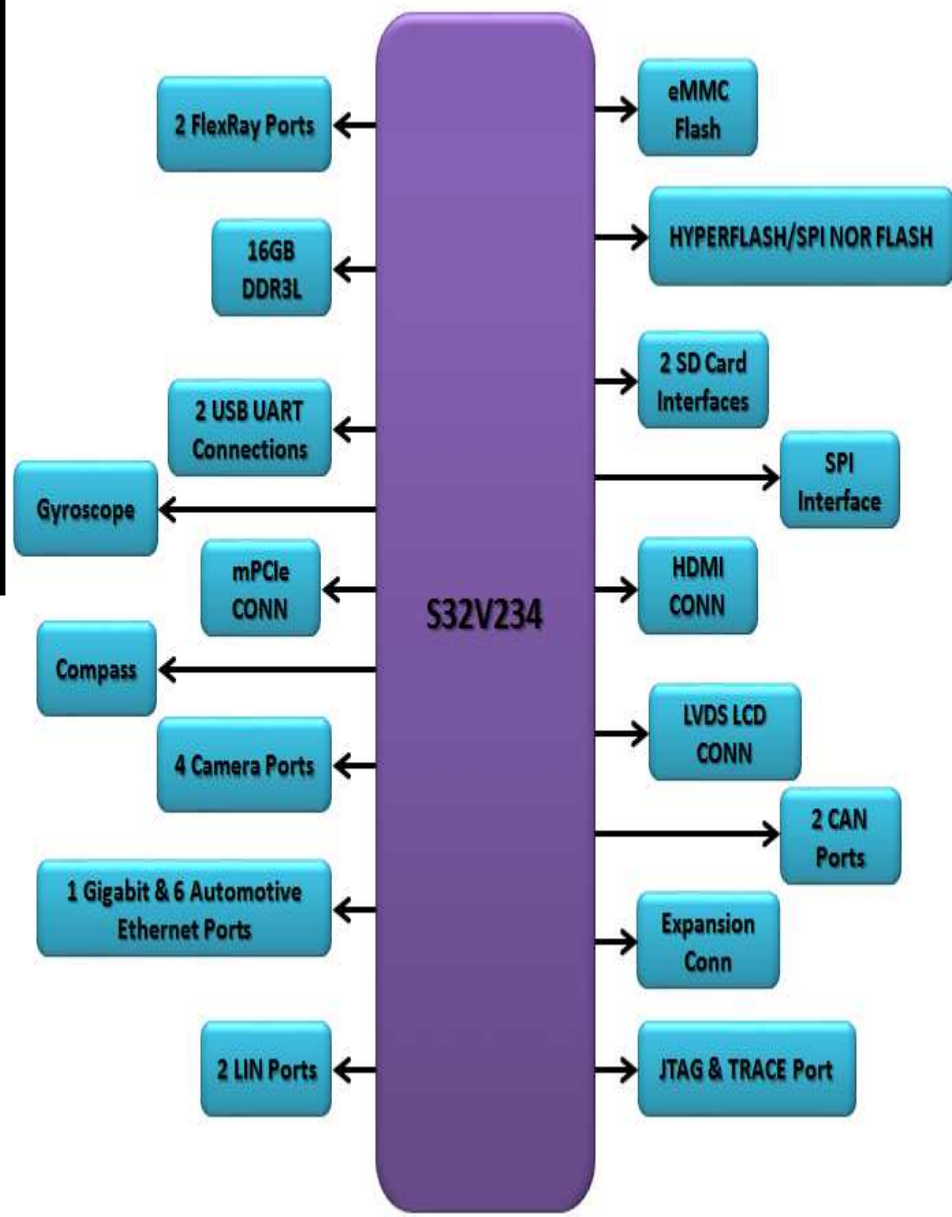


Table of Content


Page 1	TITLE PAGE
Page 2	POWER INPUT
Page 3	CPU POWER
Page 4	IPL, Compass & Gyroscope
Page 5	DDR3L MEMORY
Page 6	FLASH, eMMC, SD, & CAN INTERFACE
Page 7	RGB TO HDMI INTERFACE
Page 8	RGB TO LVDS INTERFACE
Page 9	FlexRay and RESET
Page 10	Camera PORTS
Page 11	AUTO & GE ETHERNET
Page 12	AUTO ETHERNET
Page 13	FLASH, eMMC & SD MAPPING
Page 14	EXP CON/Boot Mode/VIU WIFI SD Select
Page 15	JTAG, DEBUG, & UART INTERFACE
Page 16	mPCIe CONN & 25MHz CLOCK
Page 17	SIPI & LIN INTERFACE
Page 18	RCON BOOT SELECT
Page 19	S32v234 Socket

S32V234-EVB


SYSTEM BLOCK DIAGRAM

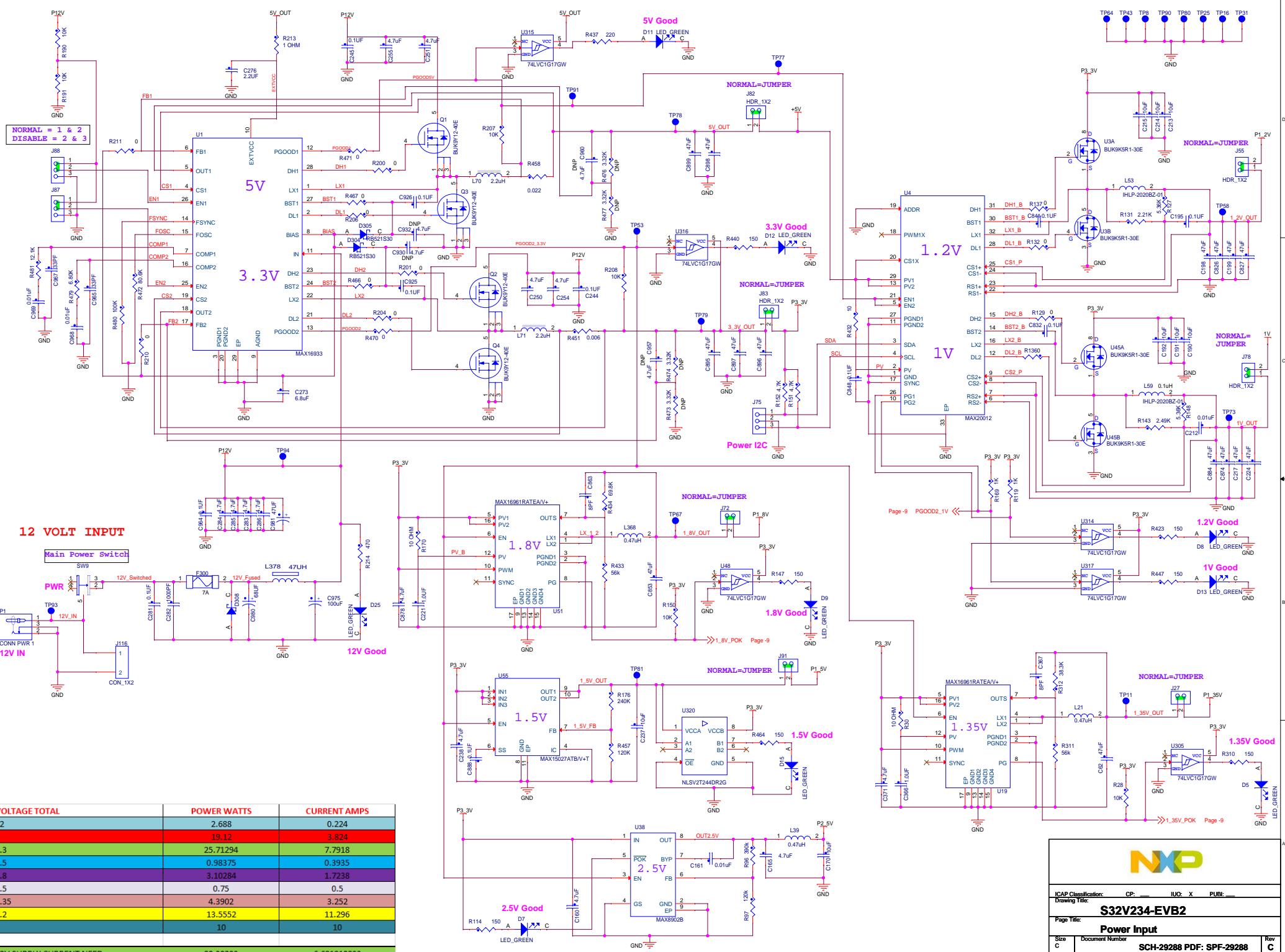


Revision History		
Rev. Code	Date	Description
X1	6/20/2016	Rev X1 Draft
A	7/25/2016	Release to Production
AX1	01/27/2017	Changes per ENGR00386568
B	3/14/2017	Release to Production
B1	4/6/2017	Changed U42 and U28 from SJA1105PEL to SJA1105QEL
B2	5/18/2017	Changed Title from S32V234-EVB to S32V234-EVB2 for Rev 2 Silicon
C	10/03/2017	DNP R99 & R101 Change J31 to a 3 pin header, tied L17, R33, R23, & R38 to 3.3V instead of 1.8V, Add J303, R2546, & R2457 connecting to JTAG_JCOMP

AC ADAPTER SPECIFICATIONS
 DC Voltage Output: 12VDC
 Current Output: ~ 5A (depending on application)
 Polarity: 
 Inner Diameter: 2.1mm
 Outer Diameter: 5.5mm

THIS COLOR IS FOR SILK SCREEN TEXT

		Automotive Product Group 6501 William Cannon Drive West Austin, TX 78735-8598	
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Designer: Steve Harrington		ICAP Classification: CP IUD: X PUB:	
Drawing Title: S32V234-EVB2		Page Title:	
Drawn by: Steve Harrington		TITLE PAGE	
Approved: <Approver>	Size C	Document Number SCH-29288 PDF: SPF-29288	Rev C
Date: Wednesday, October 04, 2017 Sheet 1 of 19			



NORMAL = 1 & 2
 DYSABLE = 2 & 3

12 VOLT INPUT

Main Power Switch

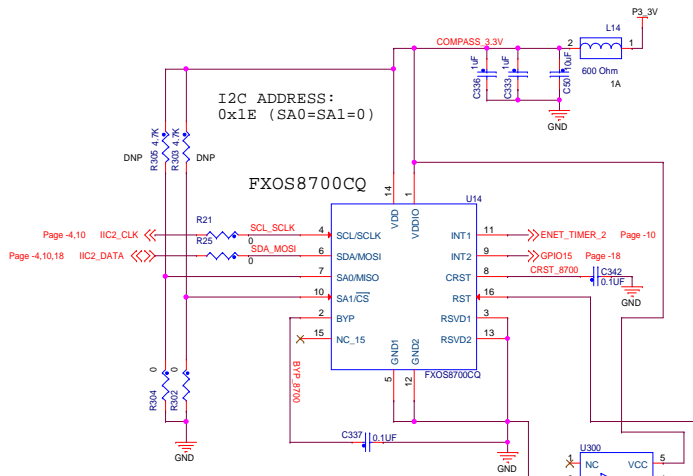
VOLTAGE TOTAL	POWER WATTS	CURRENT AMPS
12	2.688	0.224
5	19.12	3.824
3.3	25.71294	7.7918
2.5	0.98375	0.3935
1.8	3.10284	1.7238
1.5	0.75	0.5
1.35	4.3902	3.252
1.2	13.5552	11.296
1	10	10
12V SUPPLY CURRENT NEED	80.30293	6.691910833



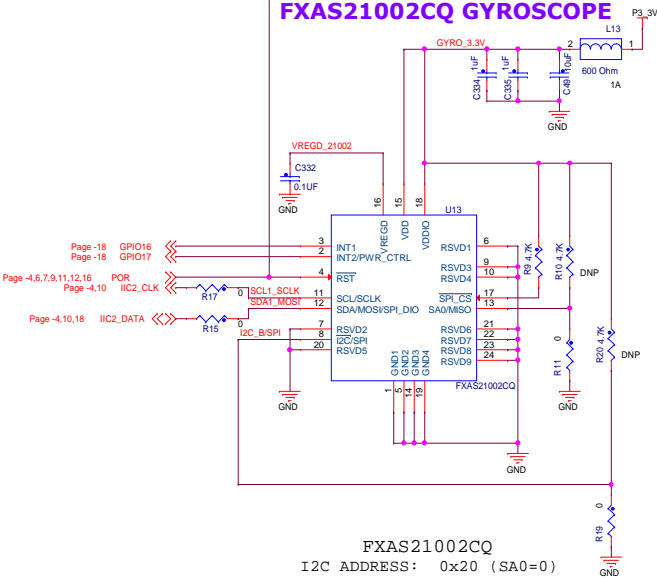
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 Page Title: **Power Input**
 Size C Document Number **SCH-29288 PDF: SPF-29288** Rev **C**
 Date: Wednesday, October 04, 2017 Sheet 2 of 19

