

A34M418

Starter Kit

Starter Kit_A34M418VLN

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 A34M418VLN. In Table 1, you can see main features of the starter kit board.

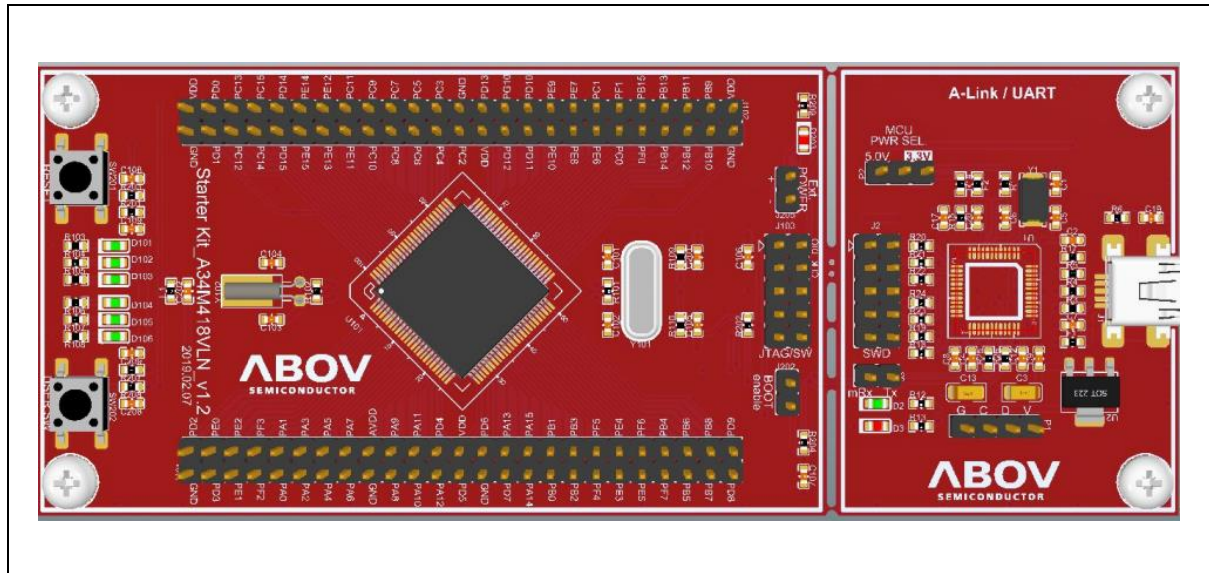


Figure 1. Starter Kit Board

Table 1. Main Features of Starter Kit Board

Main feature	Specifications	Remark
MCU	A34M418VLN	ARM CORTEX-M4F
Operating clock	8MHz / 32.768kHz	Crystal Main/Sub
Code Flash Memory	512kB	-
Data Flash Memory	32KB	-
RAM	64KB	-
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

