide for board details
- See the Errata Document for design Issues
- See the PCB Build Specification for PCB Details



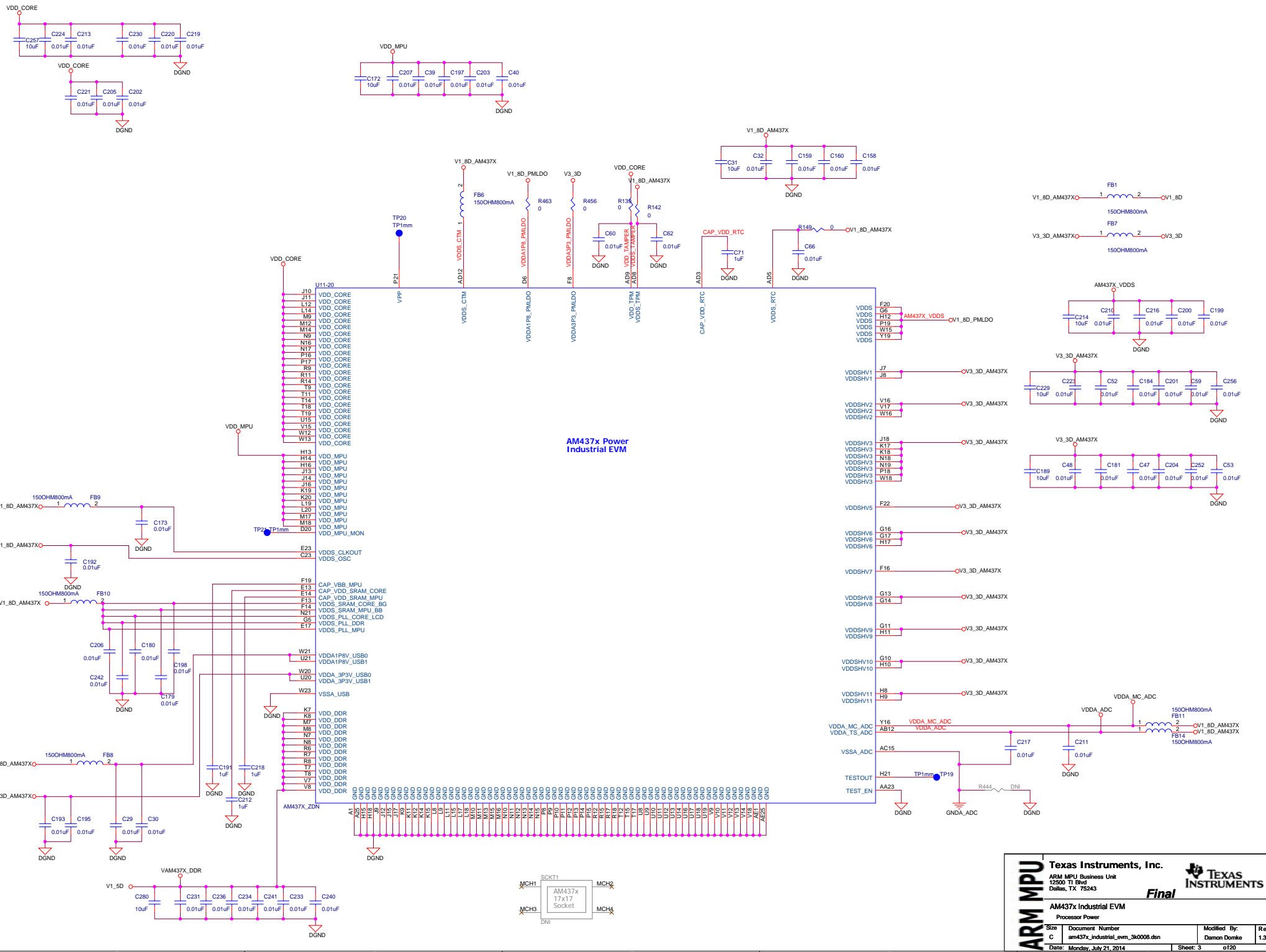
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	ARM MPU Business Unit 12500 TI Blvd Dallas, TX 75243			
	<b>AM437x Industrial EVM</b>			<b>Final</b>
	Title Page			
Size	Document Number	Modified By:	Rev	
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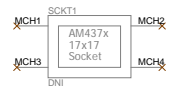
Warm Reset Switch

defaultbuild

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<b>AM437x Industrial EVM</b>				
Processor System				
Size	Document Number	Modified By:	Rev	
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Date:	Monday, July 21, 2014	Sheet:	2 of 20	

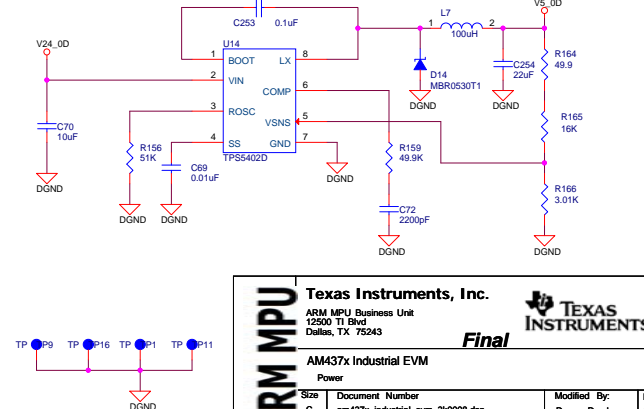
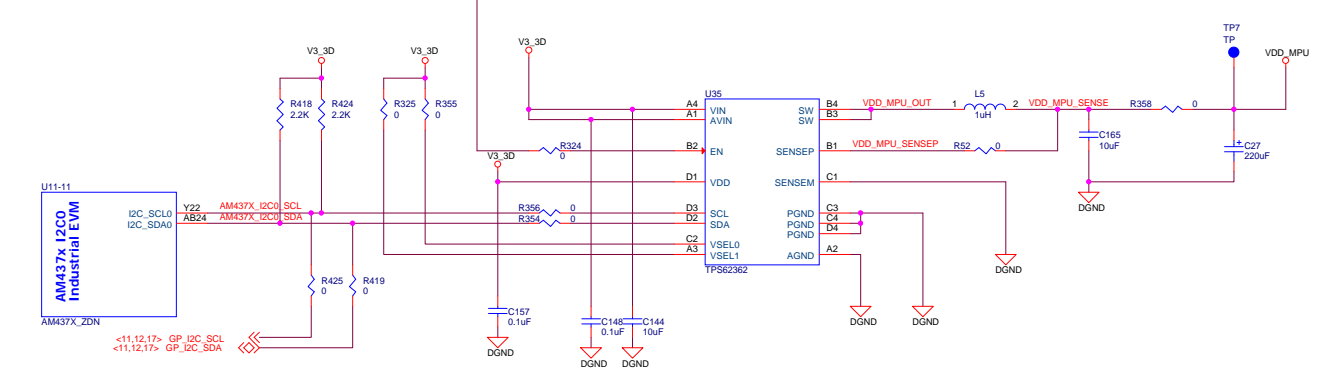
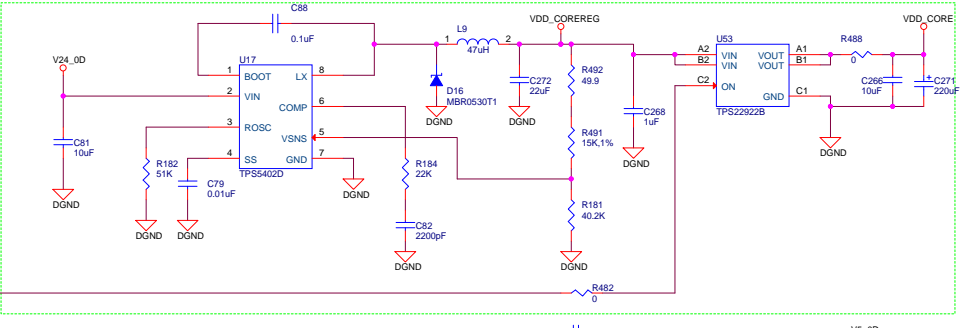
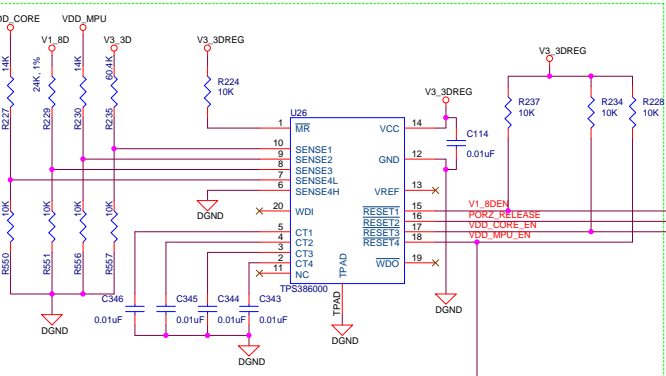
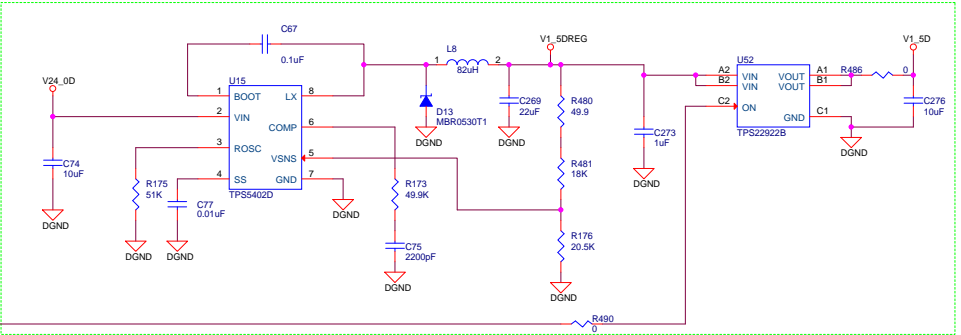
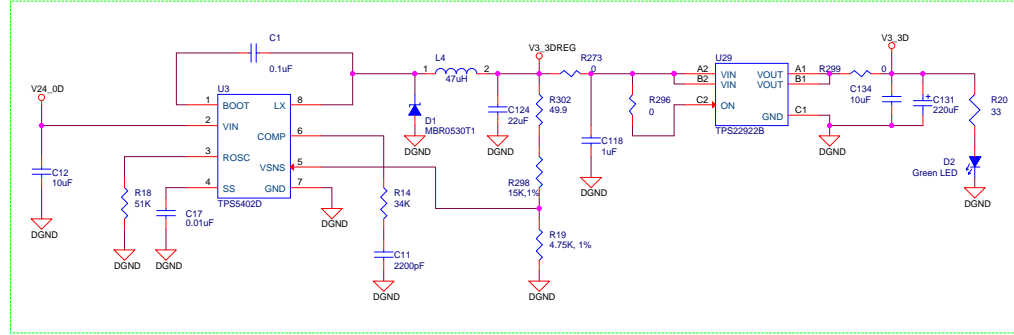
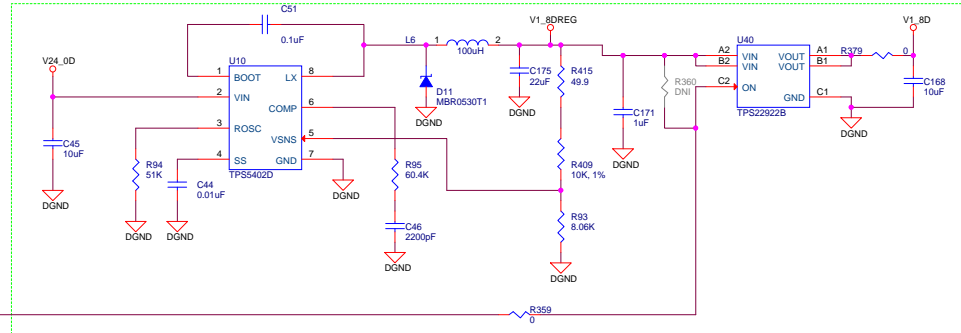
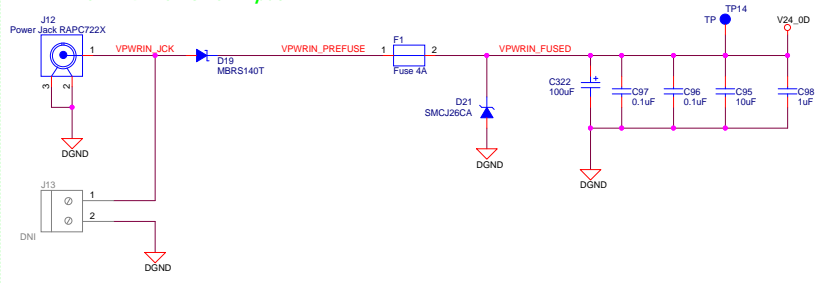