VIU0 and IPL SELECTION

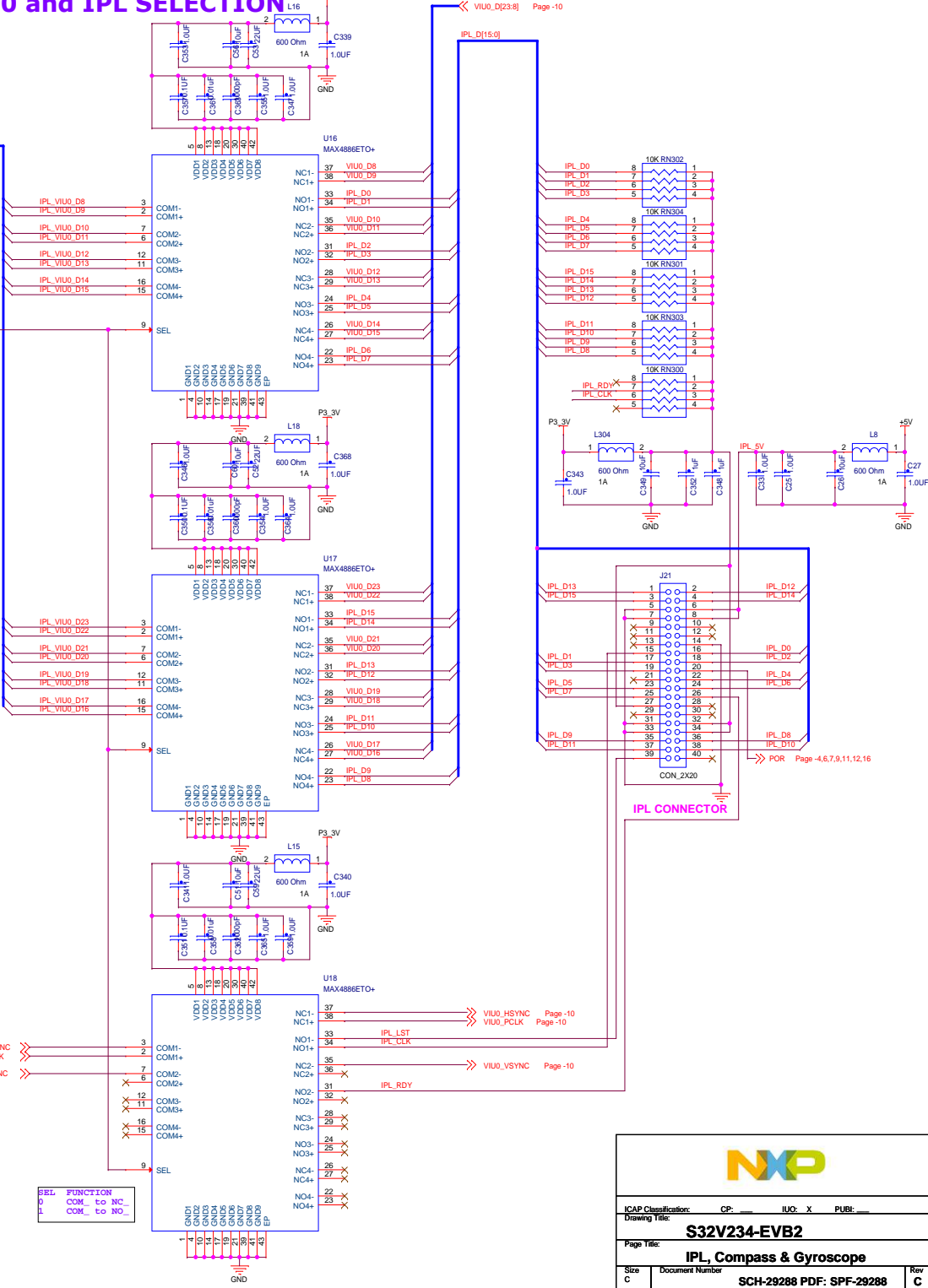
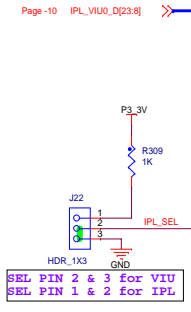
FXOS8700CQ ACCELEROMETER AND MAGNETOMETER SENSOR



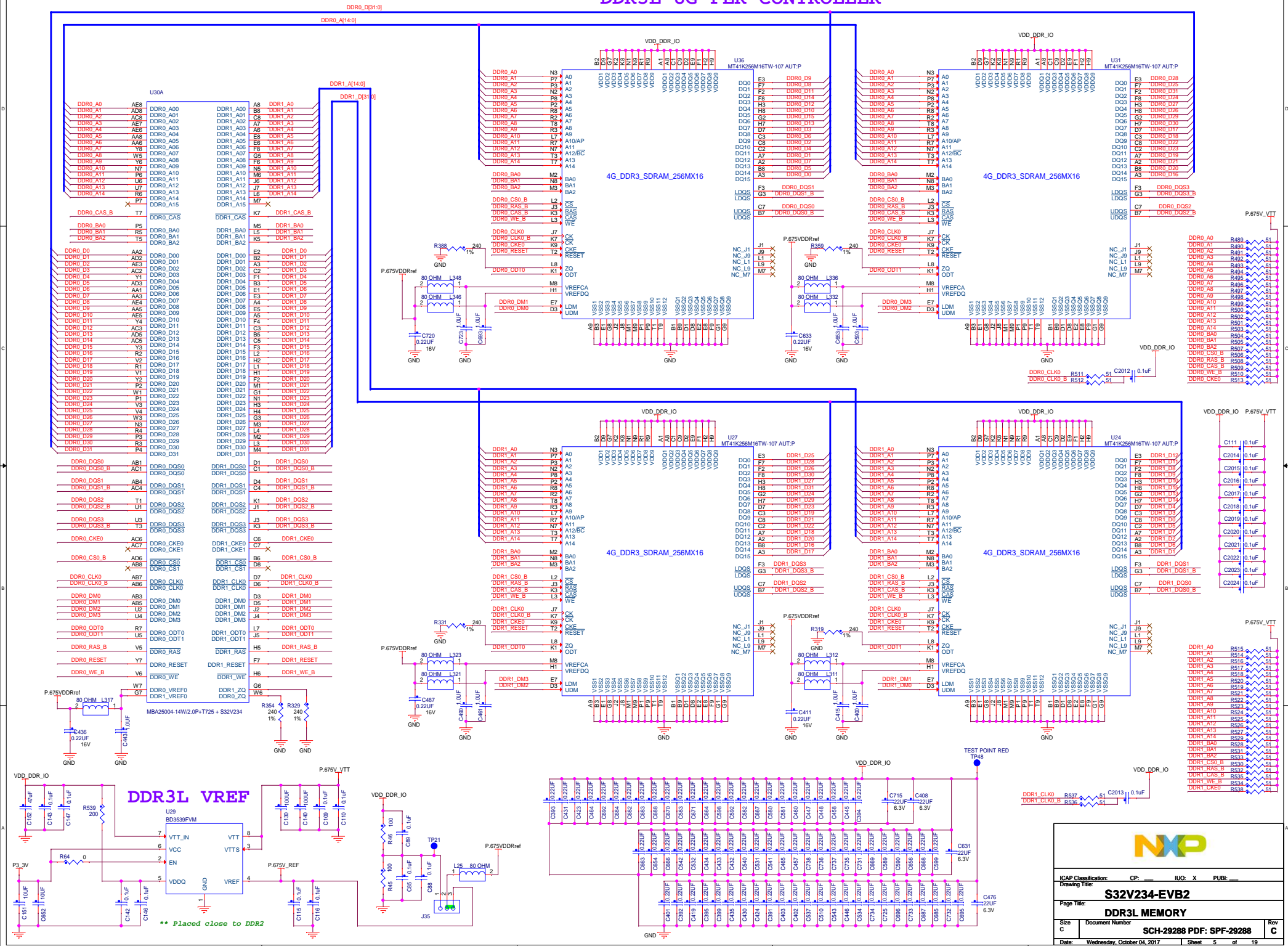
FXAS21002CQ GYROSCOPE



FXAS21002CQ
I2C ADDRESS: 0x20 (SA0=0)



DDR3L 8G PER CONTROLLER

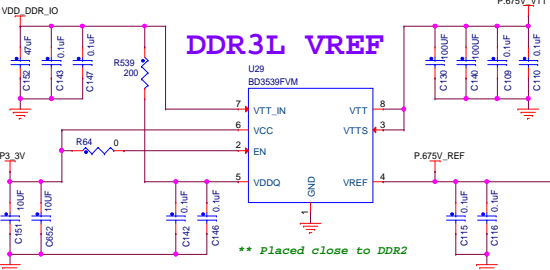


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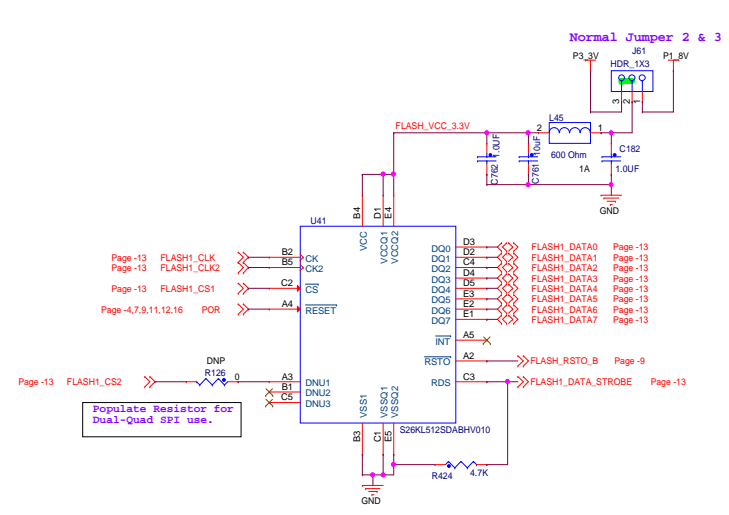
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 Page Title: **S32V234-EVB2**
 DDR3L MEMORY
 SCH-29288.PDF: SPF-29288
 C

