

VAR-DT6CustomBoard



CONTENT

PAGE NO.	SCHEMATIC PAGE
1	Cover
2	Block Diagram
3	DART-MX6
4	Display ,Touch, HDMI
5	USB, Audio, Camera
6	Peripherals, Exp. Connectors
7	G. Ethernet PHY, PCIe
8	Power & Mechanics

Disclaimer:

SchematicS are for reference only.
Variscite LTD provides no warranty for the use of
these schematics.
Schematics are subject to change without notice.

Revision History

Document	Carrier	
1.0	1.0	Initial
1.1	1.0	Pre-Prodcution
1.2	1.1	Production - J14.25, J15.15 - pinout change - Removed RN100 - Added R135-R137,RN102,RN103
1.3	1.1	Added note for UART3_RTS signal
1.4	1.2	Camera connector P/N and connection changed

Title01. Cover

SizeA3

Document NumberVAR-DT6CustomBoard

ProjectVAR-DT6CustomBoard

Rev1.2

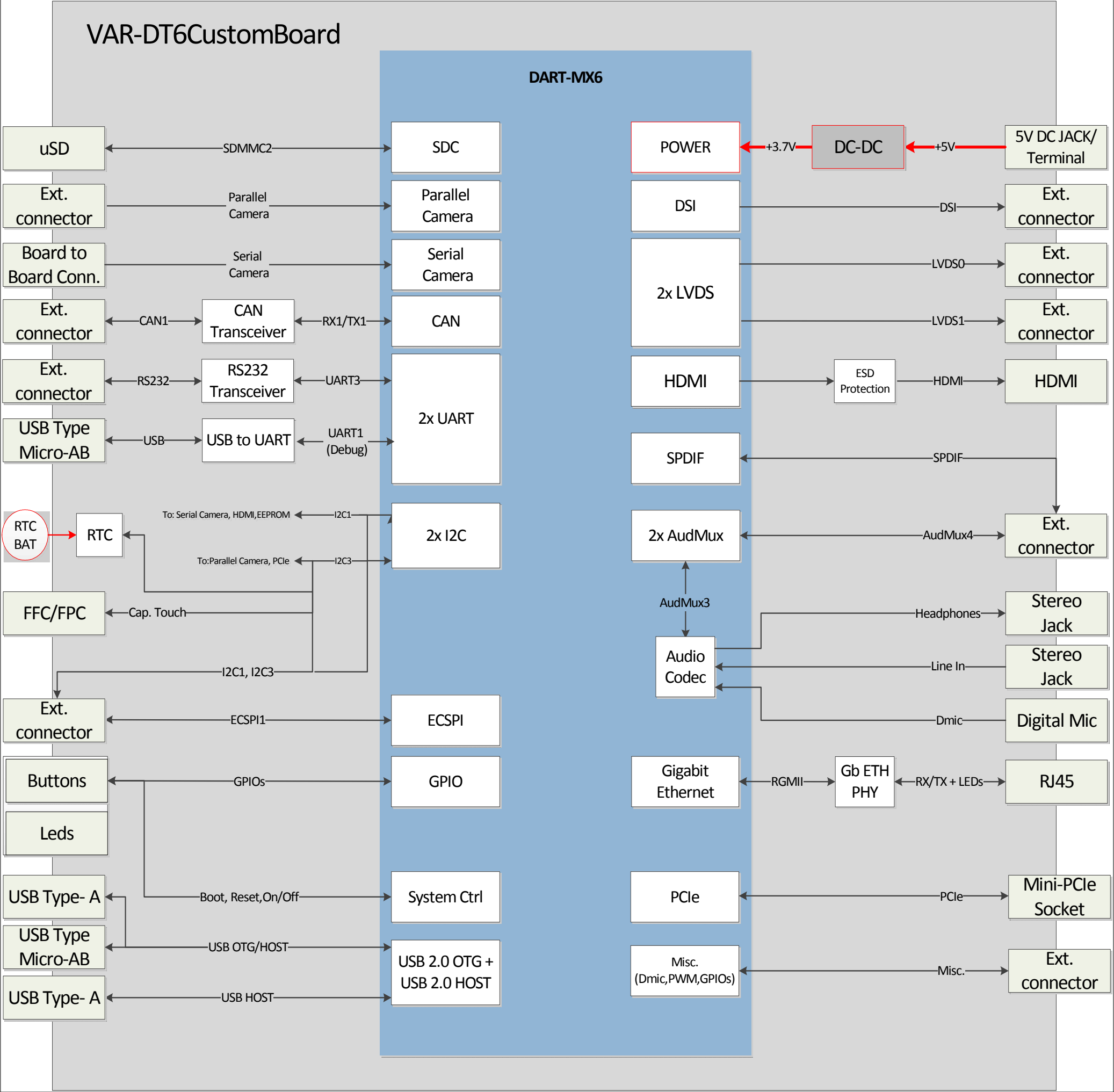