**AM437x Power Industrial EVM**

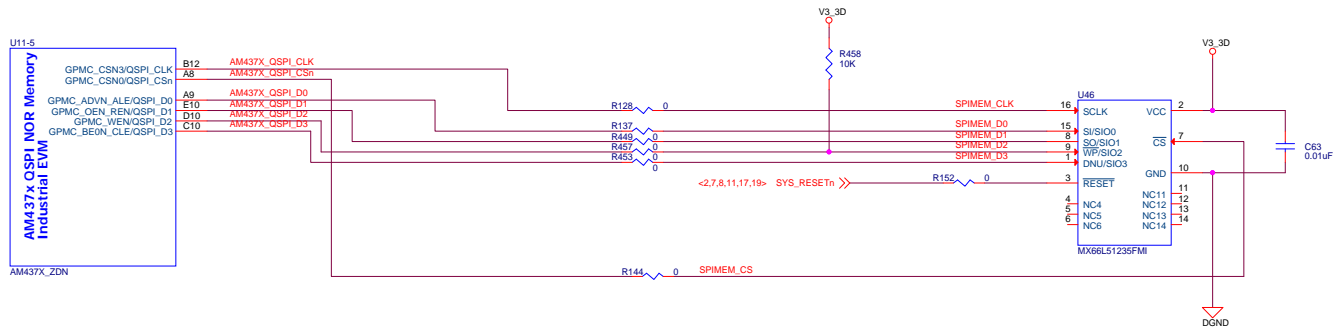


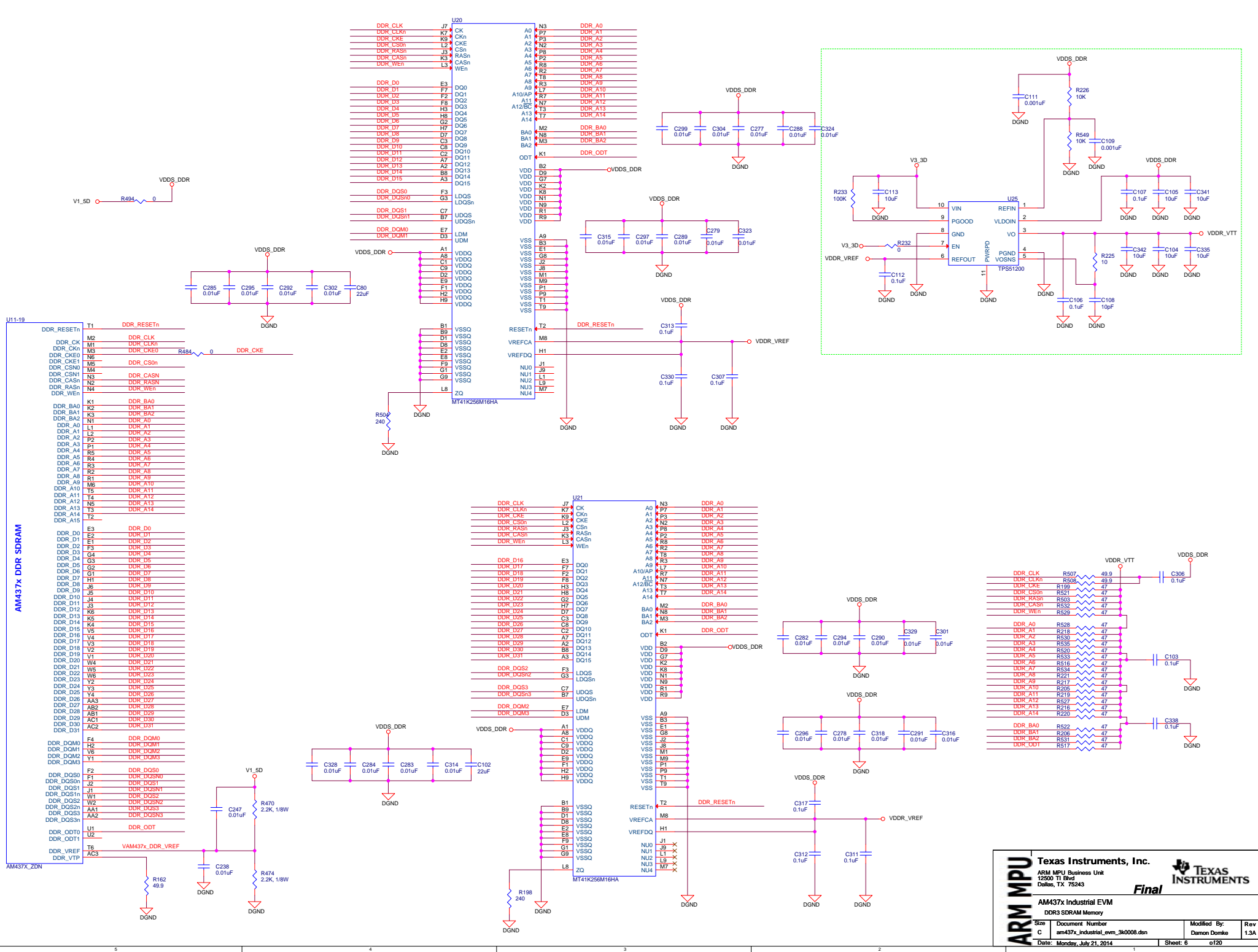
<b>ARM MPU</b>	<b>Texas Instruments, Inc.</b> ARM MPU Business Unit 12500 TI Blvd Dallas, TX 75243			<b>TEXAS INSTRUMENTS</b>
	<b>Final</b> <b>AM437x Industrial EVM</b> Processor Power			
Size	Document Number	Modified By:		
C	am437x_industrial_ev_m_3k0008.dsn	Damon Domke	Rev	1.3A
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### Main 24VDC Power Input



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**AM437x Industrial EVM**  
 Power  
 Size C Document Number am437x\_industrial\_evm\_3k0008.dsn Modified By: Damon Domke Rev 1.3A  
 Date: Thursday, July 31, 2014 Sheet: 4 of 20





