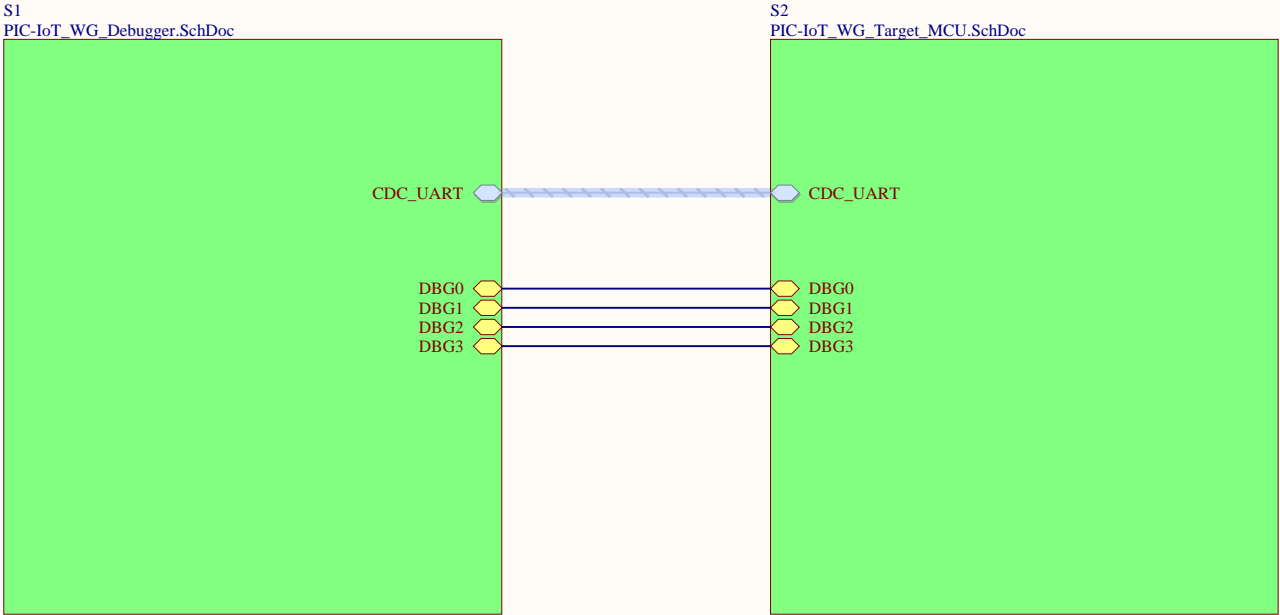


PIC-IoT WG



TESTDOC1



A12-1388

PCBADOC1



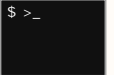
A12-1387

FW1



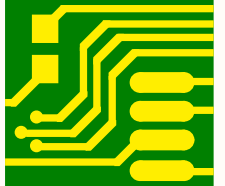
A11-0406

TEST1



A11-0447

PCB1



A08-2993

PIC-IoT WG PCB documentation

LABEL1



Label PCBA Small 6x6mm

S3

PIC-IoT_WG_Revision_History.SchDoc