Designer:<Designer>

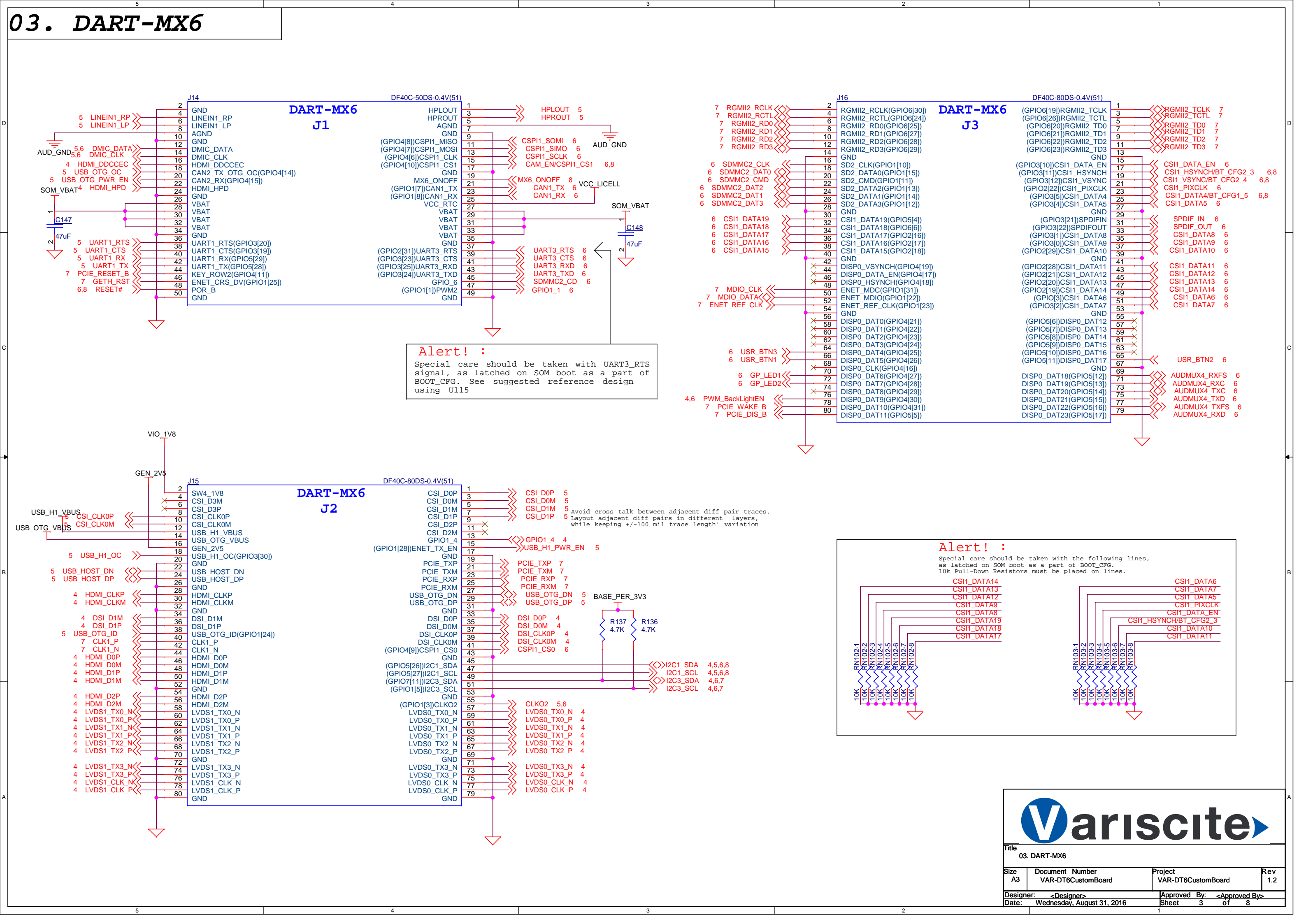
Approved By:<Approved By>

Date:Wednesday, August 31, 2016

Sheet1 of 8

02 - Block Diagram

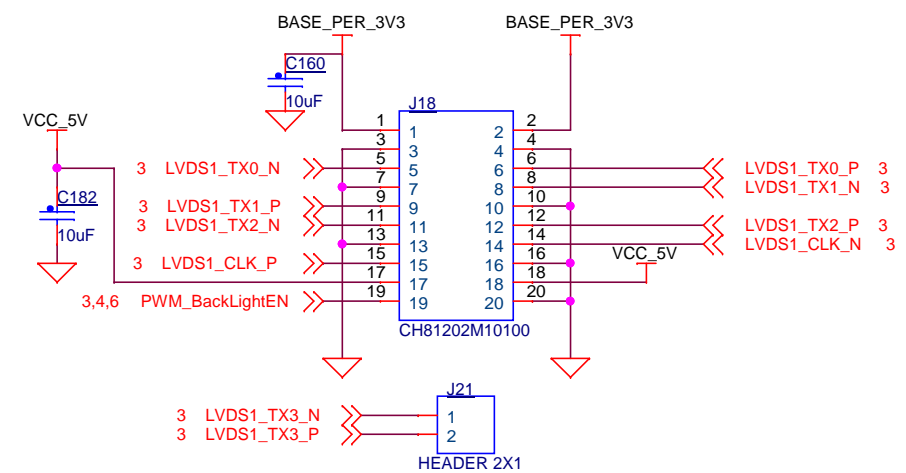




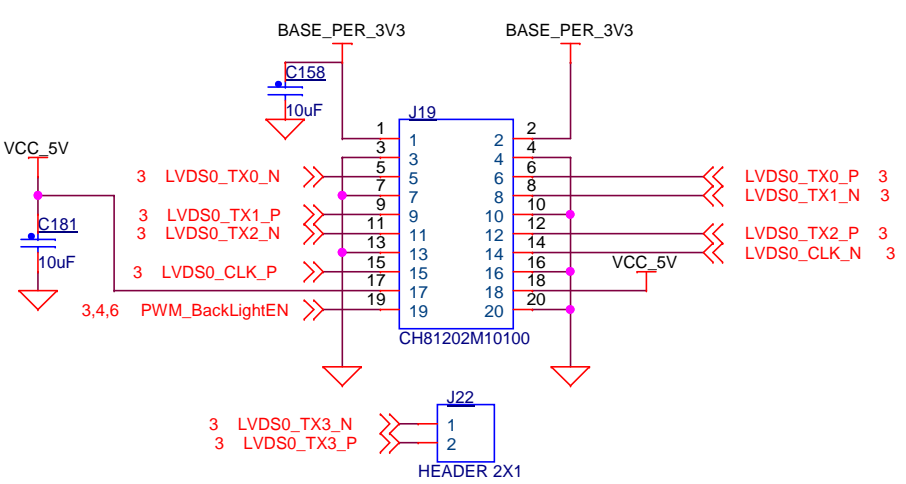
04. Display, Touch, HDMI

Display

LVDS1

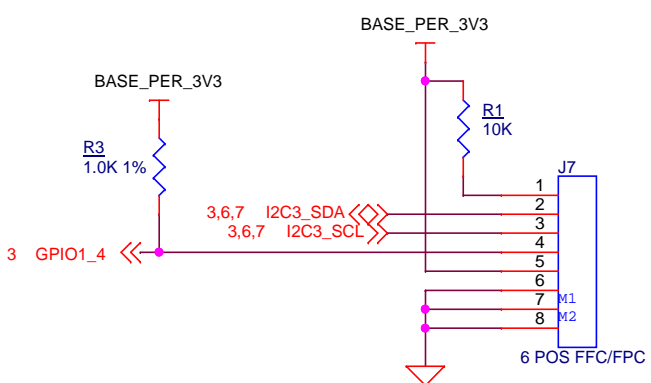


LVDS0

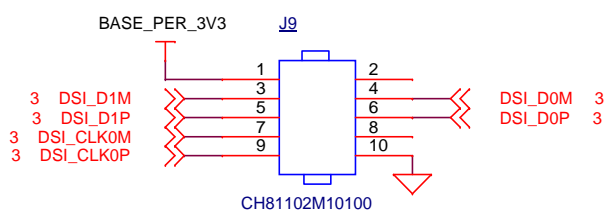


Touch

Capacitive Touch