AM437x DDR SDRAM

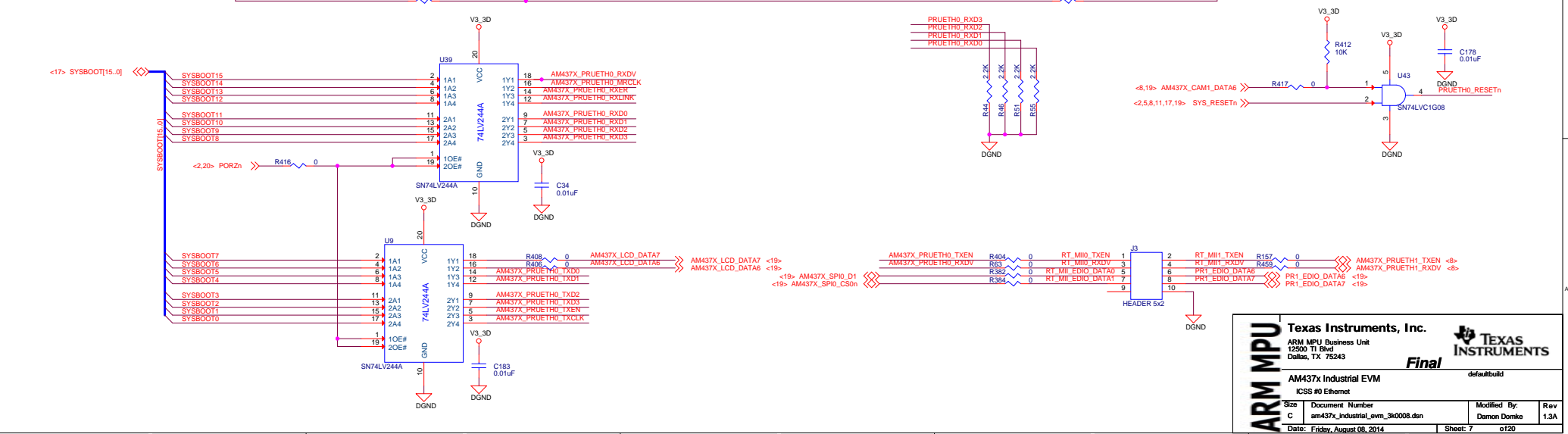
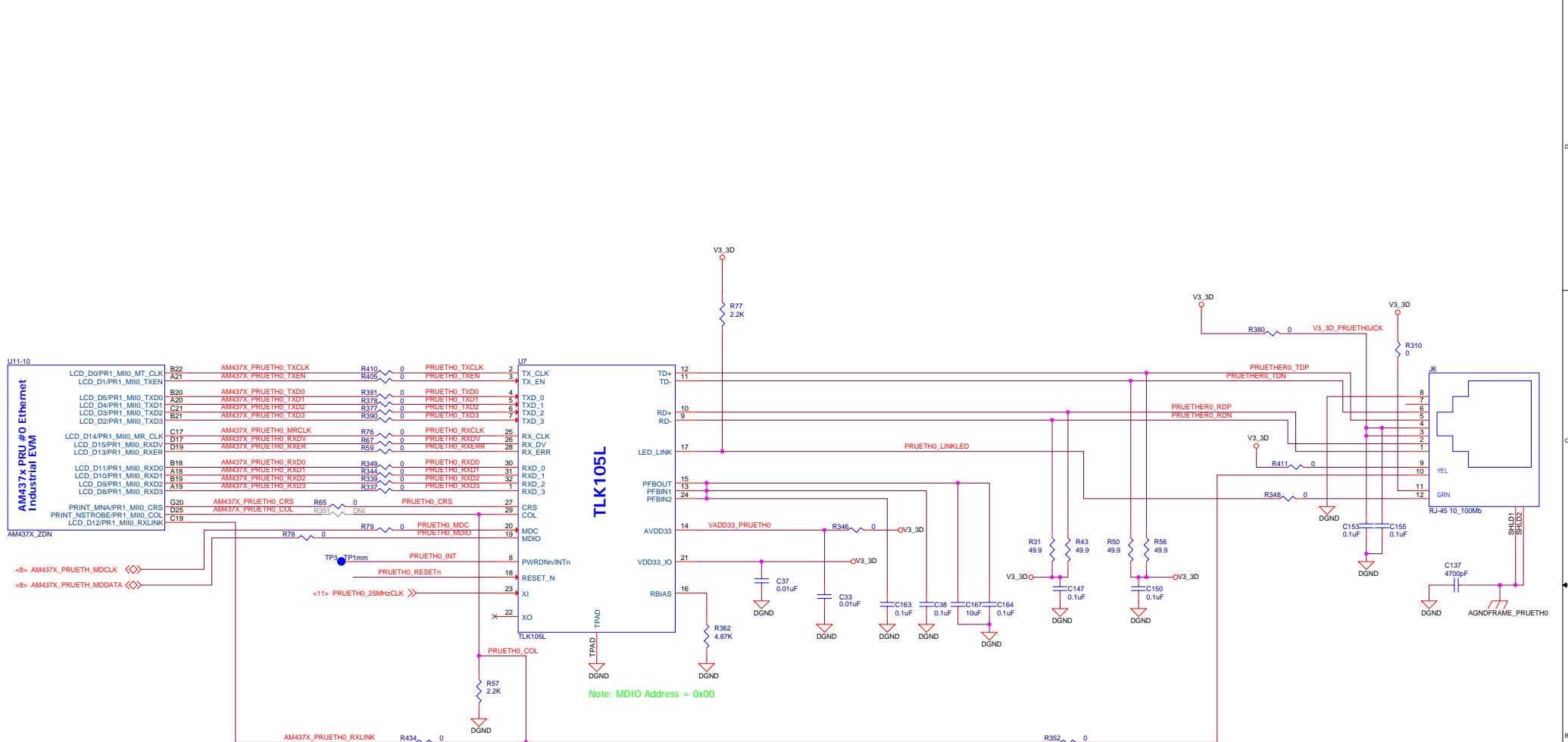
ARM MPU

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**AM437x Industrial EVM**  
 DDR3 SDRAM Memory

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ARM MPU

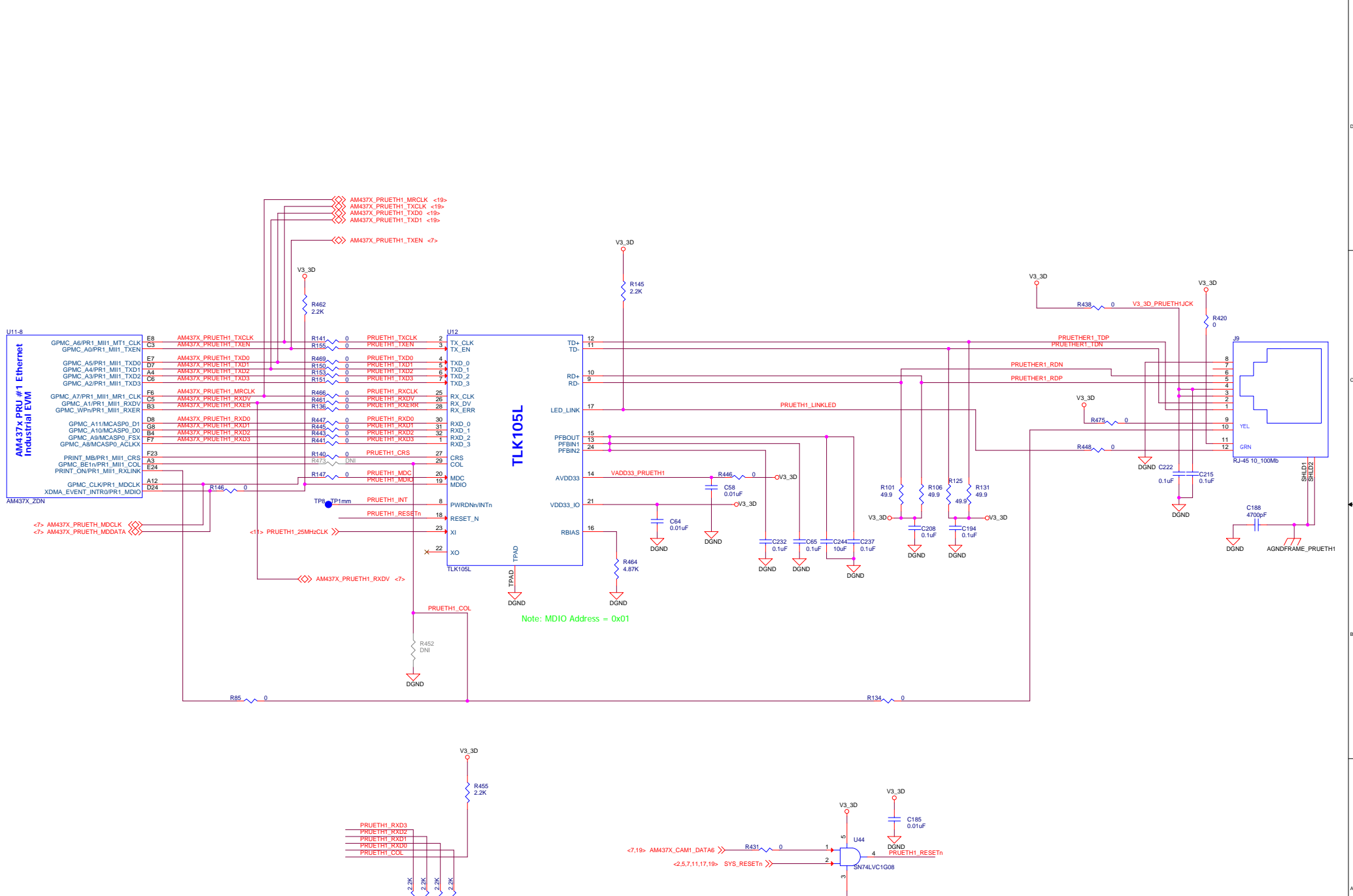
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<b>AM437x Industrial EVM</b>			
ICSS #0 Ethernet			
Size	Document Number	Modified By:	Rev
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**U11-8**  
AM437x PRU#1 Ethernet Industrial EVM

GPIC_A6/PR1_MI11_MT1_CLK	E8	AM437X_PRUETH1_TXCLK	R141	0	PRUETH1_TXCLK	2	TX_CLK
GPIC_A0/PR1_MI11_TXEN	C3	AM437X_PRUETH1_TXEN	R155	0	PRUETH1_TXEN	3	TX_EN
GPIC_A5/PR1_MI11_TXD0	E7	AM437X_PRUETH1_TXD0	R469	0	PRUETH1_TXD0	4	TXD_0
GPIC_A4/PR1_MI11_TXD1	D9	AM437X_PRUETH1_TXD1	R150	0	PRUETH1_TXD1	5	TXD_1
GPIC_A3/PR1_MI11_TXD2	A4	AM437X_PRUETH1_TXD2	R153	0	PRUETH1_TXD2	6	TXD_2
GPIC_A2/PR1_MI11_TXD3	C6	AM437X_PRUETH1_TXD3	R151	0	PRUETH1_TXD3	7	TXD_3
GPIC_A7/PR1_MI11_MR1_CLK	F6	AM437X_PRUETH1_MRCLK	R466	0	PRUETH1_RXCLK	25	RX_CLK
GPIC_A1/PR1_MI11_RXDV	C5	AM437X_PRUETH1_RXDV	R461	0	PRUETH1_RXDV	26	RX_DV
GPIC_WPn/PR1_MI11_RXERR	B5	AM437X_PRUETH1_RXEN	R136	0	PRUETH1_RXERR	29	RX_ERR
GPIC_A11/MCASPO_D1	D8	AM437X_PRUETH1_RXD0	R447	0	PRUETH1_RXD0	30	RXD_0
GPIC_A10/MCASPO_D0	G8	AM437X_PRUETH1_RXD1	R445	0	PRUETH1_RXD1	31	RXD_1
GPIC_A9/MCASPO_FSX	B4	AM437X_PRUETH1_RXD2	R443	0	PRUETH1_RXD2	32	RXD_2
GPIC_A8/MCASPO_ACLKX	F7	AM437X_PRUETH1_RXD3	R441	0	PRUETH1_RXD3	1	RXD_3
PRINT_MB/PR1_MI11_CRIS	F23	PRUETH1_CRIS	R140	0	PRUETH1_CRIS	27	CRIS_COL
GPIC_BE1n/PR1_MI11_COL	A3	PRUETH1_MDIO	R413	DNI	PRUETH1_MDIO	29	
PRINT_ON/PR1_MI11_RXLINK	E24	PRUETH1_MDC	R147	0	PRUETH1_MDC	20	MDC_MDIO
GPIC_CLK/PR1_MDCLK	A12	PRUETH1_INT	R146	0	PRUETH1_INT	8	PWRDNvInTn
XDMA_EVENT_INTRU/PR1_MDIO	D24	PRUETH1_RESETh	R147	0	PRUETH1_RESETh	18	RESET_N
		PRUETH1_25MHzCLK				23	XI
		AM437X_PRUETH1_RXDV				22	XO
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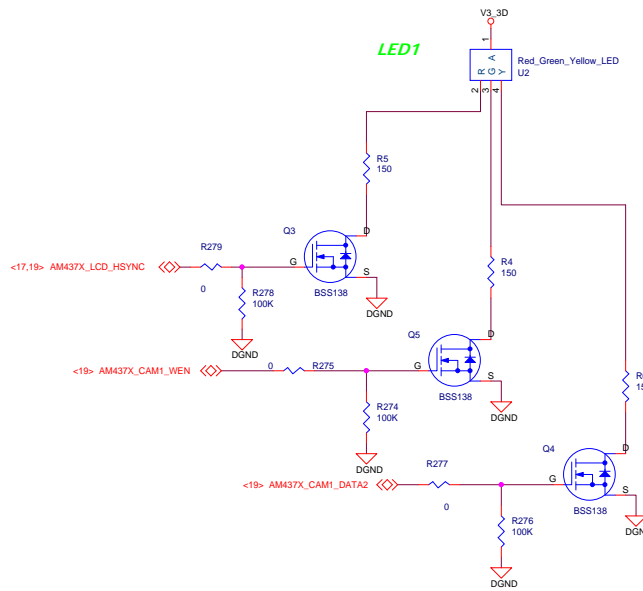
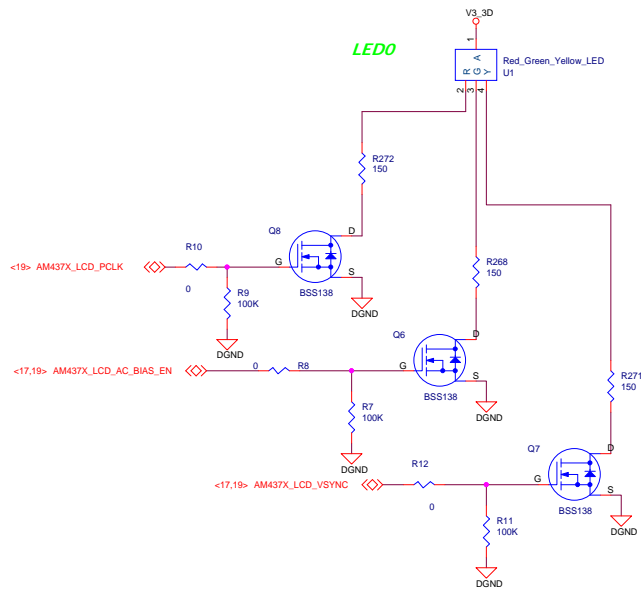
defaultbuild

