

A

B

C

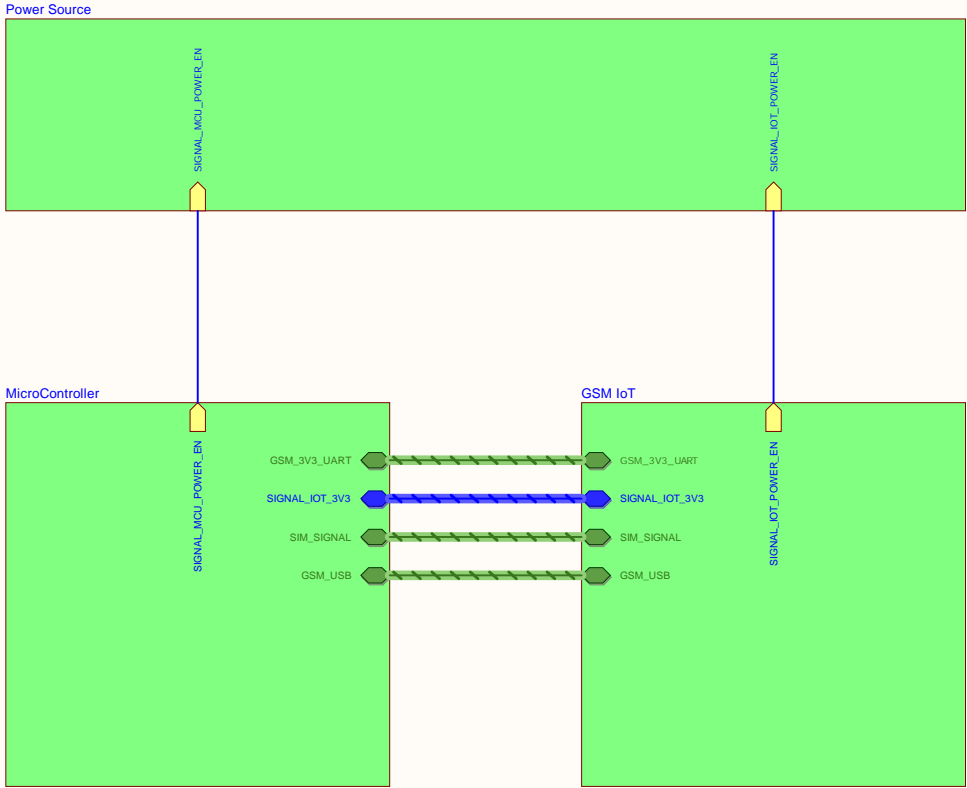
D

A

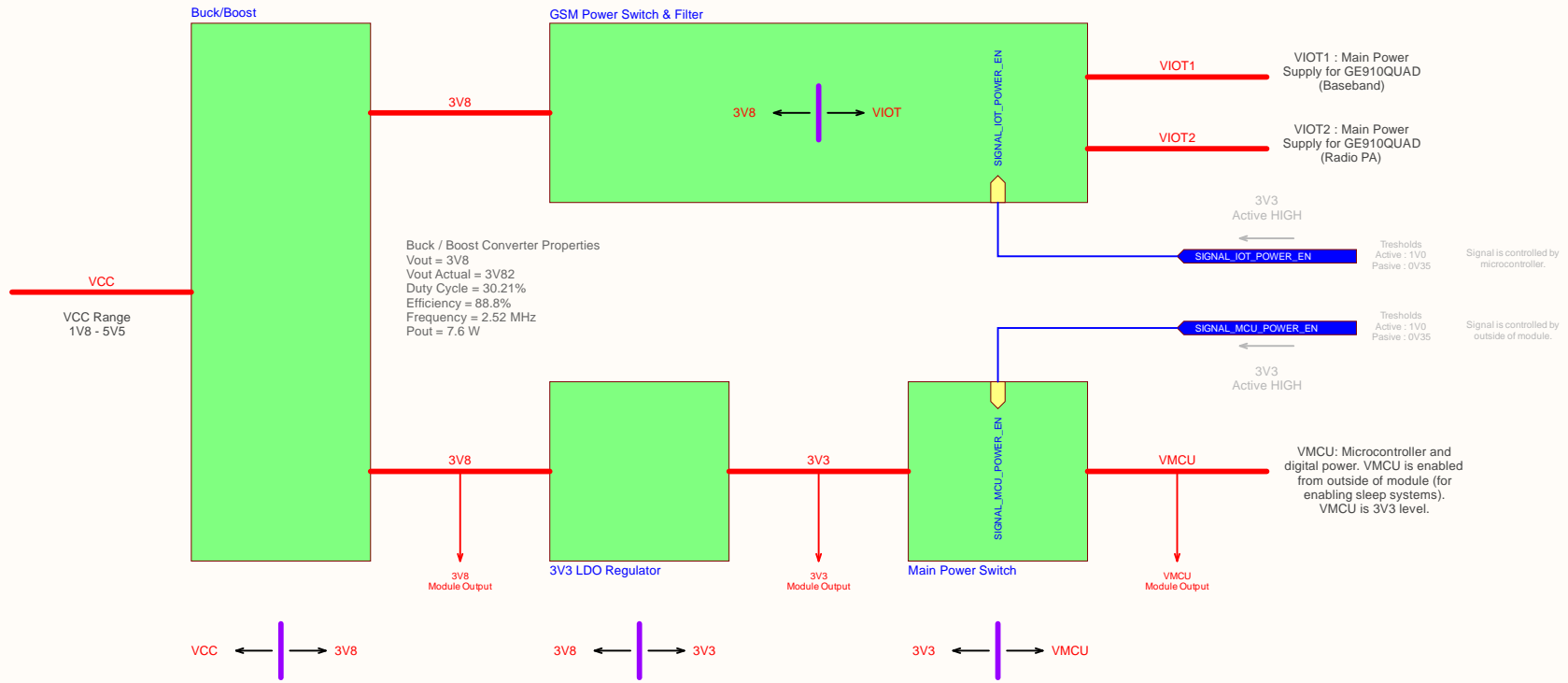
B

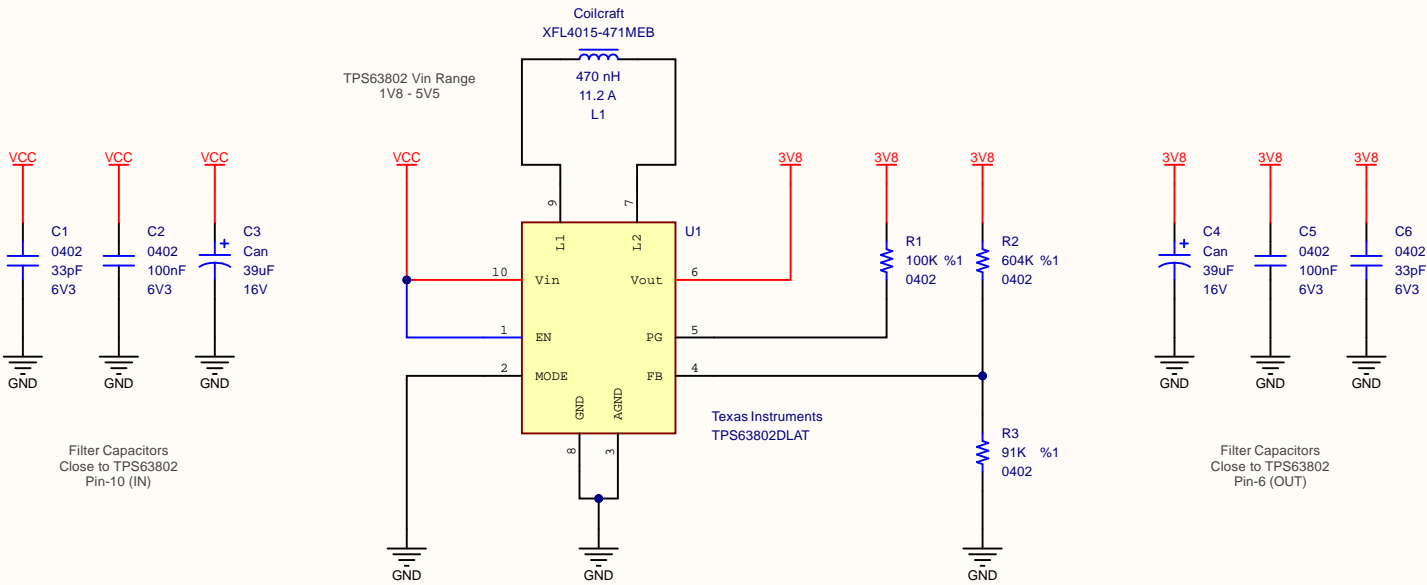
C

D

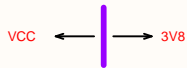


Power Architecture




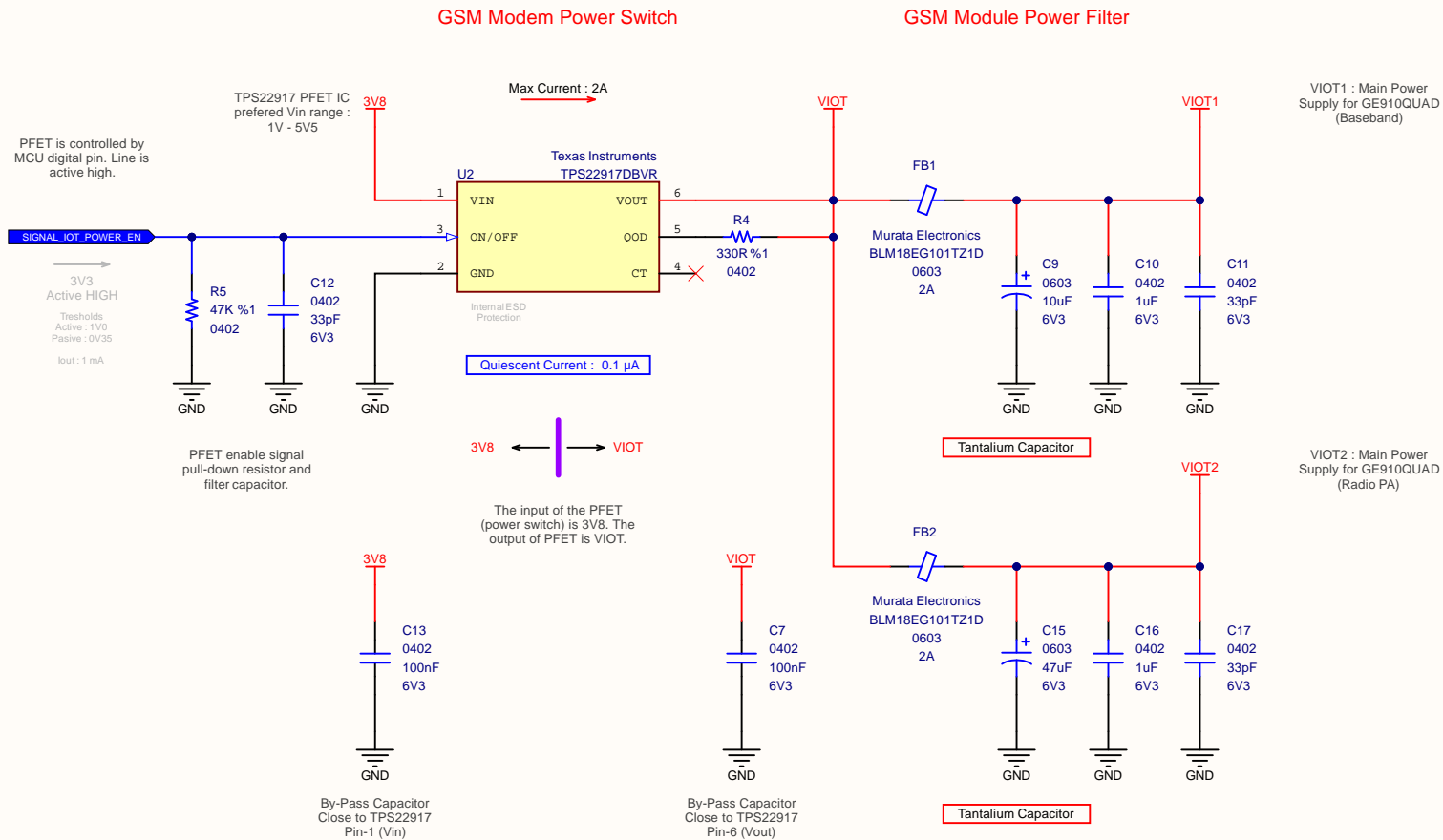



Quiescent Current: 11µA



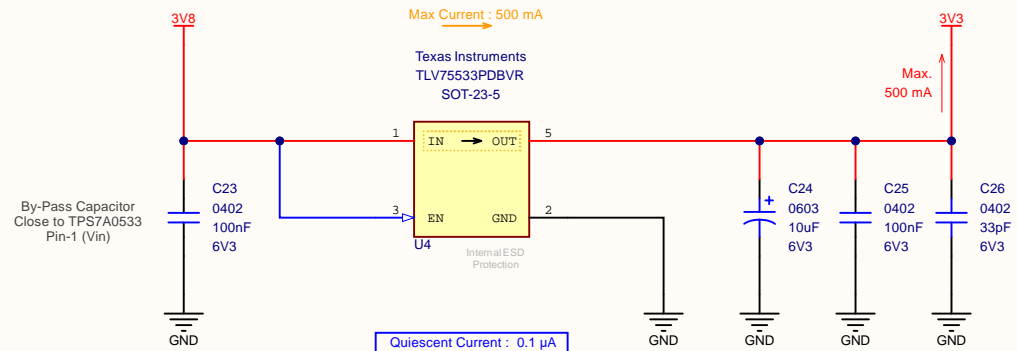
Buck / Boost Converter Properties
Vout = 3V8
Vout Actual = 3V82
Duty Cycle = 30.21%
Efficiency = 88.8%
Frequency = 2.52 MHz
Pout = 7.6 W