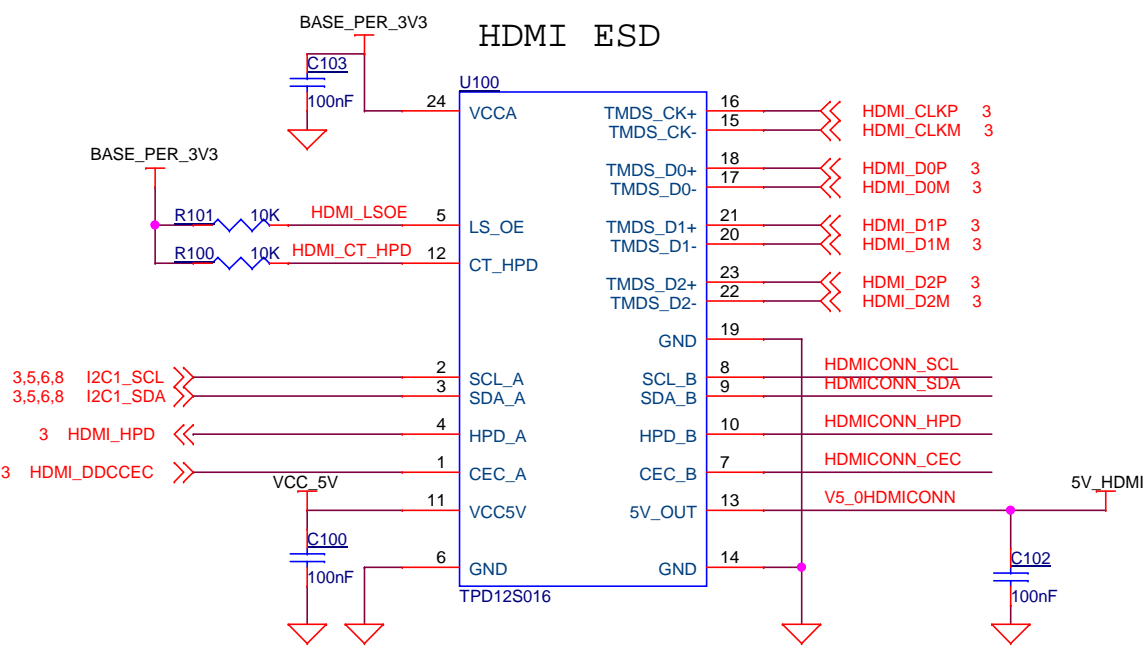


DSI

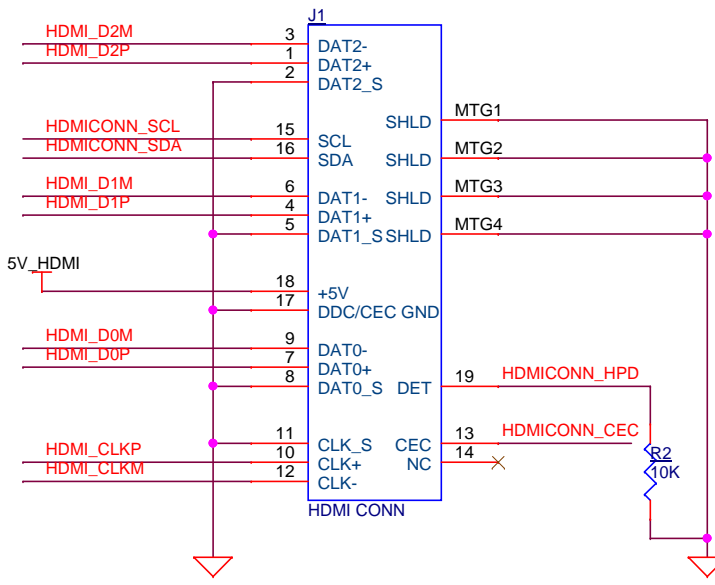


HDMI

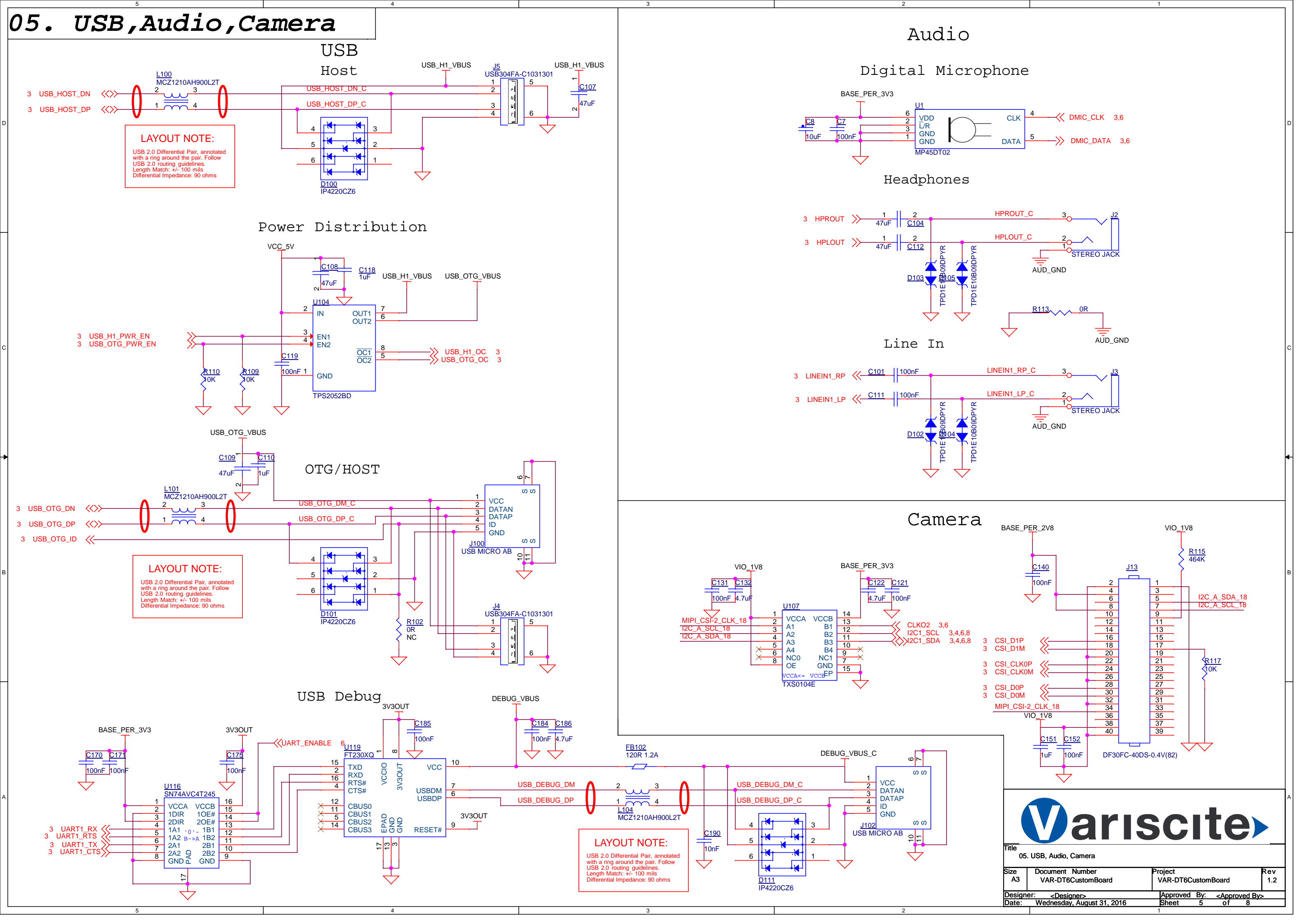
HDMI ESD



HDMI Connector

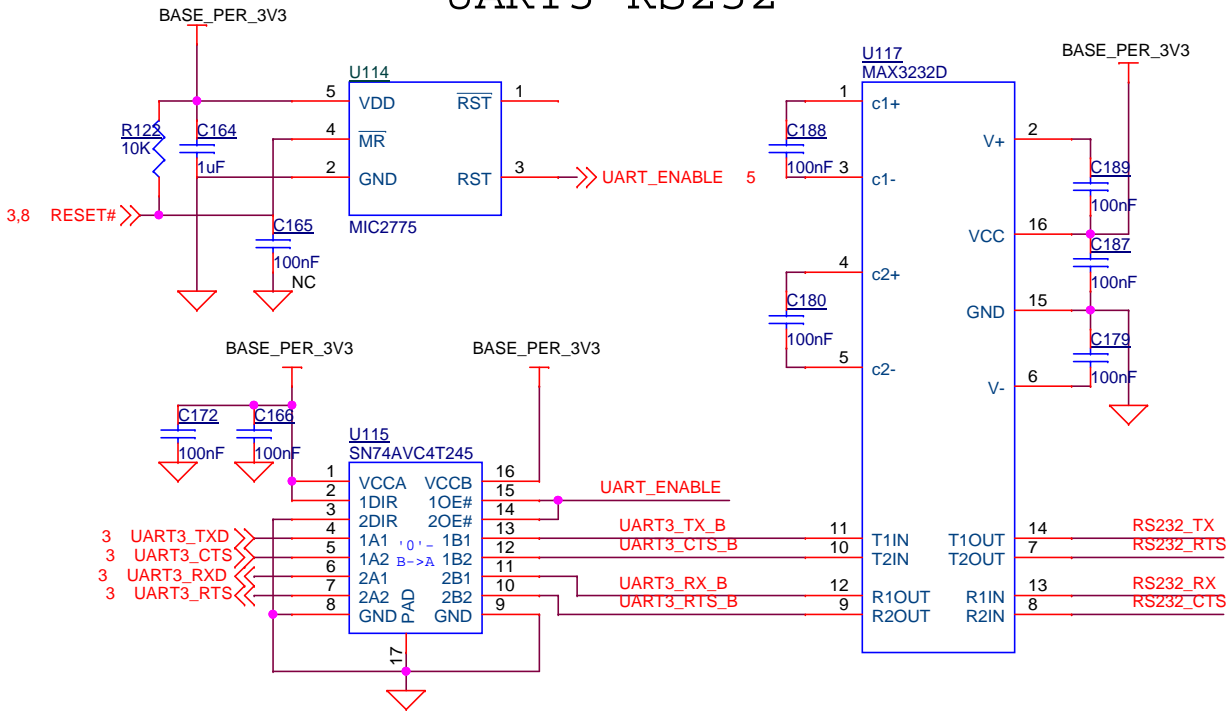


Title 04. Display ,Touch, HDMI			
Size A3	Document Number VAR-DT6CustomBoard	Project VAR-DT6CustomBoard	Rev 1.2
Designer: Date: Wednesday, August 31, 2016		Approved By: Sheet 4 of 8	