Date: Wednesday, October 04, 2017 Sheet 5 of 29

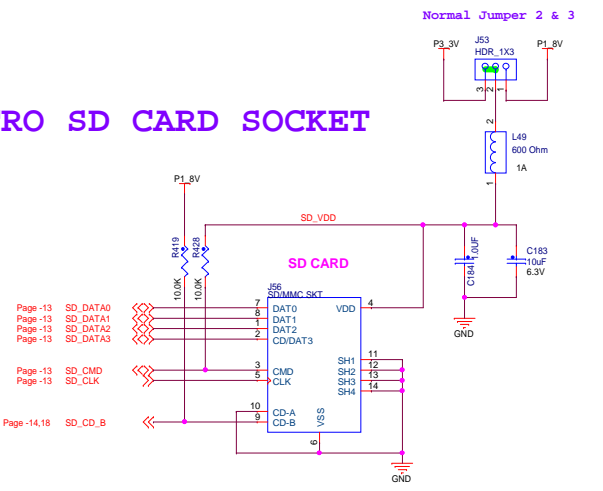
DDR3L VREF



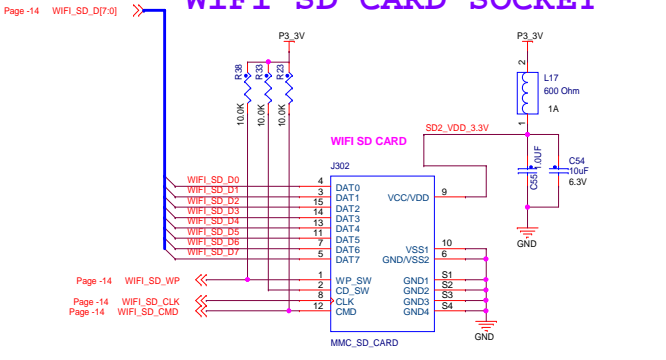
Dual-Quad SPI NOR FLASH or HYPERFLASH



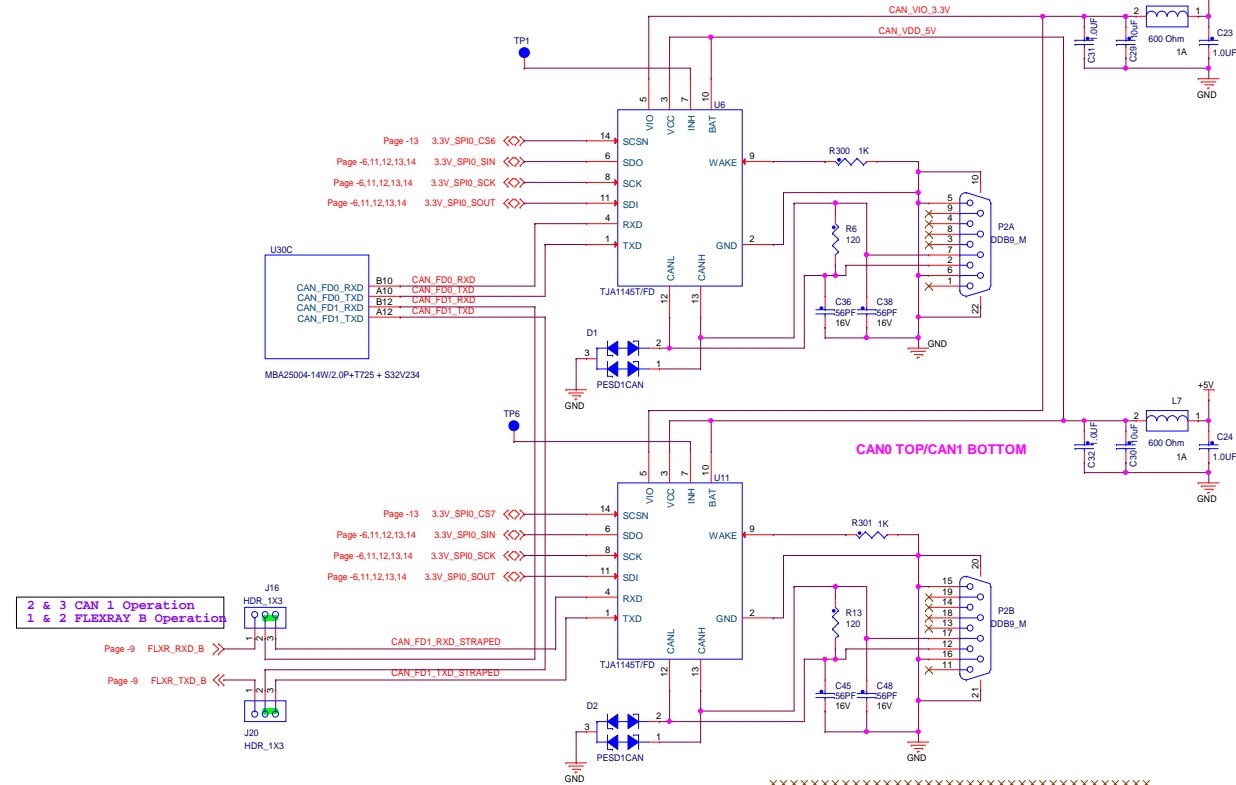
MICRO SD CARD SOCKET



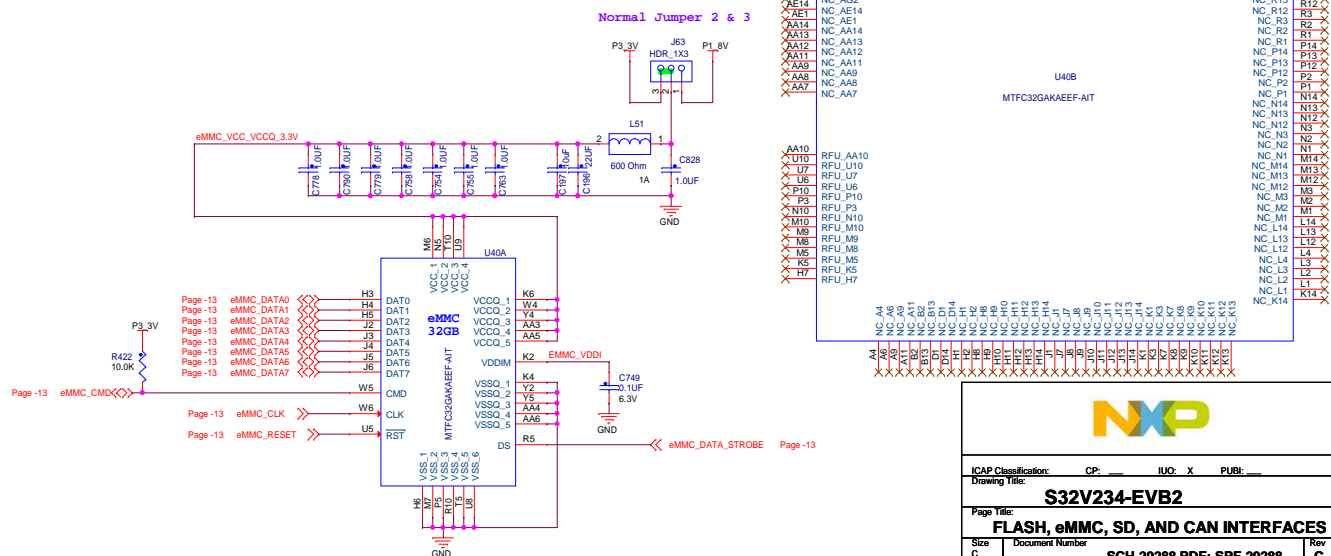
WIFI SD CARD SOCKET



CAN Connections



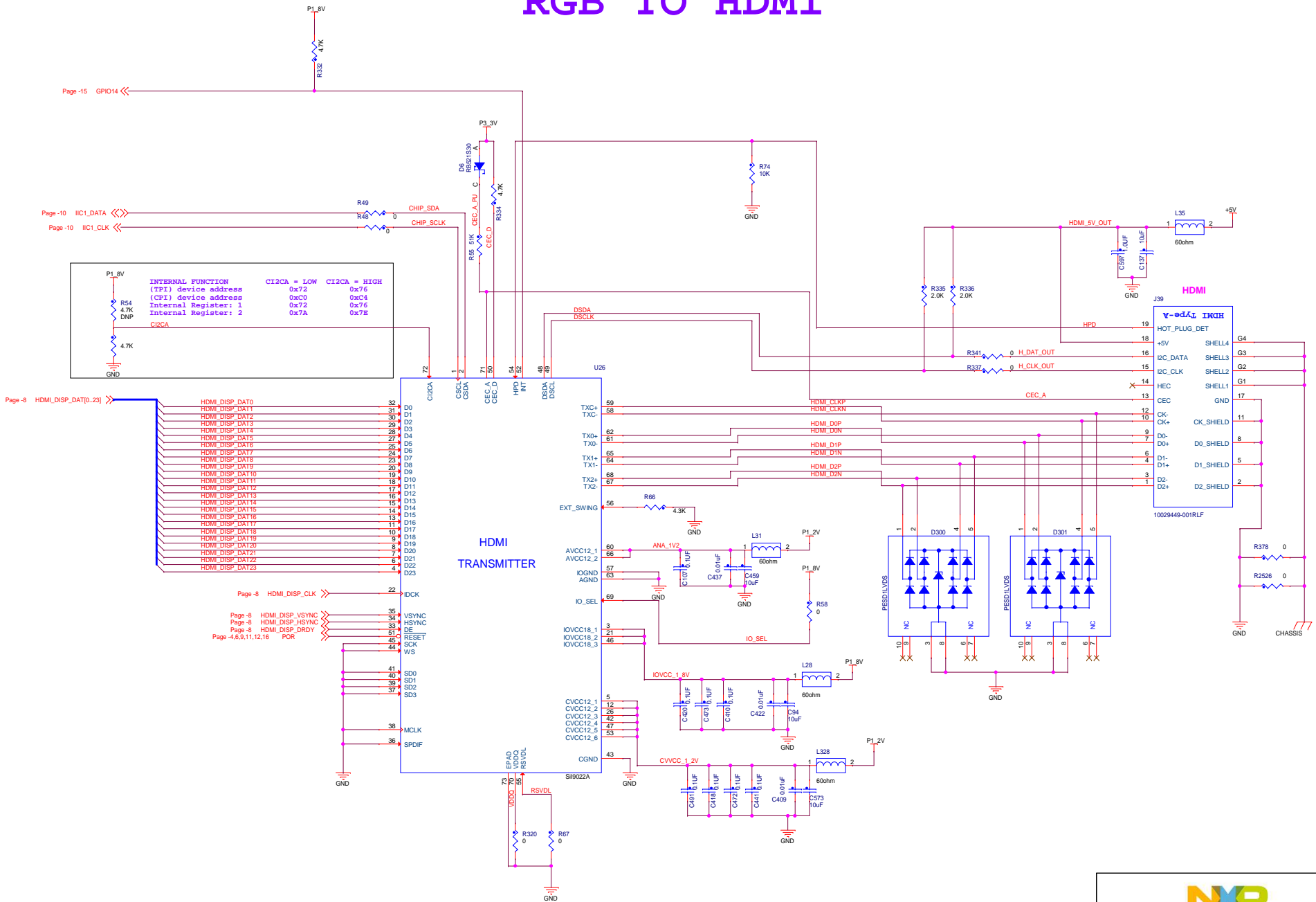
32GB eMMC MEMORY 5.0



NXP

ICAP Classification: CP: IUC: X PUB: _____
Drawing Title: **S32V234-EVB2**
Page Title: **FLASH, eMMC, SD, AND CAN INTERFACES**
Size C Document Number **SCH-29288 PDF: SPF-29288**
Date: Wednesday, October 04, 2017 Sheet 6 of 19