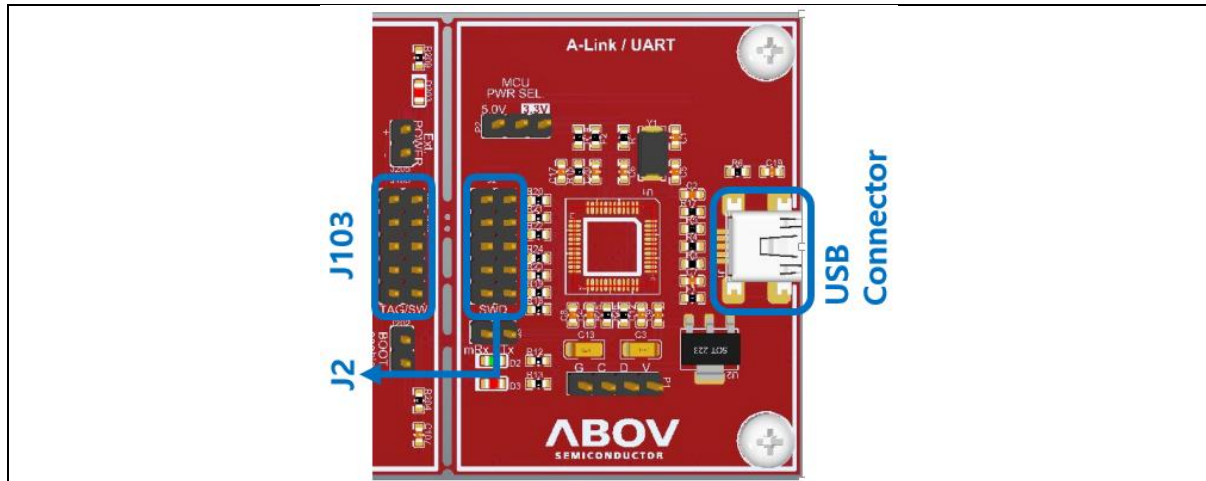


Figure 2. A-Link Section

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
NC	7	8	NC/TDI
GND	9	10	nRESET