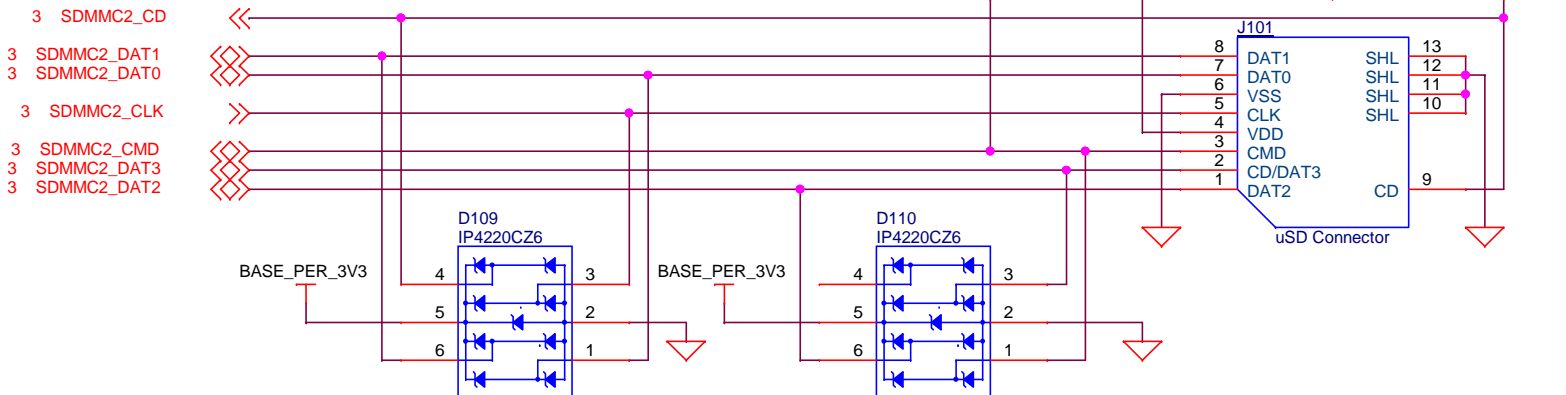


06. Peripherals, Exp. Connectors

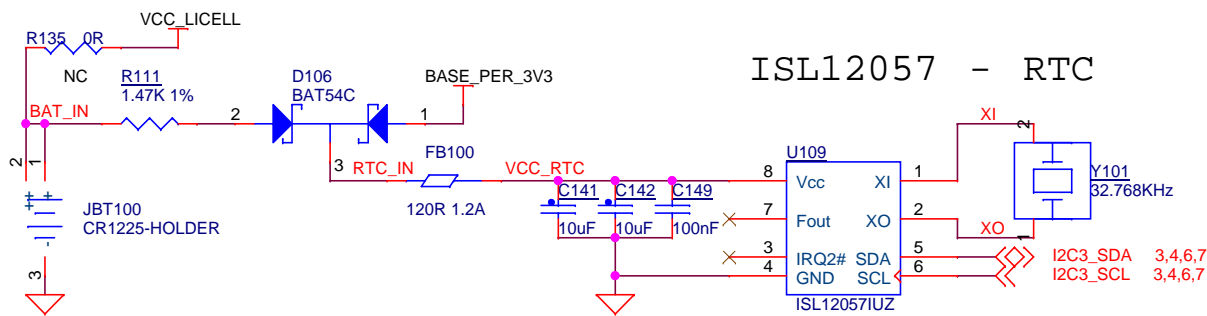
UART3-RS232



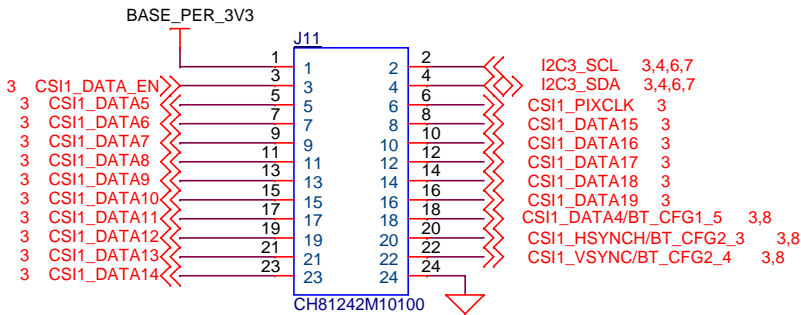
uSD CARD



