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09	CAN Transceivers
10	TJA1103 Ethernet PHY

Revision History

Rev	Description	Date	Approved/Designer
X1	Initial Schematic	04-30-2020	Jesús Sánchez Alan Alvarado
X1	A055 Release	05-06-2021	Alan Alvarado
X2	Block Diagram updated, signaling LED added	05-07-2021	Alan Alvarado
X3	IMU connector added, update in MCU signals	05-11-2021	Alan Alvarado
X4	Reset of parts RefDef	05-14-2021	Alan Alvarado
X5	BOM Optimization	05-17-2021	Alan Alvarado
X6	UART connector signals Update	05-18-2021	Alan Alvarado
X7	Replaced TJA1101 by TJA1103	05-21-2021	Alan Alvarado
X8	Changes in capacitors and resistors, correction of small details	05-25-2021	Alan Alvarado
X9	Second BOM optimization	06-02-2021	Alan Alvarado
X10	Adjust in FS26 Capacitors, overall details correction	06-10-2021	Alan Alvarado
A	A085 Release	07-20-2021	Alan Alvarado
A2	A085 Release	12-21-2022	Luis Mateos



MR - CANHUBK3



Automotive Product Group

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Alan Alvarado

Drawing Title:

MR-CANHUBK3

Drawn by:
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Gino Krubben

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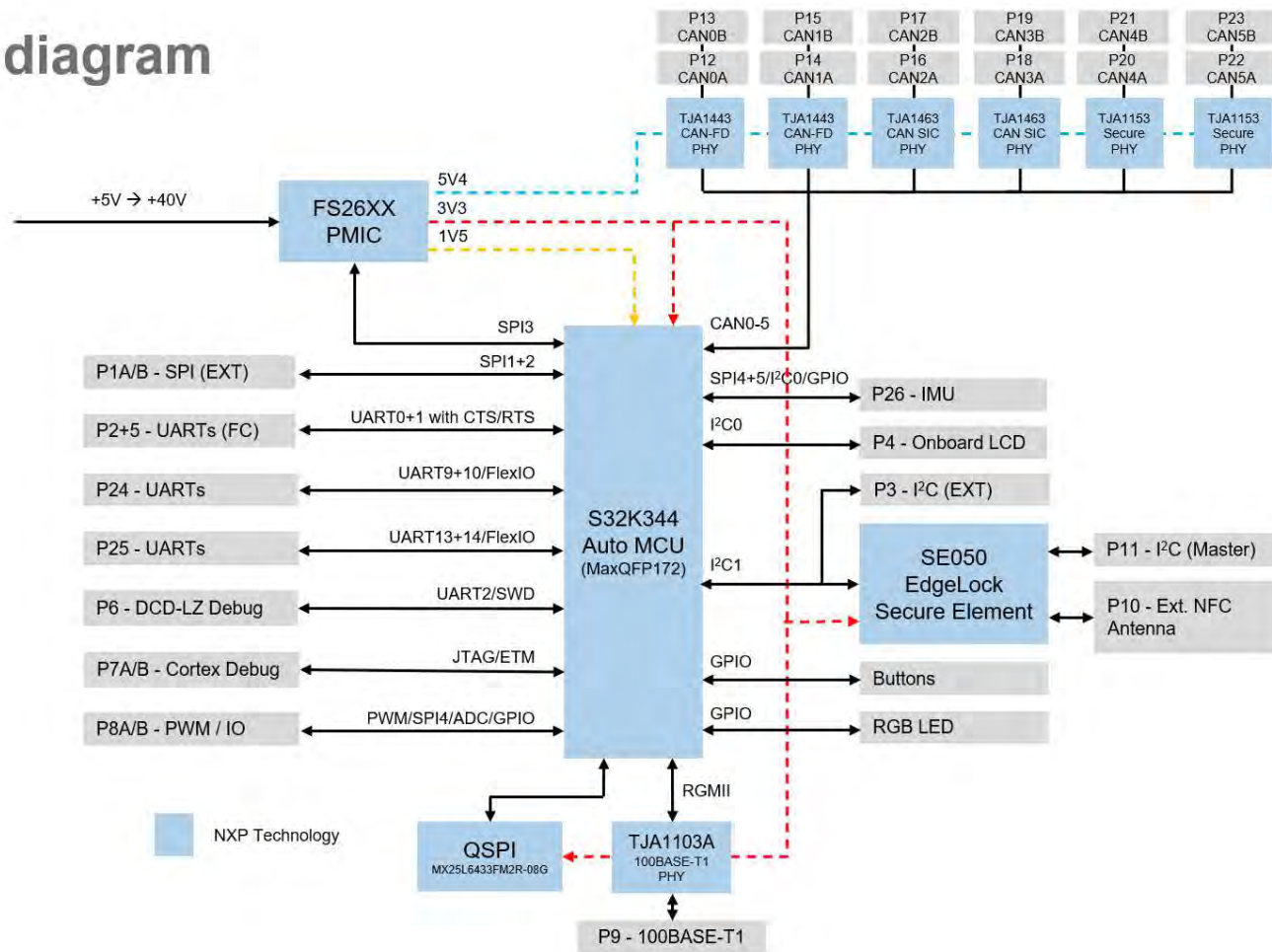
SCH-50749 PDF: SPF-50749