2.2 Power, USB to UART section

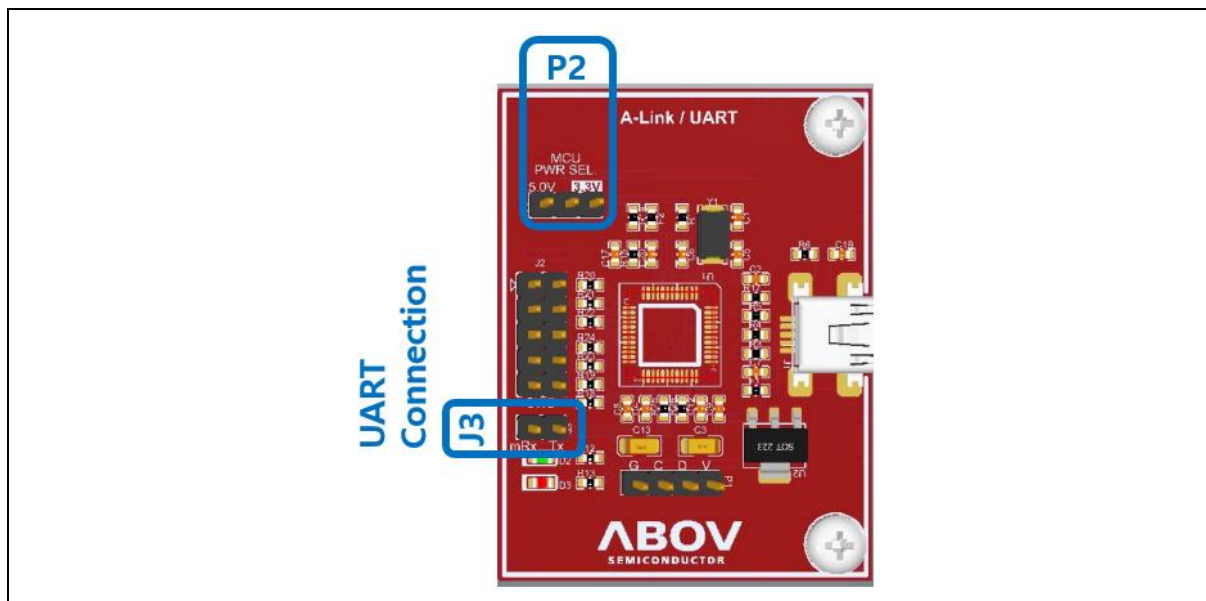


Figure 3. Power, USB to UART Section

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

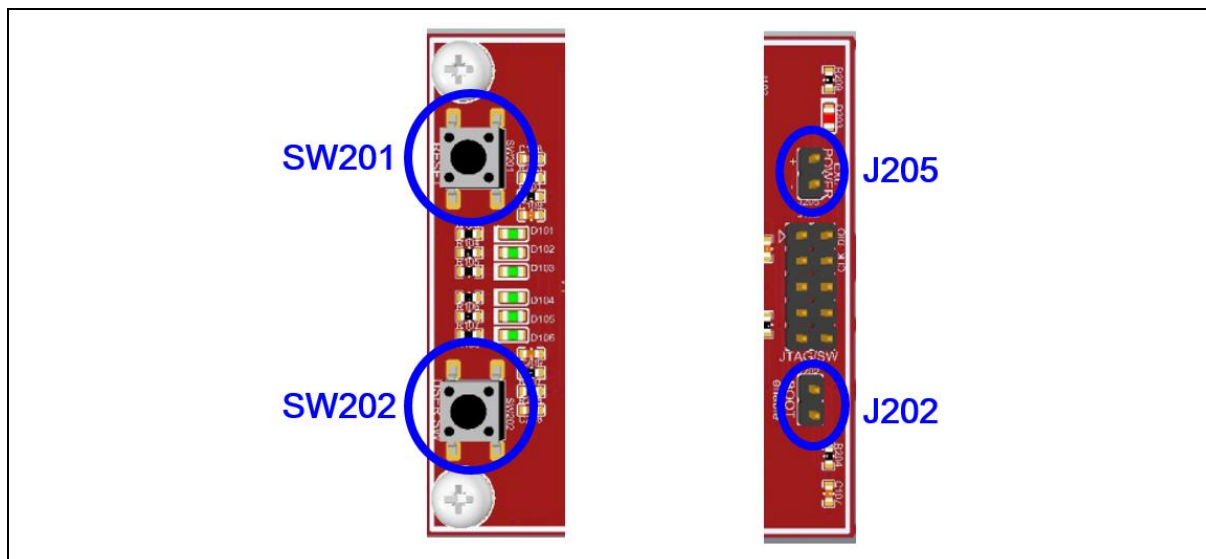
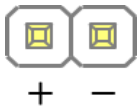