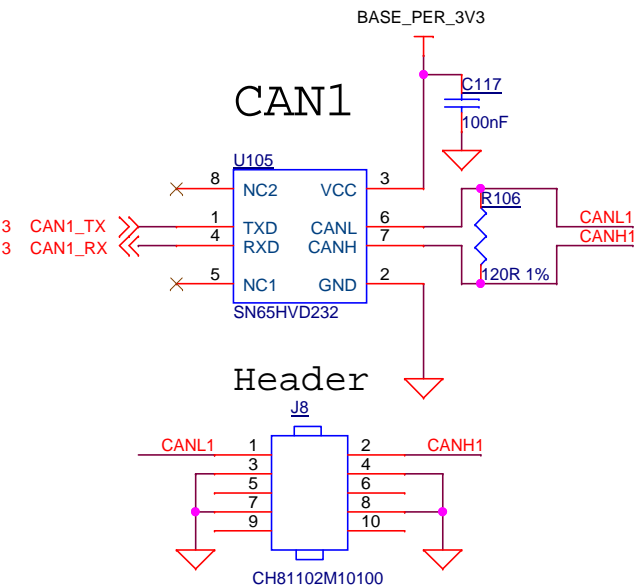
RTC Battery



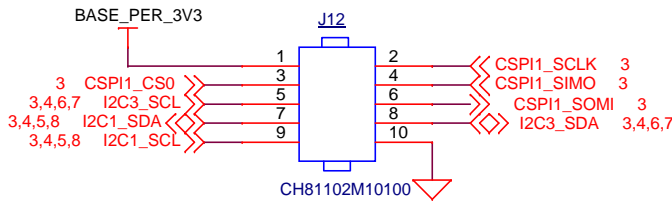
Parallel Camera



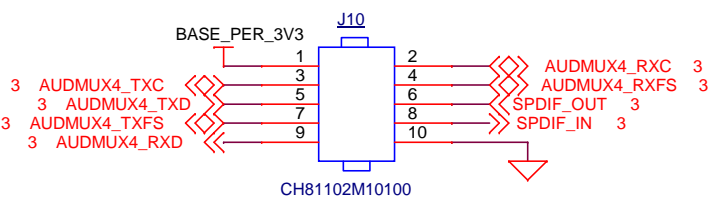
CAN1



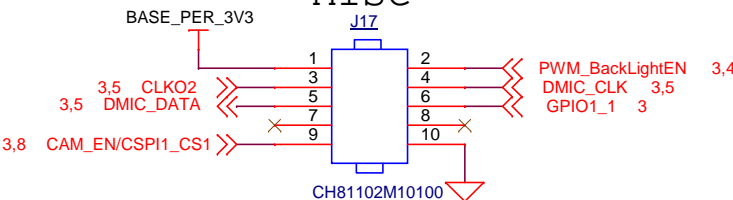
SPI/I2C