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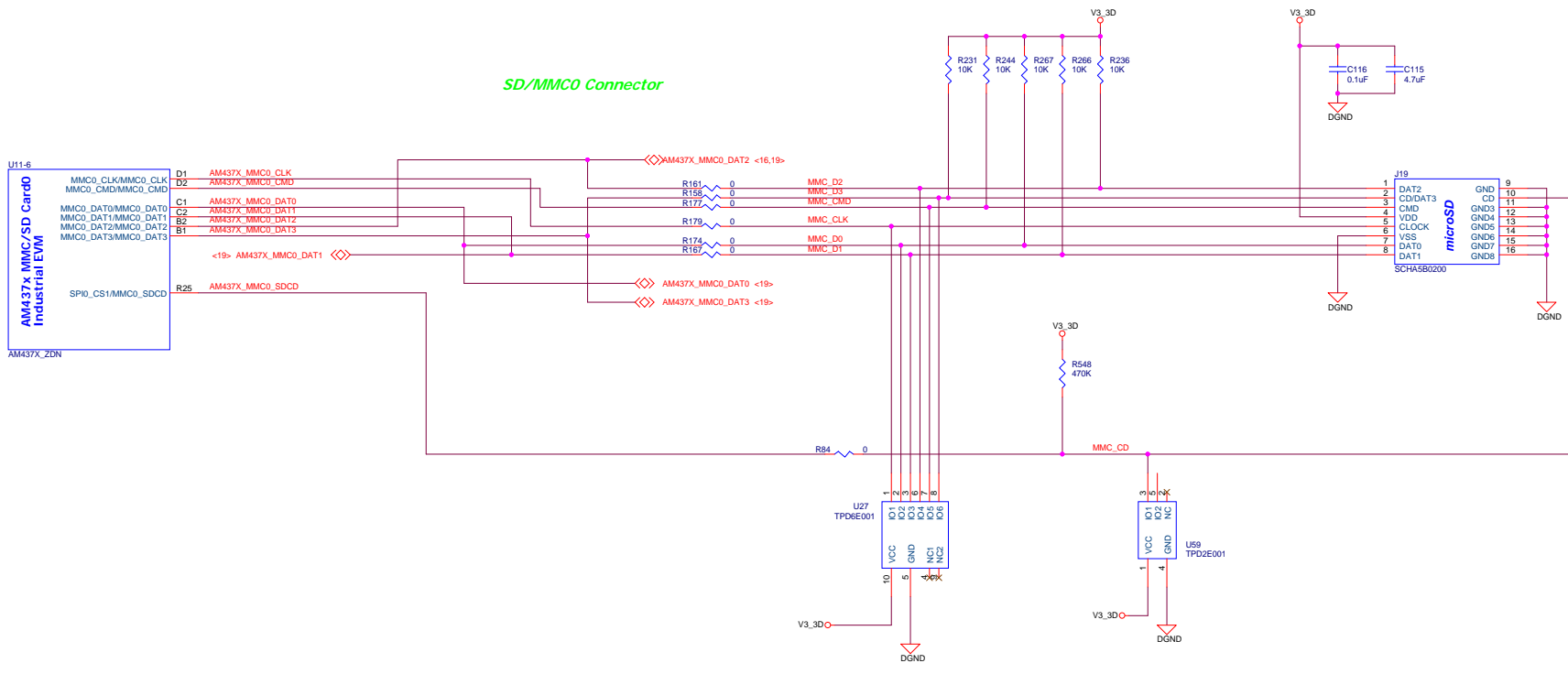
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 ICSS #1 Ethernet

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	<b>Final</b>			
	<b>AM437x Industrial EVM</b>			
EtherCAT				
Size	Document Number	Modified By:	Rev	
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SD/MMC0 Connector

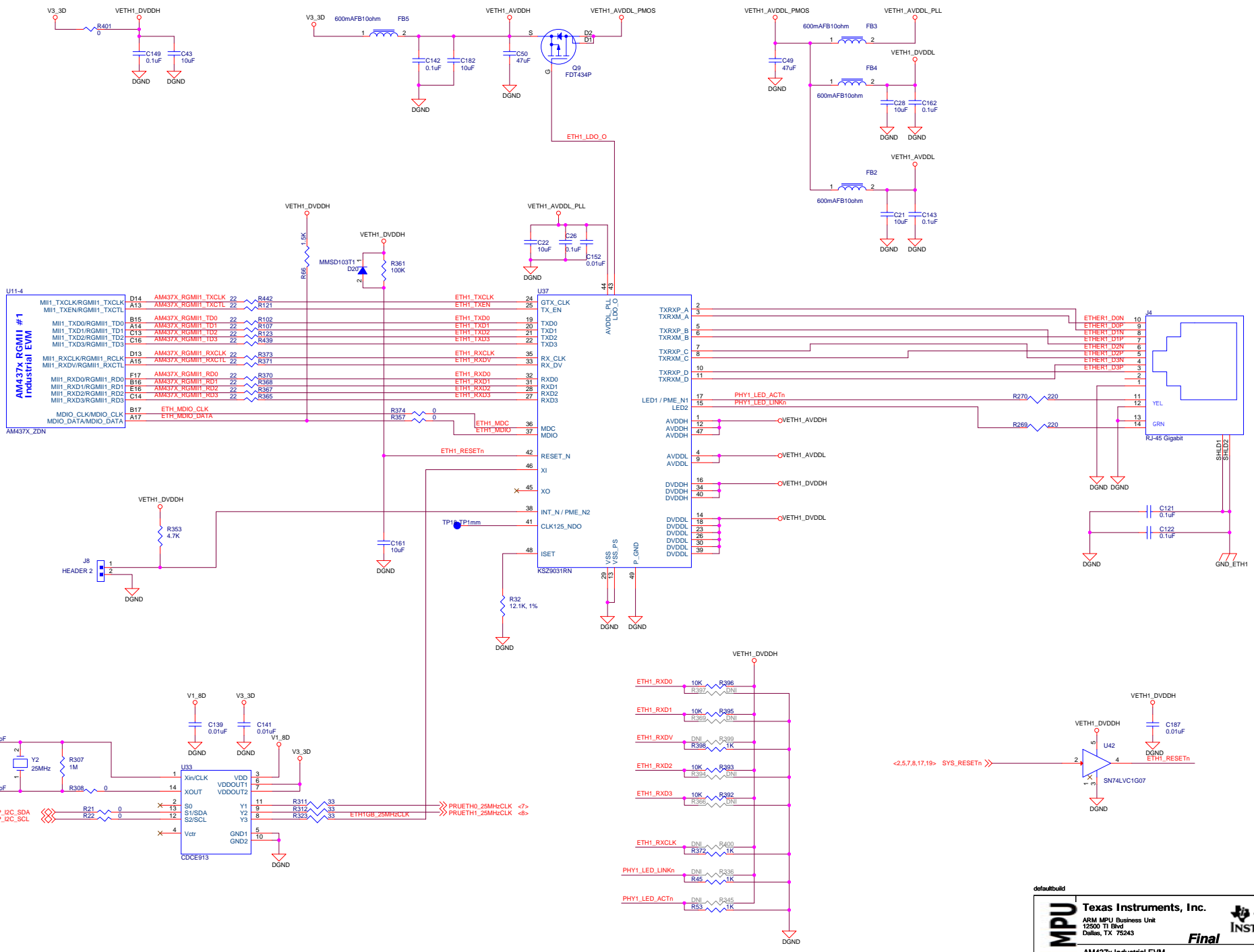
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**AM437x Industrial EVM**  
 SDMMC #0 Interface

