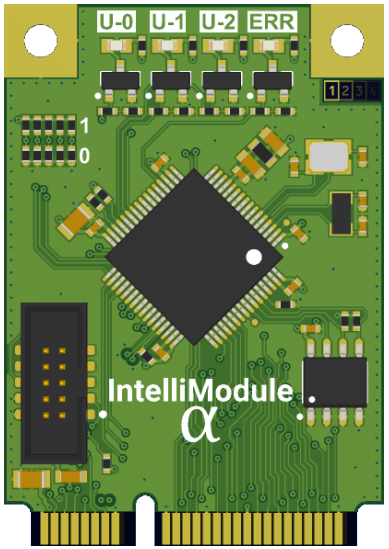
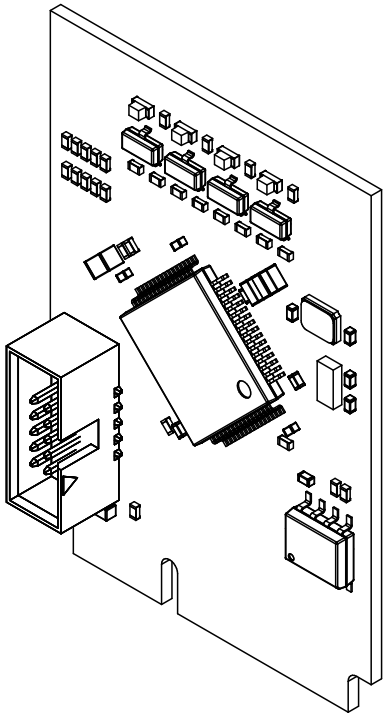
3D Board View

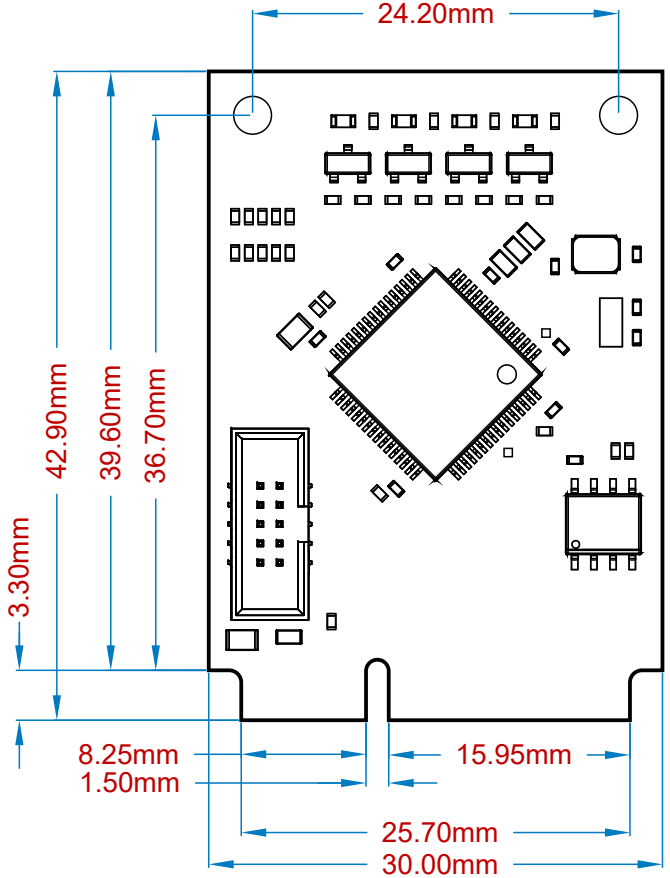




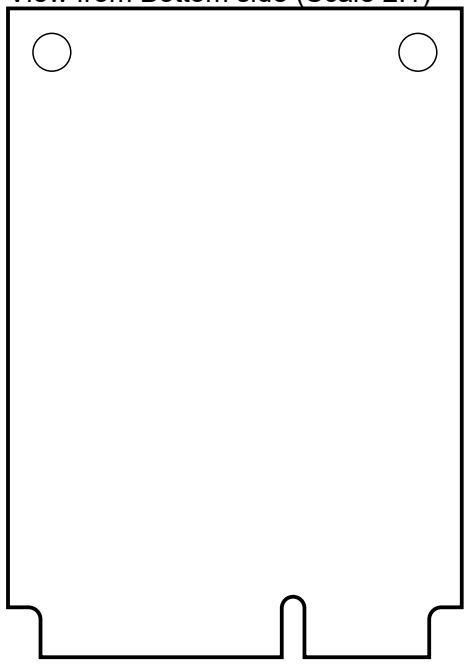
IntelliModule Alpha

Technical Documentation and Assembly Drawings
PCB Revision B
Nov. 2019

View from Top side (Scale 2:1)