Title Buck Boost Converter			Ovoo Electronics Necip Fazil Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye		
Size: A4	Number:	Revision: B100AA			
Date: 4.01.2021	Time: 14:29:21	Sheet 3 of 35			
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Buck Boost Converter.SchDoc					



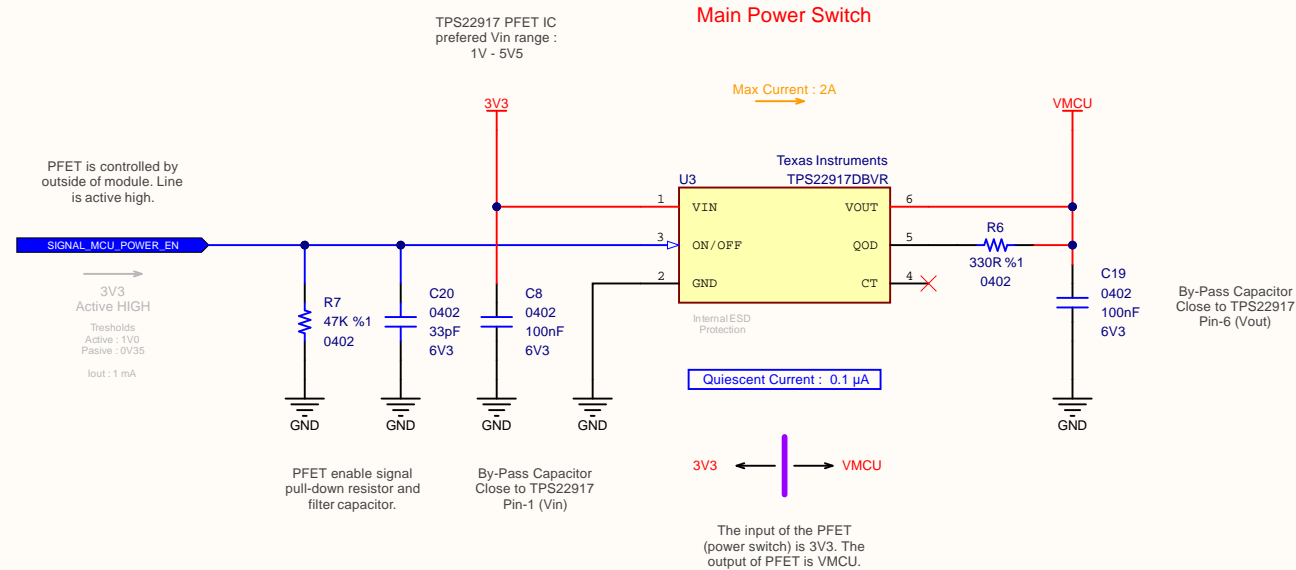
Title GSM Power Switch and Filter			Ovoo Electronics Necip Fazıl Mah. Ortamık Sok. Birgül Apt. No: 19/6 Meram / Konya Türkiye		
Size: A4	Number:	Revision: B100AA			
Date: 4.01.2021	Time: 14:29:21	Sheet 4 of 35			
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\GSM Power.SchDoc					