Drawn By:
Microchip Norway

Engineer:
HN/TF



Project Title

PIC-IoT WG

Sheet Title

Top Level

Size A3

PCB Assembly Number: A09-3261

PCBA Revision: 2

PCB Number: A08-2993

PCB Revision: 1

File: PIC-IoT_WG_TopLevel.SchDoc

Designed with

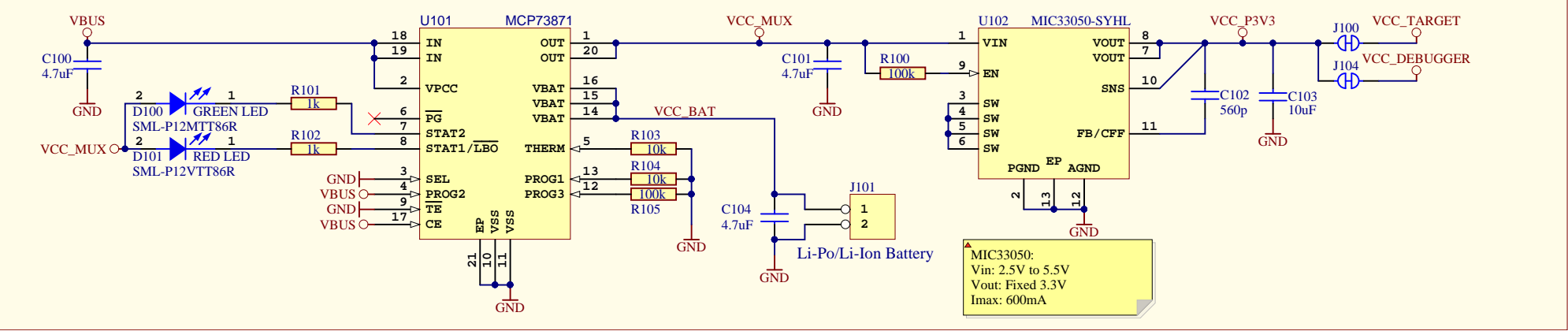
Altium

Altium.com