Rev
A2

Date: Wednesday, December 21, 2022

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Block diagram

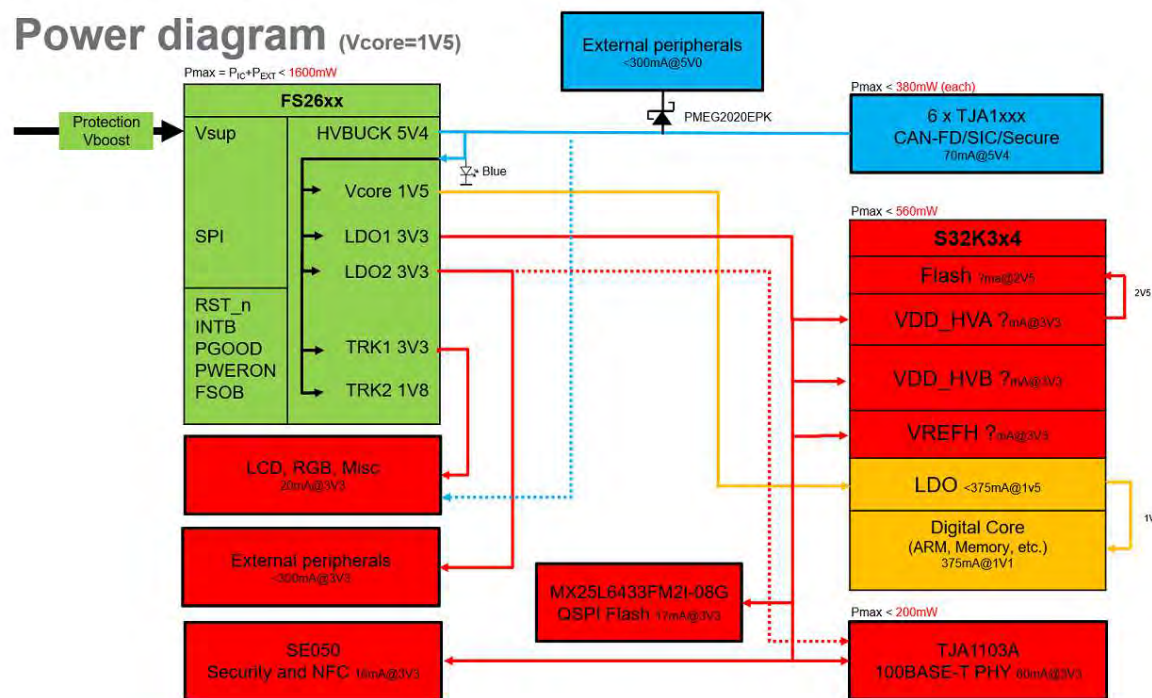


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Drawn by: Alan Alvarado	Page Title:	BLOCK DIAGRAM	
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Date: Wednesday, December 21, 2022		Sheet 2 of 10	

