A33G527

Starter Kit
Starter Kit_A33G527VQN

Starter Kit H/W Manual

Version 1.03

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1 Introduction of starter kit board

Figure 1 shows a starter kit board of A33G527VQN. In Table 1, you can see main features of the starter kit board.

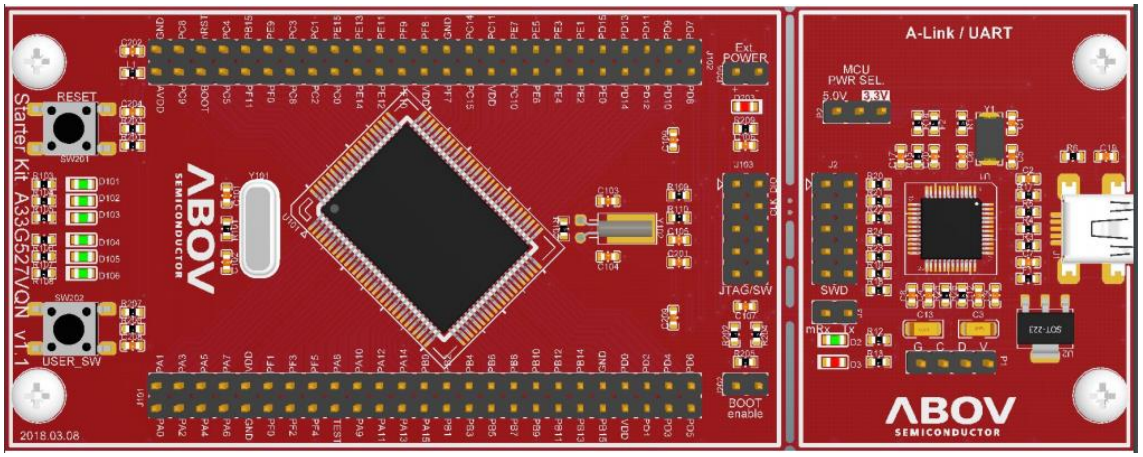


Figure 1. Starter Kit Board

Table 1. Main Features of Starter Kit Board

Main feature	Specifications	Remark
MCU	A33G527VQN	ARM CORTEX-M3
Operating clock	8 MHz / 32.768 kHz	Crystal Main/Sub
ROM	384 KB / 32 KB flash ROM	Code / Data
RAM	24 KB	
Communication Port	USB 2.0	Mini USB Type B 5-pin
Debugging Port	SWD / JTAG	10-pin Connector
Input Buttons	1 reset & 1 event input	TACT Switch

2 A-link part

In this chapter, A-link part of the starter kit board is introduced.