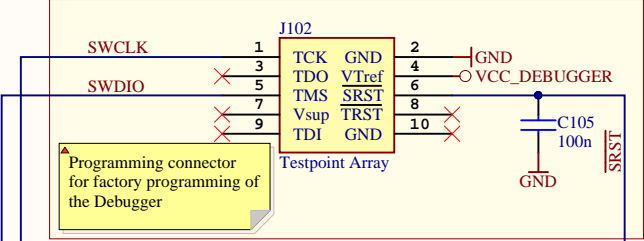
Date: 12.02.2019

Page: 1 of 4

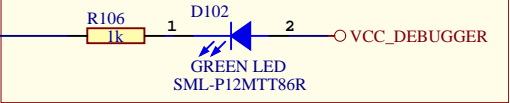
POWER SUPPLY AND BATTERY CHARGER



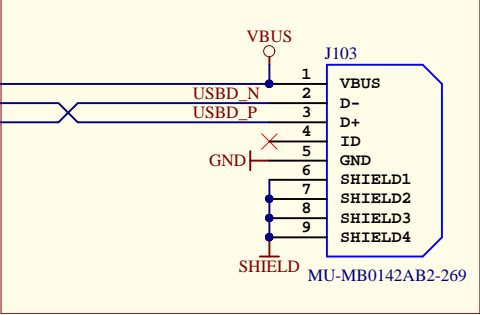
DEBUGGER TESTPOINT



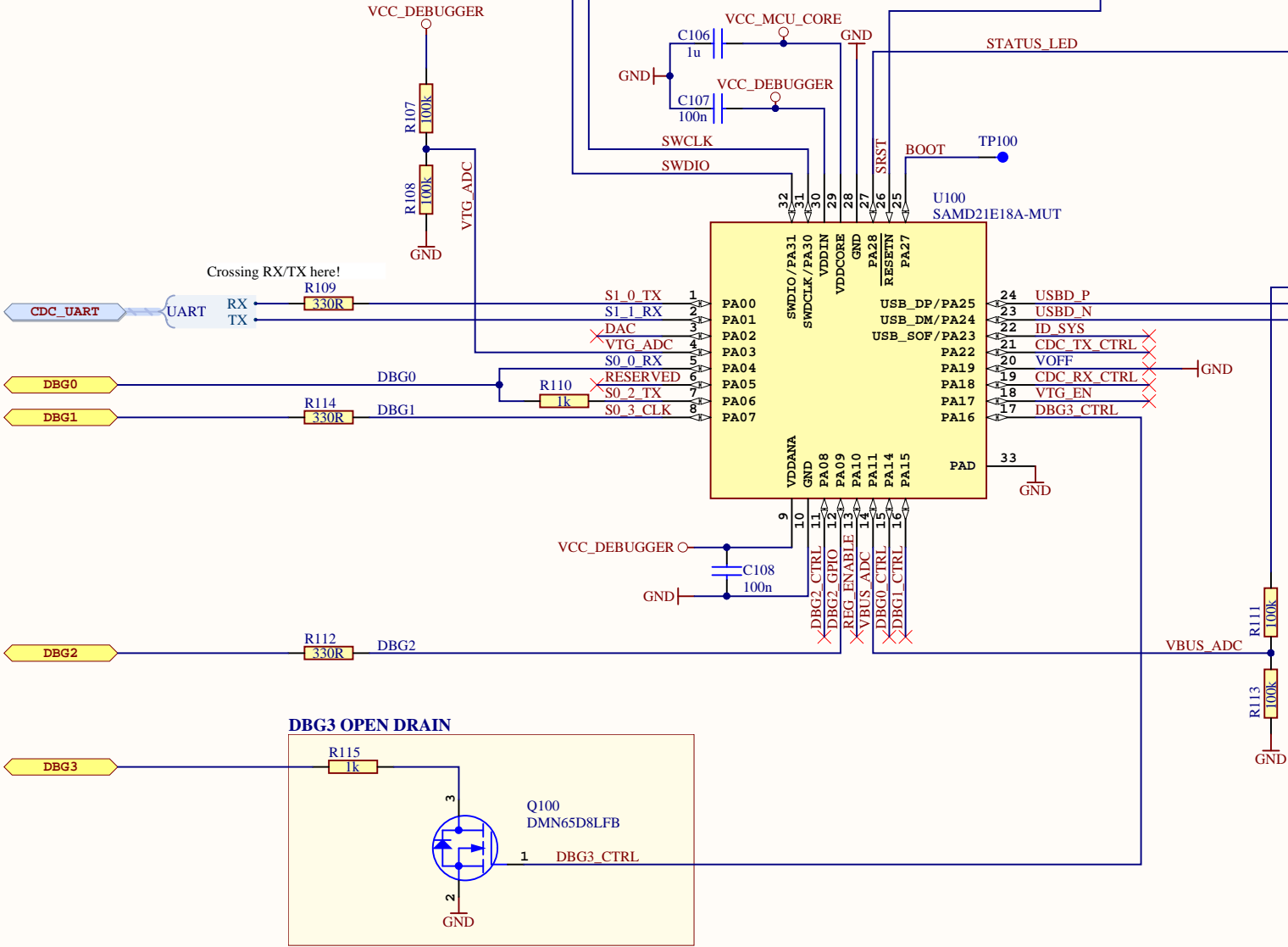
DEBUGGER POWER/STATUS LED

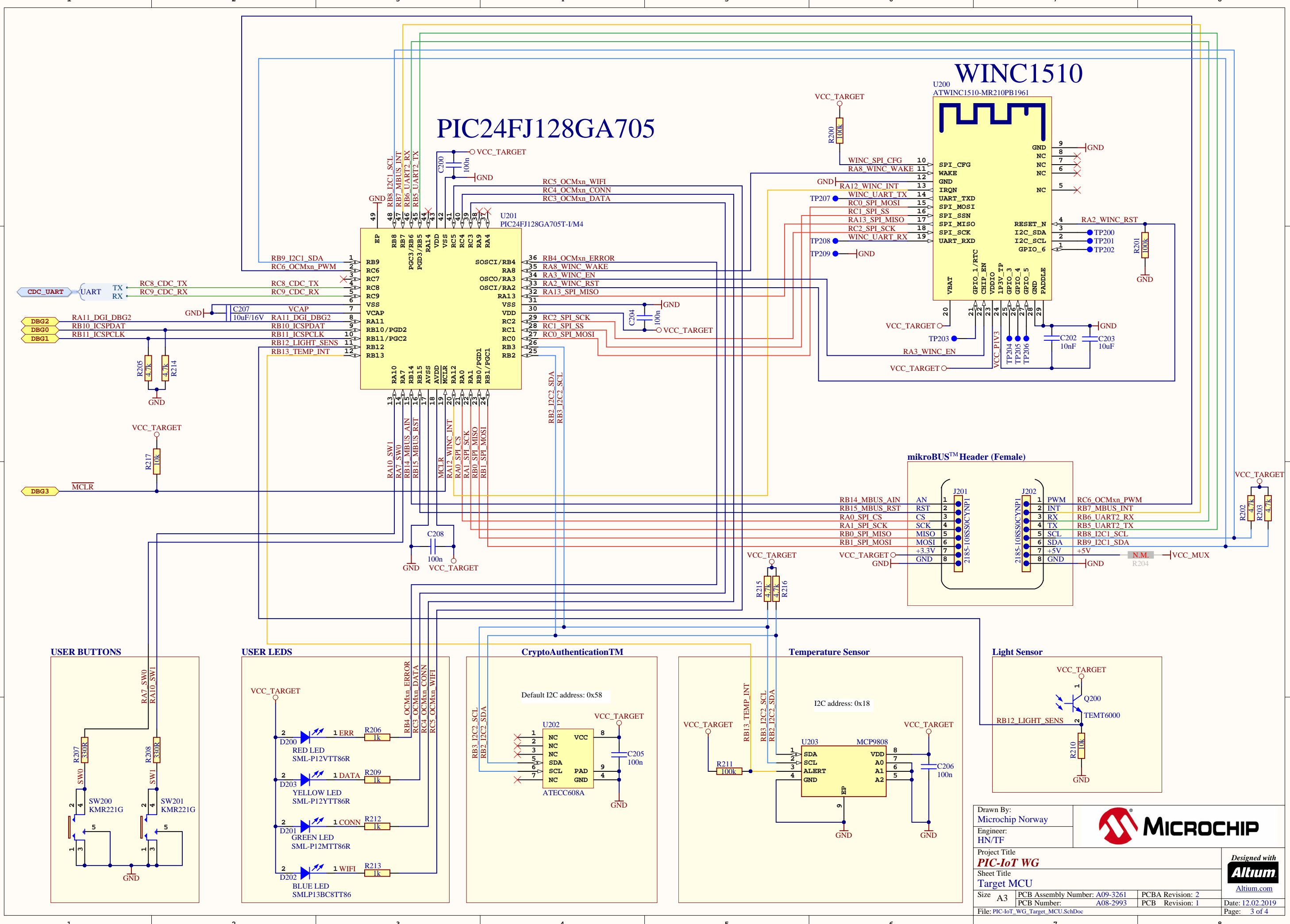


DEBUGGER USB MICRO-B CONNECTOR