REF DES	JUMPER(DEFAULT)	PAGE NAME
JP1	1-2	04 FS26
JP2,JP3	1-2	04 FS26

REF DES	ASSY_OPT	PAGE NAME
R26,R38,R42,R173,R198,R207	DNP	04 FS26
R1,R2,R3,R4,R5,R27,R75,R90,R298	DNP	05. MCU PORTS1
R25,R111,R124,R154,R189	DNP	07. I2C/SPI/PWM&IO CONN
D13,D15,D17,D18,D19,D20,P7B,R128,R133,R134,R135,R136	DNP	08. JTAG/SWD/CORTEX DEBUG+ETM
C2,C13,C16,C25,C31,C32,C34,C39,C42,C46,C47,C51,R139,R142,R149,R151,R158,R162,R168,R170,R172,R177,R180,R182,R211,R216,R220,R222,R238,R242,R246,R248,R260,R263,R267,R269	DNP	09. CAN TRANSCEIVERS
R63,R76,R79,R85,R87,R88,R214,R230	DNP	10. TJA1103 ETHERNET PHY

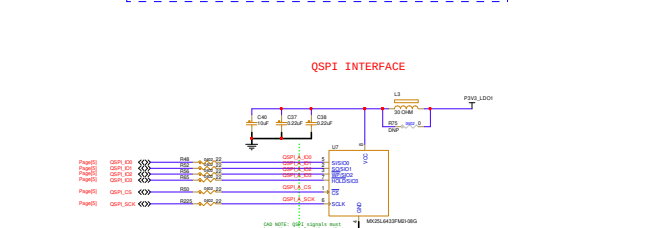
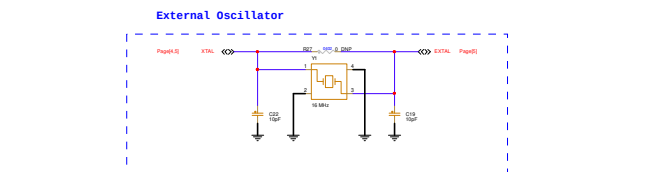
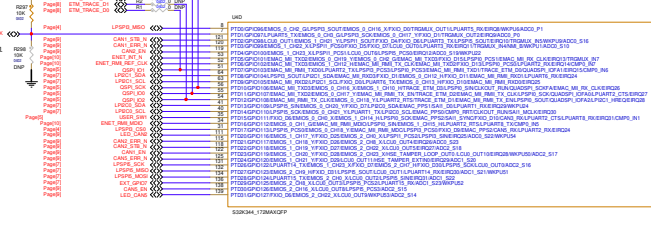
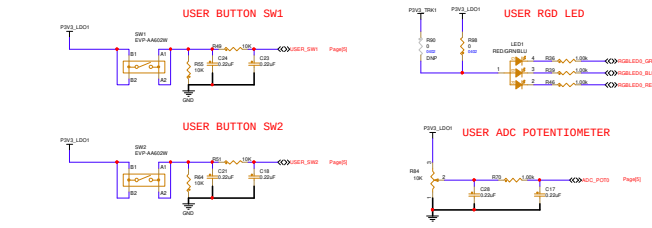
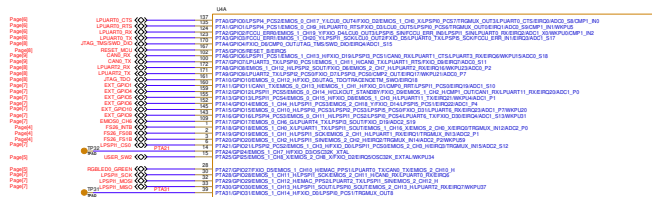
Power diagram (Vcore=1V5)



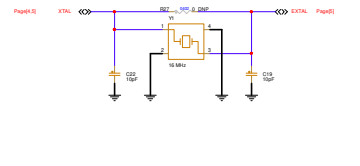
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S32K3XX Microcontroller - MAXQFP172

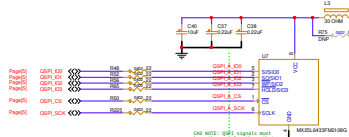
Ports A/B/C/D/E



External Oscillator



QSPI Interface

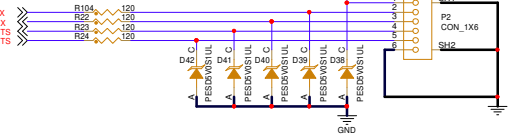


	Automotive Product Group		
	MR-CANHUBK3		
Part Number	MR-CANHUBK3	Revision	1.0
Product Name	S32K3XX - Ports A/B/C/D/E	Document Type	Application Note
Doc Number	S32K3XX - PORTS A/B/C/D/E	Doc Version	1.0
Doc Date	October 2023	Doc Status	Released