2.1 A-link section

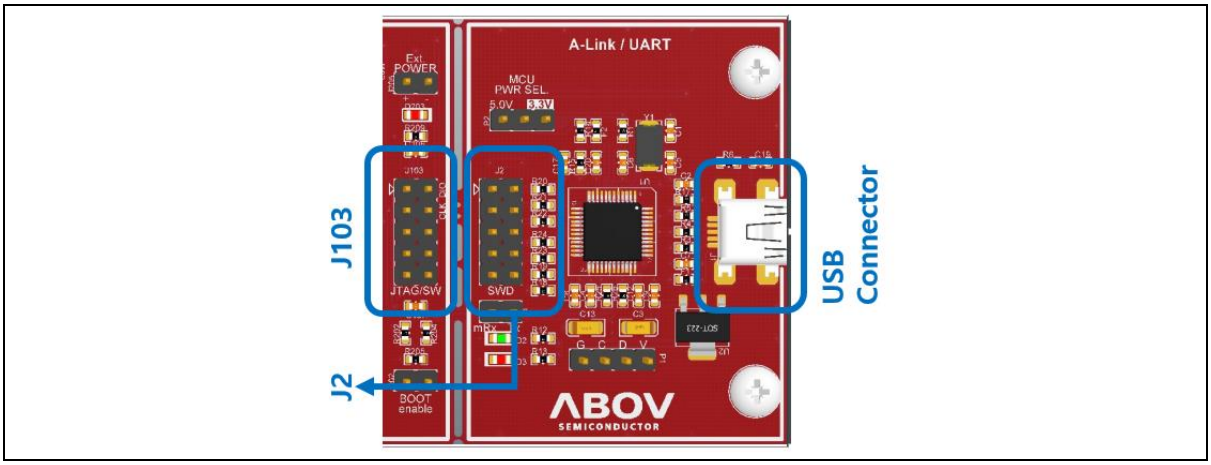


Figure 2. A-Link Section

2.1.1 USB connector (mini USB type B)

- PC USB interface (Debug Keil, IAR ..)
- CMSIS-DAP (Debug)
- COM Port

2.1.2 J103 (Box Header): SWD Connector on MCU Board

Table 2. SWD Pin Description on MCU Board

V-Sense	**1**	**2**	SWDIO/TMS
GND	**3**	**4**	SWCLK/TCK
GND	**5**	**6**	TDO
NC	**7**	**8**	TDI
GND	**9**	**10**	nRESET

2.1.3 J2 (Box Header): SWD Connector on A-Link Board

Table 3. A-Link SWD Pin Description

V-Sense	**1**	**2**	SWDIO/TMS
GND	**3**	**4**	SWCLK/TCK
GND	**5**	**6**	SWO/TDO
RTCK	**7**	**8**	NC/TDI
GND	**9**	**10**	nRESET