Interface	ICSP TARGET
CDC TX	UART RX
CDC RX	UART TX
DBG0	DAT
DBG1	CLK
DBG2	GPIO
DBG3	MCLR
VCC	-





Revision History

PCB Assembly Rev 2:

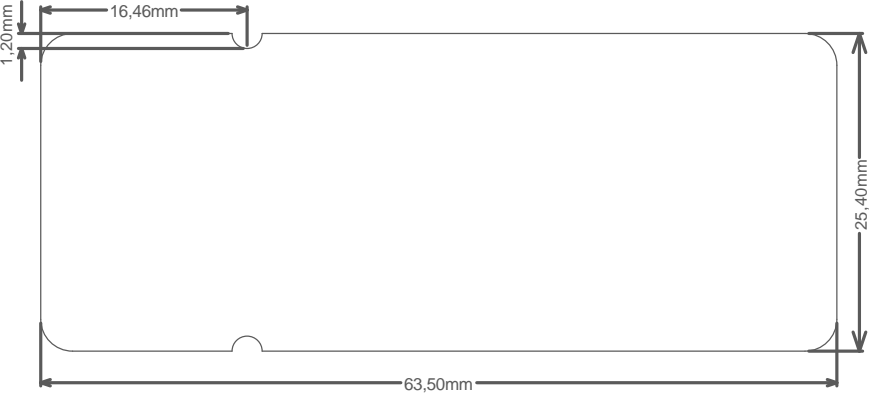
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Design Changes:

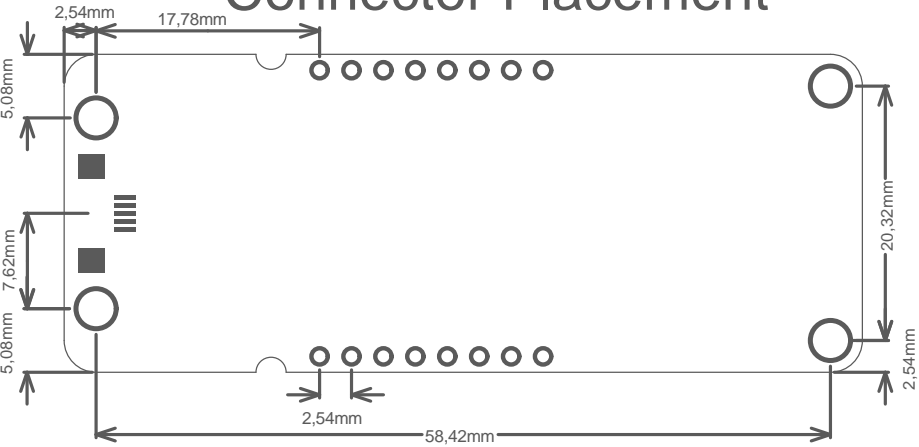
Initial Design

PCB:

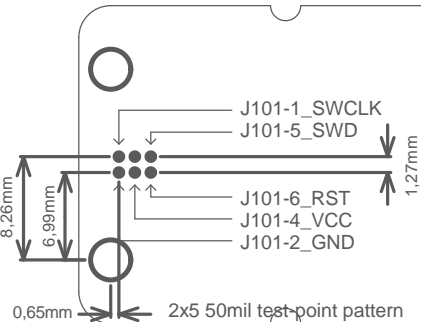
PCB revision 1

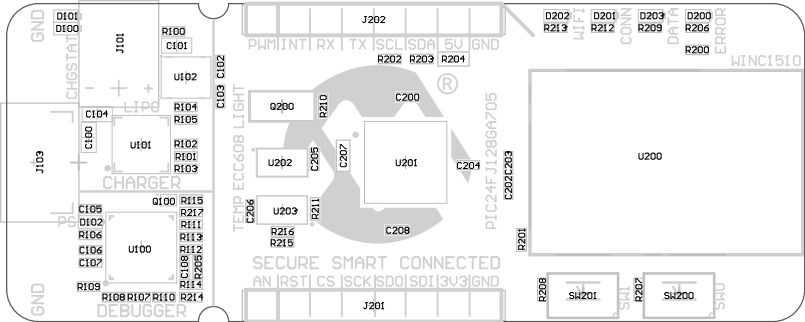


Connector Placement



Test Point Placement





GND

BOOT

J102
TP100

GND

LIPO
BATT



UCC

TARGET DEBUG

001f

401f

PCBA
LABEL



RC6 / PWM

AN / RB14

RB7 / INT

RST / RB15

RB6 / RX

CS / RA0

RB5 / TX

SCK / RA1

RB8 / SCL

MISO / RB0

RB9 / SDA

MOSI / RB1

+5V

+3.3V

GND

mikro
BUS

GND

GP1

GP3

GP4

GP5

GP6

SCL

SDA

Microchip © 2018

A08-2993 Rev1

®

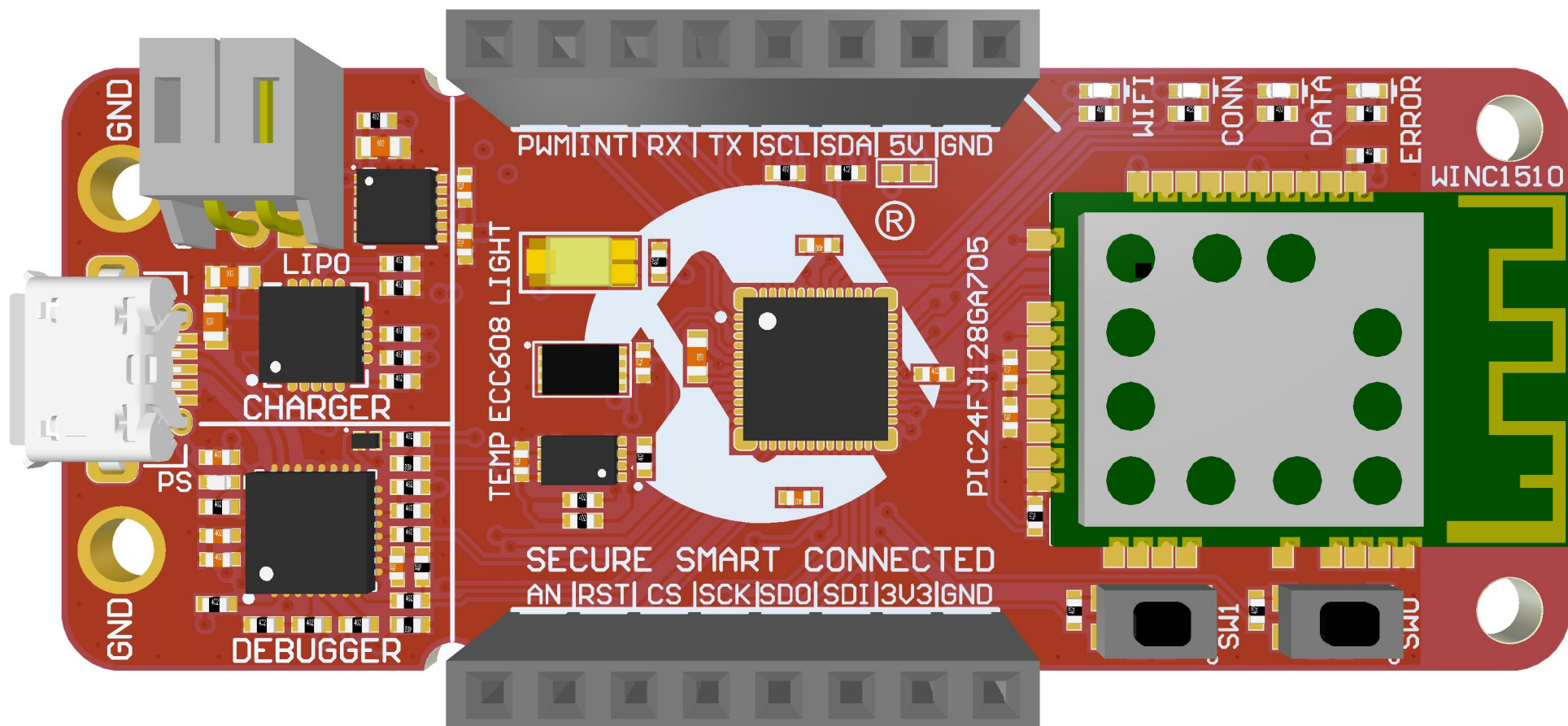