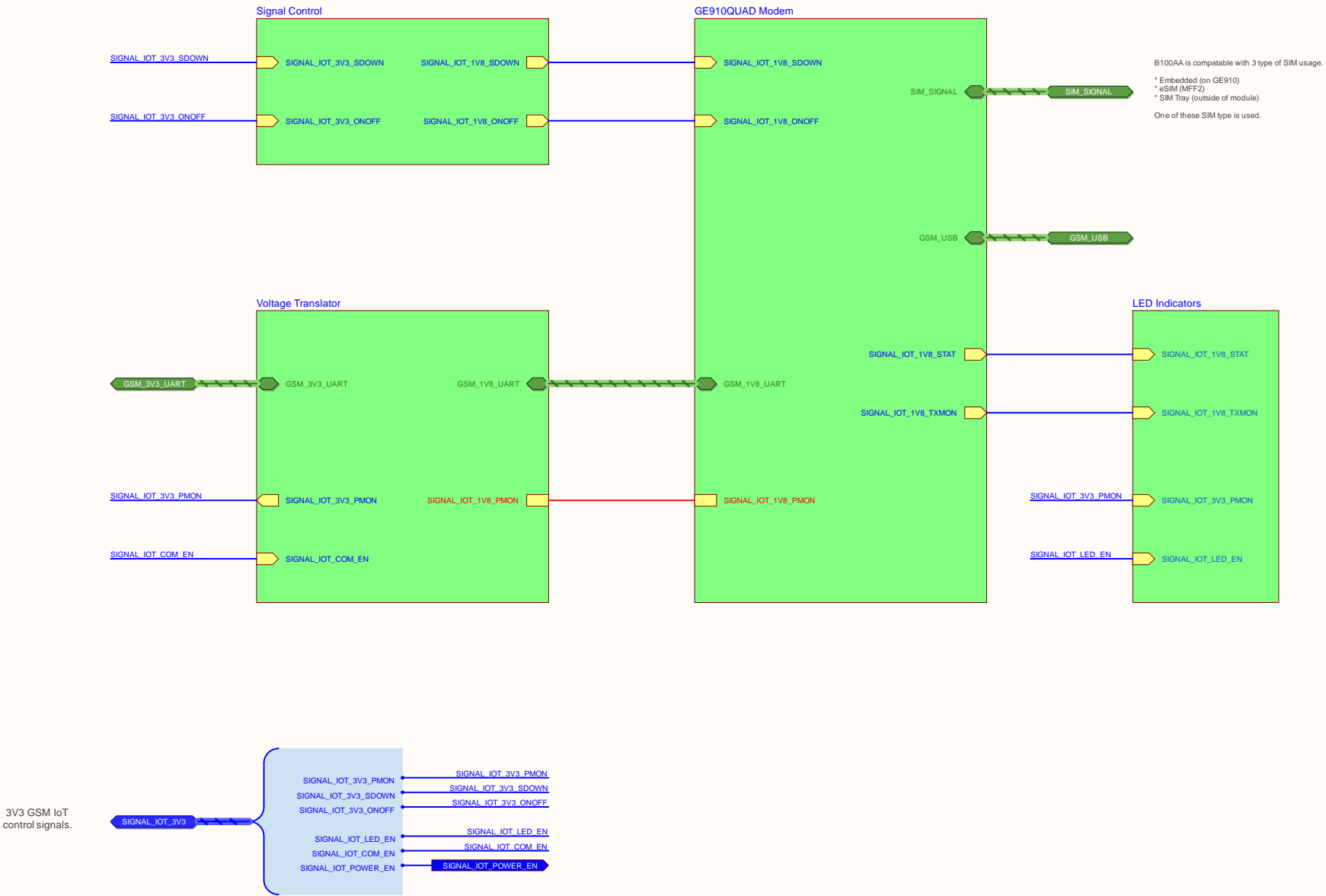
3V8 ← → 3V3

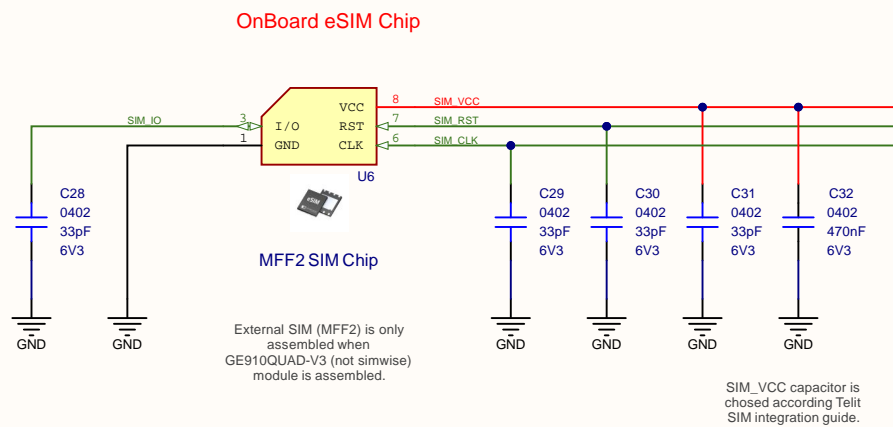
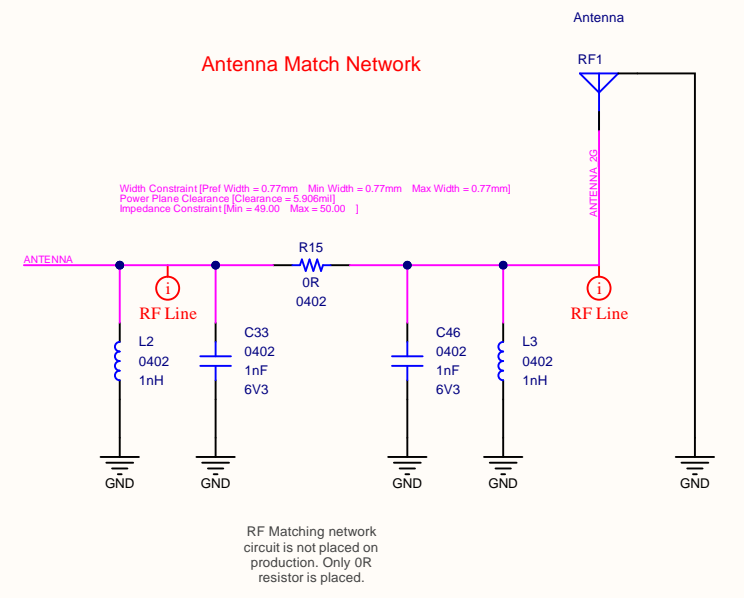
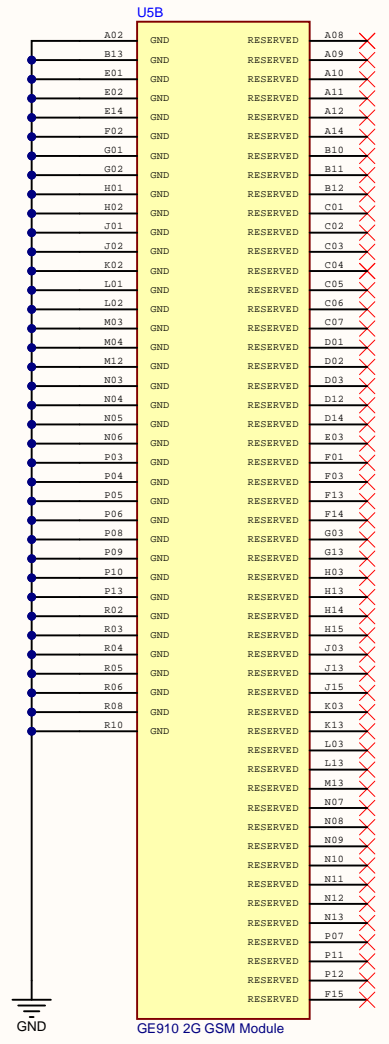
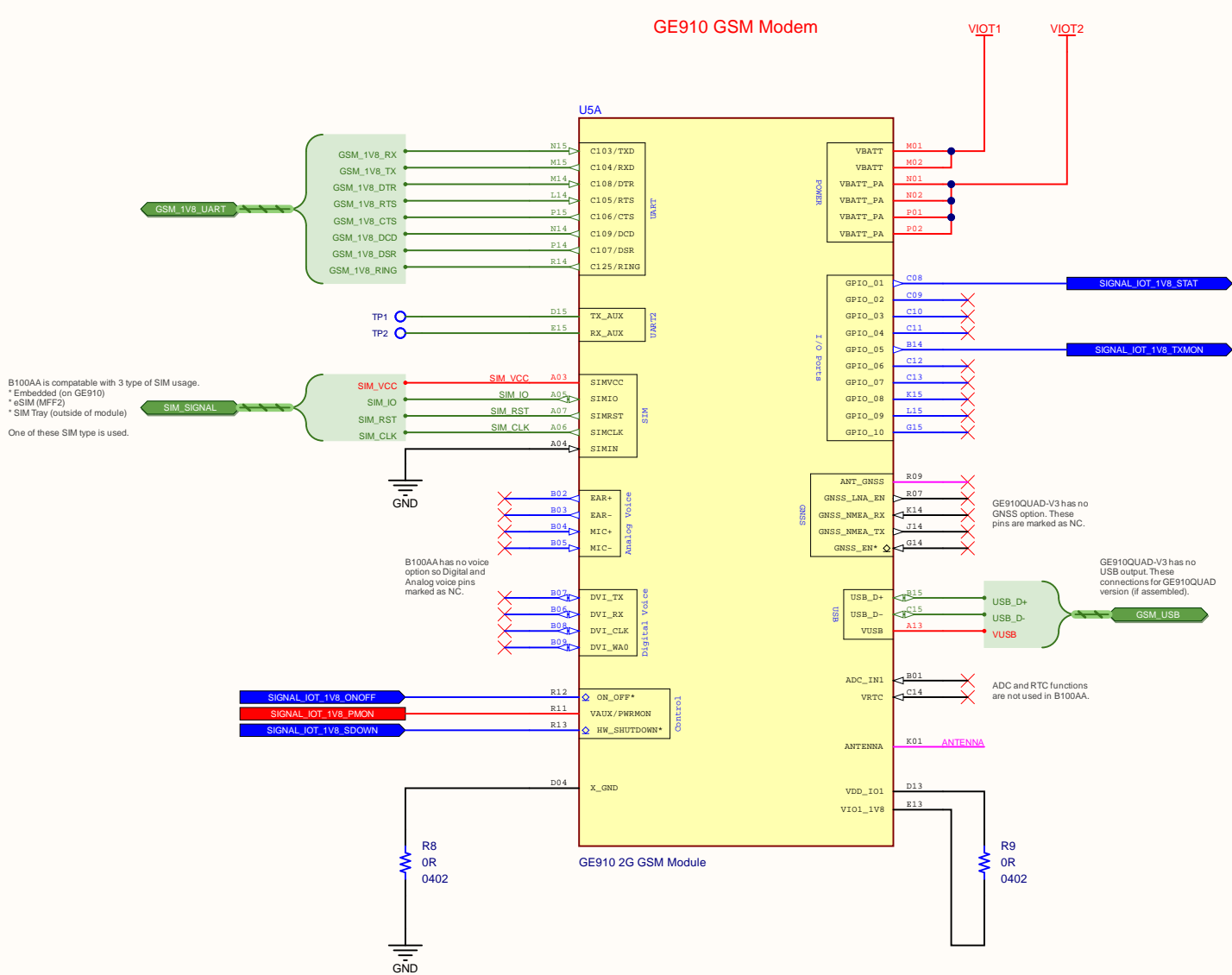
TLV75533 LDO is a 3V3 regulator. LDO is always enable.



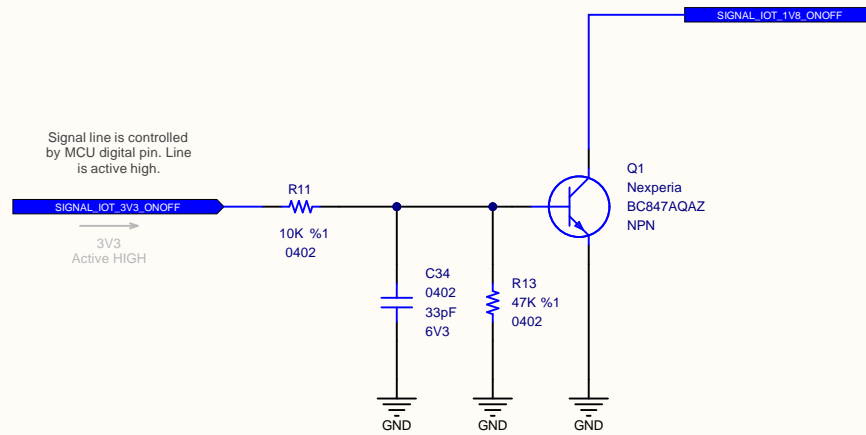
Title Main Power Switch			Ovoo Electronics Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:21	Sheet 6 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Main Power Switch.SchDoc				

GSM IoT Communication Layer

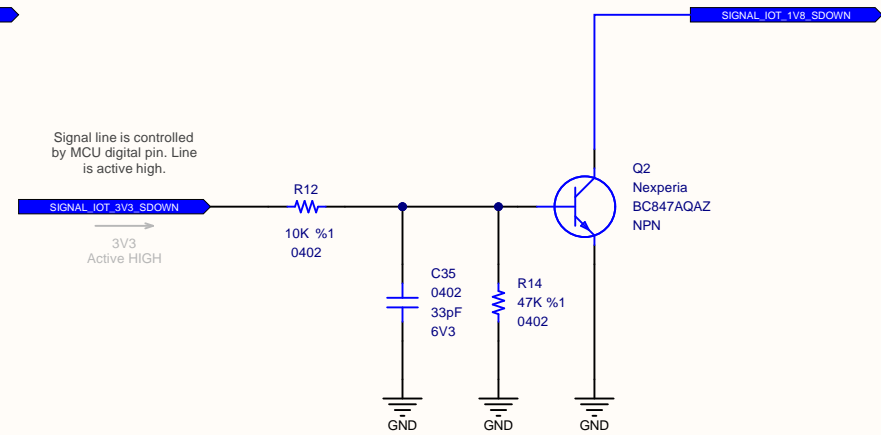




GSM Module On/Off Signal



GSM Module Shut Down Signal



Title GSM Control Signal Management

Size: A4

Number:

Revision: B100AA

Date: 4.01.2021

Time: 14:29:22

Sheet 9 of 35

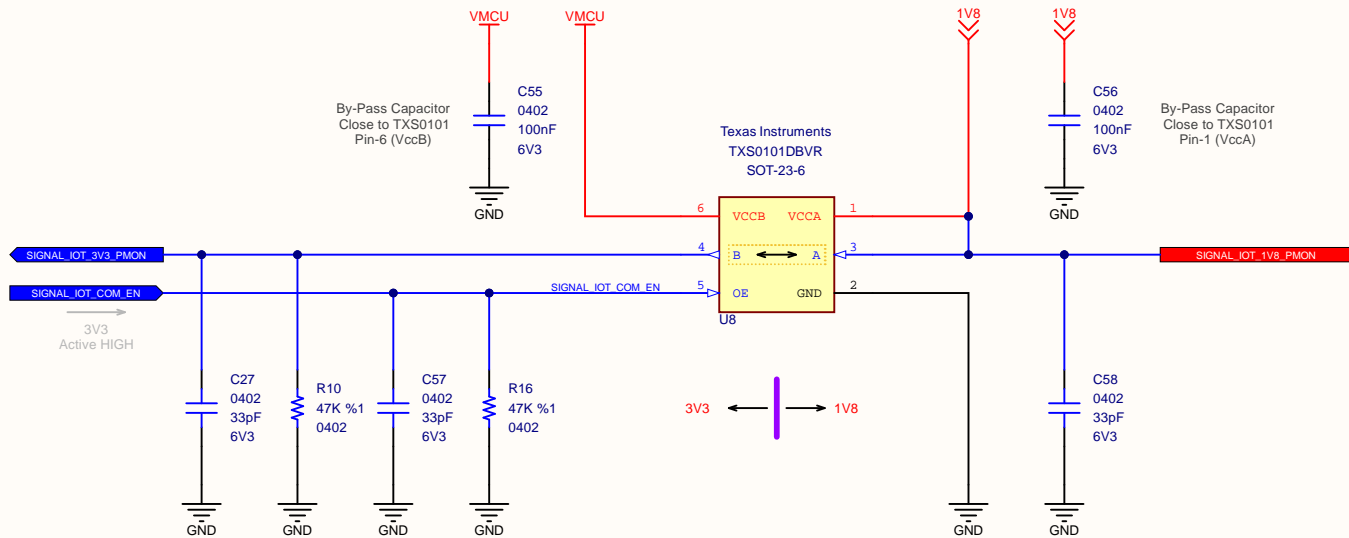
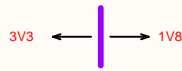
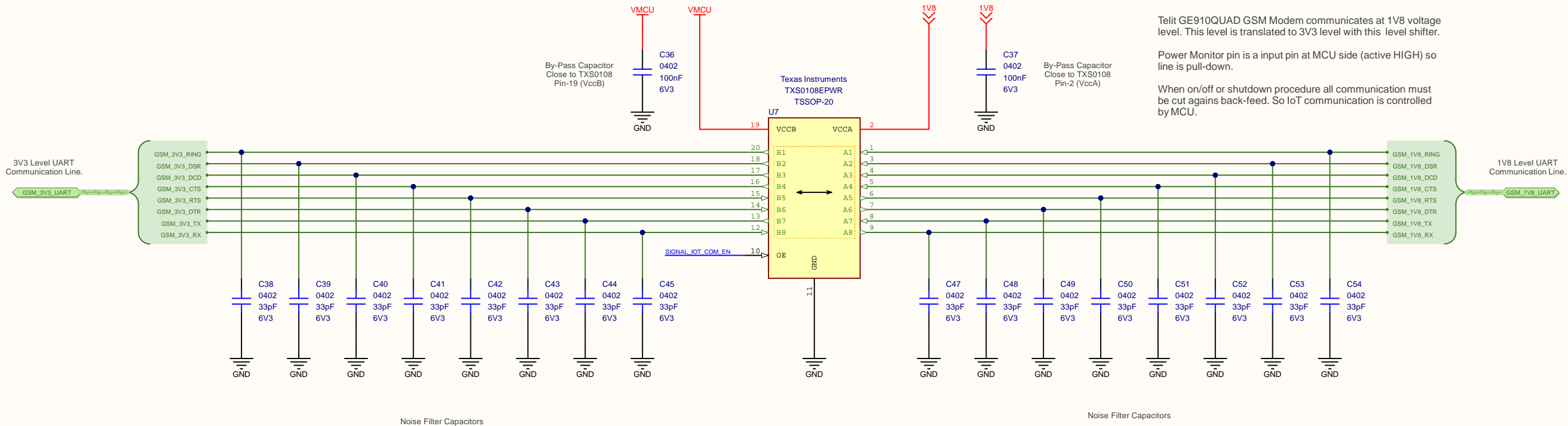
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Ovoo Electronics