Figure 4. Power, Boot mode and Switch

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/PC10
SW202	PC9

3.2 LED display (D101 – D106)

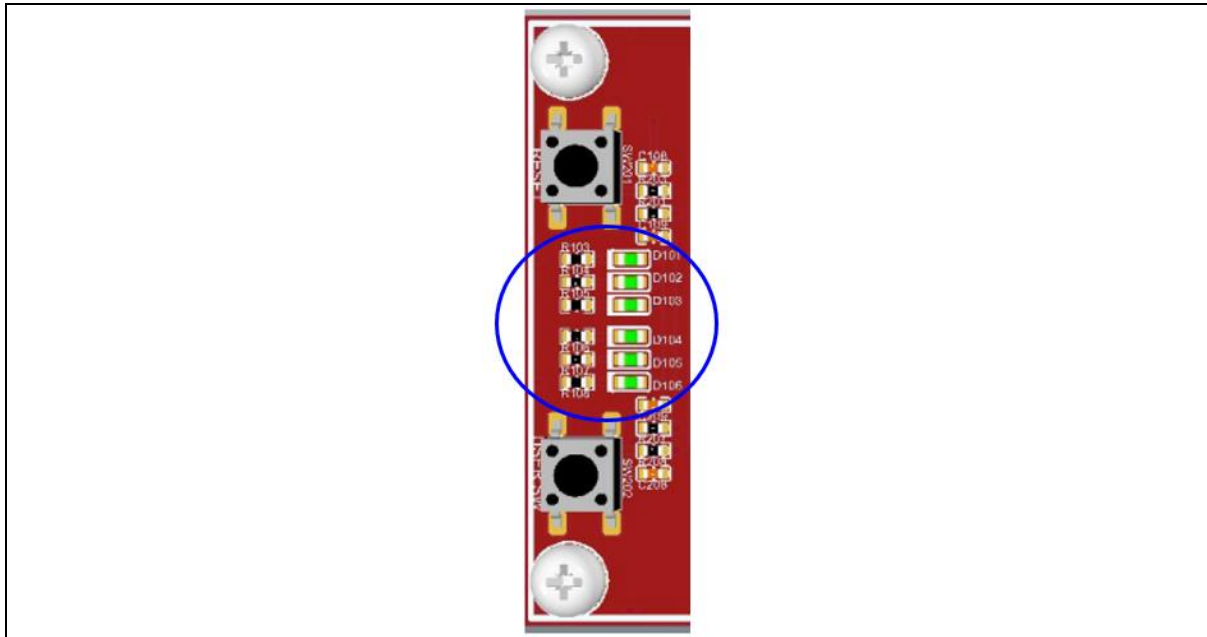


Figure 5. LED Display

3.2.1 LED schematic

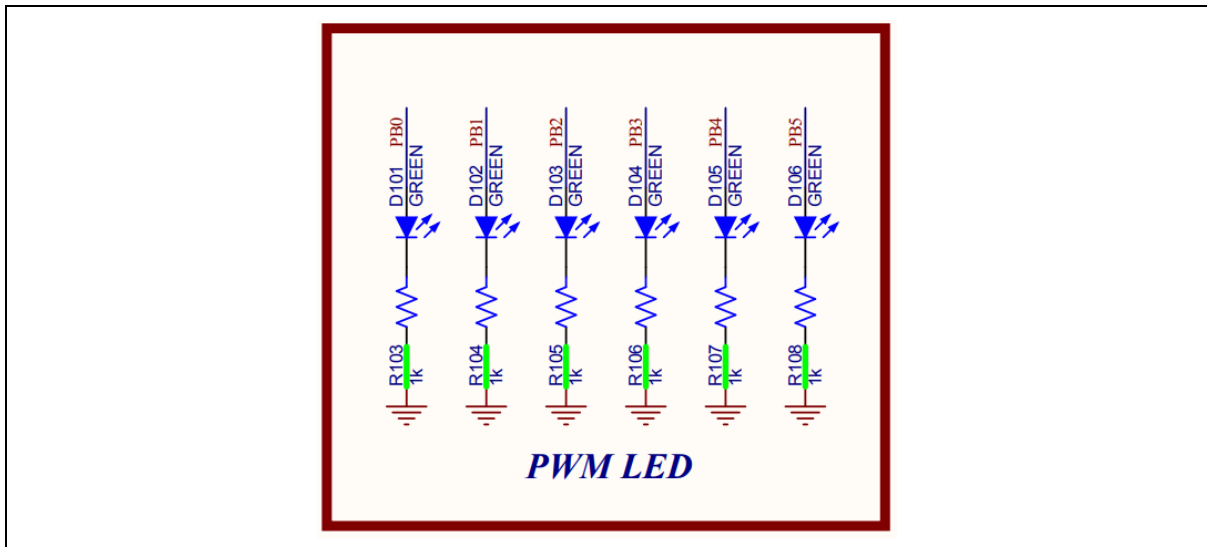


Figure 6. LED Schematic

3.2.2 LED pin assignment

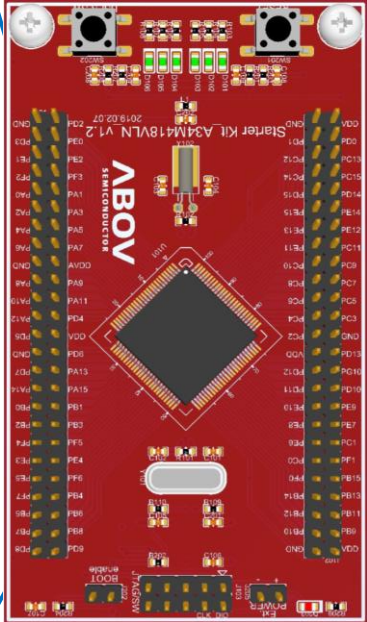
Table 9. LED Pin Description

LED name	PORT
D101	PB0
D102	PB1

D103	PB2
D104	PB3
D105	PB4
D106	PB5

3.3 Pin assignment

1	GND	MOSI1/PD2	2
3	MISO1/PD3	PE0	4
5	CP2/AN20/PE1	CREF2/AN21/PE2	6
7	CP3/AN22/PF2	CREF3/AN23/PF3	8
9	AN0/PA0	AN1/PA1	10
11	AN2/PA2	AN3/PA3	12
13	CP0A/T0IO/AN4/PA4	CAPEU/CP0B/T1IO/AN5/PA5	14
15	CAPEV/CP0C/T2IO/AN6/PA6	CAPEW/CREFO/T3IO/AN7/PA7	16
17	AGND	AVDD	18
19	CP1A/CAN_RX/AN8/PA8	CP1B/CAN_TX/AN9/PA9	20
21	SCAPEU/CP1C/RXD1/AN10/PA10	SCAPEV/CREF1/TXD1/AN11/PA11	22
23	SCAPEW/SS0/QE10_UPDN/AN12/PA12	SCL1/AN16/PD4	24
25	SDA1/AN17/PD5	VDD	26
27	GND	PD6/AN18/TXD2	28
29	PD7/AN19/RXD2	PA13/AN13/SCK0/QE10_A	30
31	PA14/AN14/MOSI0/QE10_B/PRTINEV	PA15/AN15/MISO0/QE10_IDX/OVINEV	32
33	PB0/MP0UH	PB1/MP0UL	34
35	PB2/MP0VH	PB3/MP0VL	36
37	PF4/TXD5	PF5/RXD5	38
39	PE3/SCL0	PE4/SDA0	40