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**ARM MPU**

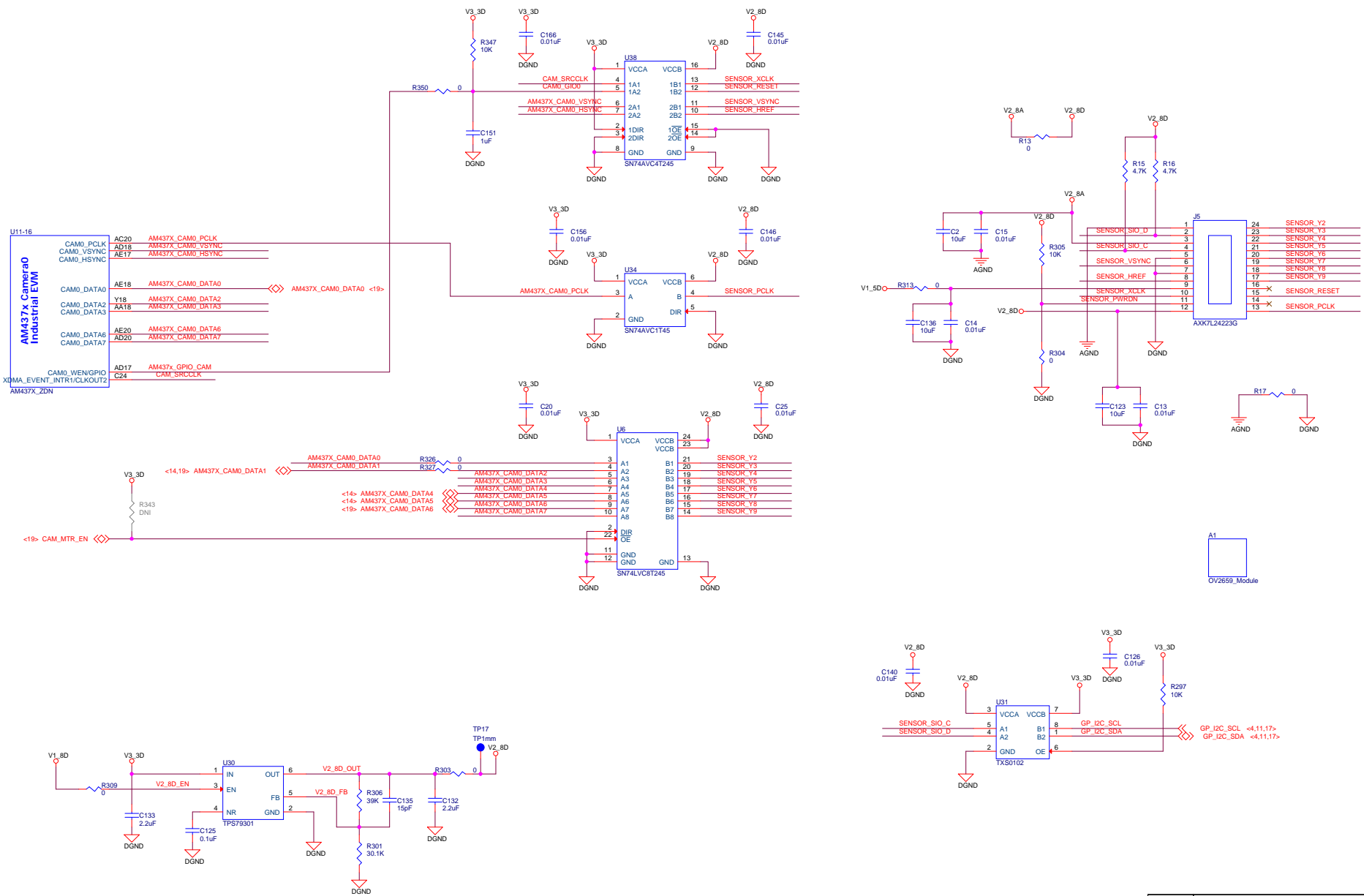
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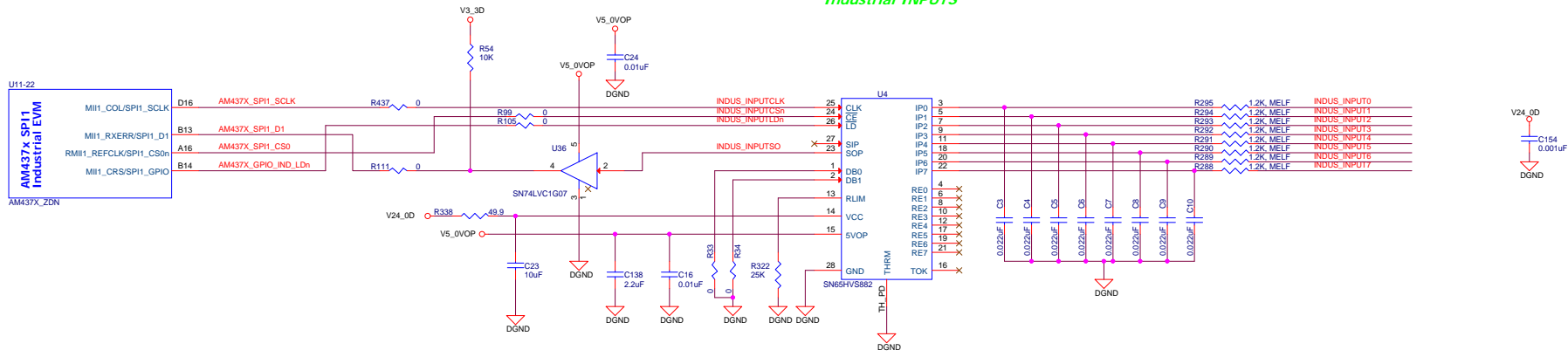
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 Gigabit Ethernet #1

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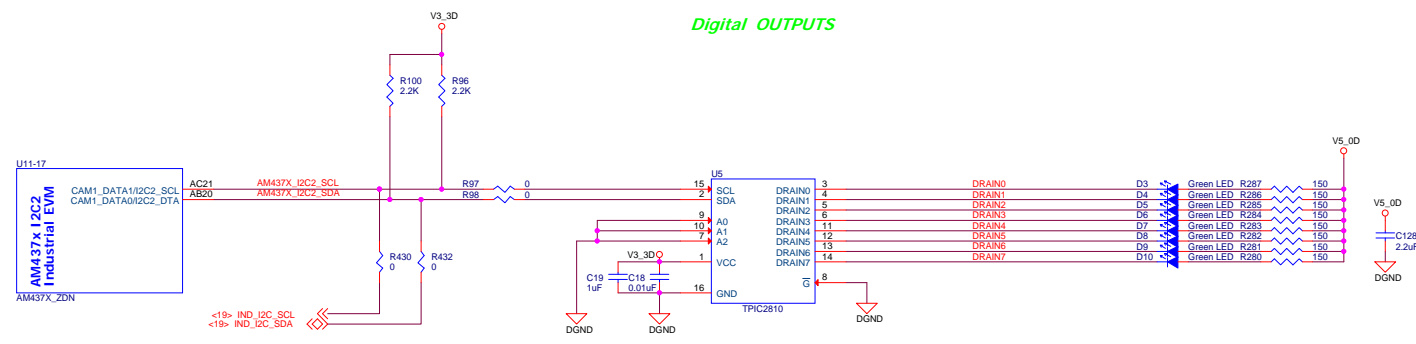
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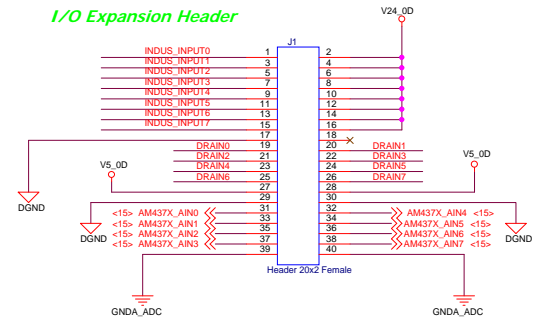
### Industrial INPUTS

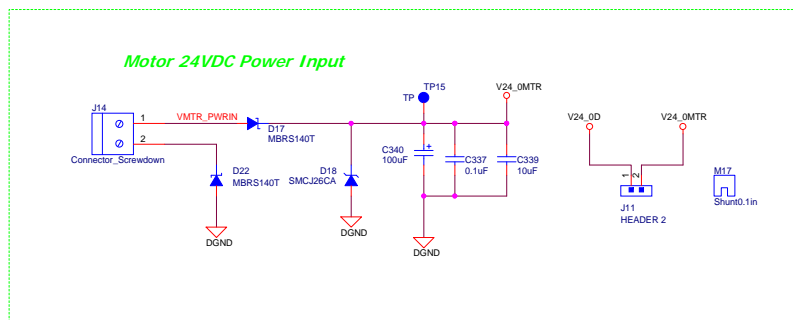
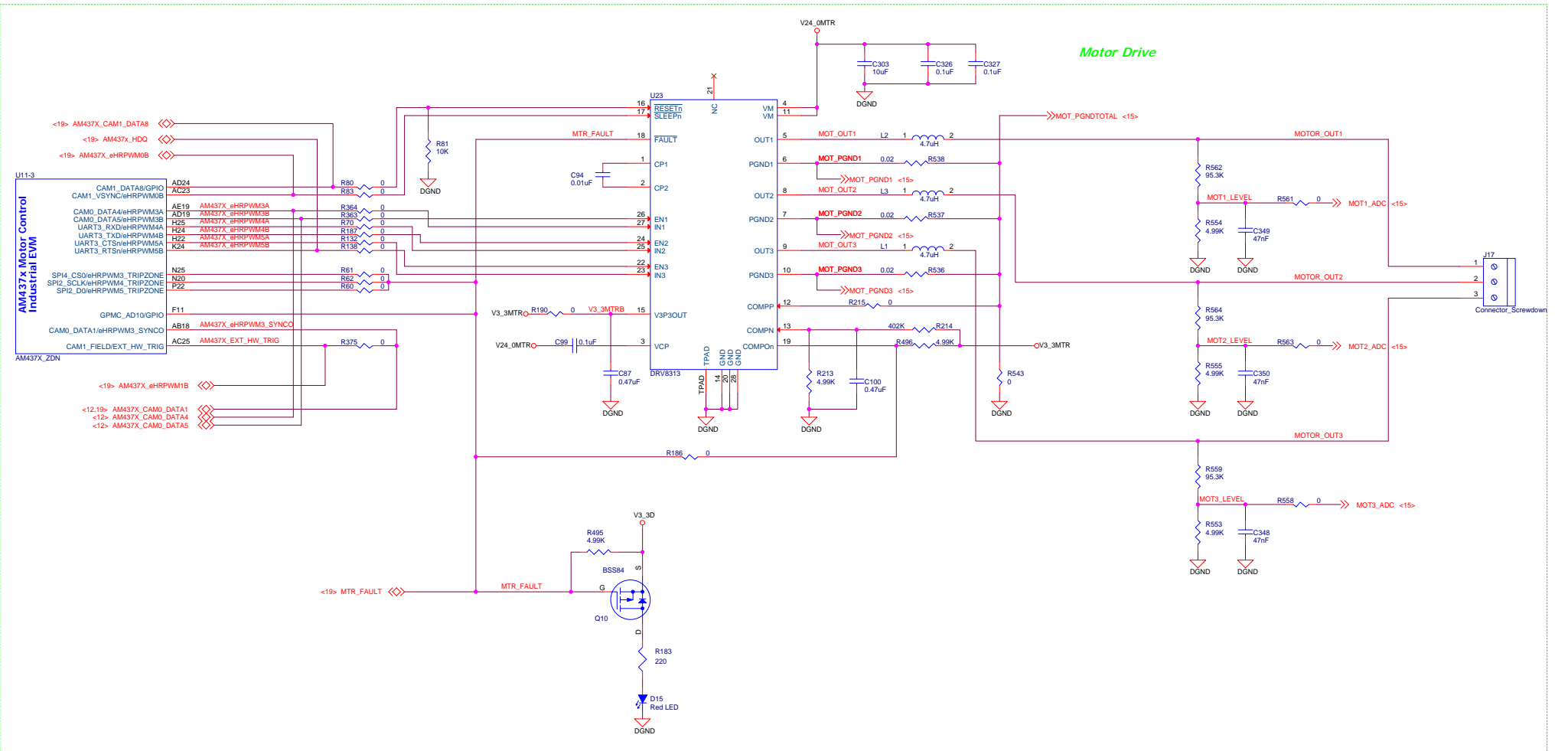