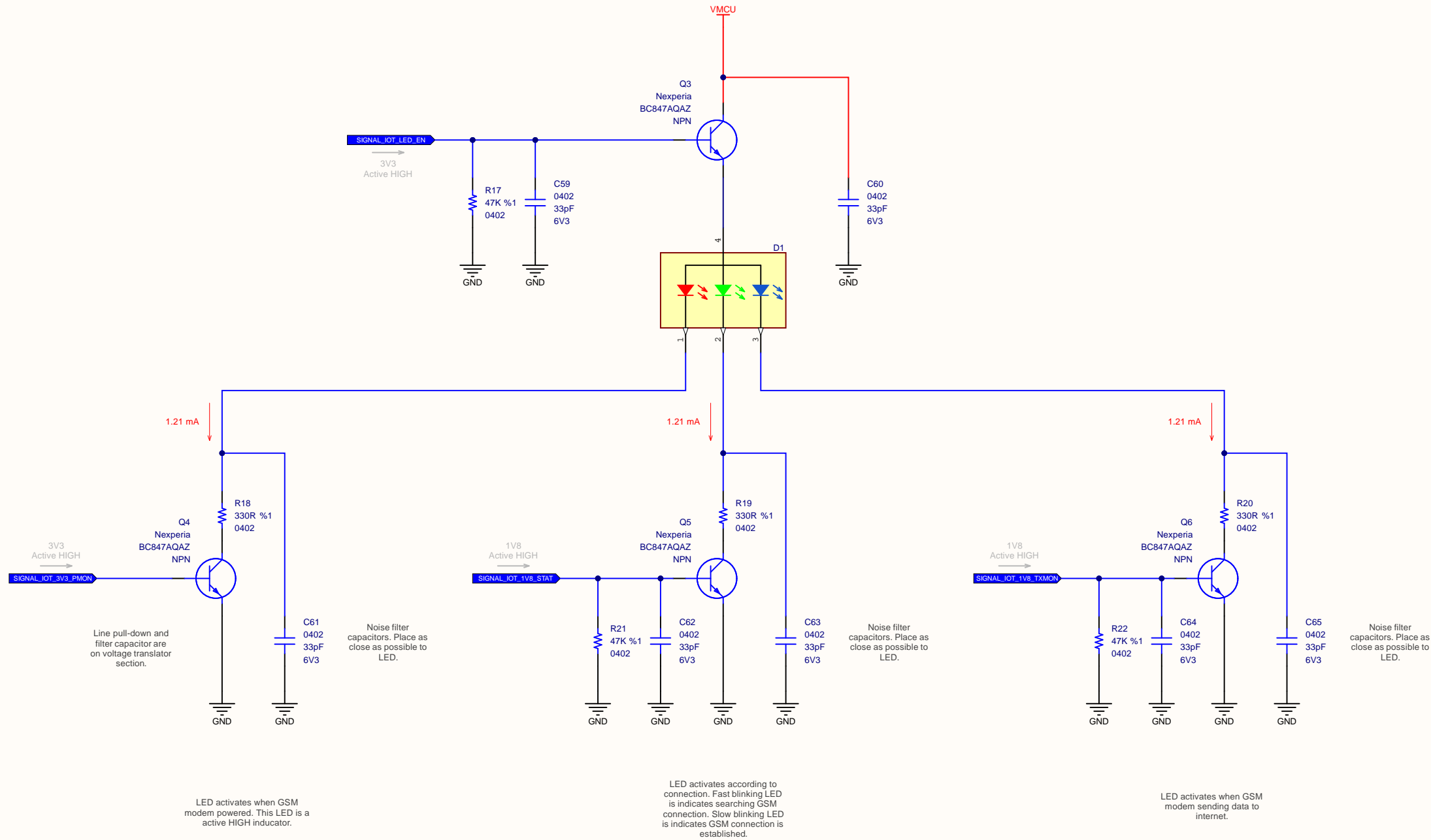
Necip Fazıl Mah. Ortarmak Sok.
Bırgölü Apt. No: 19/6
Meram / Konya
Türkiye

OVOO

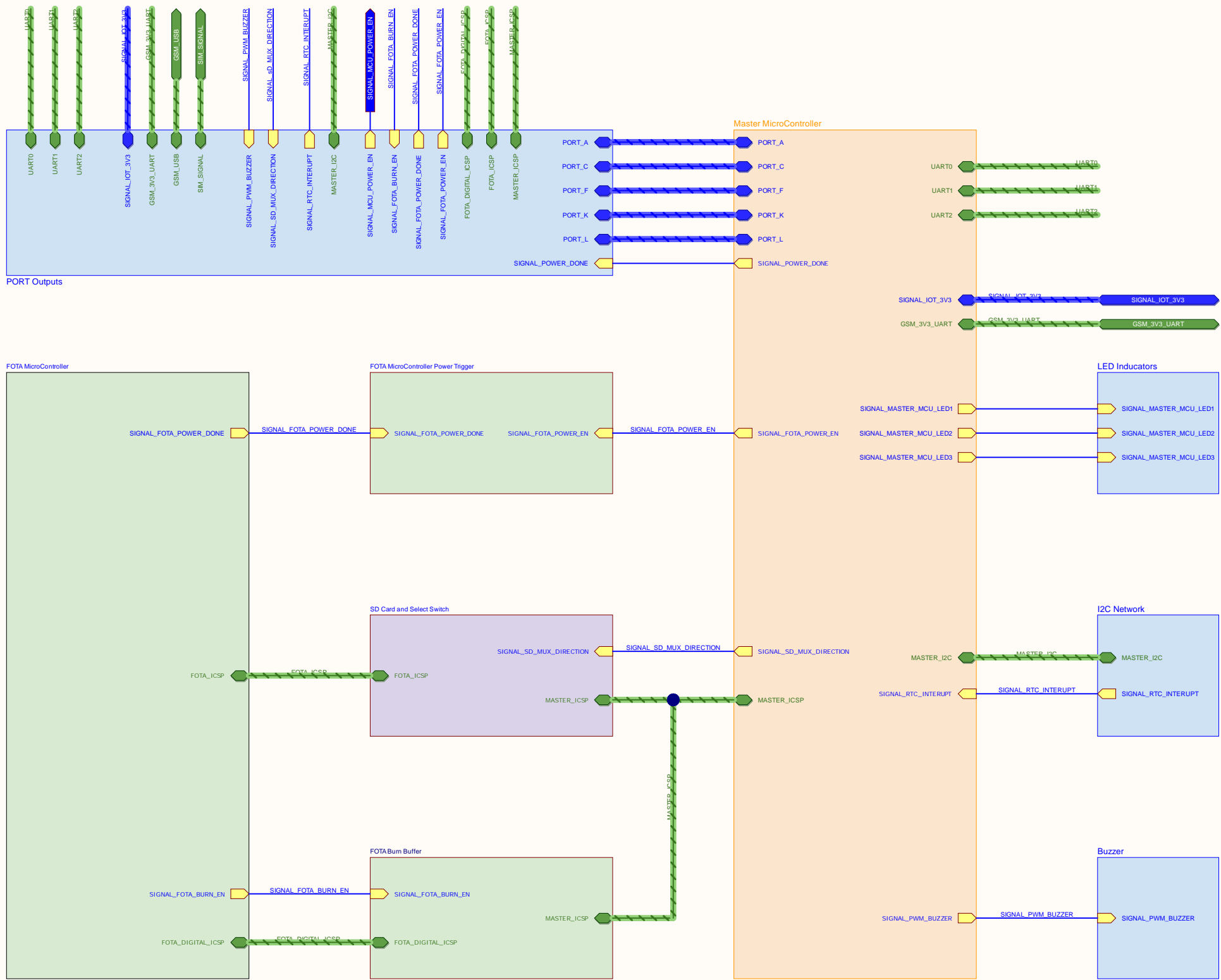
BiDirectional Level Shifter



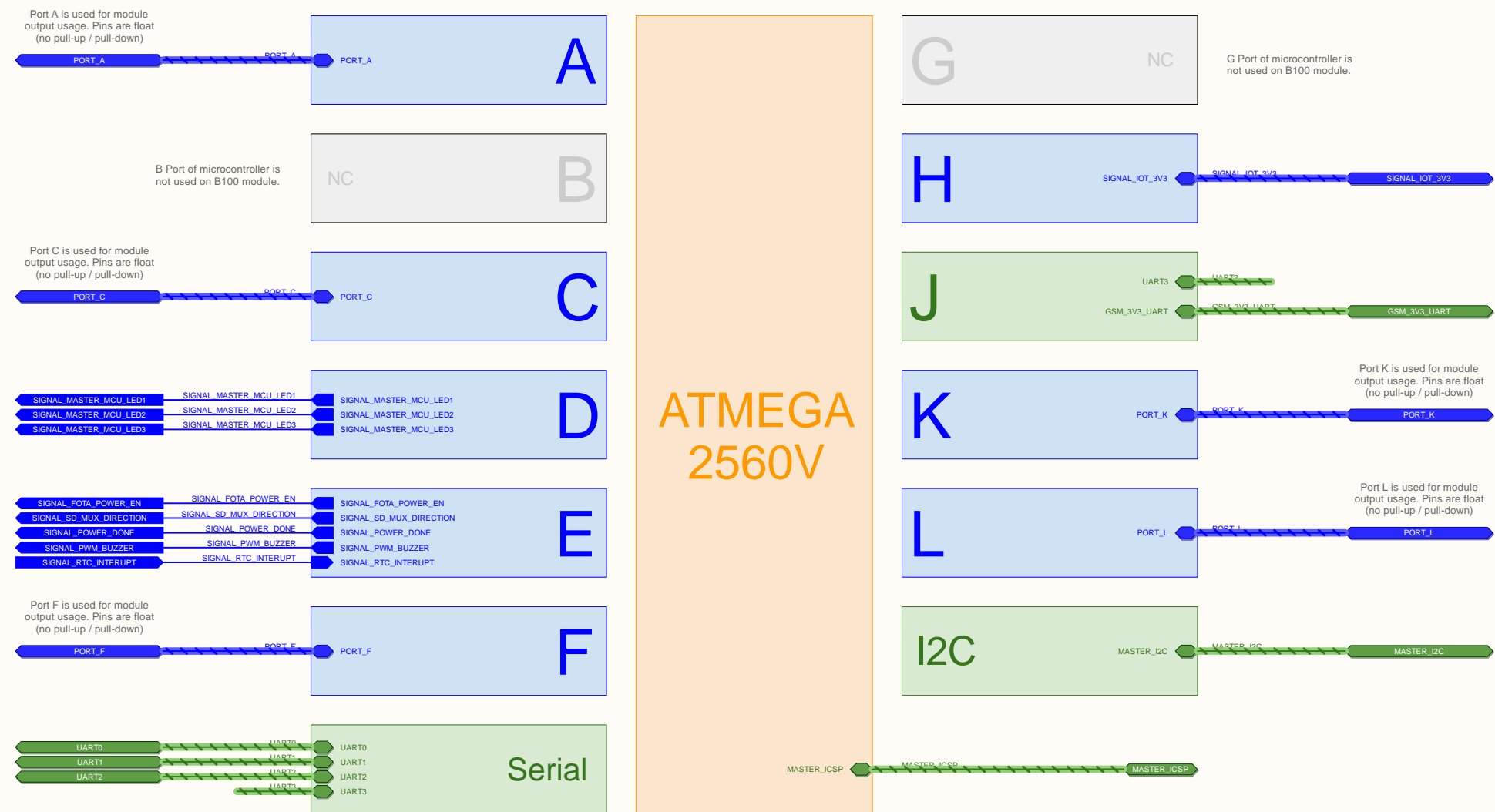
GSM IoT LED Indicators




B100 MicroController



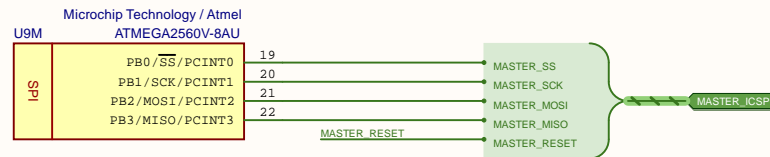
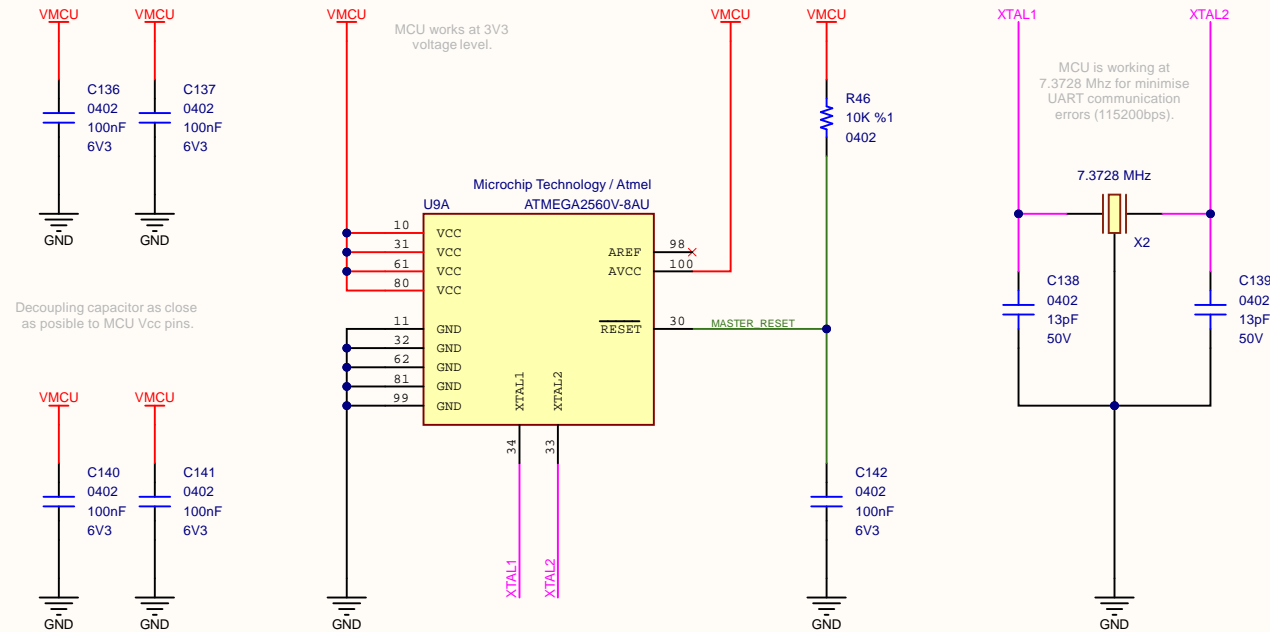
Master MicroController




