

Introduction

The A34G43A Starter Kit makes it easy to develop applications when using the A34G43AYL2N high-performance microcontroller with an Arm Cortex®-M4F 32-bit core. The A34G43A Starter Kit includes the elements for beginners and experienced users to start their development.

This A34G43A Starter Kit contains an A34G43AYL2N in 120-LQFP package, an ABOV A-Link debugger embedded debug tool, LEDs, push buttons, and a type-C USB connector. Also, this starter kit has expansion header connectors for either user function circuits or specialized function boards.

The A34G43A Starter Kit comes with the ABOV software libraries and examples provided as a reference software package.

Figure 1. Starter Kit Board

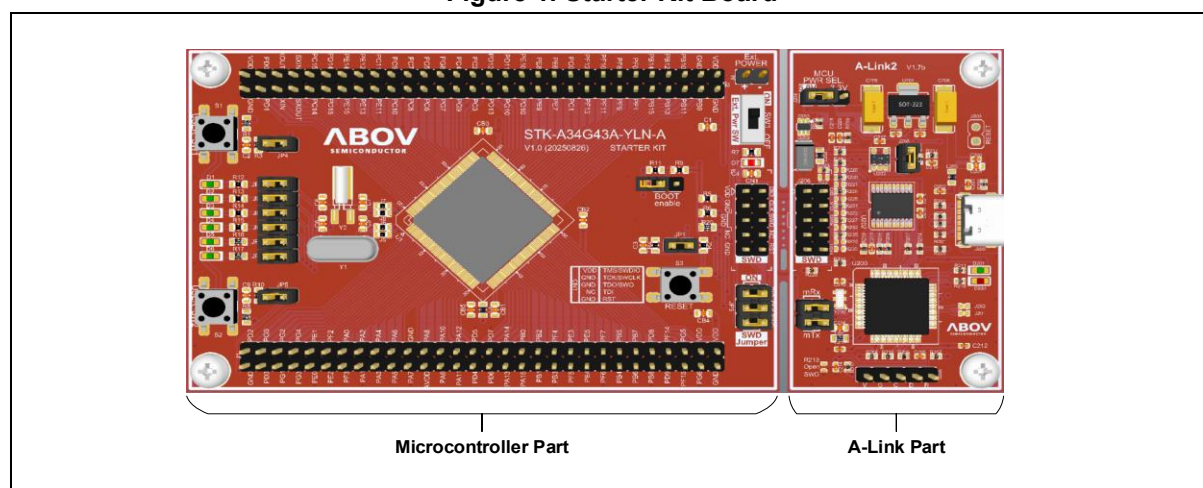


Table 1. Main Features of Starter Kit Board

Main Feature		Specifications	Remark
Microcontroller		A34G43AYL2N	Cortex-M4F, 200 MHz, 120-LQFP
Operating Clock		PLL Internal 500 kHz Internal 16 MHz External 32.768 kHz External 8 MHz	Max 200 MHz LSI HSI LSE HSE
Flash Memory	Code	2,048 KB	Dual Bank (1,024 KB + 1,024 KB)
	Data	32 KB	Data
SRAM		256 KB	SRAM
Host Interface Type		USB 2.0 FS	USB Type C
Debugging Port		SWD	10-pin connector
Input Buttons		Reset x 1, event input x 2	TACT switch

Reference Document

The following documents are available on www.abovsemi.com.

- A34G43x User's Manual
- A34G43x Datasheet

For information on A34G43A relevant technical materials, visit our official website.

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1. Ordering Information

To order the starter kit board product of microcontrollers, refer to Table 2.

For more information about the starter kit board, please visit the ABOV website (www.abovsemi.com).