RGB TO HDMI

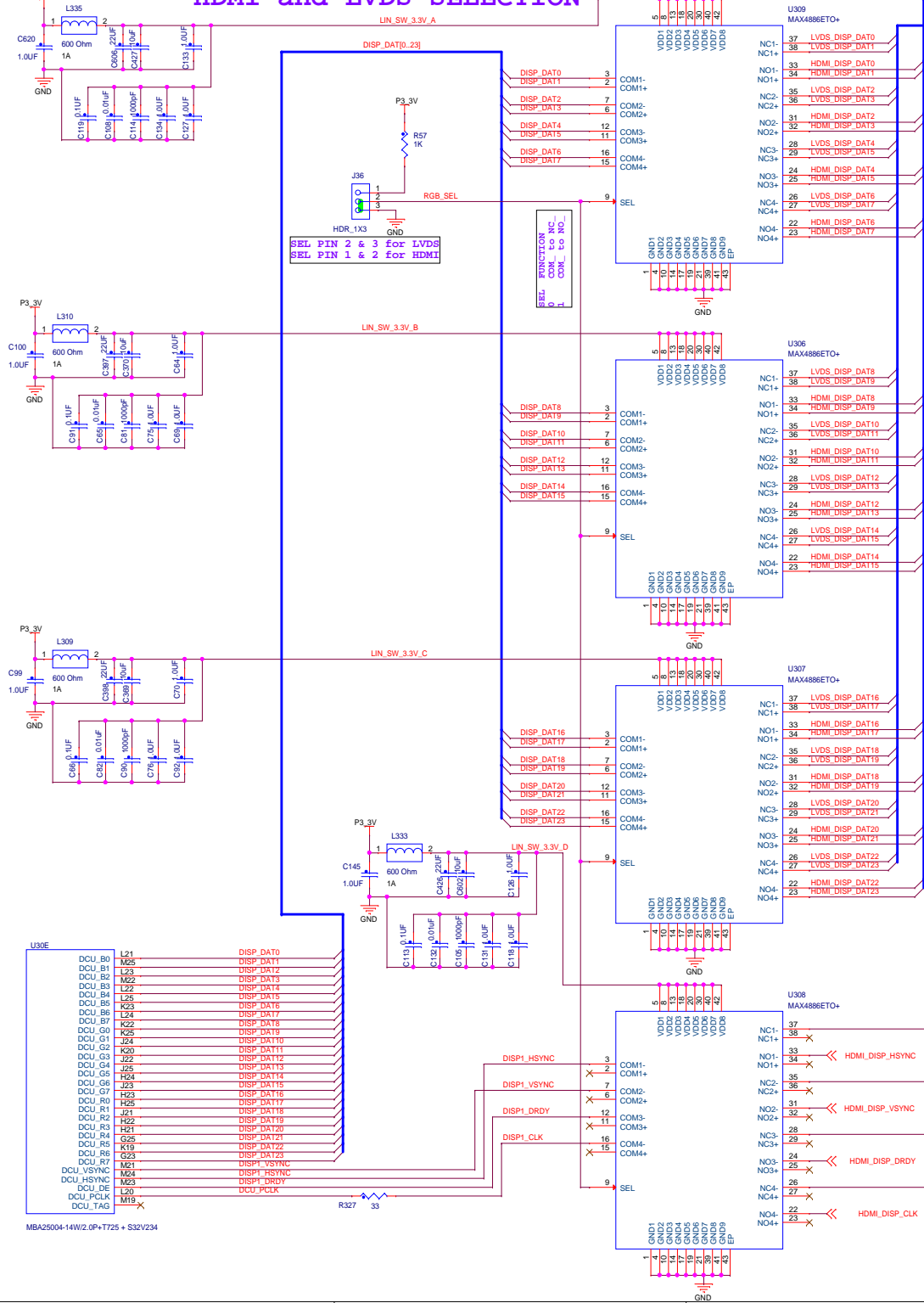


NXP

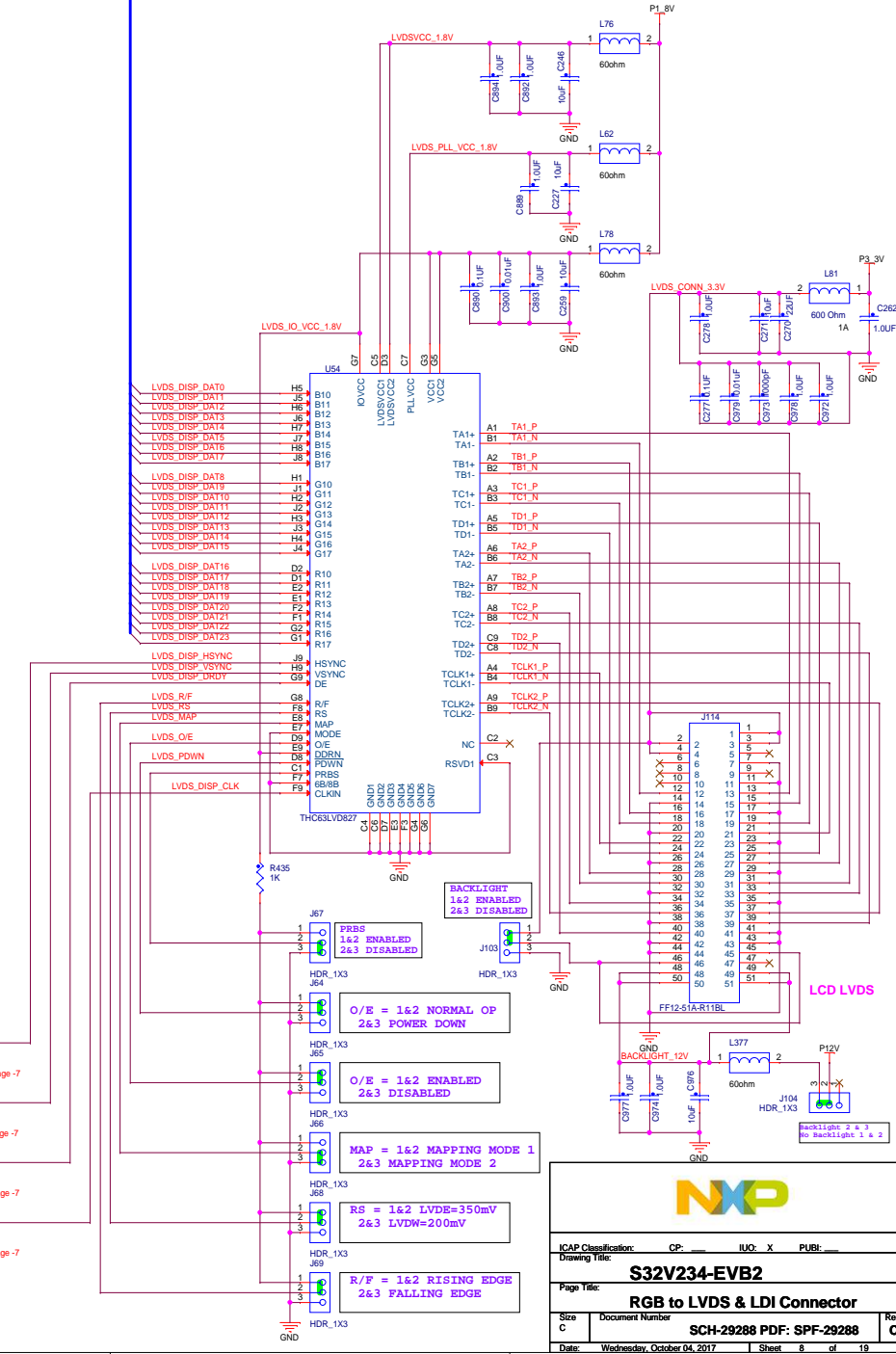
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 Page Title: **RGB to HDMI Interface**

Size C	Document Number	Rev C
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HDMI and LVDS SELECTION



RGB TO LVDS



ICAP Classification: CP: _____ IUQ: X PWB: _____

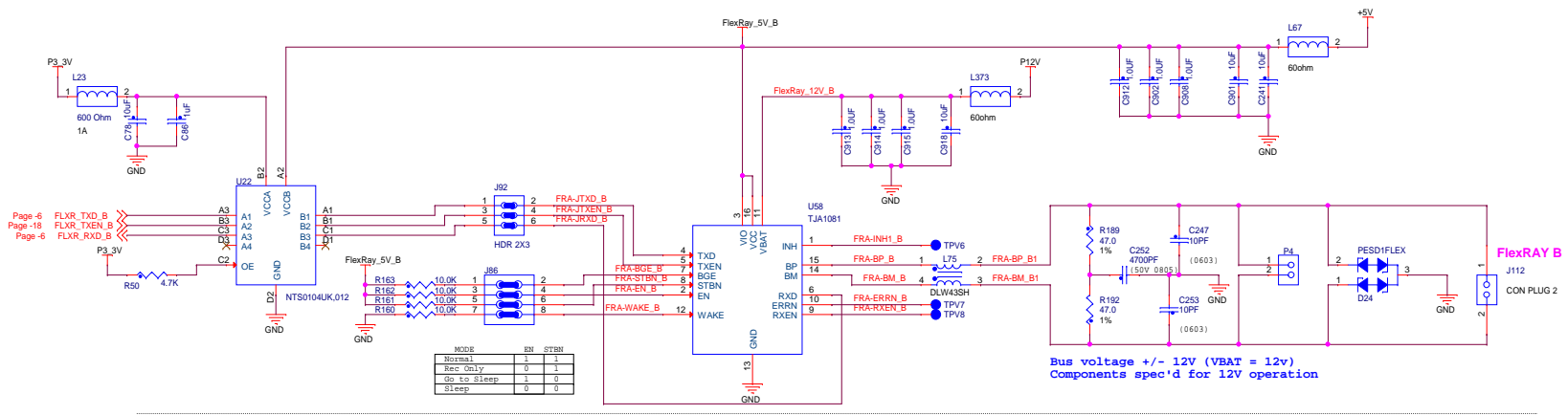
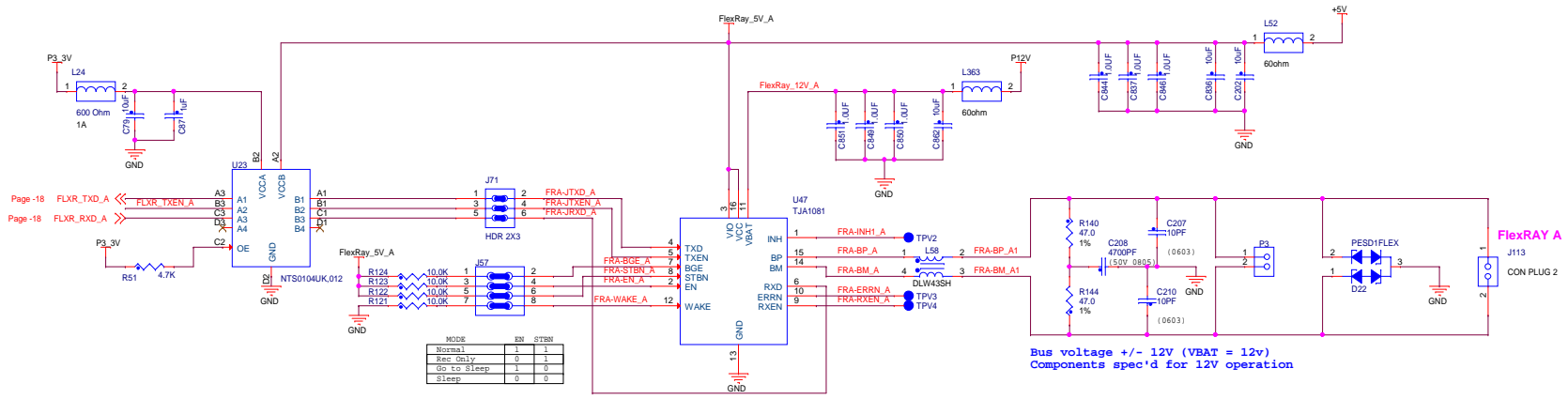
Drawing Title: **S32V234-EVB2**

Page Title: **RGB to LVDS & LDI Connector**

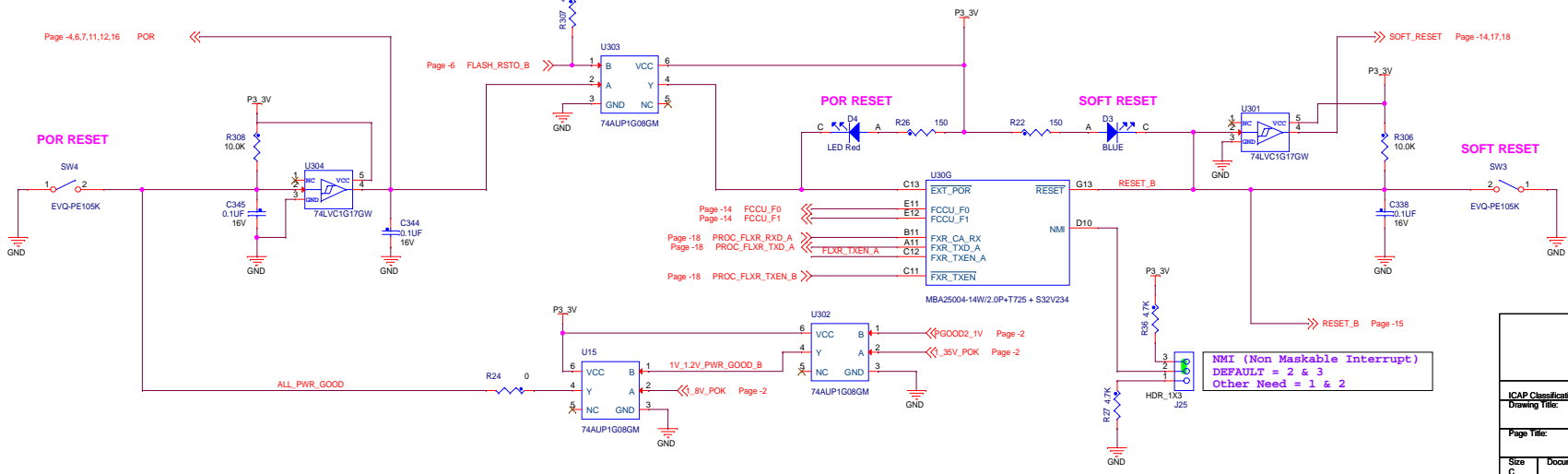
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FlexRay