Title Master Micro Controller				Ovoo Electronics Necip Fazil Mah. , Ortamak Sok. Bırgöl Apt. No: 18/B Meram / Konya Turkey		
Size: A3	Number:	Revision: B100AA				
Date: 4.01.2021	Time: 14:29:22	Sheet 13 of 35				
File: C:\Altium Projects\B100(AA)\Design Files\B100AA\Schematics\Master MicroController.SchDoc						

MicroController

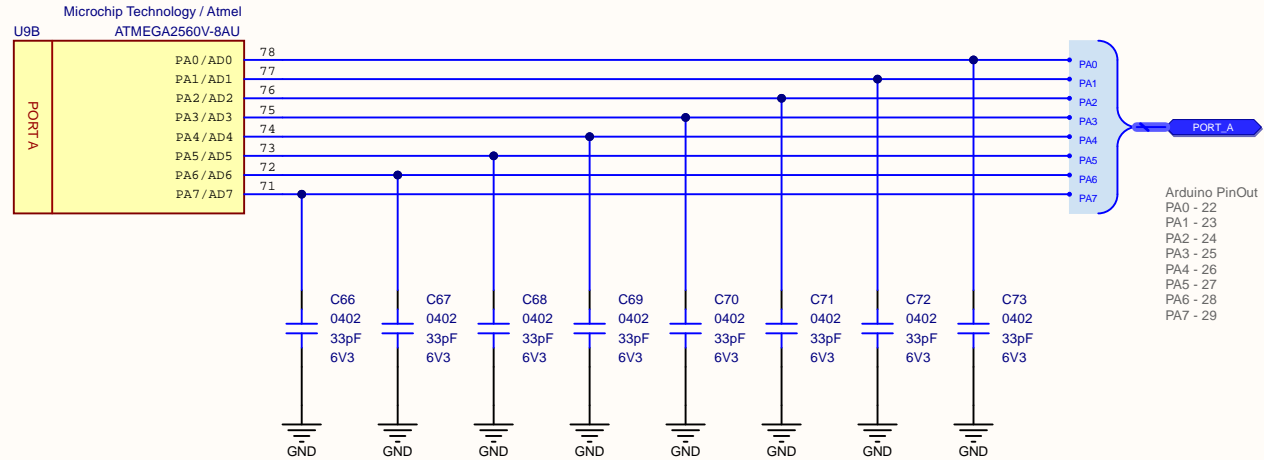
Crystal Oscillator




Master MicroController ICSP

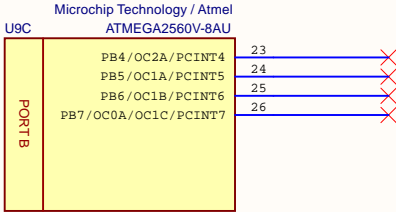
Title Master MicroController Core			Ovoo Electronics Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:22	Sheet 14 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Master MicroController Core.SchDoc				


Master MicroController A Port



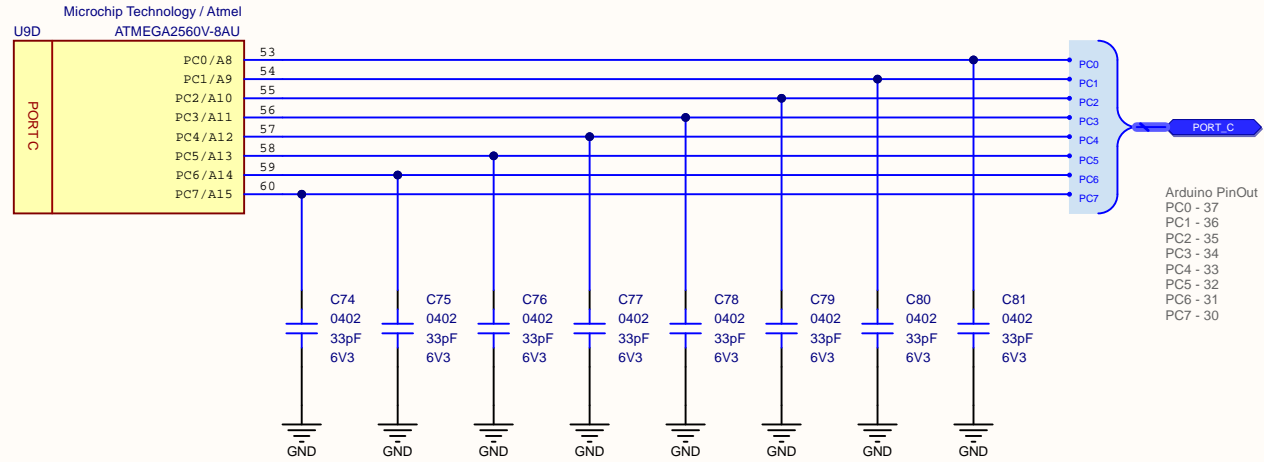
Title Master Micro Controller Port A Pin Out			Ovoo Electronics Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Turkey	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:22	Sheet 15 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Master MicroController Port A.SchDoc				


Master MicroController B Port

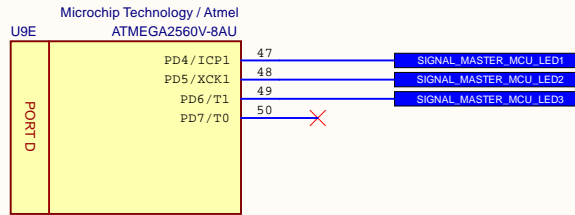



Title Master Micro Controller Port B Pin Out			Ovoo Electronics Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:22	Sheet 16 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Master MicroController Port B.SchDoc				

Master MicroController C Port



Title Master Micro Controller Port C Pin Out			Ovoo Electronics Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:23	Sheet 17 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Master MicroController Port C.SchDoc				



Title Master Micro Controller Port D Pin Out			Ovoo Electronics Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:23	Sheet 18 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Master MicroController Port D.SchDoc				

A

B

C

D

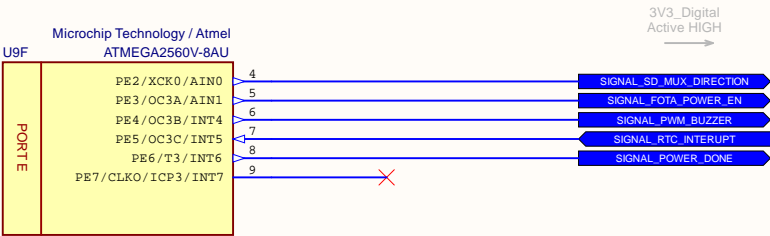
A


B

C

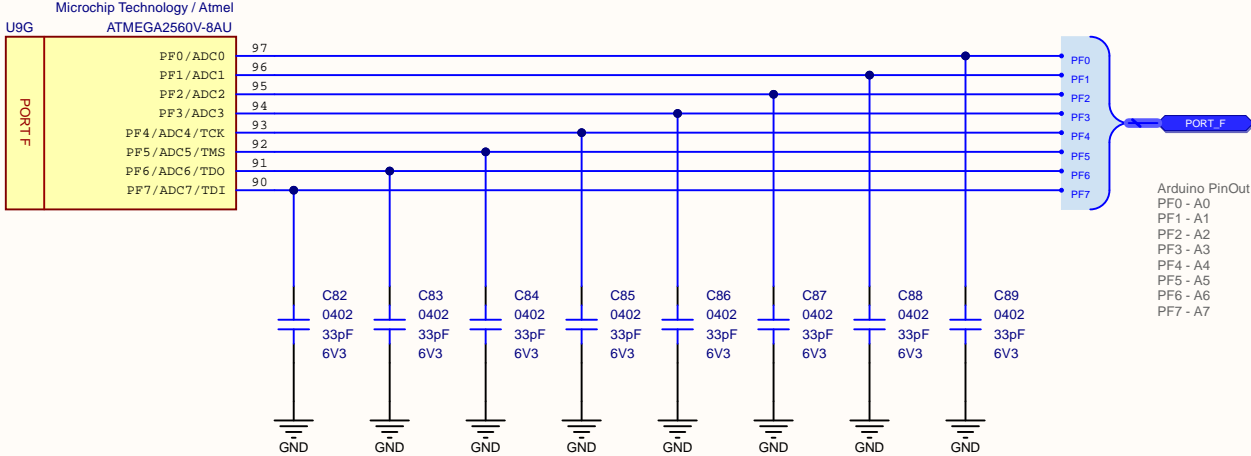
D


Master MicroController E Port



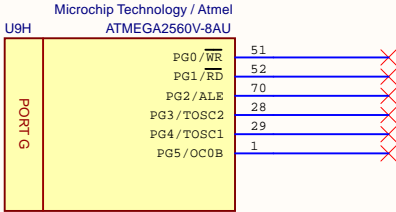
Title Master Micro Controller Port E Pin Out			Ovoo Electronics Necip Fazıl Mah. Ortairmak Sok. Bırgöl Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:23	Sheet 19 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Master MicroController Port E.SchDoc				

Master MicroController F Port

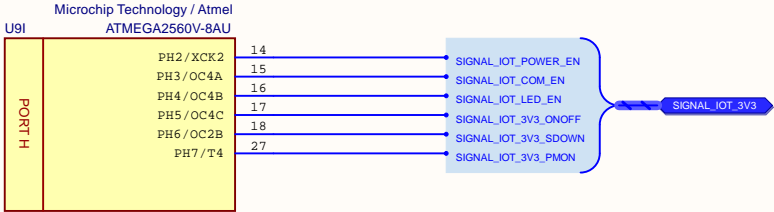



Title			Master Micro Controller Port F Pin Out		Ovoo Electronics		
Size: A4		Number:	Revision: B100AA		Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye		
Date: 4.01.2021		Time: 14:29:23	Sheet 20 of 35				
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Master MicroController Port F.SchDoc							