Table 2. Ordering Information

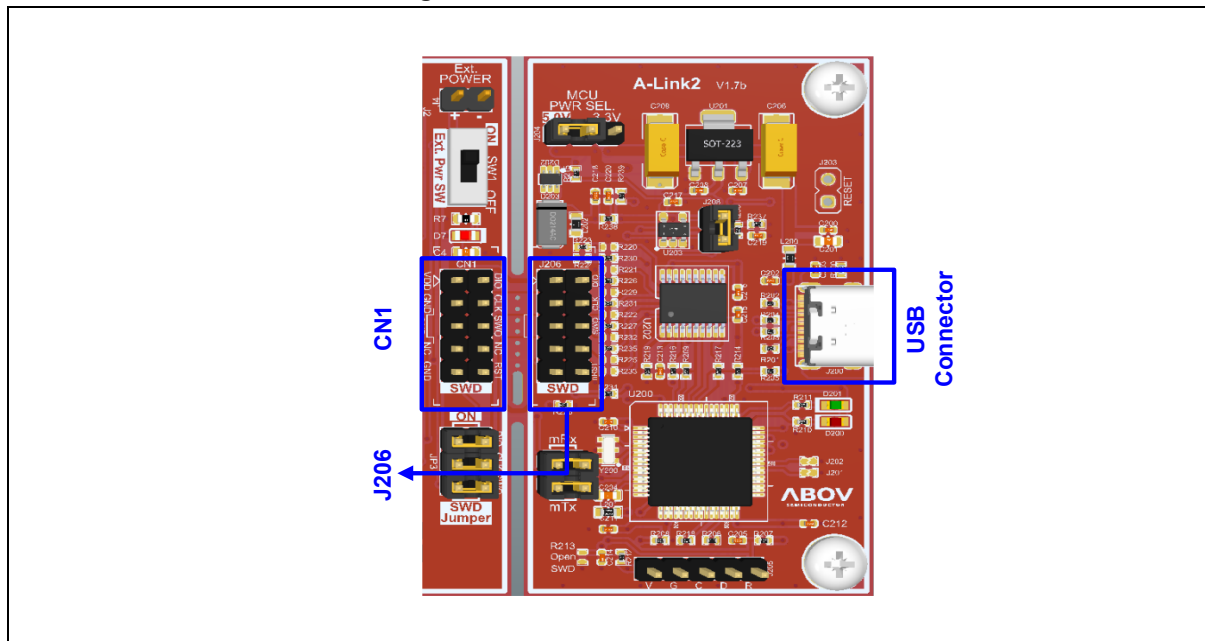
Order Code	Product Name	Microcontroller
StarterKit-A34G43AYLN	STK-A34G43A-YLN-A	A34G43AYL2N

2. Hardware Configuration: A-Link Part

In this chapter, the A-Link part of the starter kit board is described.

2.1 A-Link Part

Figure 2. A-Link Part of Starter Kit



2.1.1 J200: USB Type C Connector

- Power supply by USB connector from host computer
- A-Link CMSIS-DAP compatible debugger
- USB-to-UART serial port

2.1.2 CN1: SWD Connector on Microcontroller Part

Table 3. SWD Connector Pin Description on Microcontroller Part (CN1)

Pin Name	Pin Number	Pin Number	Pin Name
V-Sense	1	2	SWDIO / TMS
GND	3	4	SWCLK / TCK
GND	5	6	SWO / TDO
N.C.	7	8	N.C. / TDI
GND	9	10	nRESET

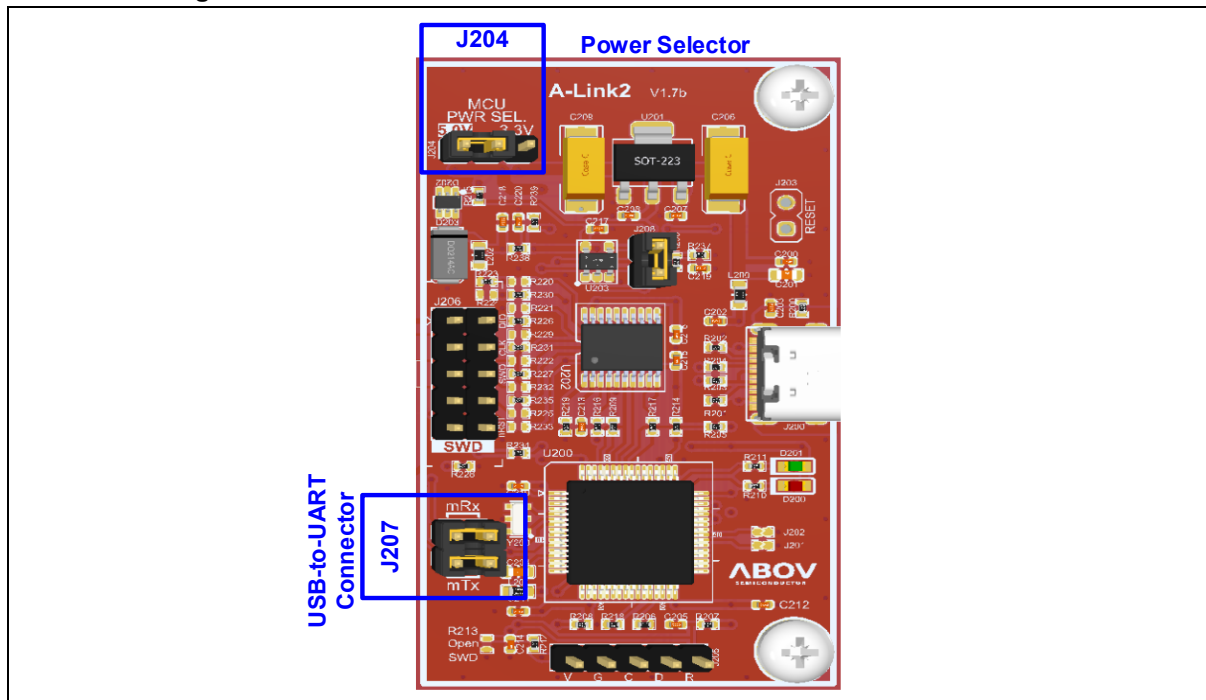
2.1.3 J206: SWD Connector on A-Link Part