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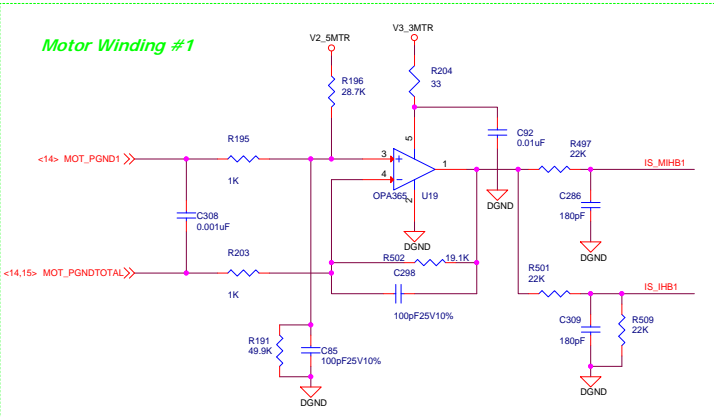


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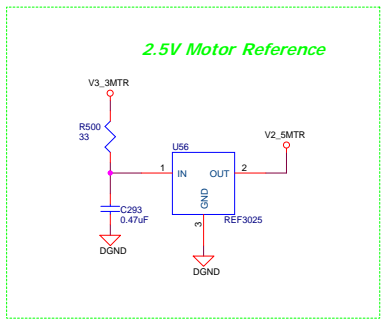




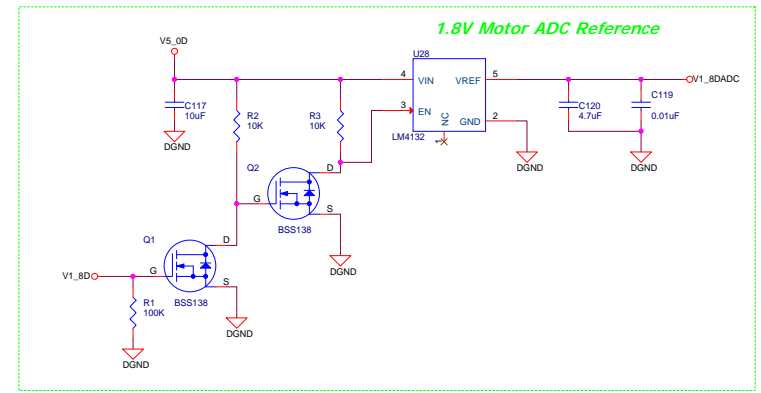
### Motor Winding #1



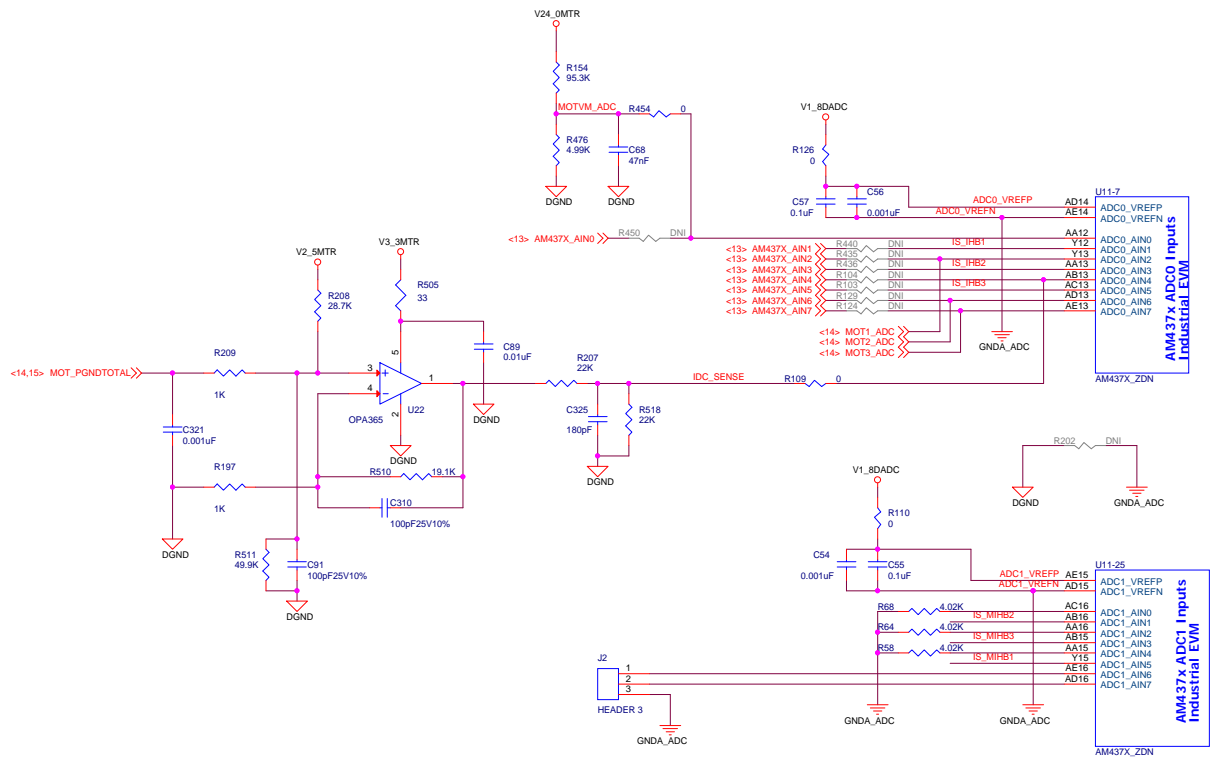
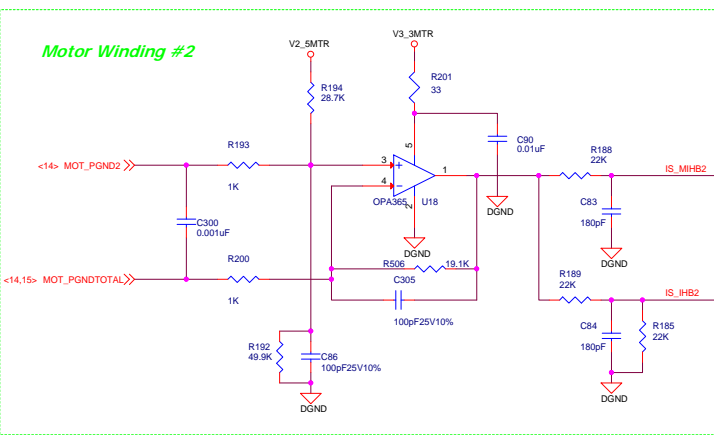
### 2.5V Motor Reference