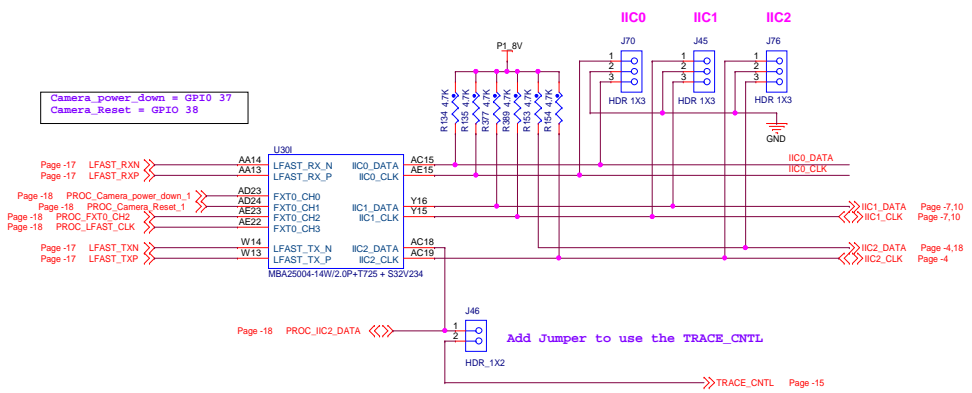


MCU RESET CIRCUIT

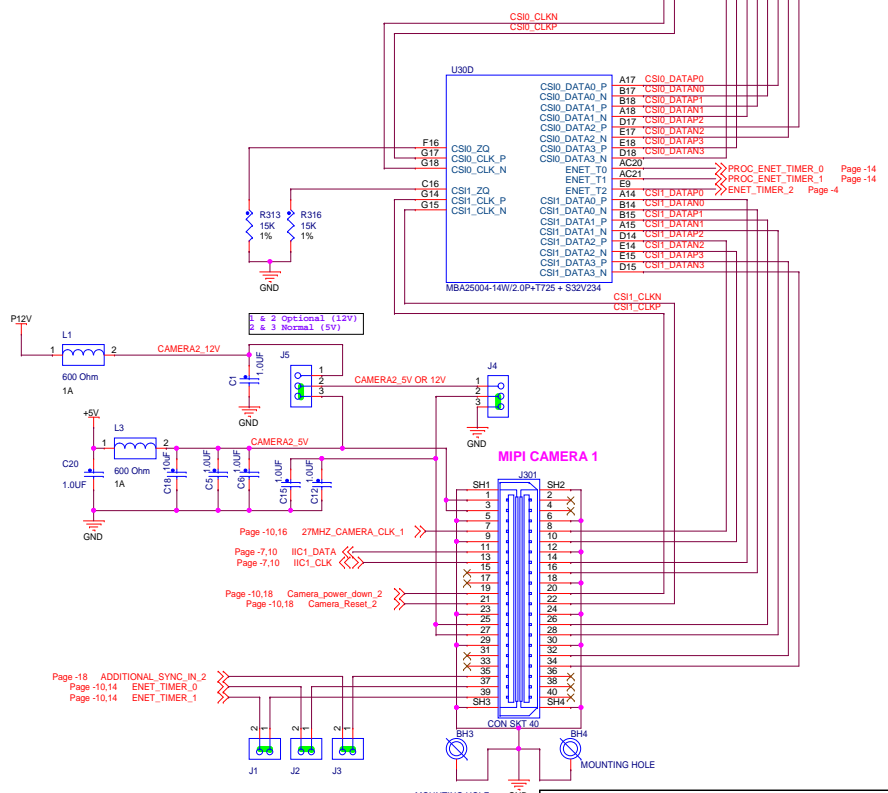
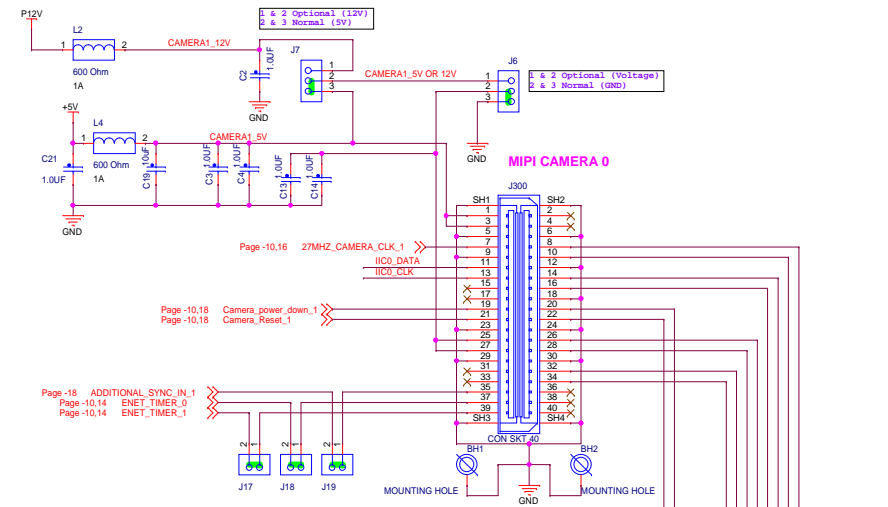
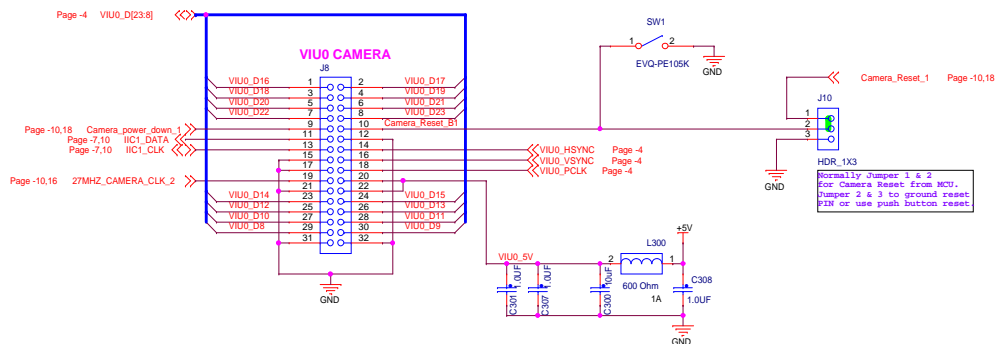
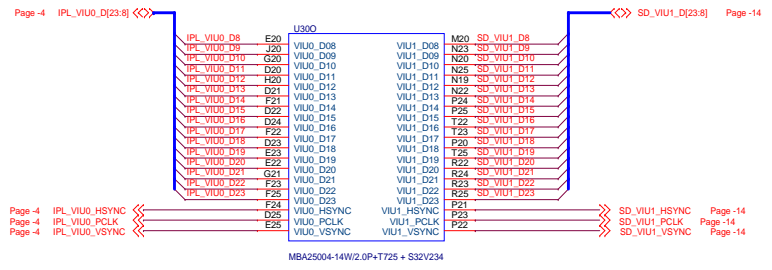
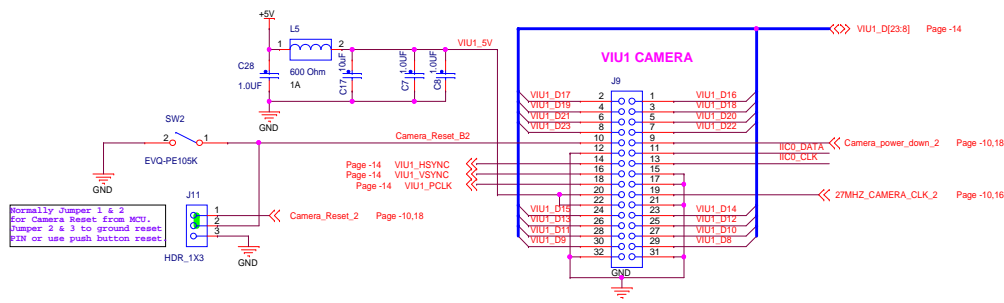


ICAP Classification: CP: _____ IUC: X PUBL: _____	
Drawing Title: S32V234-EVB2	
Page Title: FlexRay and RESET	
Size C	Document Number SCH-29288 PDF: SPF-29288
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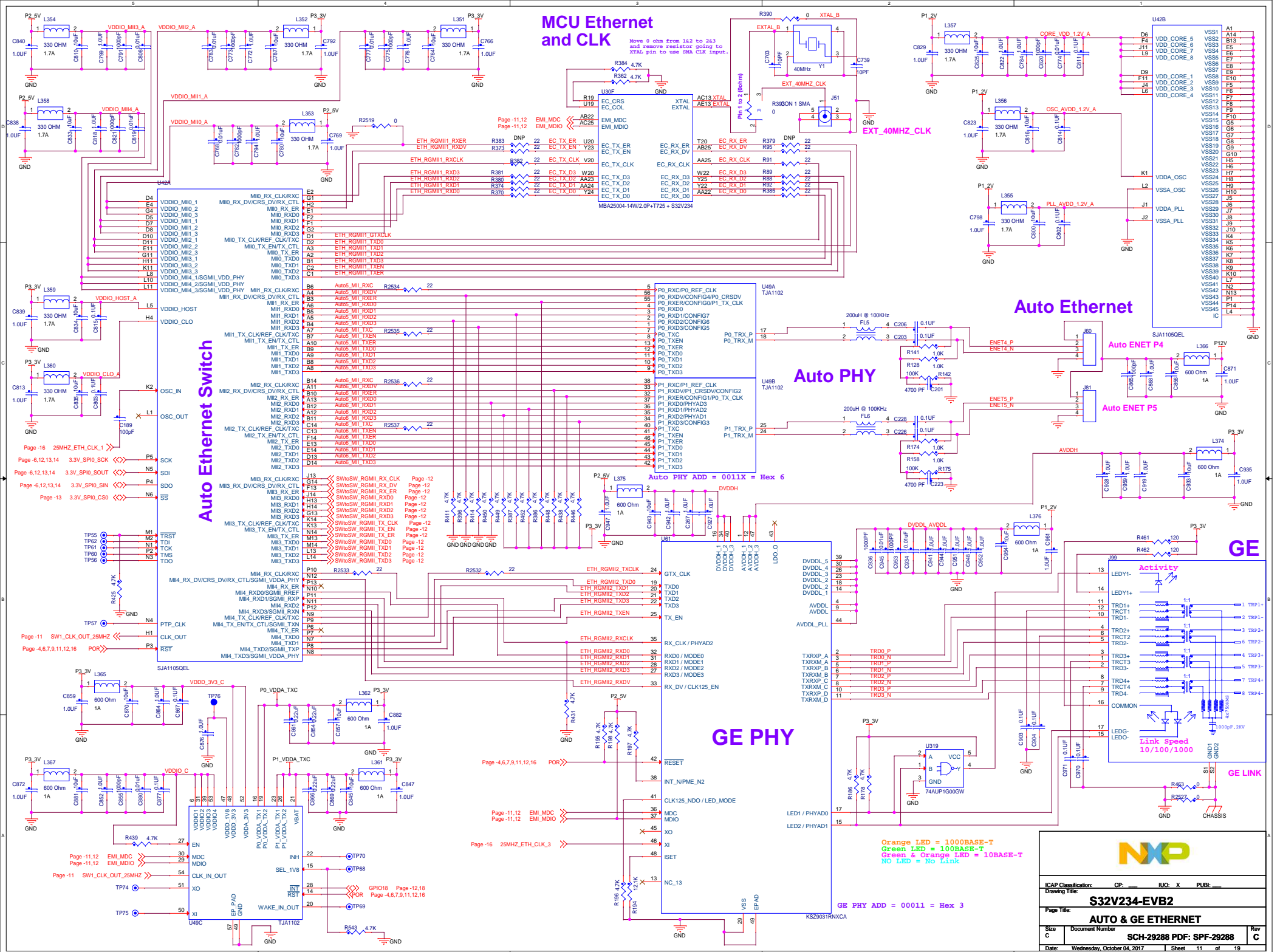
MIPI-CSI CAMERA INTERFACE



PARALLEL DIGITAL CAMERA INTERFACE



ICAP Classification: CP: _____ IUC: X PUBL: _____	
Drawing Title: S32V234-EVB2	
Page Title: Camera PORTS	
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MCU Ethernet and CLK

Move 0 Ohm from L62 to 2e3 and remove resistor going to XTAL pin to use 89A CLK input.