2.2 Power, USB to UART section

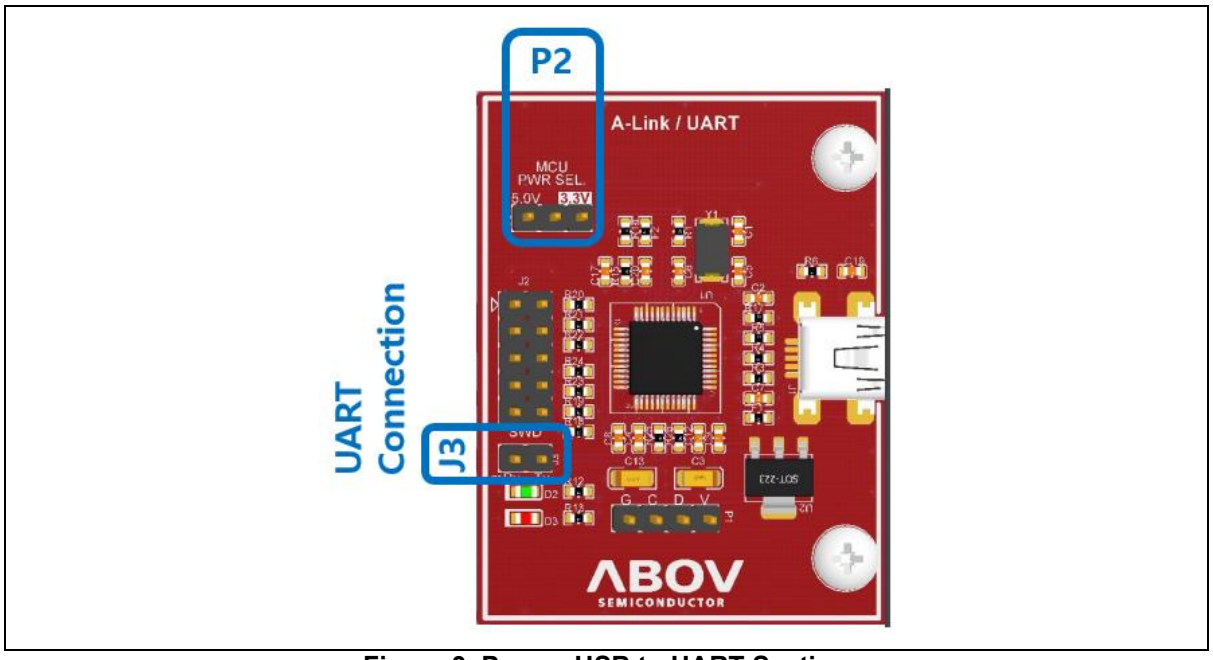


Figure 3. Power, USB to UART Section

2.2.1 P2: MCU Power Selector

Table 4. P2 MCU Power Selector

P2	VDD
	5.0V
	3.3V
	External Power

2.2.2 J3: USB to UART connection

Table 5. USB to UART Description

J3	Pin	Connection
	Short	(mRX) MCU RXD ← PC TXD
	Open	(mRx) MCU RXD Open

3 Device part

In this chapter, power, a boot mode selector and switches of the starter kit board are introduced.

3.1 Power, Boot mode selector and switch

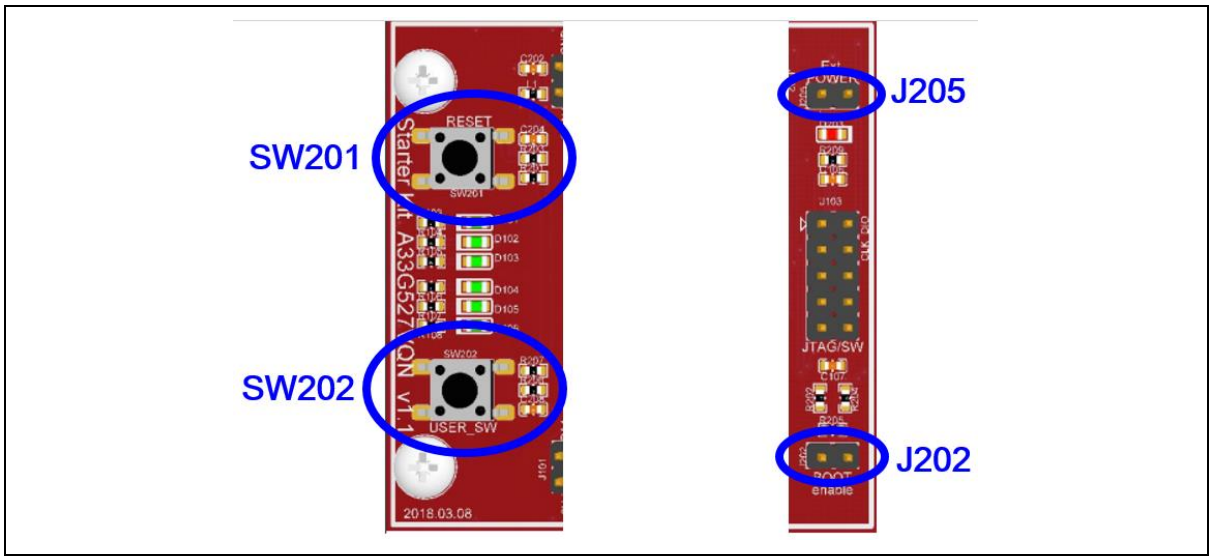
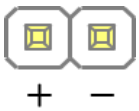