TP209 TP207 TP208

ⓧRX

ⓧTX

ⓧGND

TP200 TP201 TP202 TP206 TP205 TP204 TP203

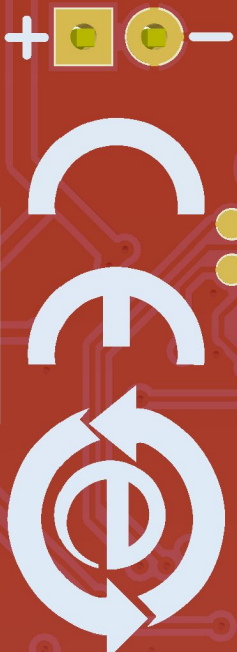


GND

BOOT

GND

L1P0
BATT



UCC

TARGET DEBUG

PCBA
LABEL



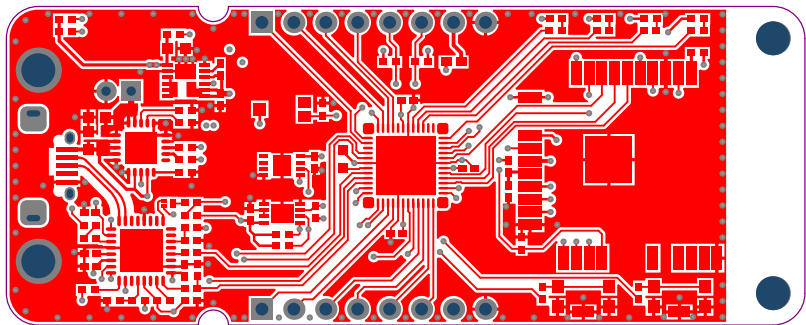
Microchip PIC[®] mikroBUS

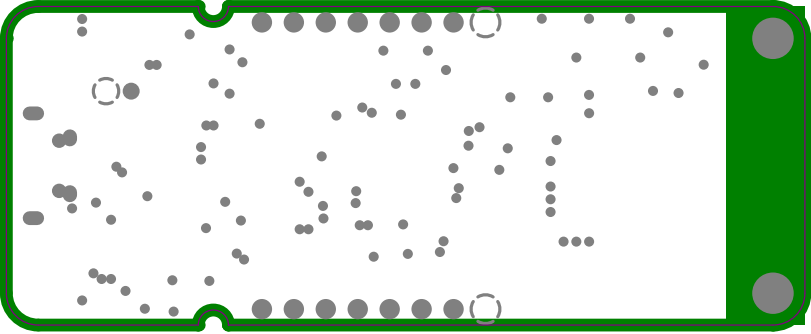
Pin	Function	Pin	Function
RC6 / PWM	AN / RB14	GP1	GP1
RB7 / INT	RST / RB15	GP3	GP3
RB6 / RX	CS / RA0	GP4	GP4
RB5 / TX	SCK / RA1	GP5	GP5
RB8 / SCL	MISO / RB0	GP6	GP6
RB9 / SDA	MOSI / RB1	SCL	SCL
+5V	+3.3V	SDA	SDA
GND	GND		