Auto Ethernet

Auto PHY

GE PHY

GE

Auto Ethernet Switch

Activity

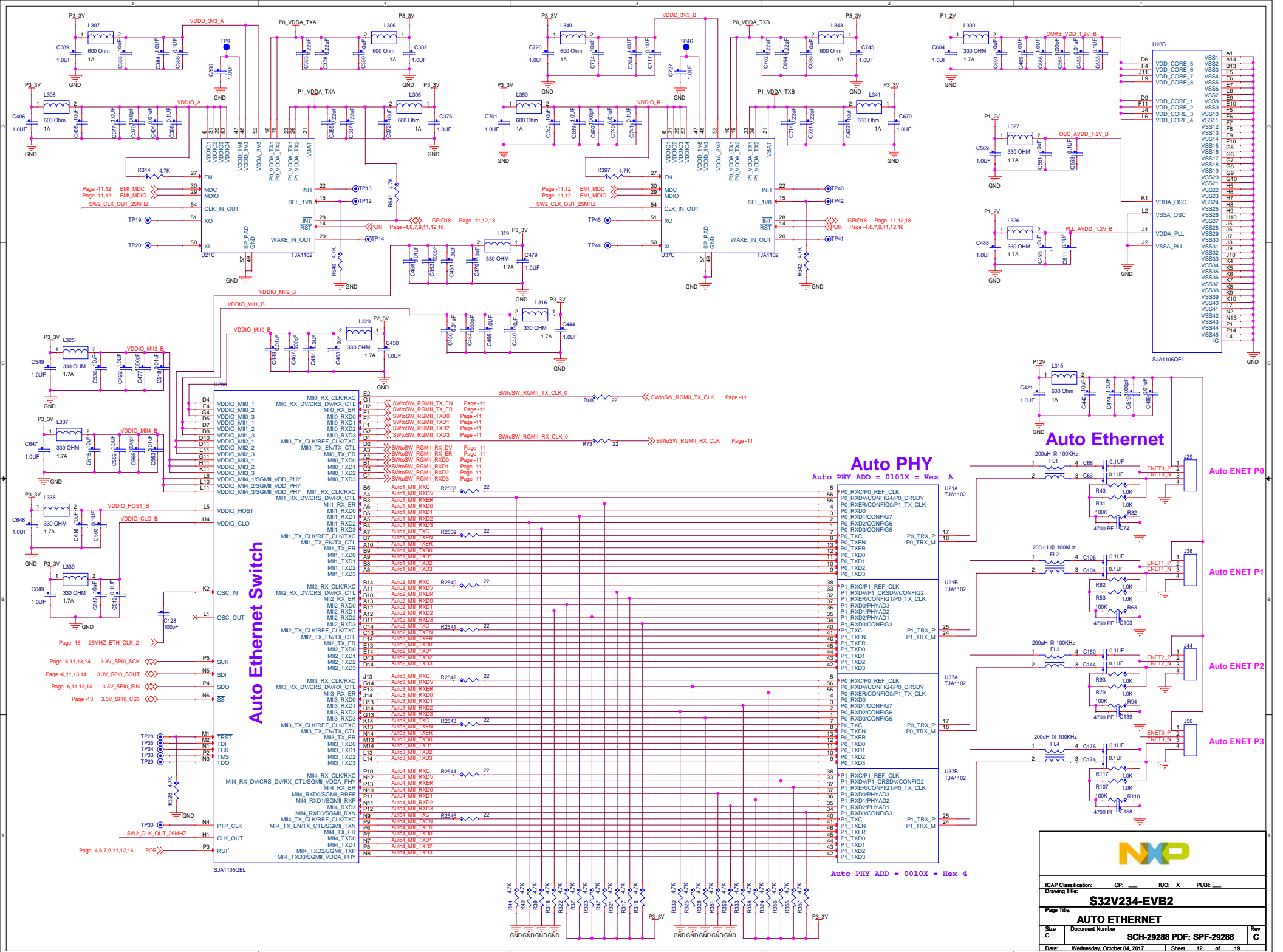
Link Speed 10/100/1000

Orange LED = 1000BASE-T
 Green LED = 100BASE-T
 Red LED = 10BASE-T
 NO LED = No Link