Figure 4. Power, Boot mode and Switch

3.1.1 J205: external power (not used)

Table 6. J205 Description and Connection

J205	Pin name	Connection
 + −	VDD	+3.3 ~ 5.0V
	GND	0V

3.1.2 J202: mode select (boot/normal) pins

Table 7. J202 Boot Mode Selector

J202	Pin name	Connection
	Short	Boot mode
	Open	Normal mode

3.1.3 SW201, SW202: switch

Table 8. SW201, SW202 Description and Function

Switch	Function
SW201	nRESET/PC6
SW202	PB1

3.2 LED display (D101 – D106)

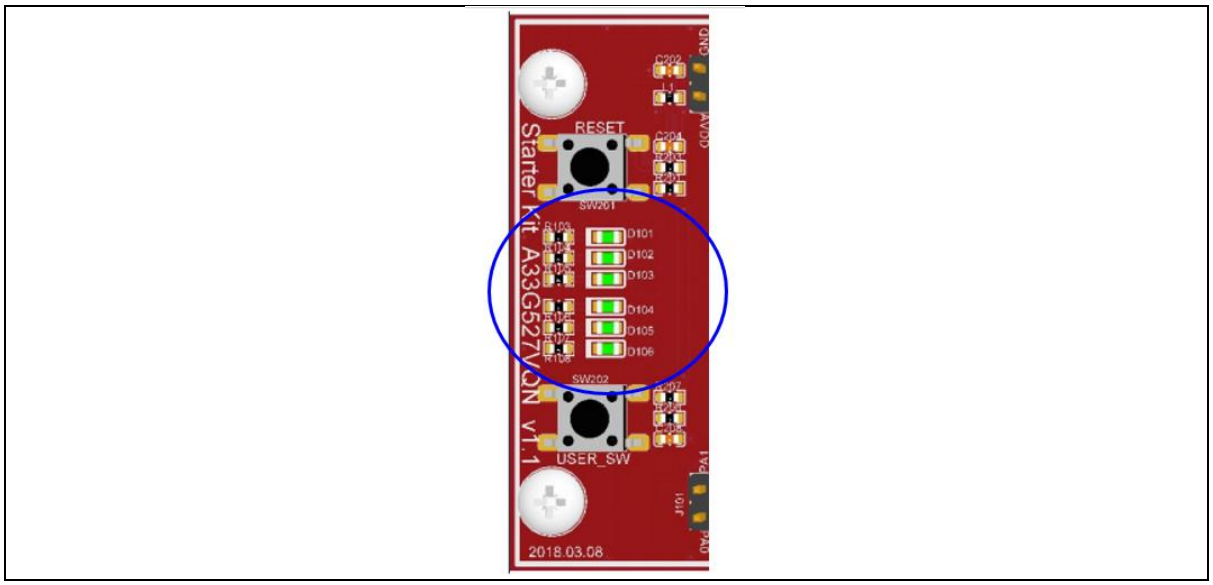


Figure 5. LED Display

3.2.1 LED schematic

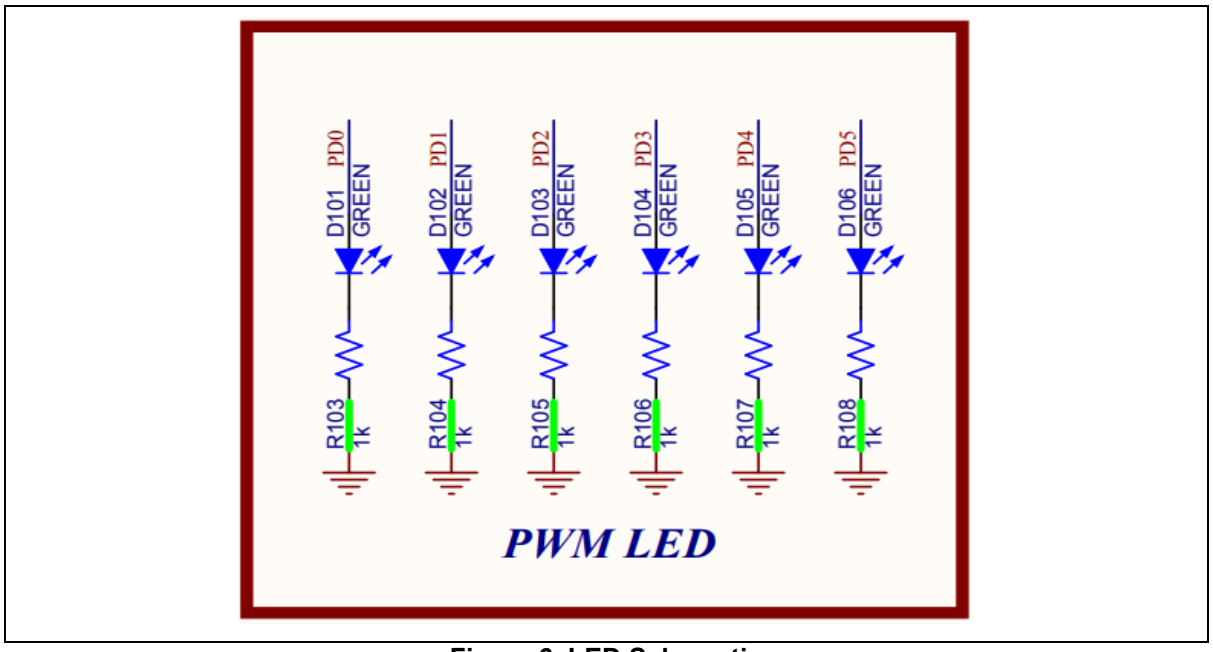


Figure 6. LED Schematic

3.2.2 LED pin assignment

Table 9. LED Pin Description

LED name	PORT
D101	PD0
D102	PD1
D103	PD2
D104	PD3
D105	PD4
D106	PD5

3.3 Pin assignment

Pin color legend

VDD	PC
GND	PD
PA	PE
PB	PF

CN1

1	PA0/AN0/AVREF	PA1/AN1	2
3	PA2/AN2	PA3/AM3	4
5	PA4/AN4	PA5/AN5	6
7	PA6/T0C/AN6	PA7/T1C/AN7	8
9	GND	VDD	10
11	PF0/AN8	PF1/AN9	12
13	PF2/AN10	PF3/AN11	14
15	PF4/AN12	PF5/AN13	16
17	TEST	PA8/T2C	18
19	PA9/T3C	PA10/T4C	20
21	PA11/T5C	PA12/T6C	22
23	PA13/T7C	PA14/T8C/AN14	22
25	PA15/T9C/AN15	PB0/T0O	24
27	PB1/T1O	PB2/T2O	28
29	PB3/T3O	PB4/T4O	30