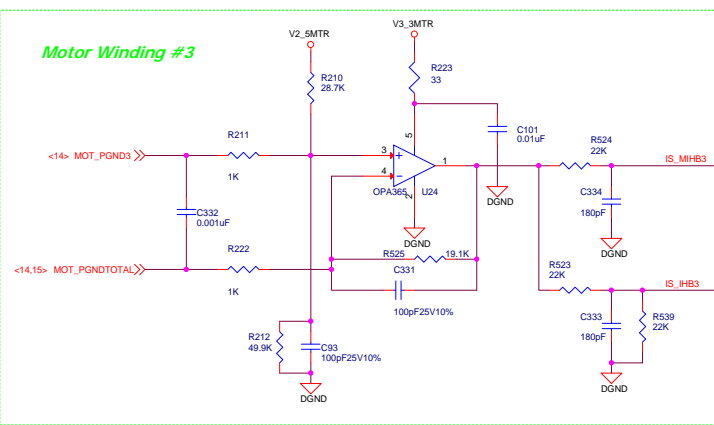
### 1.8V Motor ADC Reference



### Motor Winding #2



### Motor Winding #3



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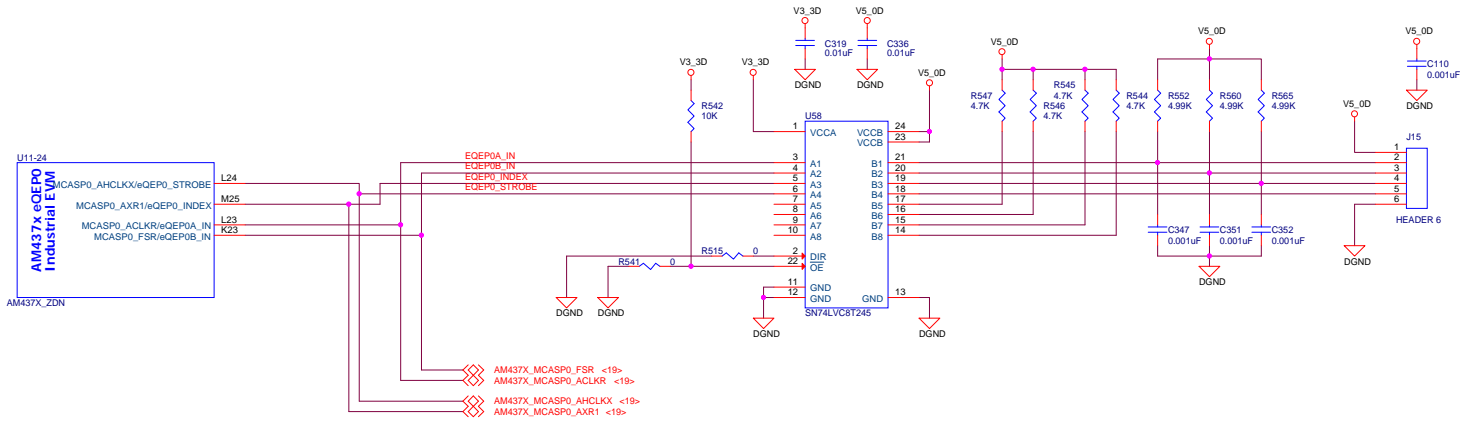
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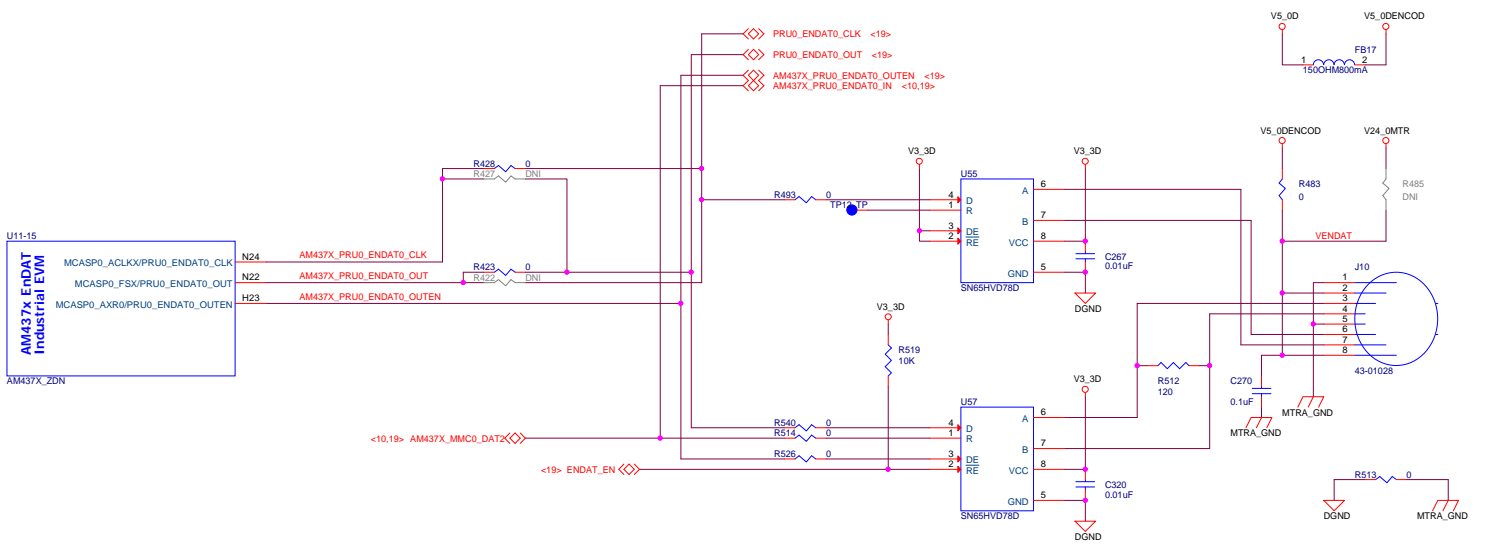
AM437x Industrial EVM  
Motor Sense

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C	am437x_industrial_ewm_3k0008.dsn	Damon Domke	1.3A

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 AM437X\_MCASPO\_ACLKR <19>  
 AM437X\_MCASPO\_AHCLKX <19>  
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<10,19> AM437X\_MMCO\_DAT <19>  
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defaultbuild

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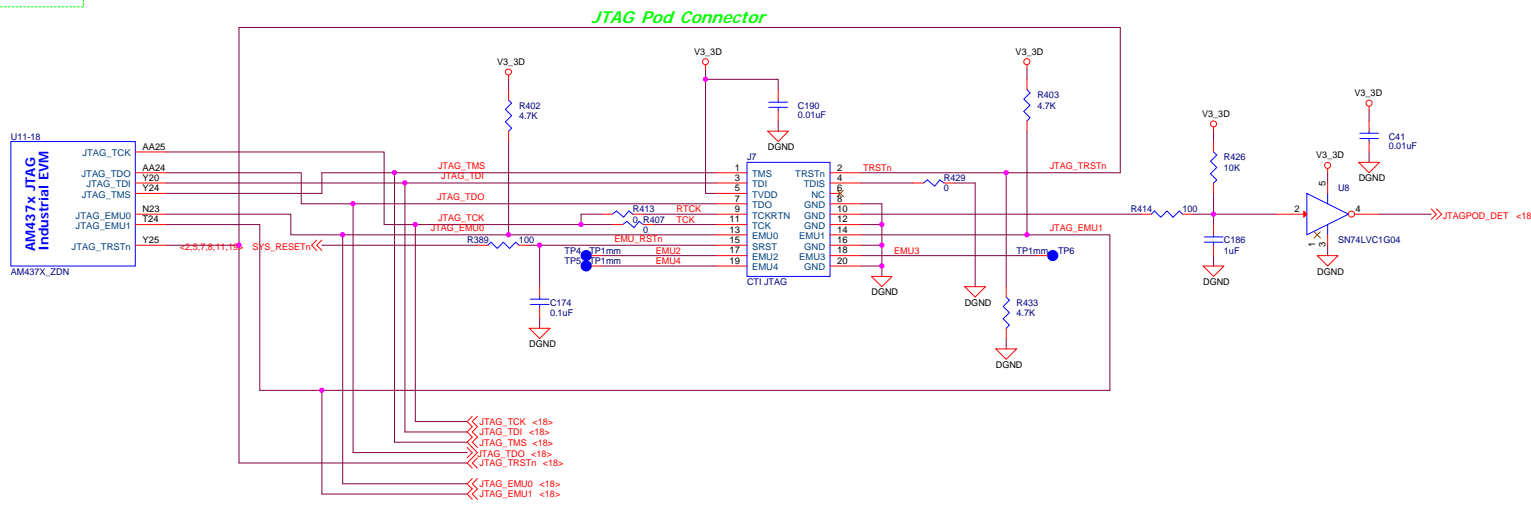
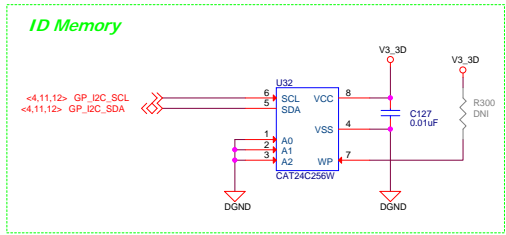
**Final**

**AM437x Industrial EVM**  
 Motor Encoders QEP and EndAT

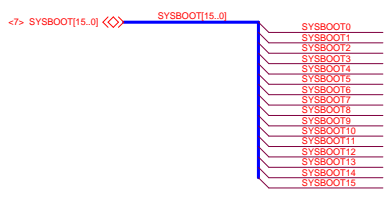
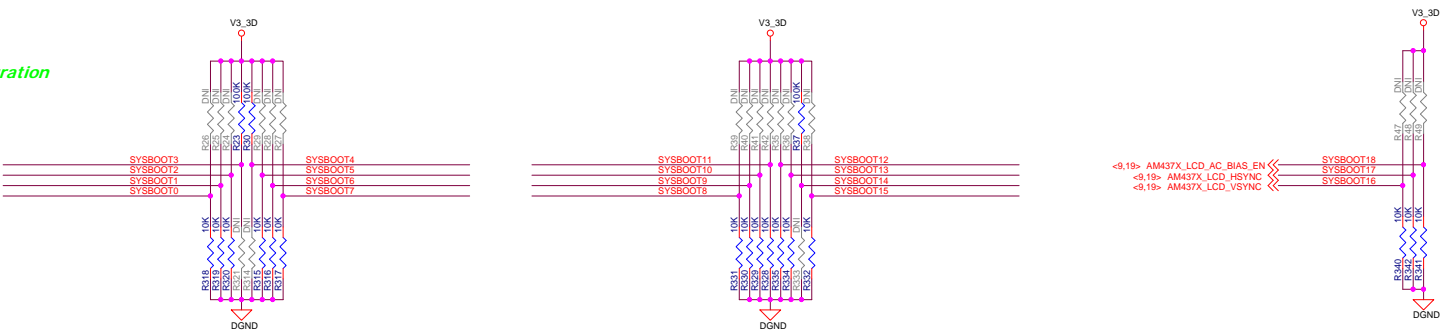
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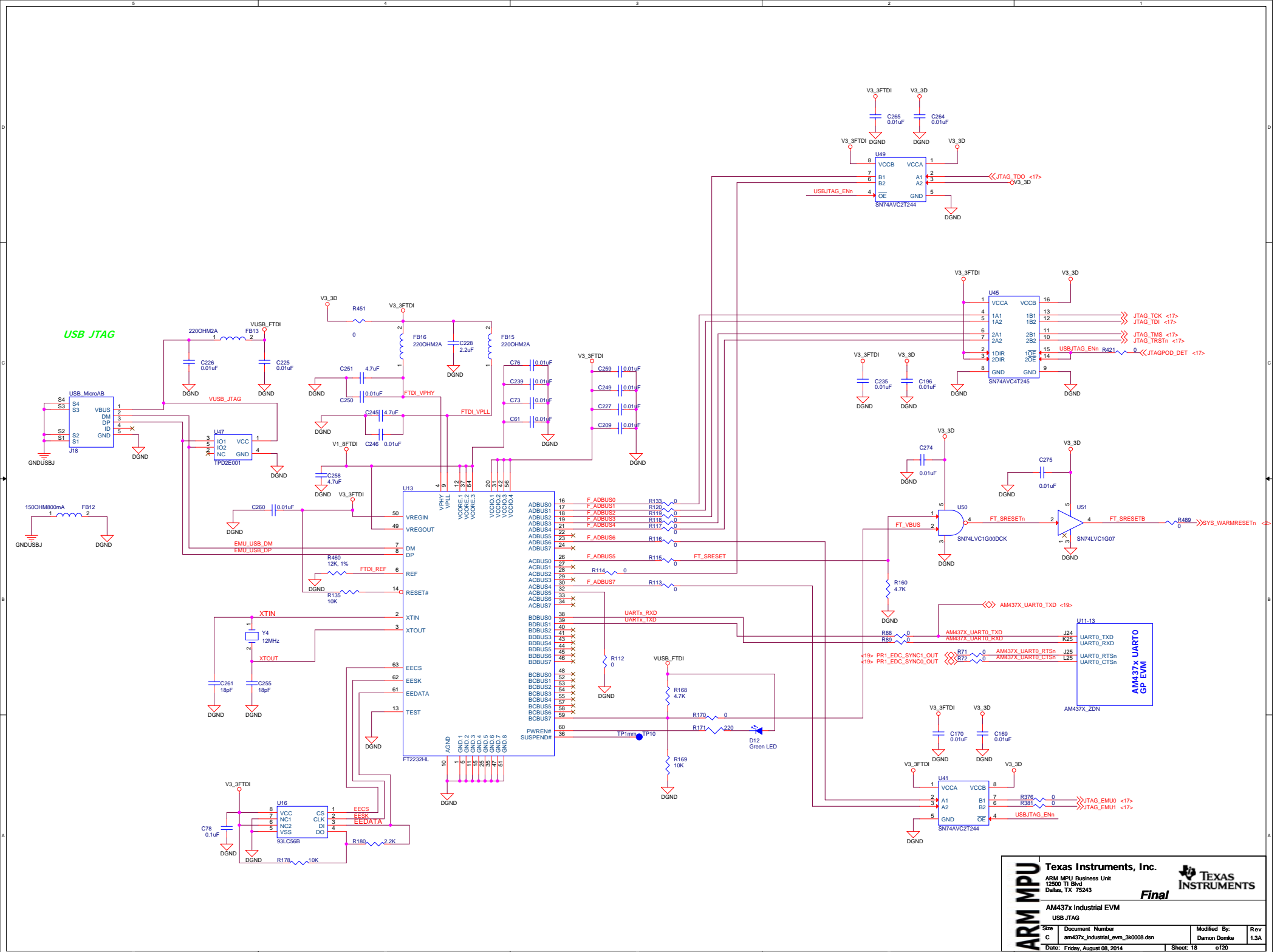