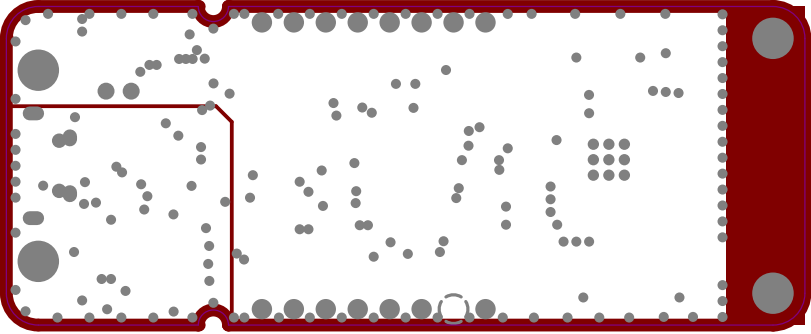
Microchip © 2018

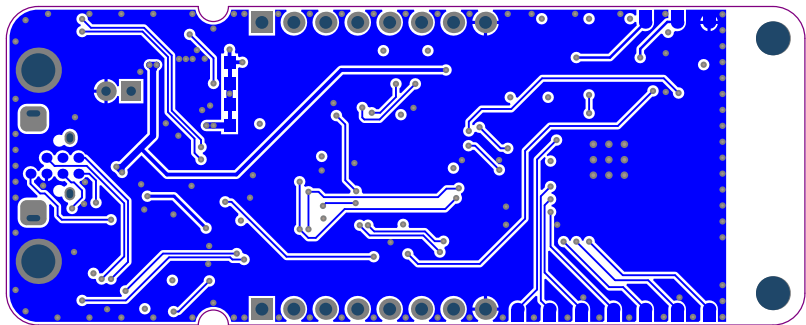
A08-2993 Rev1











Component list

Bill of Materials Fitted For Variant [Default Assembly] of Project [PIC-IoT_WG.PrjPcb] (No PCB Document Selected)



Source Data From:	PIC-IoT_WG.PrjPcb
Project:	PIC-IoT_WG.PrjPcb
Variant:	Default Assembly