31	PB5/T5O	PB6/T6O	32
33	PB7/T7O	PB8/T8O	34
35	PB9/T9O	PB10/SS0	36
37	PB11/SCK0	PB12/MOSI0	38
39	PB13/MISO0	PB14/SCL0	40
41	PB15/SDA0	GND	42
43	VDD	PD0/PWM0	44
45	PD1/PWM1	PD2/PWM2	46
47	PD3/PWM3	PD4/PWM4	48
49	PD5/PWM5	PD6/PWM6	50

CN2

100	AVDD	AGND	99
98	PC9/TXD0	PC8/RXD0	97
96	PC7/BOOT	PC6/nRESET	95
94	PC5	PC4/TDO	93
92	PF11	PC12/STBYO	91
90	PC13/CLK0	PE9/SXOUT	89
88	PE8/SXIN	PC3/TCK	87
86	PC2/TMS	PC1/TDI	85
84	PC0/nTRST	PE15/TraceCLK	83
82	PE14/TraceD0	PE13/TraceD1	81
80	PE12/TraceD2	PE11/TraceD3	79
78	PF10	PF9	77
76	VDD	PF8	75
74	PF7	GND	73
72	PC15/XTALI	PC14/XTALO	71
70	VDD	PC11/TXD2	69
68	PC10/RXD2	PE7/PWMB7/TXD3	67
66	PE6/PWMB6/RXD3	PE5/PWMB5	65
64	PE4/PWMB4	PE3/PWMB3	63
62	PE2/PWMB2	PE1/PWMB1	61
60	PE0/PWMB0	PD15/SDA1	59
58	PD14/SCL1	PD13/TXD1	57
56	PD12/RXD1	PD11/MISO1	55
54	PD10/MOSI1	PD9/SCK1	53
52	PD8/SS1	PD7/PWM7	51

Figure 7. Pin Assignment

Revision history

Date	Version	Description
20.03.31	1.00	Document created
21.01.28	1.01	Updated Starter Kit figures. Modified item name to match STK with a PCB silk.
22.11.01	1.02	Revised the font of this document
24.11.22	1.03	Updated the disclaimer

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