### Boot Configuration



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Size	Document Number	Modified By:	Rev	
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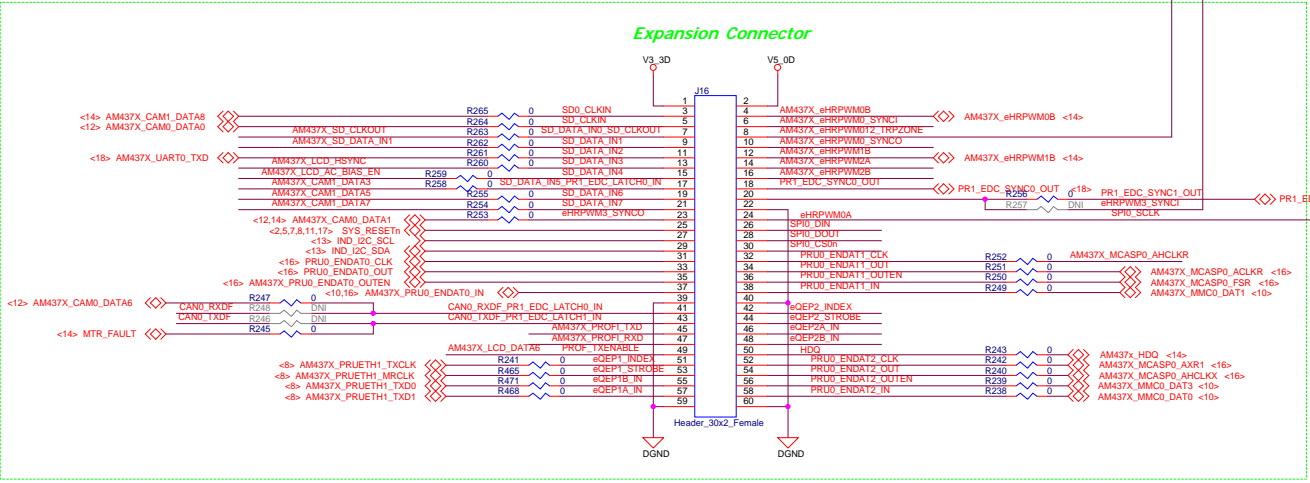
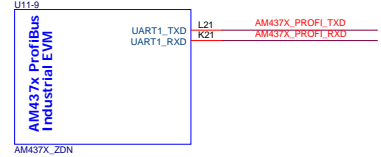
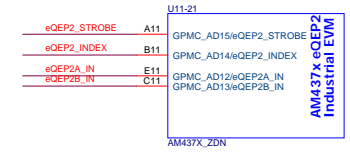
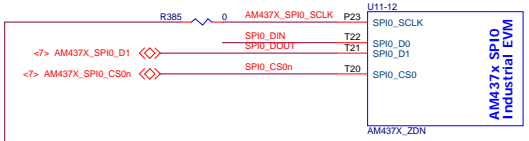
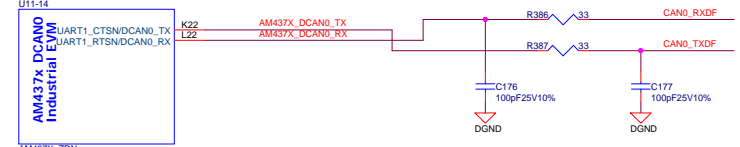
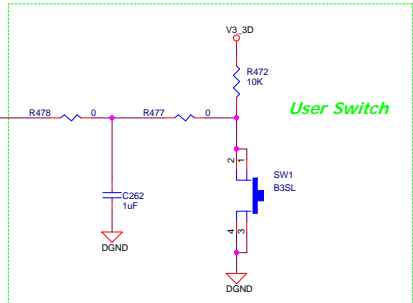


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	<b>AM437x Industrial EVM USB JTAG</b>		
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AE11	U11_23
AE12	XI_32K
AE10	NO_SOK
AE7	PMU_PORZ
AD7	EXT_WAKEUP1
AE8	PMIC_POWER_EN1
AD1	PMU_HB2
AD2	TEMP_DIODE_P
AD6	TEMP_DIODE_N
AB6	TAMPER_EVENT
W25	USB0_DP
W24	USB0_DM
U24	USB0_CE
U23	USB0_ID
Q21	USB0_VBUS
U21	USB0_DRVVBUS
V24	USB1_DP
V25	USB1_DM
U25	USB1_CE
T25	USB1_ID
U25	USB1_VBUS
F25	USB1_DRVVBUS
AC12	RSV_AC12
AC10	RSV_AC10
AS10	RSV_AC10
AA10	RSV_AB10
AA9	RSV_AA10
Y10	RSV_AA9
AC9	RSV_Y10
Y7	RSV_AC9
AA7	RSV_Y7
AC6	RSV_AA7
AC5	RSV_AC6
AB7	RSV_AC5
AB7	RSV_AB7
AD10	RSV_AD10
AD11	RSV_AD11
AB9	RSV_AB9
W10	RSV_W10
AC7	RSV_AC7
Y6	RSV_Y6
AE9	RSV_AE9
HT9	RSV_H19

AM437x GPIO & Unused Pins  
Industrial EVM

CAM0_FIELD	AC18	AM437X_CAM1_WEN	<8>
CAM1_WEN	AB25	AM437X_CAM1_DATA2	<8>
CAM1_DATA3	AD21	AM437X_CAM1_DATA3	<8>
CAM1_DATA4	AE22	AM437X_CAM1_DATA4	<8>
CAM1_DATA5	AD22	AM437X_CAM1_DATA5	<8>
CAM1_DATA6	AE23	AM437X_CAM1_DATA6	<8>
CAM1_DATA7	AD23	AM437X_CAM1_DATA7	<8>
CAM1_DATA8	AE24	AM437X_CAM1_DATA8	<8>
CAM1_DATA9	AC24	AM437X_CAM1_DATA9	<8>
LCD_D6	C20	AM437X_LCD_DATA6	<7>
LCD_D7	E19	AM437X_LCD_DATA7	<7>
LCD_PCLK	B23	AM437X_LCD_PCLK	<8>
LCD_VSYNC	A23	AM437X_LCD_VSYNC	<9.17>
LCD_HSYNC	A24	AM437X_LCD_HSYNC	<9.17>
LCD_AC_BIAS_EN	A24	AM437X_LCD_AC_BIAS_EN	<9.17>
GPIO5_9	F24	ENDAT_EN	<16>
GPIO5_12	E25	ENDAT_EN	<16>
CAM1_HS_VNC/SD_DATA_IN0	AD25	AM437X_SD_CLKOUT	
CAM1_PCLK/SD_DATA_IN1	AE21	AM437X_SD_DATA_IN1	
SPI4_SCLK/eHRPWM0_SYNC1	P25	AM437X_eHRPWM0_SYNC1	
SPI4_D1/eHRPWM0_TRIPZONE_I	D11	AM437X_eHRPWM0_SYNC0	
GPMC_AD11/eHRPWM0_SYNC0	P20	AM437X_eHRPWM0_SYNC0	
SPI2_CS0	T23	AM437X_SYNCI	
SPI4_D0	R24	AM437X_SYNCI	
ECAPO_IN_PWM0_OUT	G24	AM437X_MCASPO_AHCLKR	
MCASPO_AHCLKR	M24	AM437X_MCASPO_AHCLKR	
GPMC_AD0	A5	PR1_EDIO_DATA6	<7>
GPMC_AD1	B6	PR1_EDIO_DATA7	<7>
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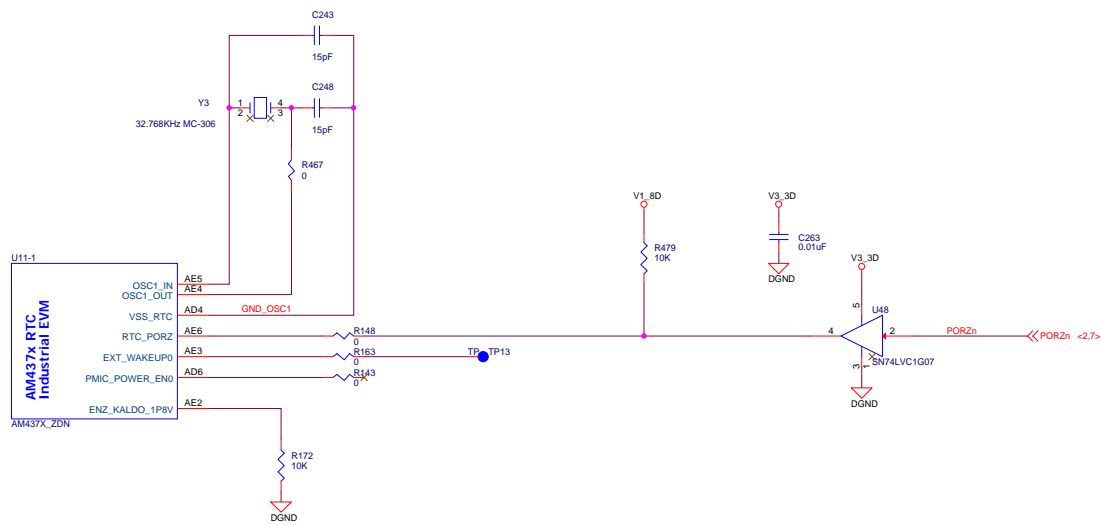
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**Final** TEXAS INSTRUMENTS

AM437x Industrial EVM Expansion

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