LPUART0 CONNECTOR

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LPUART0_TX
LPUART0_RX
LPUART0_CTS
LPUART0_RTS

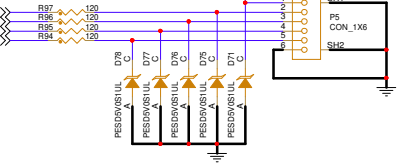


CAD NOTE: Place NPM15PC104R1A3D capacitor as close as possible to the pin it is connected.

LPUART1 CONNECTOR

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LPUART1_TX
LPUART1_RX
LPUART1_CTS
LPUART1_RTS

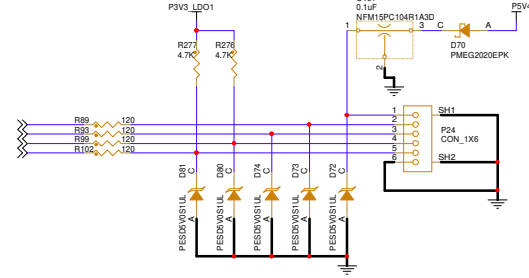


CAD NOTE: Place NPM15PC104R1A3D capacitor as close as possible to the pin it is connected.

LPUART9/10 & FlexIO connector

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LPUART9_TX
LPUART9_RX
LPUART10_TX
LPUART10_RX

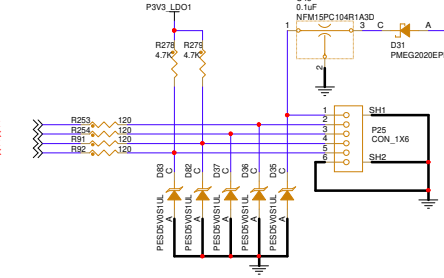


CAD NOTE: Place NPM15PC104R1A3D capacitor as close as possible to the pin it is connected.

LPUART13/14 & FlexIO connector

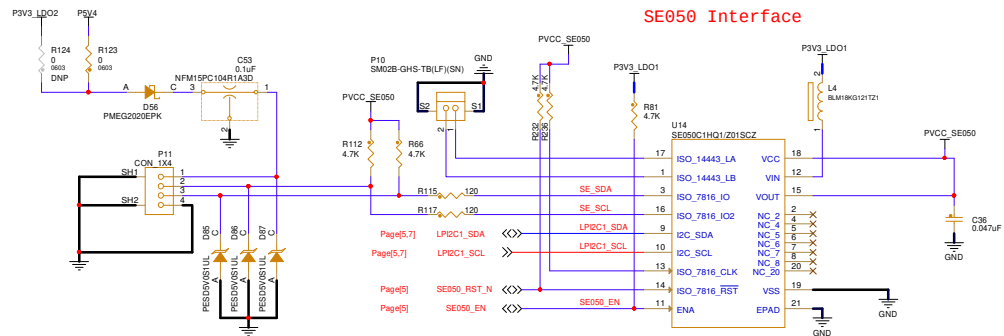
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LPUART13_TX
LPUART13_RX
LPUART14_TX
LPUART14_RX

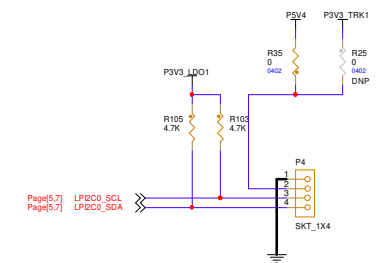


CAD NOTE: Place NPM15PC104R1A3D capacitor as close as possible to the pin it is connected.