Report Date: 12.02.2019 12:29:58
Print Date: 12.02.2019 12:25:52

Fitted	Designator	Quantity	Value	Manufacturer	MPN	Description
Fitted	C100, C101, C104	3	4.7uF	WALSIN Technology Corporation	0603X475K100CT	Ceramic capacitor, SMD 0603, X5R, 10V, 10% (de31036)
Fitted	C102	1	560p			Ceramic capacitor, SMD 0402, X7R, 50V, +/-10%
Fitted	C103, C203	2	10uF	Murata	GRM155R60J106ME15	Ceramic capacitor, SMD 0402, X5R, 6.3V, 20%
Fitted	C105, C107, C108, C200, C204, C205, C206, C208	8	100n	Kemet	C0402C104K4RACTU	Ceramic capacitor, SMD 0402, X7R, 16V, +/-10%
Fitted	C106	1	1u	Kemet	C0402C105K9PAC	Ceramic capacitor, SMD 0402, X5R, 6.3V, +/-10% (de26942)
Fitted	C202	1	10nF	Murata	GRM155R71E103KA01D	Ceramic capacitor, SMD 0402, X7R, 25V, 10%
Fitted	C207	1	10uF/16V	Taiyo Yuden	EMK107BBJ106MA-T	Ceramic capacitor, SMD 0603, X5R, 16V, 10UF ± 20% (High Density)
Fitted	D100, D102, D201	3	GREEN LED	ROHM	SML-P12MTT86R	LED, SMD 0402, Green, Wave length=569nm, 2.1mcd @ (1mA, 1.9Vf)rohm
Fitted	D101, D200	2	RED LED	ROHM	SML-P12V TT86R	LED, SMD 0402, Red, Wave length=630nm, 2.1mcd @ (1mA, 1.7Vf)rohm
Fitted	D202	1	BLUE LED	ROHM	SMLP13BC8TT86	LED, SMD 0402, Blue, Wave length=470nm, 25mcd @ (5mA, 2.9Vf)rohm
Fitted	D203	1	YELLOW LED	ROHM	SML-P12Y TT86R	LED, SMD 0402, Yellow, Wave length=586nm, 7.6mcd @ (1mA, 1.9Vf)
Fitted	FW1	1	nEDBG firmw are			nEDBG firmw are
Fitted	J101	1	S2B-PH-K-S	J.S.T. Mfg. Co. Ltd.	S2B-PH-K-S	Pin Header 1x2, 2mm THM, right entry, 100V AC/DC, 2A AC/DC (AWG #24) (Element14:9491902)
Fitted	J103	1	MU-MB0142AB2-269	Allen Creations Corp.	MU-MB0142AB2-269	USB micro AB, Surface mount signals and DIP shield
Fitted	J201, J202	2	2185-108SS0CYNP1	WCON HARDWARE ELECTRONICS CO., LTD	2185-108SS0CYNP1	1x8 receptacle pin header, 2.54mm pitch THM, PIP
Fitted	LABEL1	1	Label PCBA Small 6x6mm	ACT Logimark AS	505462	PCBA identification label PP Top White Gloss
Fitted	PCB1	1	PIC-IoT WG PCB documentation			PIC-IoT WG PCB documentation
Fitted	PCBADC1	1	A09-3261 PIC-IoT WG PCBA documentatio			PIC-IoT WG PCBA documentation
Fitted	Q100	1	DMN65D8LFB	Diodes Incorporated	DMN65D8LFB-7	N-channel MOSFET, DFN1006-3 (SOT883), 60V, 330mA, 4Ohm
Fitted	Q200	1	TEMT6000	vishay	TEMT6000X01	light sensor
Fitted	R100, R105, R107, R108, R111, R113, R200, R201, R211	9	100k	ASJ	CR10-1003-FK	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R101, R102, R106, R110, R115, R206, R209, R212, R213	9	1k	ASJ	CR10-1001-FK	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R103, R104, R210, R217	4	10k	YAGEO CORP	RC0402FR-0710KL	Thick film resistror, SMD 0402, 1/16W, 1%
Fitted	R109, R112, R114, R207, R208	5	330R	YAGEO CORP	RC0402FR-07330RL	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R202, R203, R205, R214, R215, R216	6	4.7k	YAGEO CORP	RC0402FR-074K7L	Thick film resistror, SMD 0402, 1/16W, 1%
Fitted	SW200, SW201	2	KMR221G	ITT cannon	KMR221G	Microminiature Tact Switch for SMT
Fitted	TEST1	1	PIC-IoT WG test			Fixture test for PIC-IoT WG
Fitted	TESTDOC1	1	PIC-IoT WG Test Instructions			PIC-IoT WG Test Instructions
Fitted	U100	1	SAMD21E18A-MUT	Microchip	ATSAMD21E18A-MUT	Microchip 32-bit RISC MCU 32pin
Fitted	U101	1	MCP73871	Microchip Technology Inc	MCP73871T-2CCI/ML	Load Sharing and Li-Ion/Li-Polymer Battery Charge Management Controller
Fitted	U102	1	MIC33050-SYHL	Microchip Technology Inc	MIC33050-SYHL-TR	3.3V Fixed, 4MHz, 600mA, Buck regulator with internal inductor with HyperLight Load
Fitted	U200	1	ATWINC1510-MR210PB1961	Microchip	ATWINC1510-MR210PB1961	IEEE 802.11 b/g/n module, 8Mbit Flash Memory, with FEM, PCB Antenna, with Shield, with MAC, Firmw are version 19.6.1
Fitted	U201	1	PIC24FJ128GA705T-IM4	Microchip Technology Inc	PIC24FJ128GA705T-IM4	PIC24FJ128GA705T-IM4 microcontroller, 48-pin UQFN 6mm x 6mm x 0.6mm
Fitted	U202	1	ATECC608A I2C (Google Cloud)	Microchip Technology Inc	ATECC608A-MAH1H-S	ATECC608A with an I2C Interface and a 8 Pin UDFN
Fitted	U203	1	MCP9808	Microchip Technology Inc	MCP9808T-EMC	±0.5C Maximum Accuracy Digital Temperature Sensor, I2C/SMBus
Not Fitted	R204	0	0R	(n/a)	RMCF0402ZT0R00	RES 0.0 OHM 1/16W 0402 SMD

Approved	78	Notes