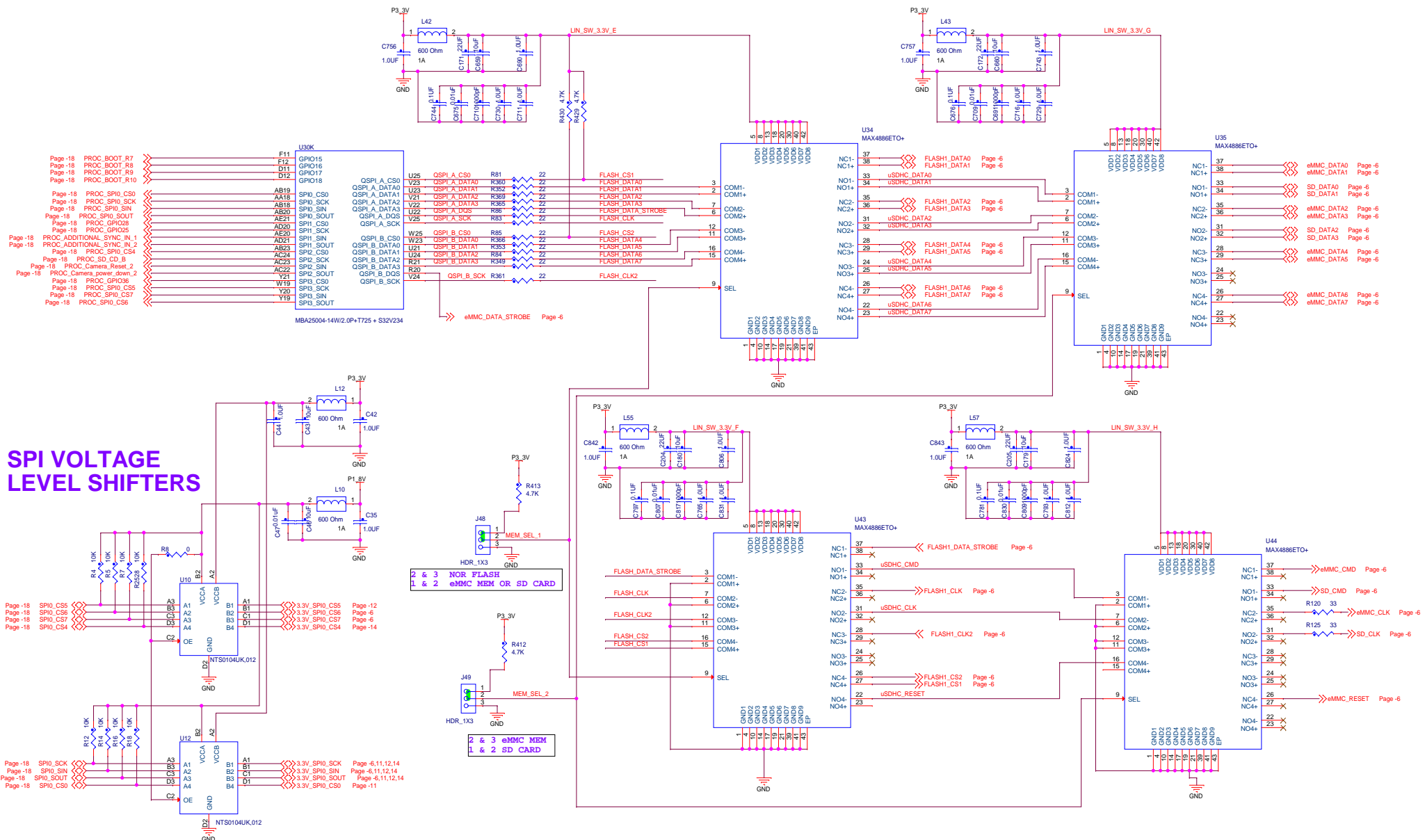


GE PHY ADD = 00011 = Hex 3

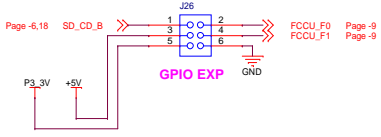
Auto PHY ADD = 0011X = Hex 6



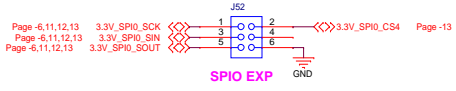
MCU MEMORY INTERFACE SELECTION



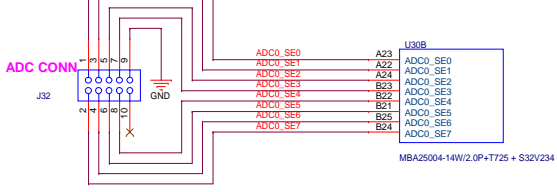
General Expansion



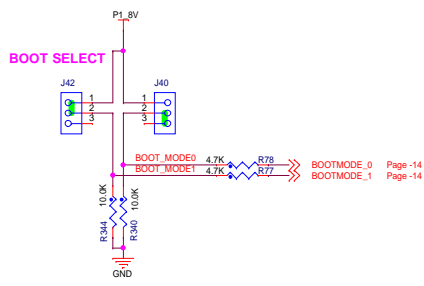
SPI0 Expansion



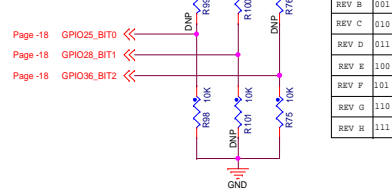
ADC Connection



Boot Mode Select

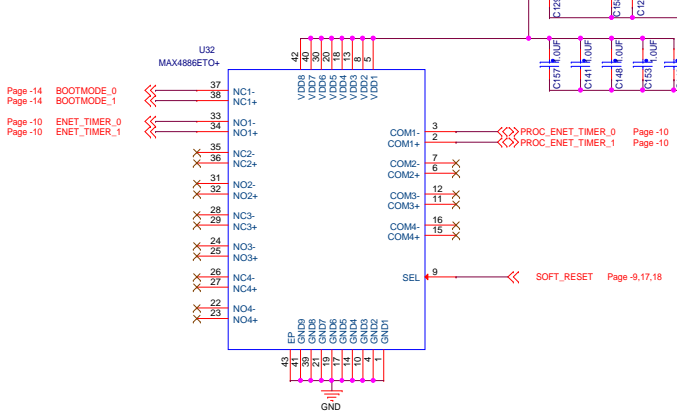


GPIO 25,28,36 BOARD REV RESISTORS

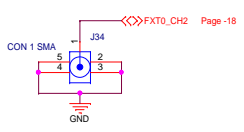


REV	A	000
REV B	001	
REV C	010	
REV D	011	
REV E	100	
REV F	101	
REV G	110	
REV H	111	

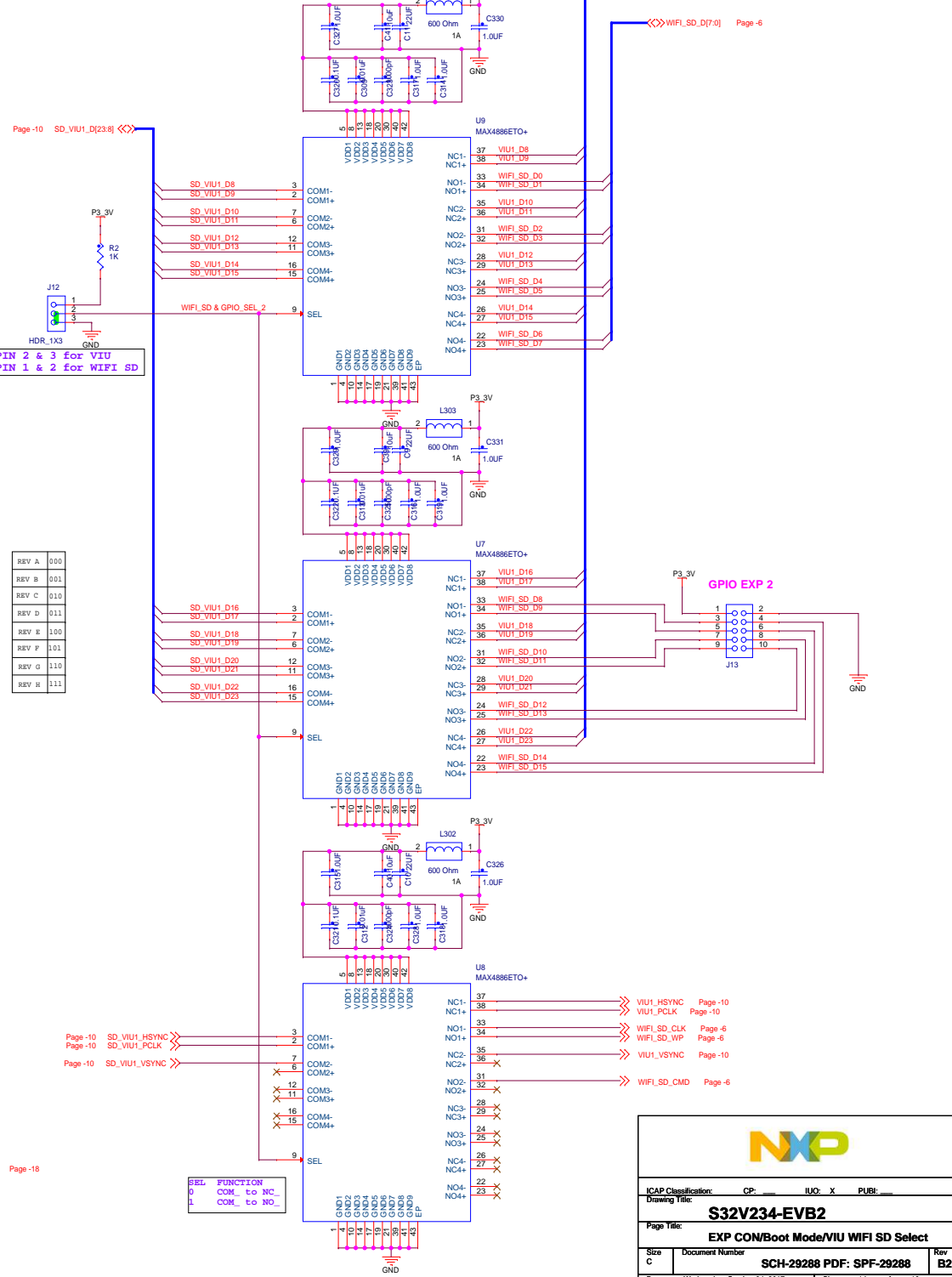
Boot Mode Driver



MCU CLOCK OUT

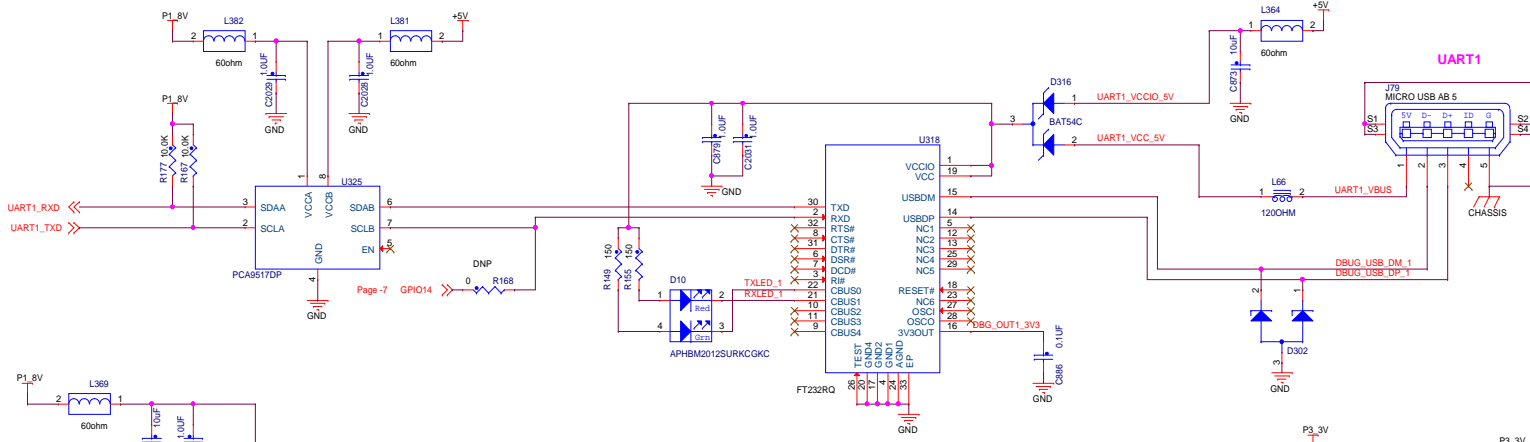
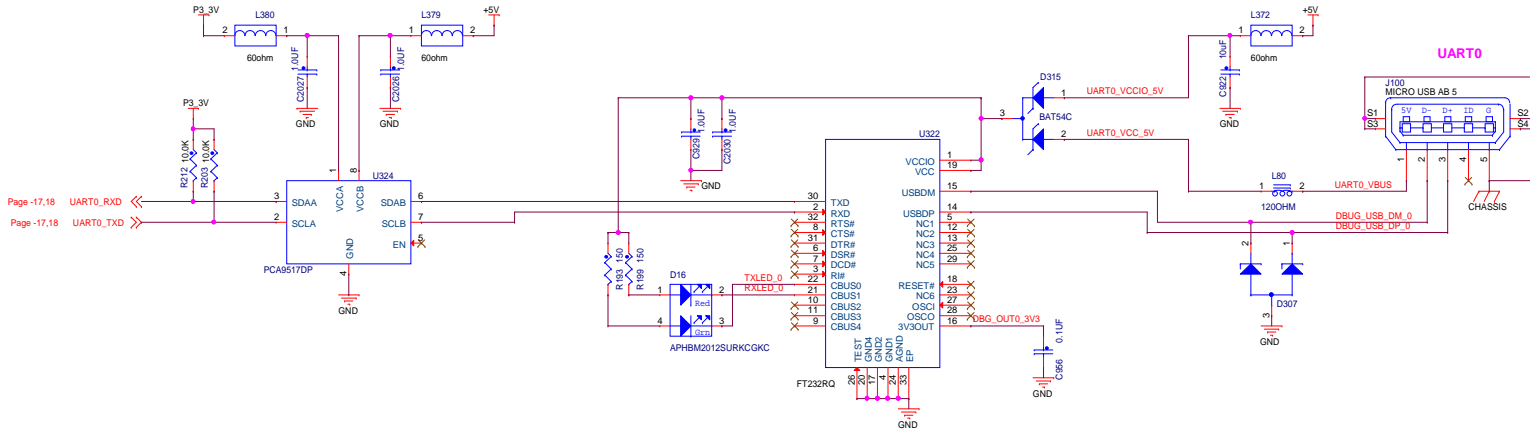


VIU1 and WIFI SD SELECTION

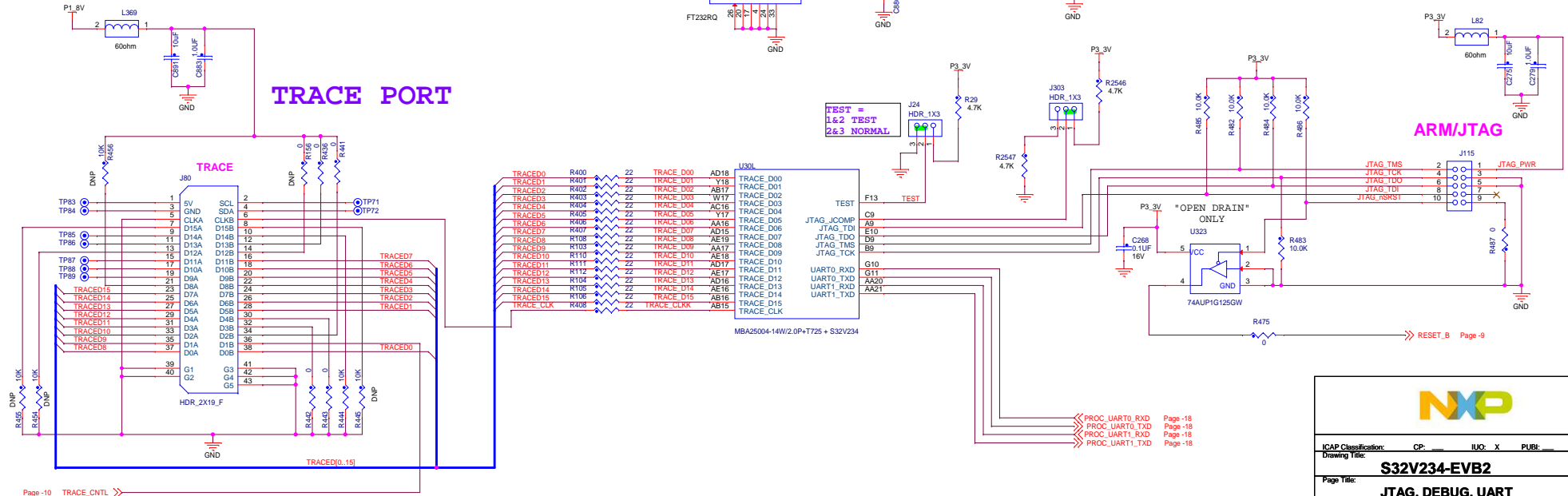


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Drawing Title: S32V234-EVB2	
Page Title: EXP CON/Boot Mode/VIU WIFI SD Select	
Size C	Document Number SCH-29288 PDF: SPF-29288
Date: Wednesday, October 04, 2017	Sheet 14 of 19

UART TO USB CONVERSION



TRACE PORT



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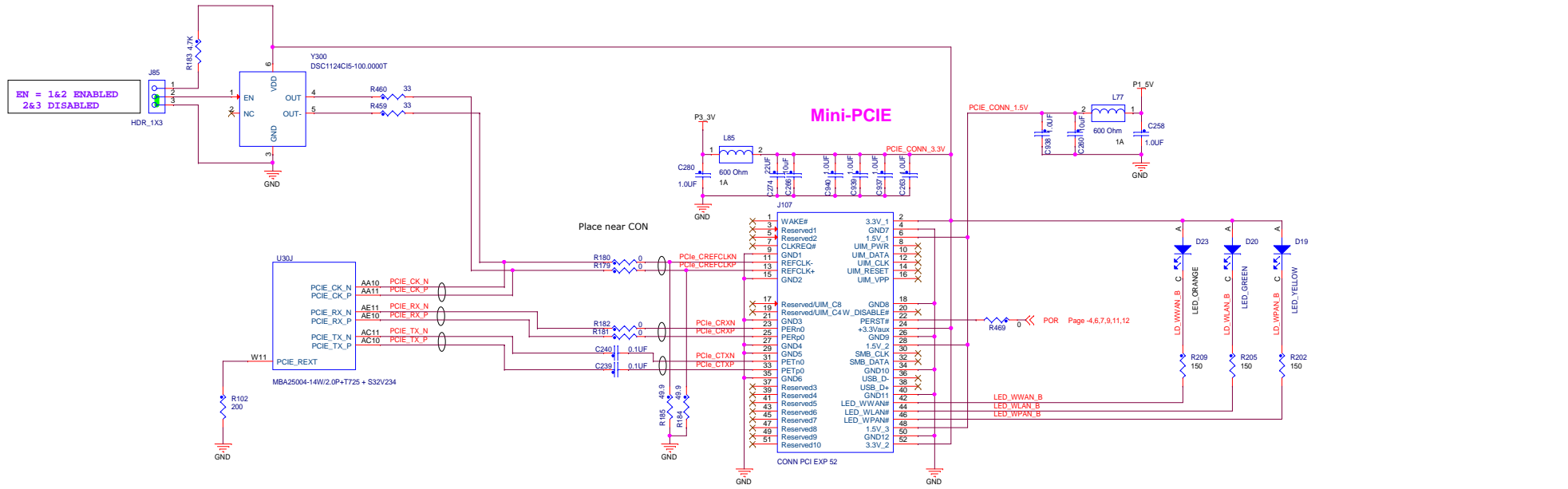
ICAP Classification: CP: IUC: X PUB: _____
 Drawing Title: **S32V234-EVB2**
 Page Title: **JTAG, DEBUG, UART**
 Size C Document Number **SCH-29288 PDF: SPF-29288** Rev **C**
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PROC_UART0_RXD Page-18
 PROC_UART0_TXD Page-18
 PROC_UART1_RXD Page-18
 PROC_UART1_TXD Page-18