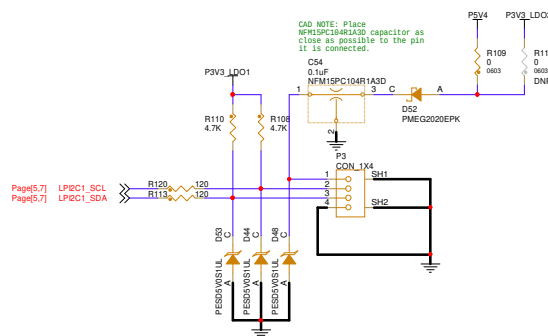
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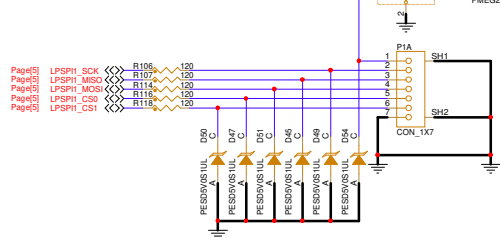
I2C0 CONNECTOR - ONBOARD LCD



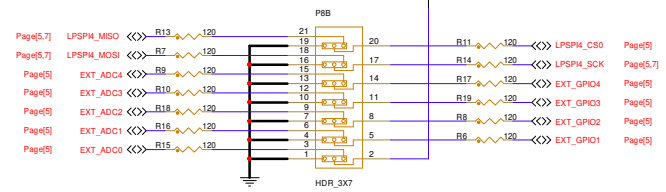
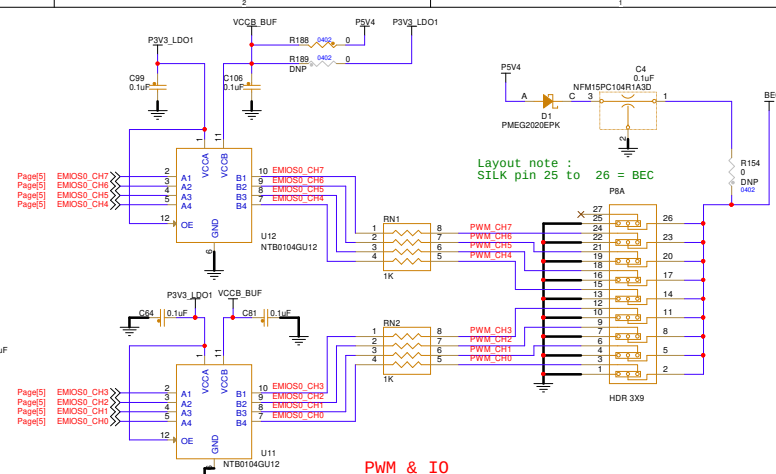
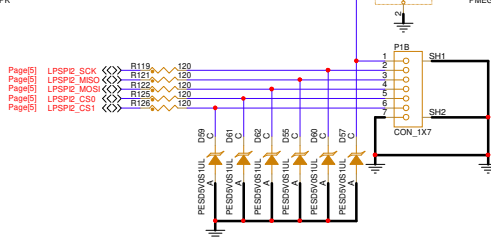
I2C1 CONNECTOR - EXT



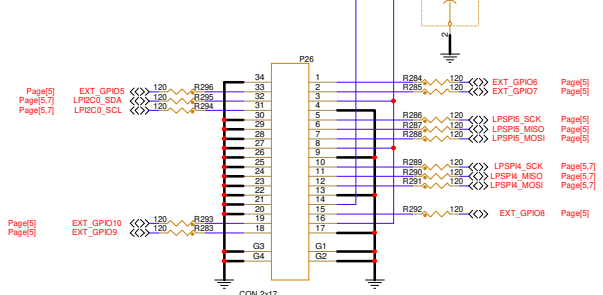
SPI1 CONNECTOR



SPI2 CONNECTOR



IMU CONNECTOR

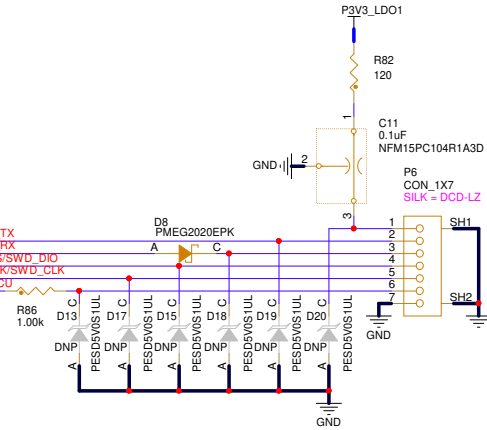


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Drawn by: Alan Alvarado		Page Title: 12CSP1P/PWM&IO Connectors	
Approved: Gino Kruibben		Date Document Number SCH-50749 PDF: SPF-50749	
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Debug Interface