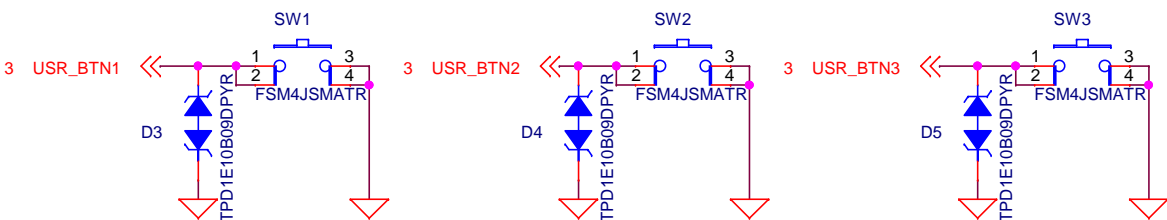
Digital Audio



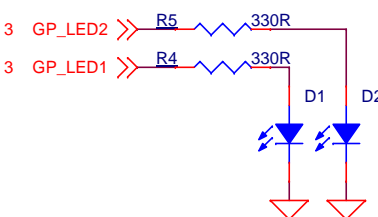
MISC



USER BUTTONS

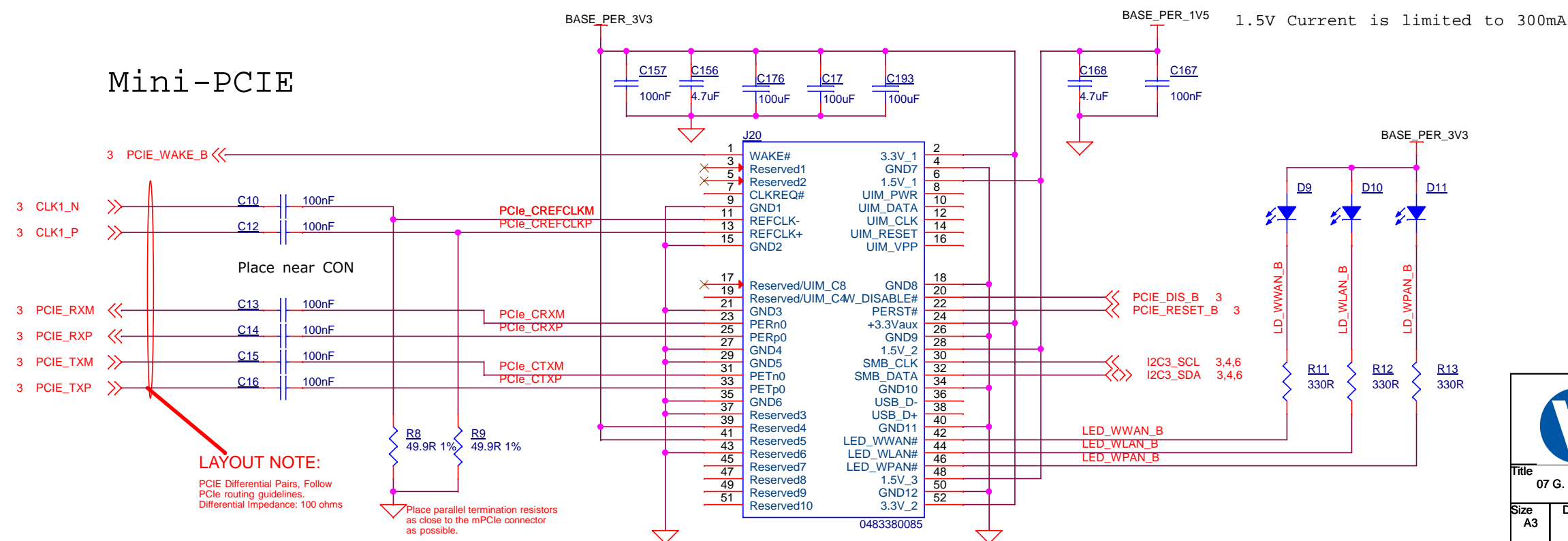
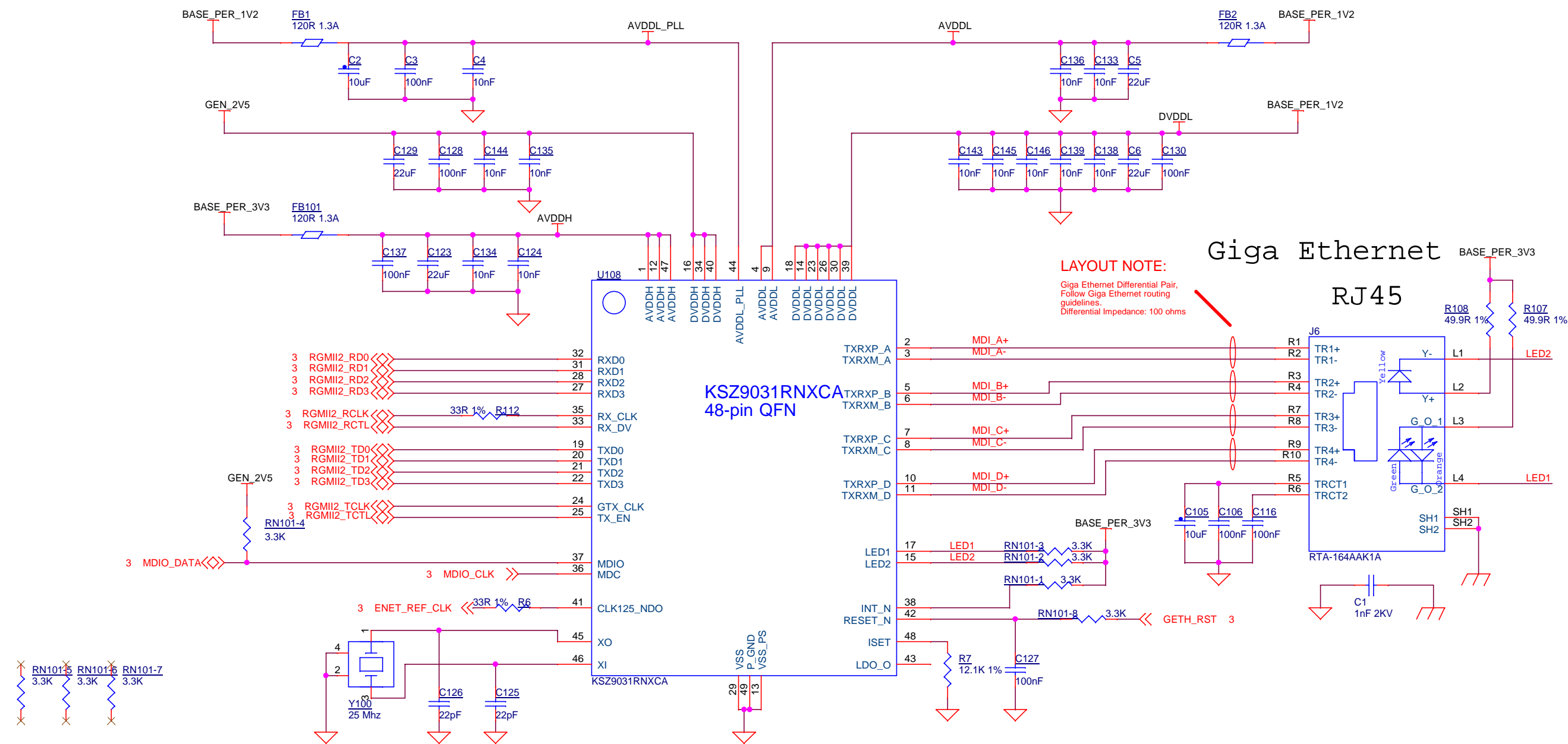