Master MicroController G Port

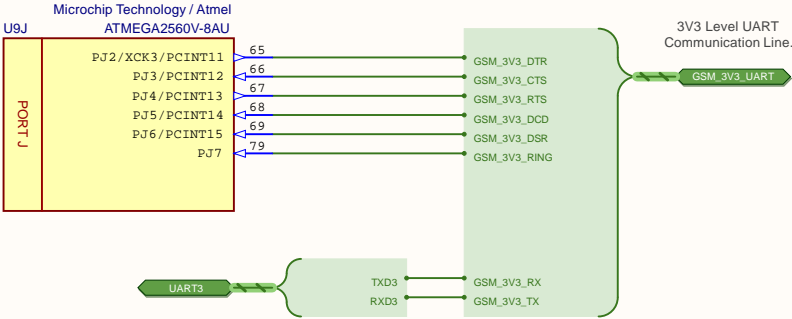



Master MicroController H Port



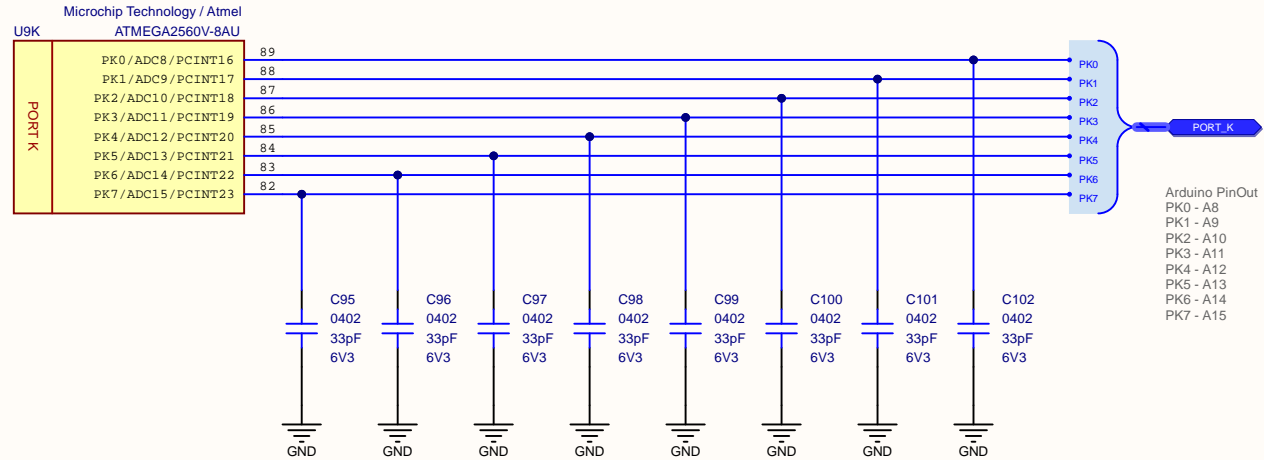
Title Master Micro Controller Port H Pin Out			Ovoo Electronics Necip Fazıl Mah. Ortairmak Sok. Bırgöl Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:23	Sheet 22 of 35		
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GSM IoT Communication Pins



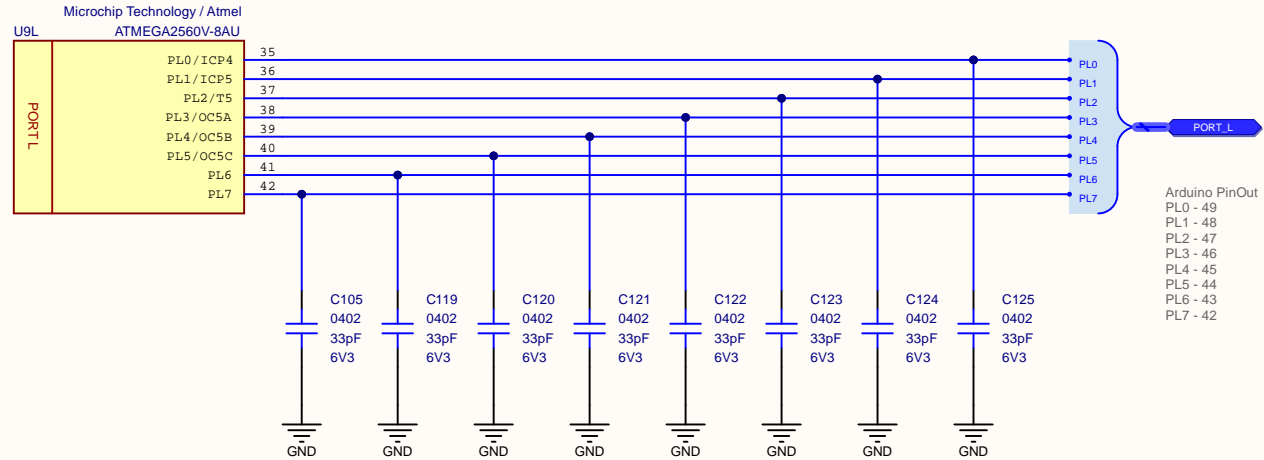
Title Master Micro Controller Port J Pin Out			Ovoo Electronics Necip Fazıl Mah. Ortairmak Sok. Bırgöl Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:23	Sheet 23 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Master MicroController Port J.SchDoc				


Master MicroController K Port



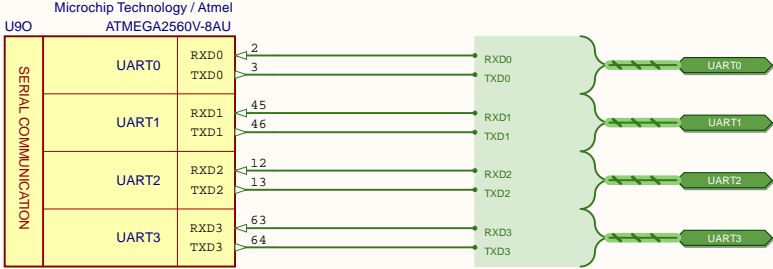
Title Master Micro Controller Port K Pin Out			Ovoo Electronics Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:23	Sheet 24 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Master MicroController Port K.SchDoc				

Master MicroController L Port




Title Master Micro Controller Port L Pin Out			Ovoo Electronics Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Turkey	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:23	Sheet 25 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Master MicroController Port L.SchDoc				

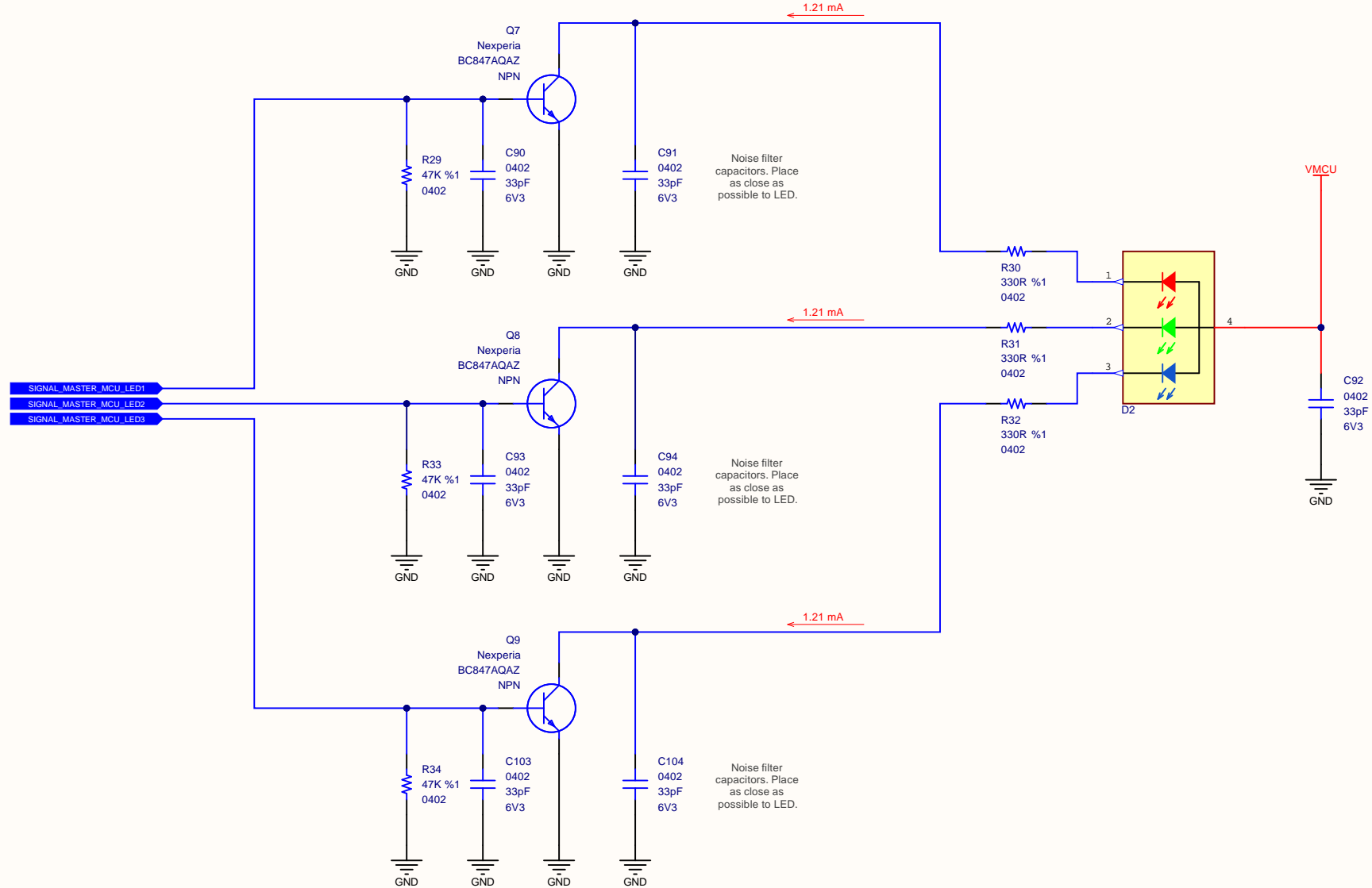
Communication Ports






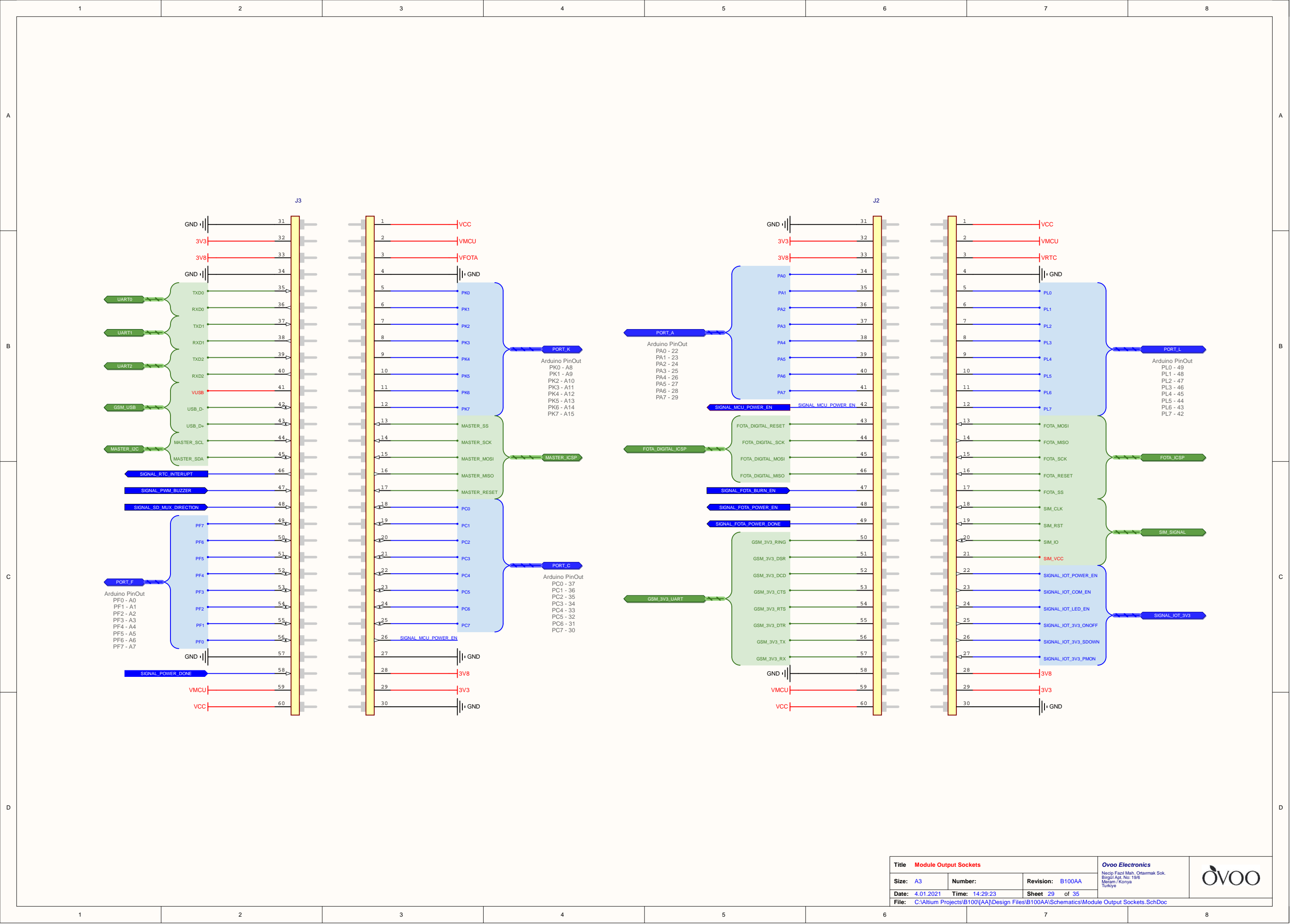
Title Master MicroController I2C Communication Port			Ovoo Electronics Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:23	Sheet 27 of 35		
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Main Microcontroller Status LED Indicators