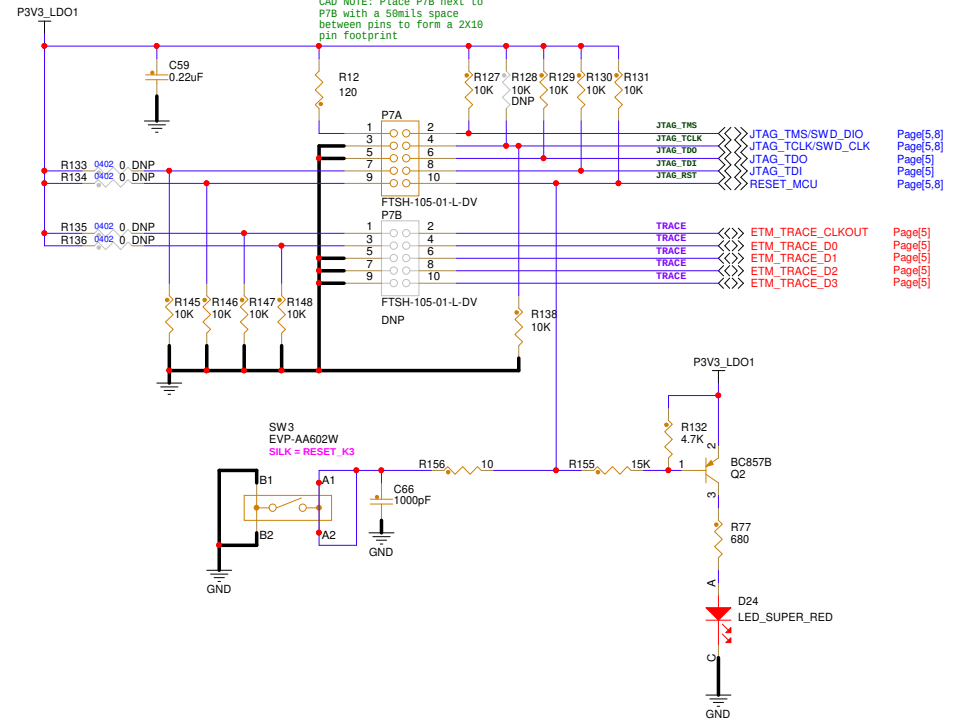
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LPUART2_TX
LPUART2_RX
JTAG_TMS/SWD_DIO
JTAG_TCLK/SWD_CLK
RESET_MCU



20-pin Cortex Debug D ETM connector

CAD NOTE: Place P7B next to P7B with a 50mils space between pins to form a 2X10 pin footprint