GP LED

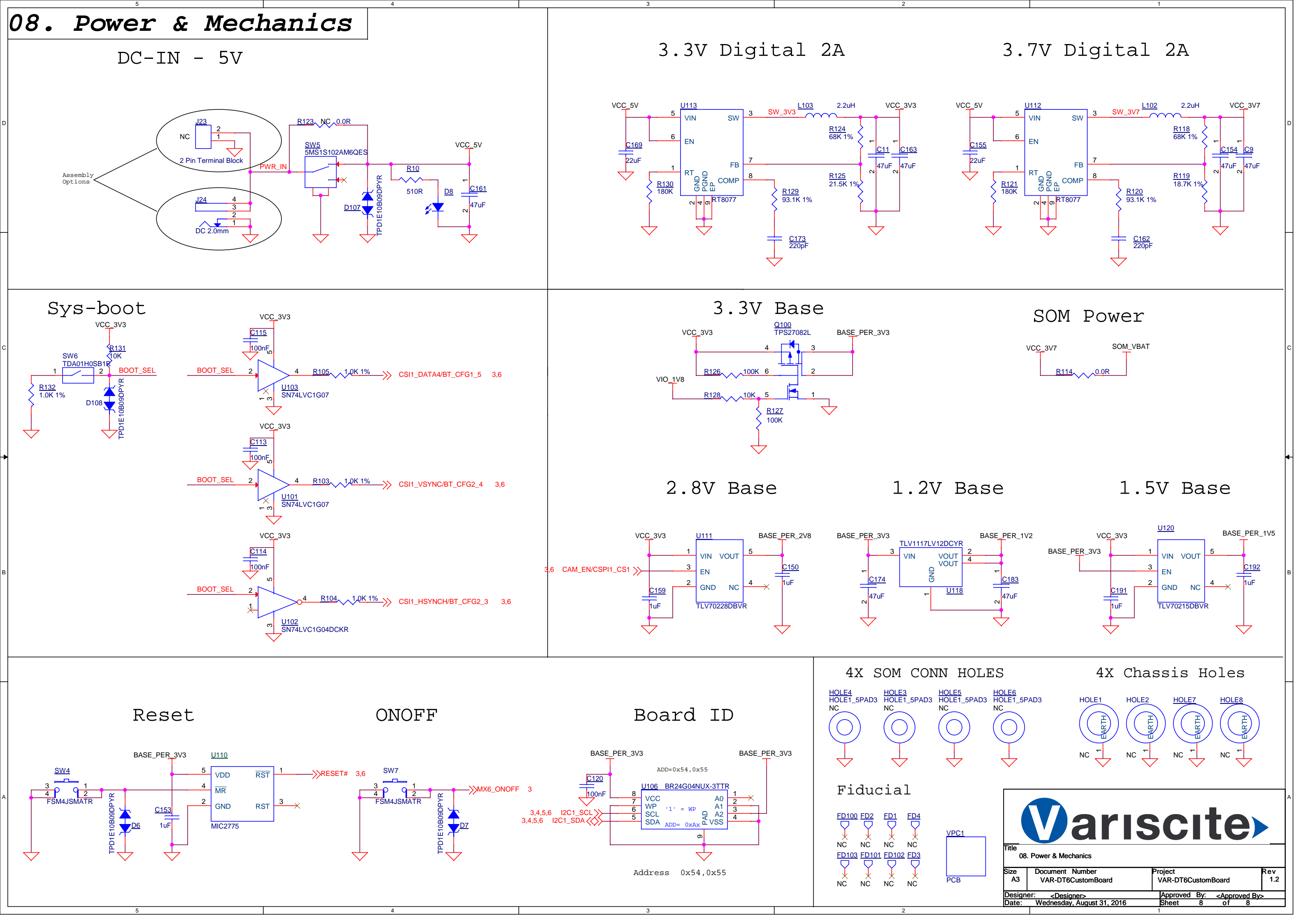


Title 06. Peripherals, Exp. Connectors			
Size A3	Document Number VAR-DT6CustomBoard	Project VAR-DT6CustomBoard	Rev 1.2
Designer: Date: Wednesday, August 31, 2016		Approved By: Sheet 6 of 8	

07. G. Ethernet PHY, PCIe



Title 07 G. Ethernet PHY, PCIe			
Size A3	Document Number VAR-DT6CustomBoard	Project VAR-DT6CustomBoard	Rev 1.2
Designer: <Designer>		Approved By: <Approved By>	
Date: Wednesday, August 31, 2016		Sheet 7 of 8	



3.7V Digital 2A

U112

RT8077

VCC_5V

C155

22uF

R121

180K

VCC_3V7

L102

2.2uH

R118

68K 1%

C154

47uF

C9

47uF

R119

18.7K 1%

R120

93.1K 1%

C162

220pF

Sys-boot

SW6

TDA01H0SB1R

R131

10K

R132

1.0K 1%

D108

TPD1E10B09DPYR

VCC_3V3

BOOT_SEL

U103

SN74LVC1G07

R105

1.0K 1%

CS1_DATA4/BT_CFG1_5

3.6

VCC_3V3

BOOT_SEL

U101

SN74LVC1G07

R103

1.0K 1%

CS1_VSYNC/BT_CFG2_4

3.6

VCC_3V3

BOOT_SEL

U102

SN74LVC1G04DCKR

R104

1.0K 1%

CS1_HSYNCH/BT_CFG2_3

3.6

3.3V Base

Q100

TPS27082L

VCC_3V3

VIO_1V8

R126

100K

R128

10K

R127

100K

BASE_PER_3V3

2.8V Base

U111

TLV70228DBVR

VCC_3V3

CAM_EN/CSPI1_CS1

3.6

C159

1uF

BASE_PER_2V8

C150

1uF

1.2V Base

U118

TLV1117LV12DCYR

BASE_PER_3V3

C174

47uF

BASE_PER_1V2

C183

47uF

1.5V Base

U120

TLV70215DBVR

VCC_3V3

BASE_PER_3V3

C191

1uF

BASE_PER_1V5

C192

1uF

Reset

SW4

FSM4JSMATR

D6

TPD1E10B09DPYR

C153

1uF

U110

MIC2775

BASE_PER_3V3

RESET#

3.6

ONOFF

SW7

FSM4JSMATR

D7

TPD1E10B09DPYR

MX6_ONOFF

3

Board ID

U106

BR24G04NUX-3TTR

BASE_PER_3V3

C120

100nF

ADD=0x54,0x55

3,4,5,6 I2C1_SCL

3,4,5,6 I2C1_SDA

Address 0x54,0x55

4X SOM CONN HOLES

HOLE4

HOLE1_5PAD3

NC

HOLE3

HOLE1_5PAD3

NC

HOLE5

HOLE1_5PAD3

NC

HOLE6

HOLE1_5PAD3

NC

4X Chassis Holes

HOLE1

EARTH

NC

HOLE2

EARTH

NC

HOLE7

EARTH

NC

HOLE8

EARTH

NC

Fiducial

FD100

NC

FD2

NC

FD1

NC

FD4

NC

FD103

NC

FD101

NC

FD102

NC

FD3

NC

VPC1

PCB

08. Power & Mechanics

08. Power & Mechanics

Size A3

Document Number VAR-DT6CustomBoard

Project VAR-DT6CustomBoard

Rev 1.2

Designer: <Designer>

Approved By: <Approved By>

Date: Wednesday, August 31, 2016

Sheet 8 of 8