View from Bottom side (Scale 2:1)



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Konrad Grefe Gasse 22
1230 Wien
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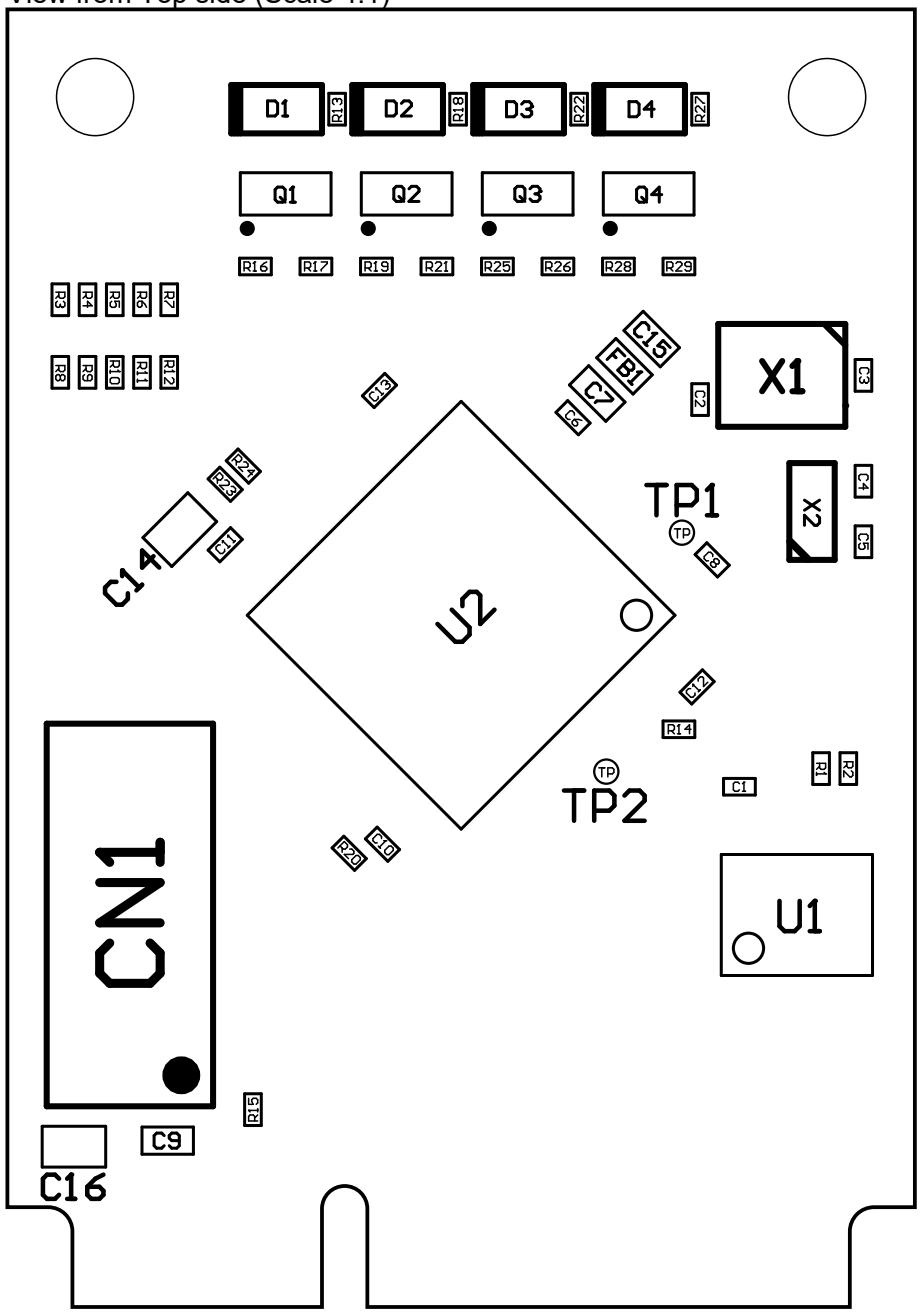
View from Top side (Scale 4:1)