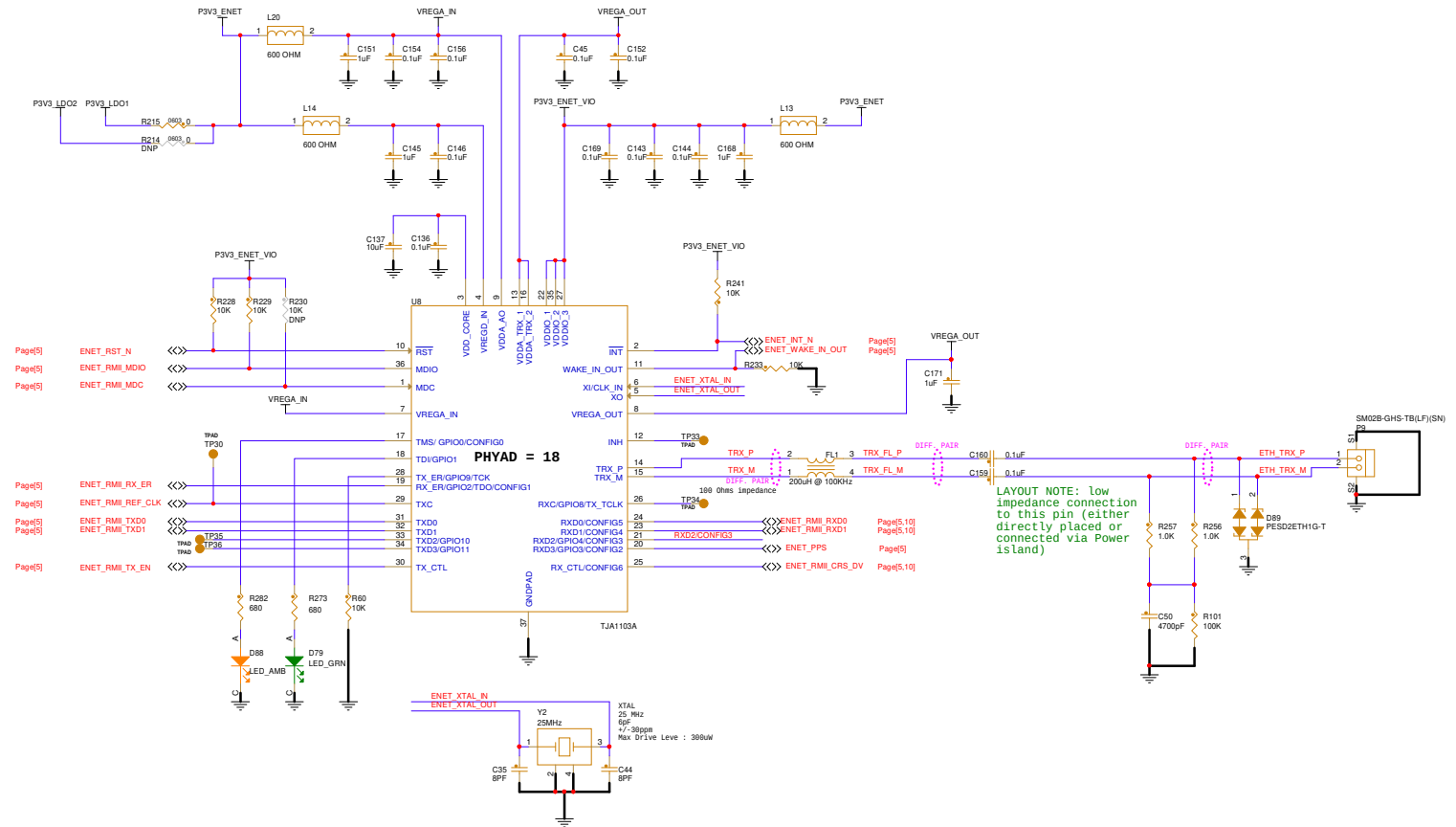


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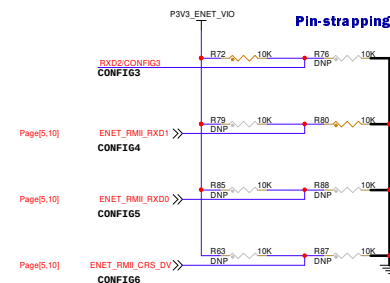
ETHERNET 100BASE-T1



HARDWARE STRAPPING OPTIONS

Pin Strapping Configuration		
XMII MODE	Pin CONFIG3	Pin CONFIG4
RGMIID (RXC)	O	O
RGMIH	O	H
RGMIID (both TXC/RXC)	O	L
RMII	H	O
RMII-clkmode	H	H
RMII-rev	H	L
MII	L	O
MII-rev	L	H
JTAG	L	L

Pin Strapping Configuration				
MASTER/SLAVE	AUTONOMOUS Mode	Polarity Correction	Pin CONFIG5	Pin CONFIG6
MASTER	enabled	enabled	O	O
MASTER	disabled	enabled	O	H
SLAVE	enabled	enabled	O	L
SLAVE	disabled	enabled	H	O
MASTER	enabled	disabled	H	H
MASTER	disabled	disabled	H	L
SLAVE	enabled	disabled	L	O
SLAVE	disabled	disabled	L	H
reserved	reserved	reserved	L	L



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Date: Wednesday, December 21, 2022		Sheet 1	of 10		