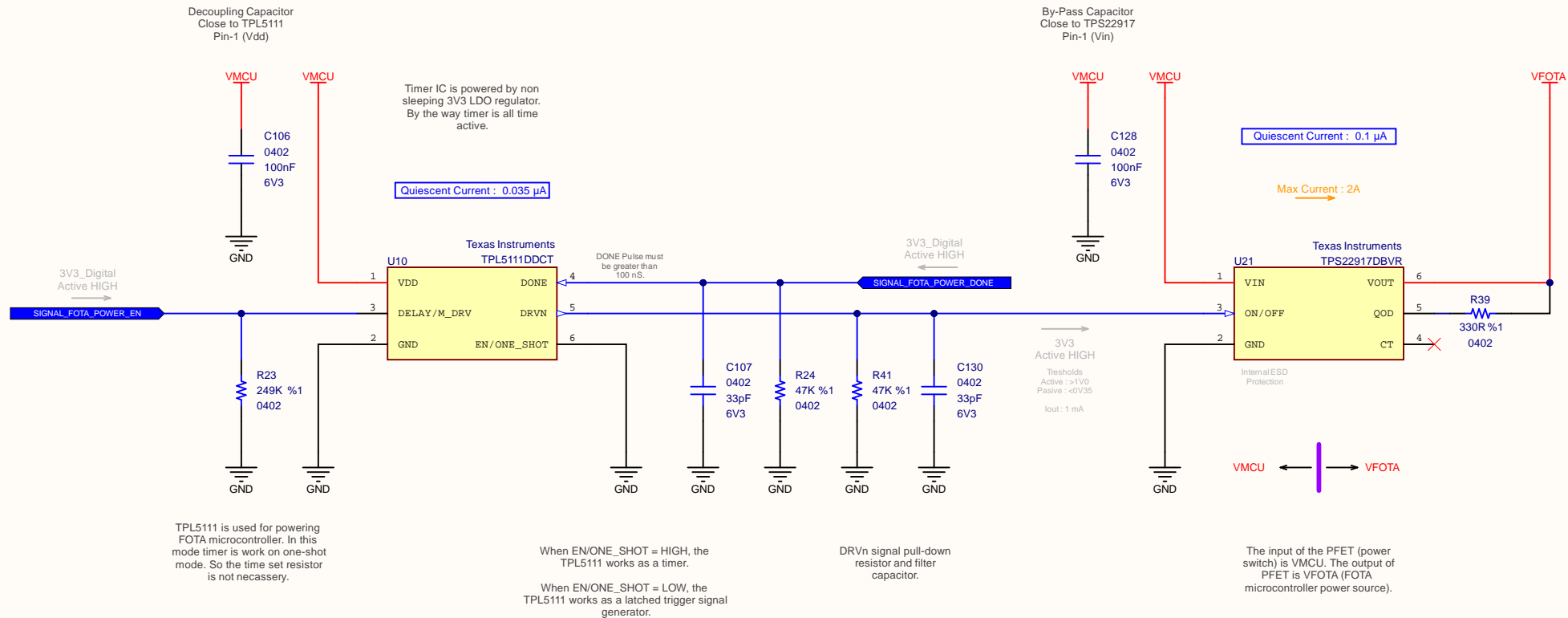
Title Master MicroController LED			Ovoo Electronics	
			Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:23	Sheet 28 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Master MicroController LED.SchDoc				





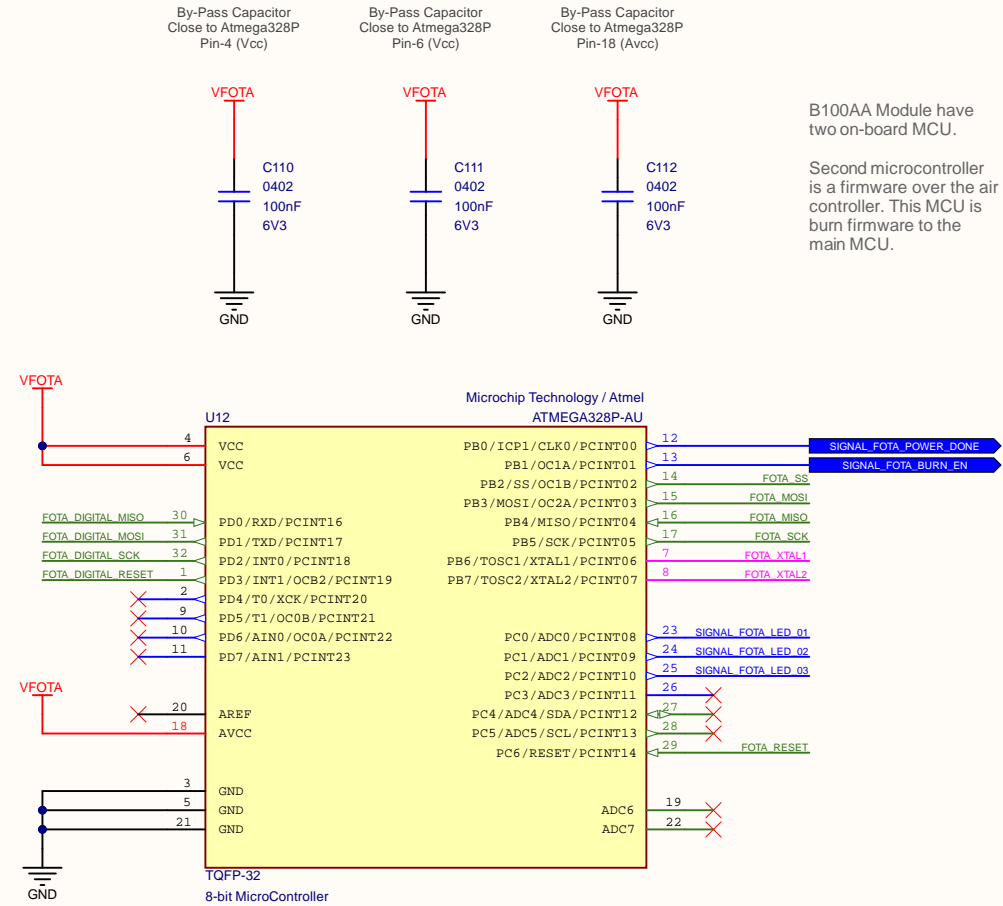
Power Trigger

Power Switch

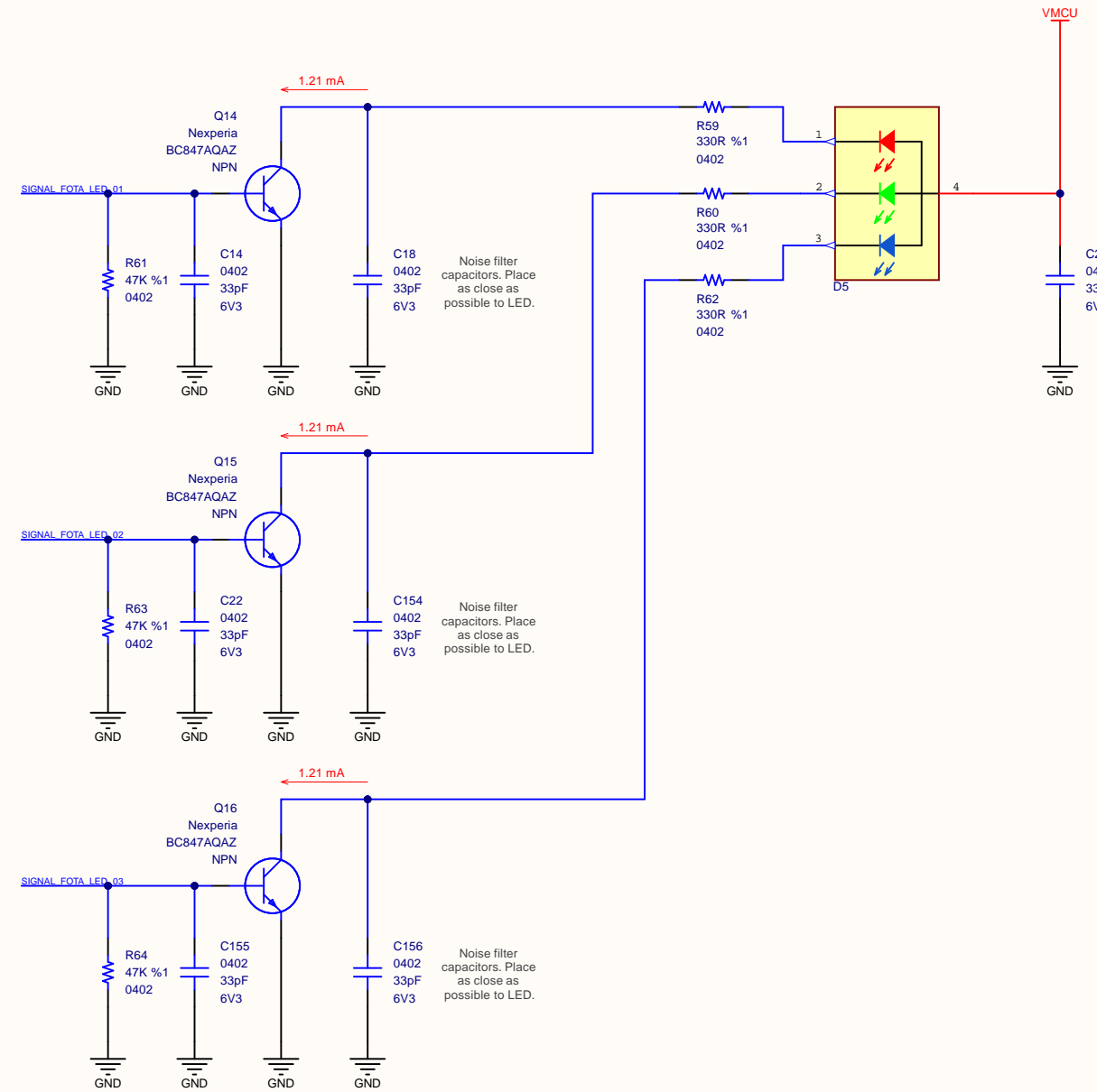


Title FOTA MicroController Latched Power Trigger			Ovoo Electronics Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye
Size: A4	Number:	Revision: B100AA	
Date: 4.01.2021	Time: 14:29:23	Sheet 30 of 35	
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\FOTA MicroController Power Switch.SchDoc			

FOTA Micro Controller



FOTA Status LED Indicators



FOTA Micro Controller ICSP




FOTA Digital ICSP (Main MCU Burn)



FOTA MCU is working at
7.3728 Mhz.

FOTA MCU Reset Line.
Pull-up.