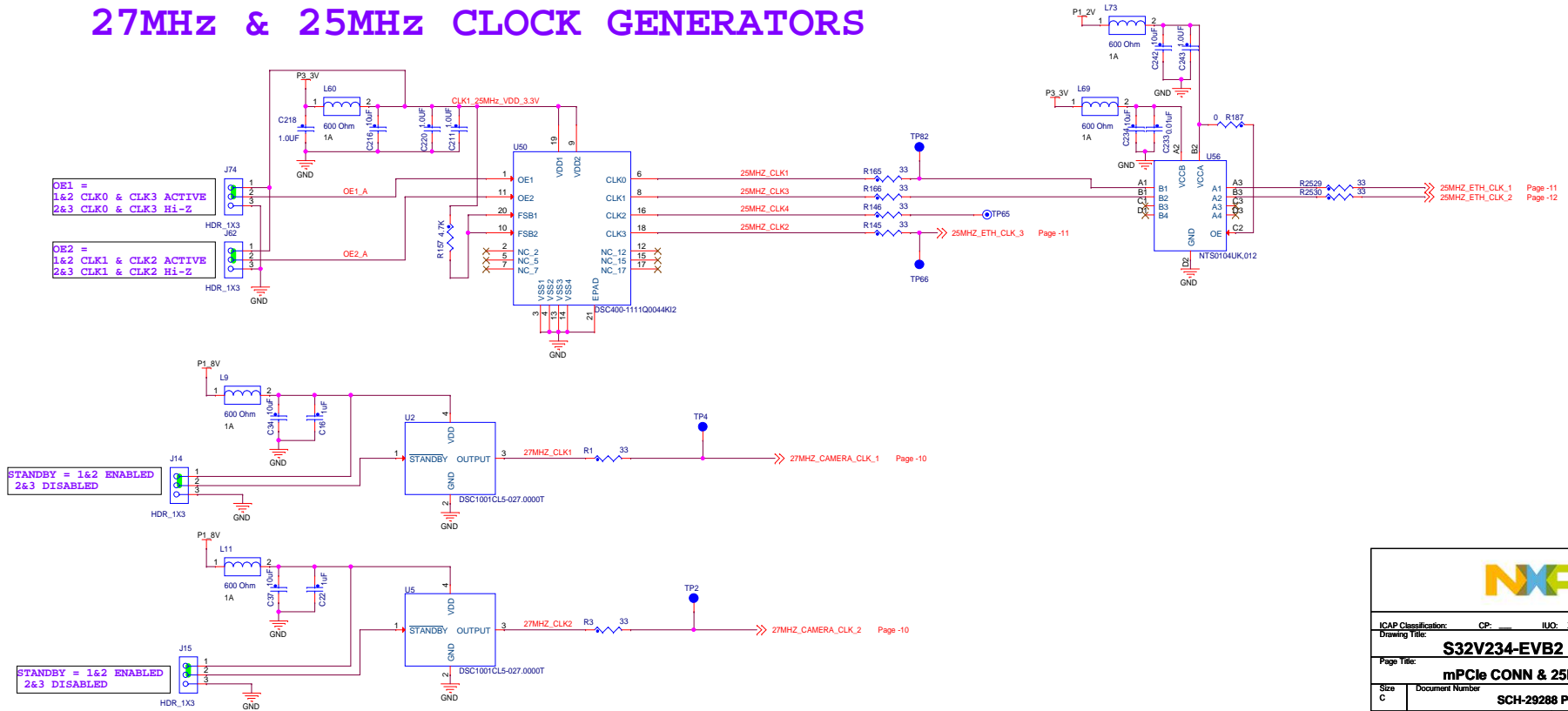
Page-10 TRACE_CNTL >>

Page-9 RESET_B

Mini-PCIE



27MHz & 25MHz CLOCK GENERATORS



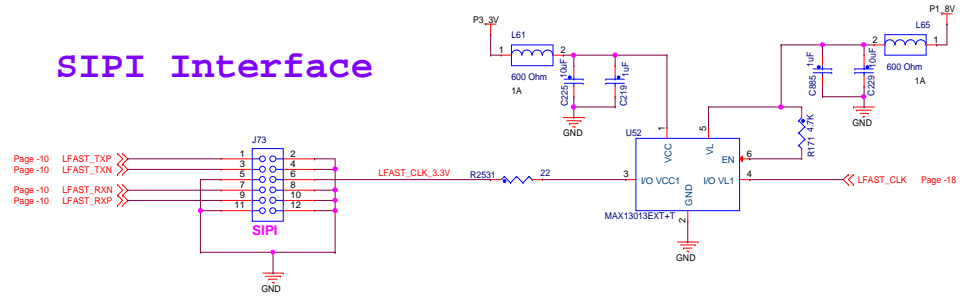
NXP

ICAP Classification: CP: _____ IUQ: X PUBL: _____
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Page Title: **mPCIe CONN & 25MHz CLOCK**

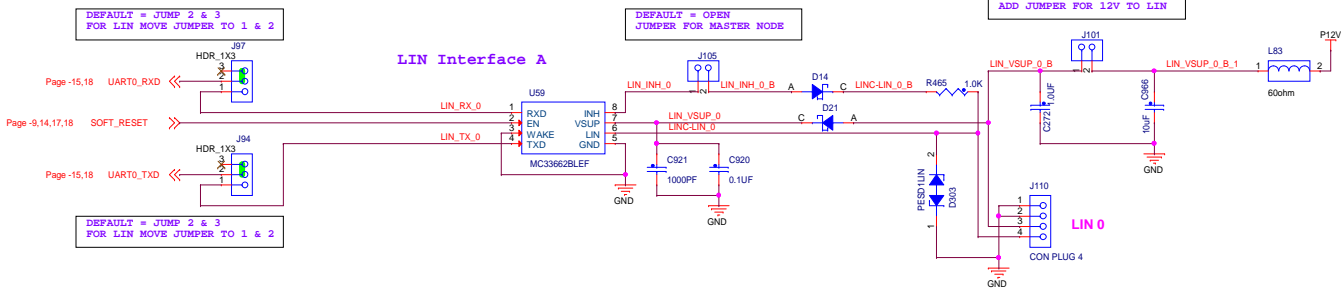
Size C	Document Number SCH-29288 PDF: SPF-29288	Rev C
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SIPI Interface

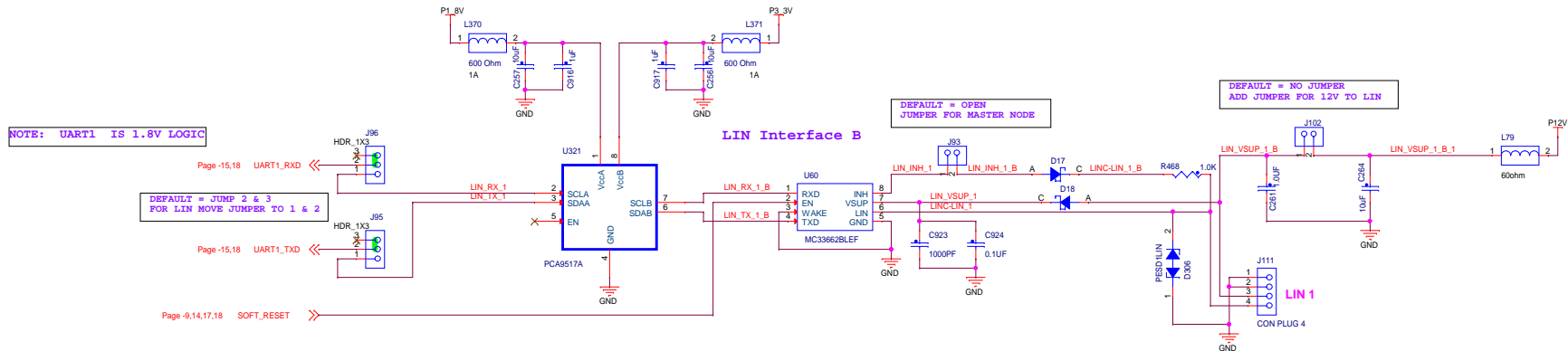


LIN Interface

LIN Interface A



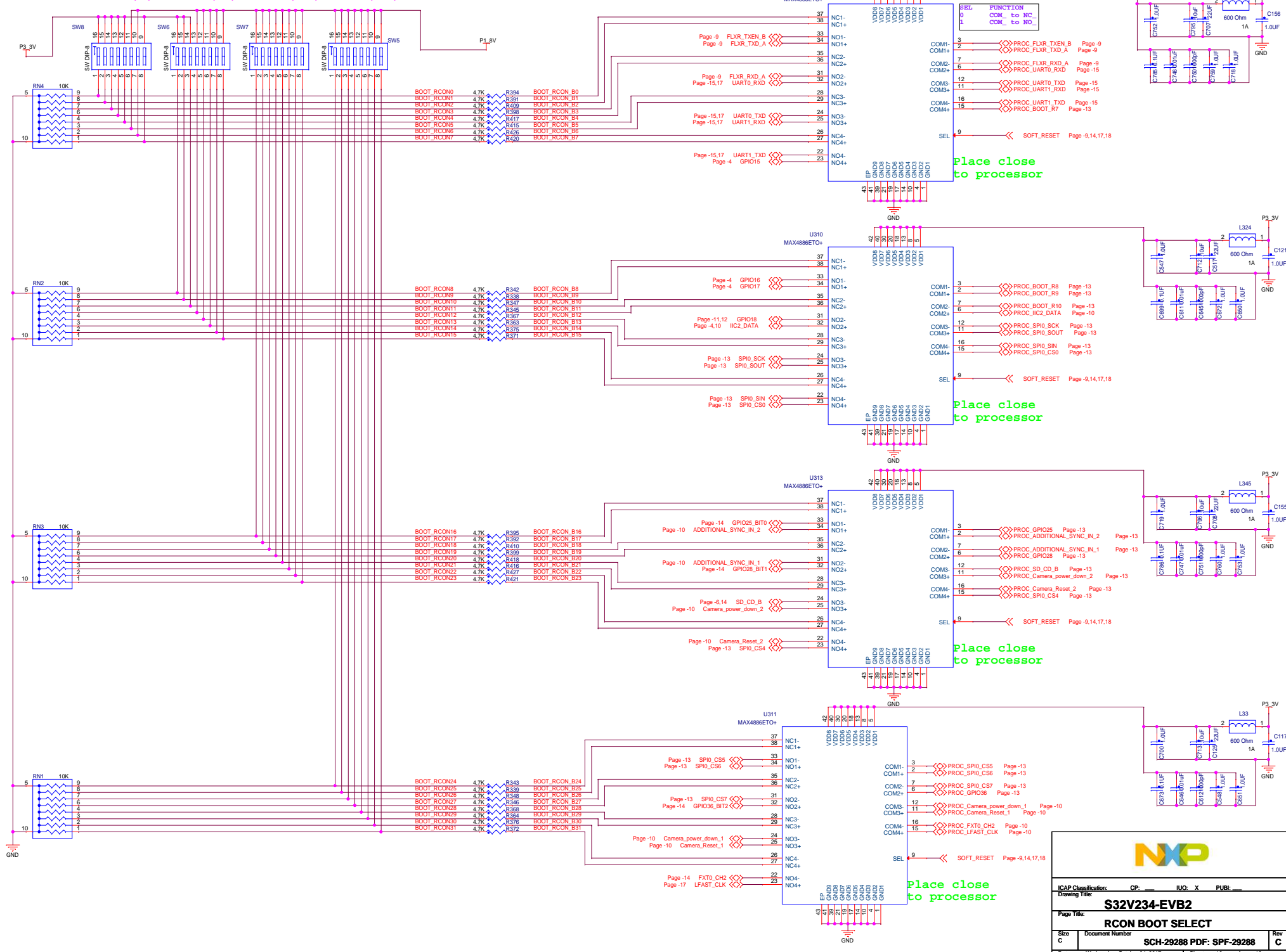
LIN Interface B



ICAP Classification: CP: IUC: X PUBL:	
Drawing Title: S32V234-EVB2	
Page Title: SIPI & LIN INTERFACE	
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RCON Boot Selection

BOOT CFG (0:7) BOOT CFG (8:15) BOOT CFG (16:23) BOOT CFG (24:31)



Place close to processor

Place close to processor

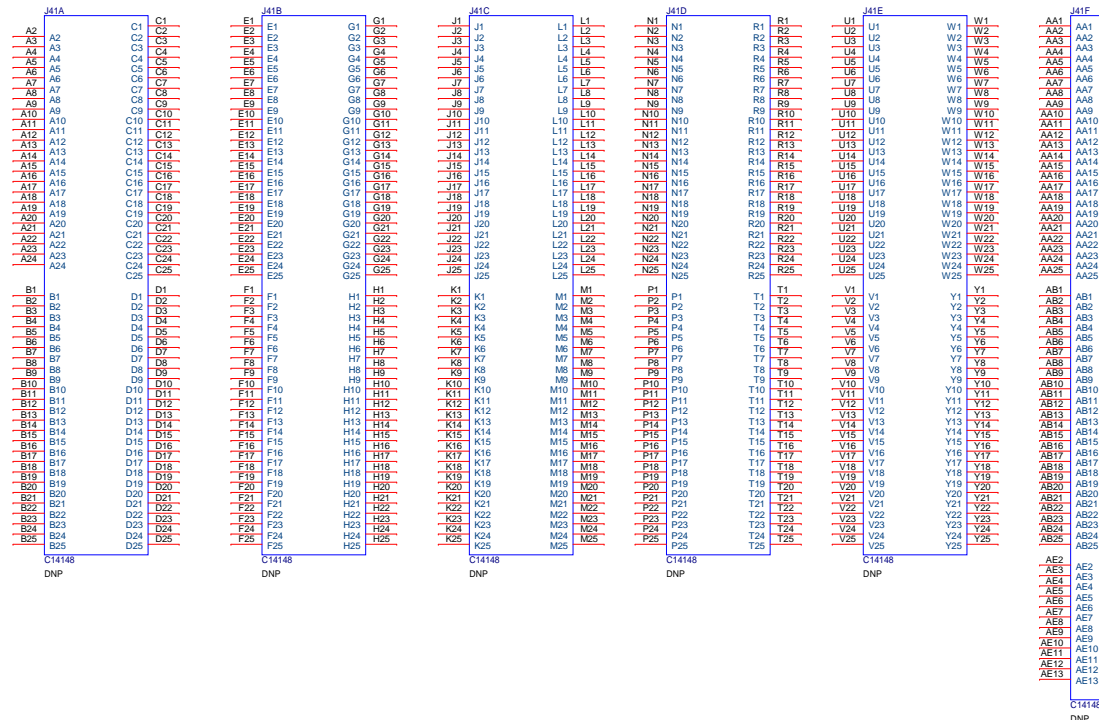

Place close to processor

Place close to processor



ICAP Classification: CP: IUC: X PUBL:	
Drawing Title: S32V234-EVB2	
Page Title: RCON BOOT SELECT	
Size C	Document Number SCH-29288 PDF: SPF-29288
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S32v234 SOCKET

ICAP Classification: CP: IUC: X PUBL: _____
 Drawing Title: **S32V234-EVB2**
 Page Title: **S32v234 Socket**

Size	Document Number	Rev
C	SCH-29288 PDF: SPF-29288	C

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