41	PES/TSIO	PF6/PRTINEW/CAN_RX	42
43	PF7/OVINEW/CAN_TX	PB4/MP0WH/T8IO	44
45	PB5/MP0WL/T9IO	PB6/PRTINOU	46
47	PB7/OVINOU	PB8/PRTINIU/RXD3	48
49	PD8/T6IO/WDIO	PD9/T7IO/STBYO	50
100	GND	VDD	99
98	SCK1/SXOUT/PD1	SS1/SXIN/PD0	97
96	XIN/PC12	XOUT/PC13	95
94	RXD0/MOSI0/PC14	TXD0/MISO0/PC15	93
92	AD2E/SCK0/PD15	AD2S/SS0/PD14	91
90	PE15	T3IO/RXD4/PE14	89
88	T2IO/TXD4/PE13	T1IO/SDA1/PE12	87
86	T0IO/SCL1/PE11	BOOT/T9IO/PC11	85
84	nRESET/PC10	CLK0/T8IO/PC9	83
82	SDA0/T4IO/PC8	SCL0/T3IO/PC7	81
80	TXD1/T2IO/PC6	RXD1/T1IO/PC5	79
78	T0IO/nTRST/PC4	TDI/PC3	77
76	TDO/PC2	GND	75
74	VDD	PD13/AD1E/T3IO	73
72	PD12/AD1S/T2IO	PG10	71
70	PD11/AD0E/T1IO	PD10/AD0S/T0IO	69
68	PE10/T9IO	PE9/T8IO/QE11_IDX	67
66	PE8/T7IO/QE11_B	PE7/T6IO/QE11_A	65
64	PE6/TSIO/QE11_UPDN	PC1/TMS/SWDIO/TXD0	63
62	PC0/TCK/SWCLK/RXD0	PF1	61
60	PF0	PB15/MP1WL	59
58	PB14/MP1VH	PB13/MP1VL	57
56	PB12/MP1VH	PB11/MP1UL	55
54	PB10/MP1UH	PB9/OVINIU/TXD3	53
52	GND	VDD	51



 VDD	 PC
 GND	 PD
 PA	 PE
 PB	 PF

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.
22.10.14	1.02	Revised the font of this document.
24.12.02	1.03	Updated the disclaimer.

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