Bill Of Materials

Designator	Internal Part Number	Comment	Quantity
C1, C6, C8, C10, C11, C12, C13	CCER000002	100nF 16V	7
C2, C3	CCER000040	18pF 50V	2
C4, C5	CCER000013	22pF 50V	2
C7, C9, C15	CCER000038	1uF 16V	3
C14, C16	CCER000039	10uF 10V	2
CN1	CON000024	3220-10-0300-00	1
CN2		PCB-EDGE PCIE MINI	1
D1, D2, D3	LED000005	150060VS75000	3
D4	LED000006	150060SS75000	1
FB1	L000007	600R-100MHz 500MA	1
MH1		PCIe Mini Card Hole 1	1
MH2		PCIe Mini Card Hole 2	1
Q1, Q2, Q3, Q4	Q000002	DMN65D8L-7	4
R1, R2, R20, R23, R24	R000006	1.5kR 1%	5
R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R14, R15, R17, R21, R26, R29	R000016	10kR 1%	16
R13, R18, R22, R27	R000043	240R 1%	4
R16, R19, R25, R28	R000007	33R 1%	4
TP1		RTC_TAMPER	1
TP2		JTRSTN	1
U1	IC000050	CAT24C512WI-GT3	1
U2	IC000049	STM32F103RCT6TR	1
X1	XTAL000001	16MHz 9pF	1
X2	XTAL000005	32.768kHz 12.5pF	1

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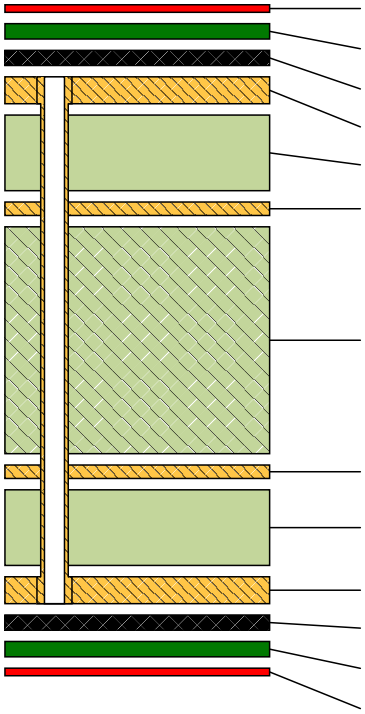
Layer Stack Legend



Material	Layer	Thickness	Dielectric Material	Type	Gerber
	Top Overlay			Legend	GTO
Surface Material	Top Solder	0.02mm	Solder Resist	Solder Mask	GTS
Nickel, Gold	Top Copper Plating	0.02mm		Copper Plating	
Copper	Top Layer	0.04mm		Signal	GTL
Prepreg		*0.10mm*	*2313-Prepreg*	*Dielectric*	
CF-004	Layer 1	0.02mm		Signal	G1
		0.66mm	*FR-4*	*Dielectric*	
CF-004	Layer 2	0.02mm		Signal	G2
Prepreg		*0.10mm*	*2313-Prepreg*	*Dielectric*	
Copper	Bottom Layer	0.04mm		Signal	GBL
Nickel, Gold	Bottom Copper Plating	0.02mm		Copper Plating	
Surface Material	Bottom Solder	0.02mm	Solder Resist	Solder Mask	GBS
	Bottom Overlay			Legend	GBO

Total thickness: 1.05mm

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1230 Wien
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Connector Pinout

Pin	Description (TOP)	Description (BOT)	Pin
1	GND	3V3	2
3	RESETn	3V3	4
5	AUX0 (BOOT0)	VBAT	6
7	JTAG_TDI	AUX1 (PA1)	8
9	JTAG_TDO_TRACESWO	GND	10
11	JTAG_TMS_SWDIO	USB_DN	12
13	JTAG_TCK_SWCLK	USB_DP	14
15	GND	GND	16
	CARD NOTCH	CARD NOTCH	
17	GND	GND	18
19	SPI1_SCK (PA5)	I2C1_SCL (PB6)	20
21	SPI1_MISO (PA6)	I2C1_SDA (PB7)	22
23	SPI1_MOSI (PA7)	I2C2_SDA (PB11)	24
25	GND	I2C2_SCL (PB10)	26
27	SPI2_SCK (PB13)	GND	28
29	SPI2_MISO (PB14)	UART1_MCUTX (PA9)	30
31	SPI2_MOSI (PB15)	UART1_MCURX (PA10)	32
33	GND	UART2_MCUTX (PA2)	34
35	GPIO0 (PA0)	UART2_MCURX (PA3)	36
37	GPIO1 (PC0)	GND	38
39	GPIO2 (PC1)	GPIO13 (PC12)	40
41	GPIO3 (PC2)	GPIO12 (PC11)	42
43	GPIO4 (PC3)	GPIO11 (PC10)	44
45	GPIO5 (PC4)	PIO10 (PC9)	46
47	GPIO6 (PC5)	GPIO9 (PC8)	48
49	GPIO7 (PD2)	GPIO8 (PC7)	50
51	GND	GND	52

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Johannes Berndorfer
Konrad Grefe Gasse 22
1230 Wien
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