Title FOTA MicroController			Ovoo Electronics Necip Fazıl Mah. Ortamak Sok. Birgül Apt. No: 19/6 Meram / Konya Turkey		
Size: A3	Number:	Revision: B100AA			
Date: 4.01.2021	Time: 14:29:23	Sheet 31 of 35			
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\FOTA MicroController.SchDoc					

A

B

C

D

A

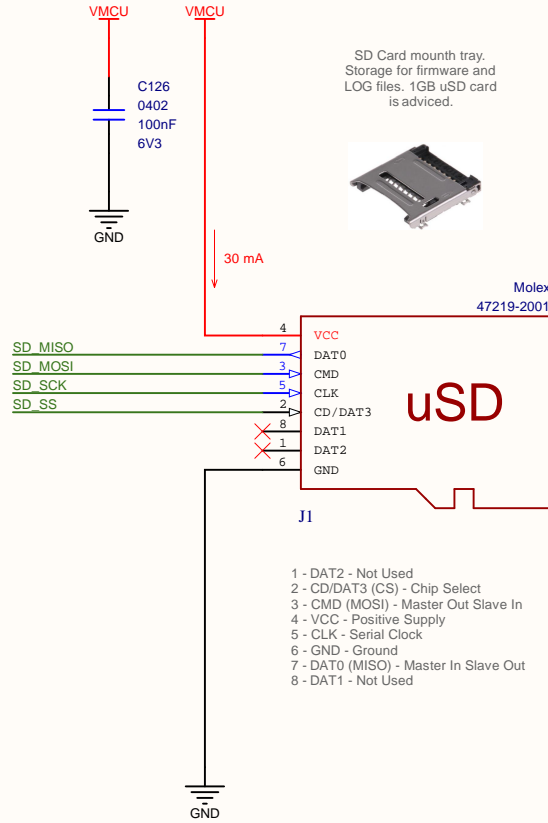
B

C

D

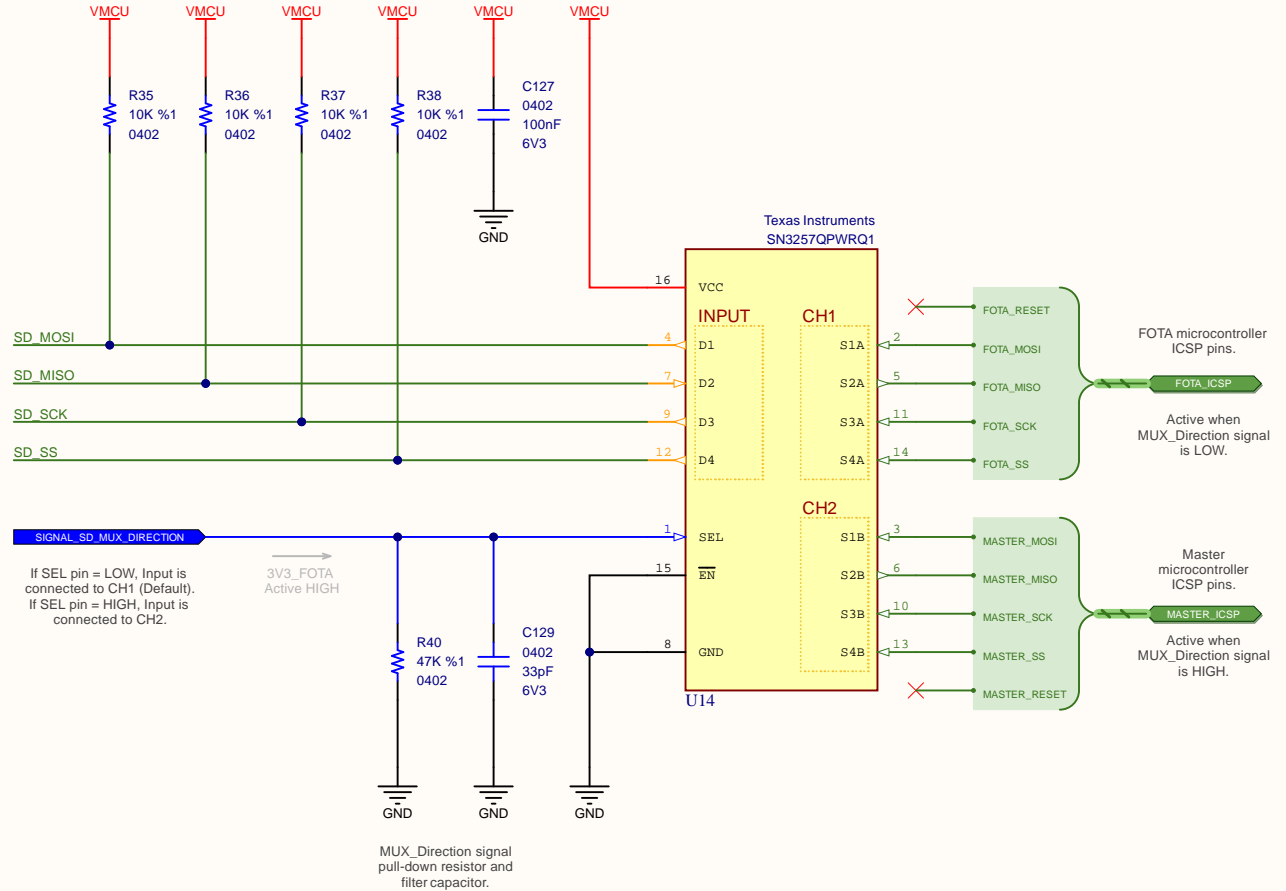
Decoupling Capacitor.
As close as possible to
uSD tray.

SD Card

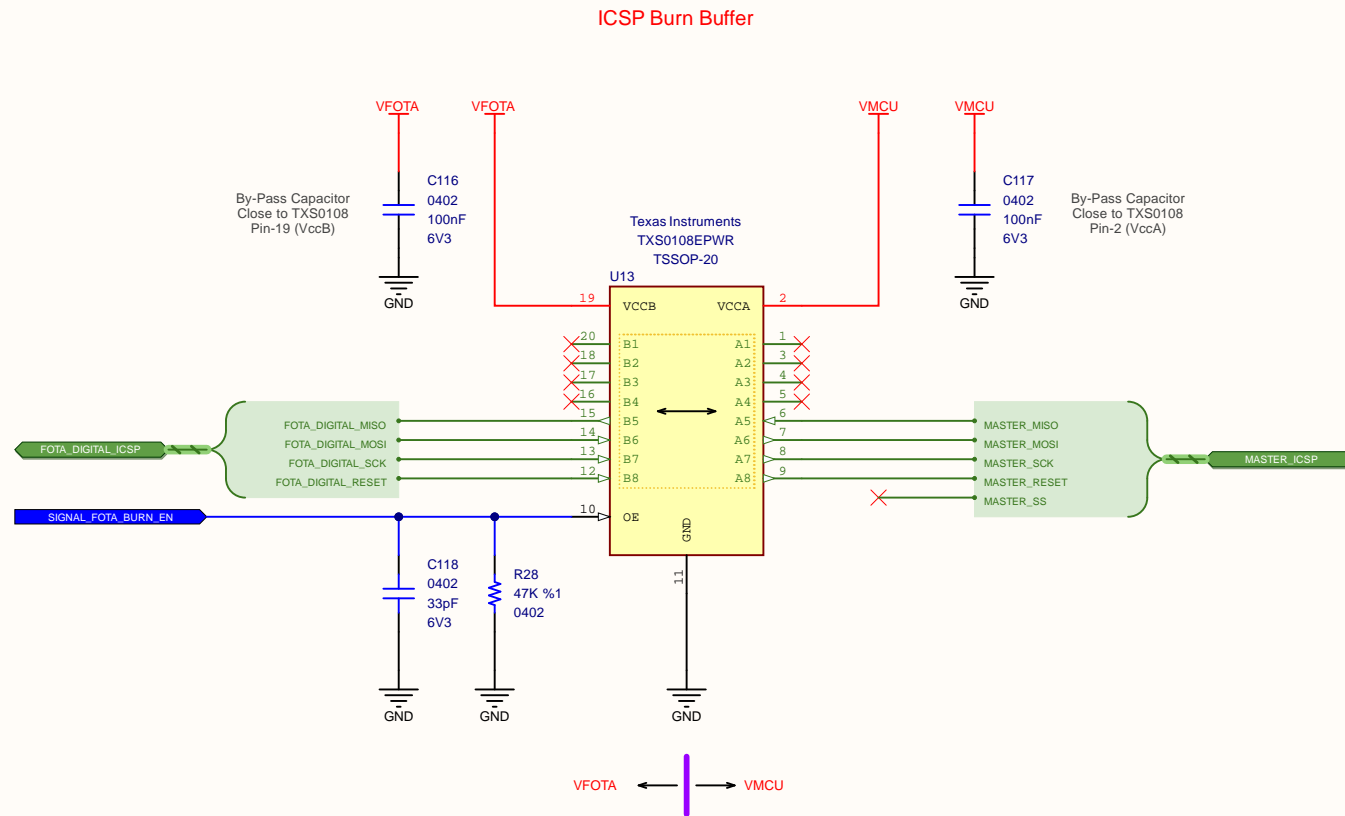


By-Pass Capacitor
Close to SN3257QPWRQ1
Pin-16 (Vcc)

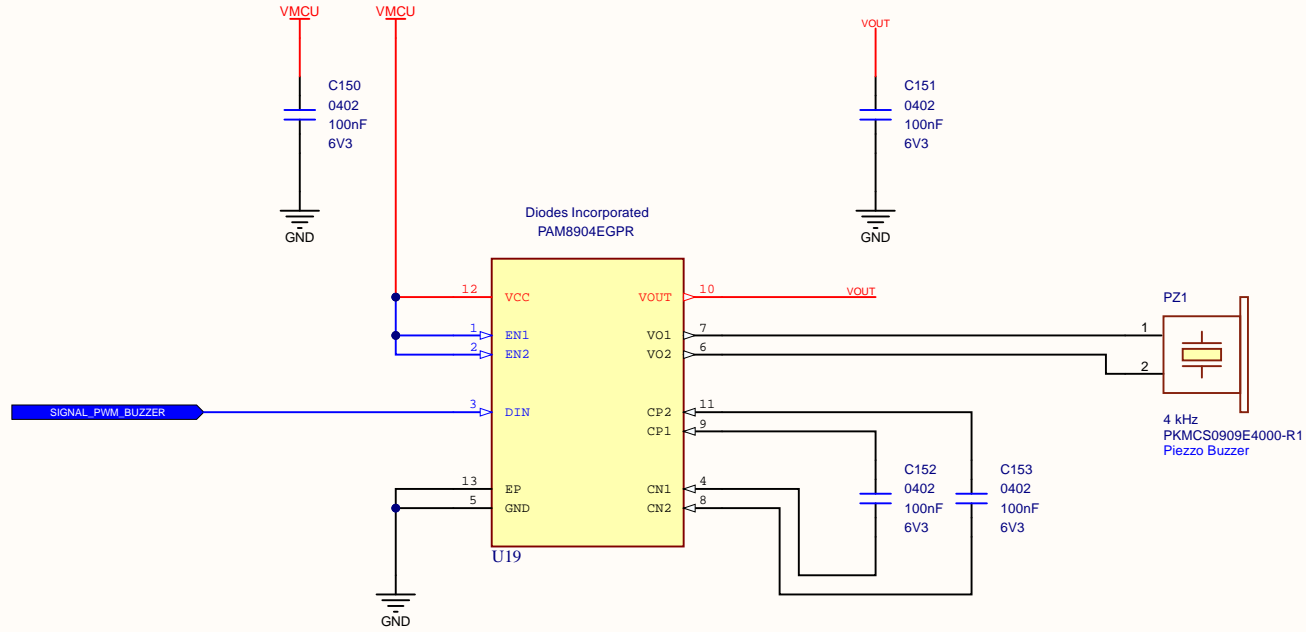
SPI Selection Switch




Title SD Card & Select Switch			Ovoo Electronics Necip Fazıl Mah. Ortamak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye		
Size: A4	Number:	Revision: B100AA			
Date: 4.01.2021	Time: 14:29:24	Sheet 32 of 35			
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\SD Card.SchDoc					

**Title** FOTA Burn Buffer**Size:** A4**Number:****Revision:** B100AA**Date:** 4.01.2021**Time:** 14:29:24**Sheet** 33 **of** 35**File:** C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\ICSP Burn Buffer.SchDoc**Ovoo Electronics**Necip Fazıl Mah. Ortarmak Sok.
Bırgölü Apt. No: 19/6
Meram / Konya
Türkiye

Piezzo Buzzer



Title Buzzer			Ovoo Electronics Necip Fazıl Mah. Ortarmak Sok. Bırgölü Apt. No: 19/6 Meram / Konya Türkiye	
Size: A4	Number:	Revision: B100AA		
Date: 4.01.2021	Time: 14:29:24	Sheet 34 of 35		
File: C:\Altium Projects\B100\AA\Design Files\B100AA\Schematics\Buzzer.SchDoc				