Table 4. SWD Connector Pin Description on A-Link Part (J206)

Pin Name	Pin Number	Pin Number	Pin Name
V-Sense	1	2	SWDIO
GND	3	4	SWCLK
GND	5	6	SWO
N.C.	7	8	N.C.
GND	9	10	nRESET

2.2 Power Selector and USB-to-UART Connector

Figure 3. Power Selector and USB-to-UART Connector on A-Link Part



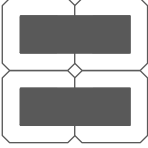
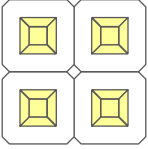
2.2.1 J204: Microcontroller Power Selector

Table 5. Microcontroller Power Selector (J204)

J204	VDD
	Use a 5.0 V power supply by USB connector (J204).
	Use a 3.3 V power supply by USB connector (J204).
	Use external power supply from microcontroller part (J4). See section 3.1.1.

2.2.2 J207: USB-to-UART Connection

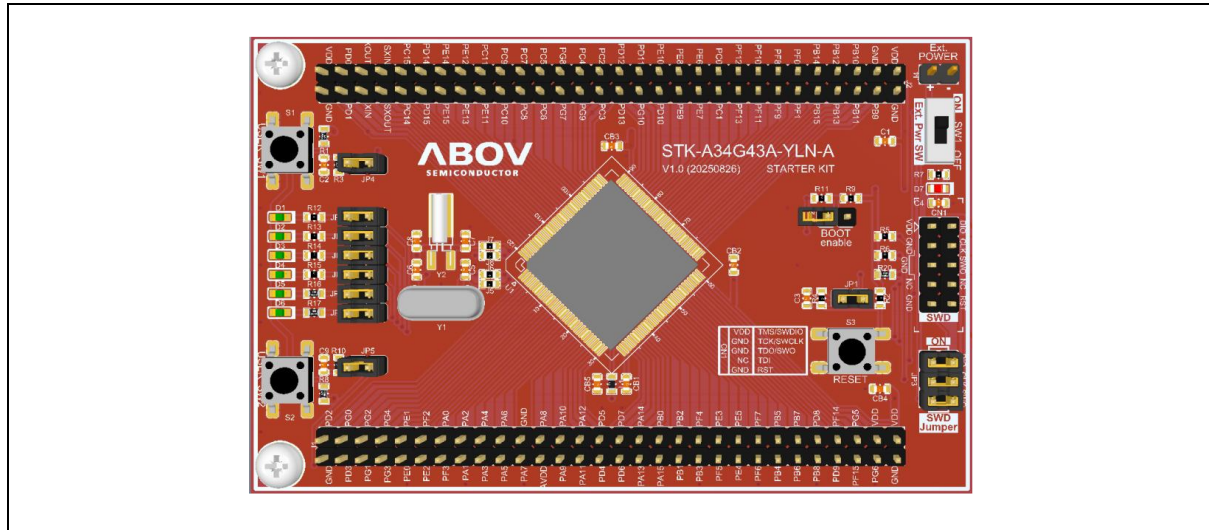
Table 6. USB-to-UART Connector (J207)

J207	Pin	Description
	Short	PC14/RXD pin is connected to the host TXD signal. PC15/TXD pin is connected to the host RXD signal.
	Open	PC14/RXD pin is not connected with the host. PC15/TXD pin is not connected with the host.

3. Hardware Configuration: Microcontroller Part

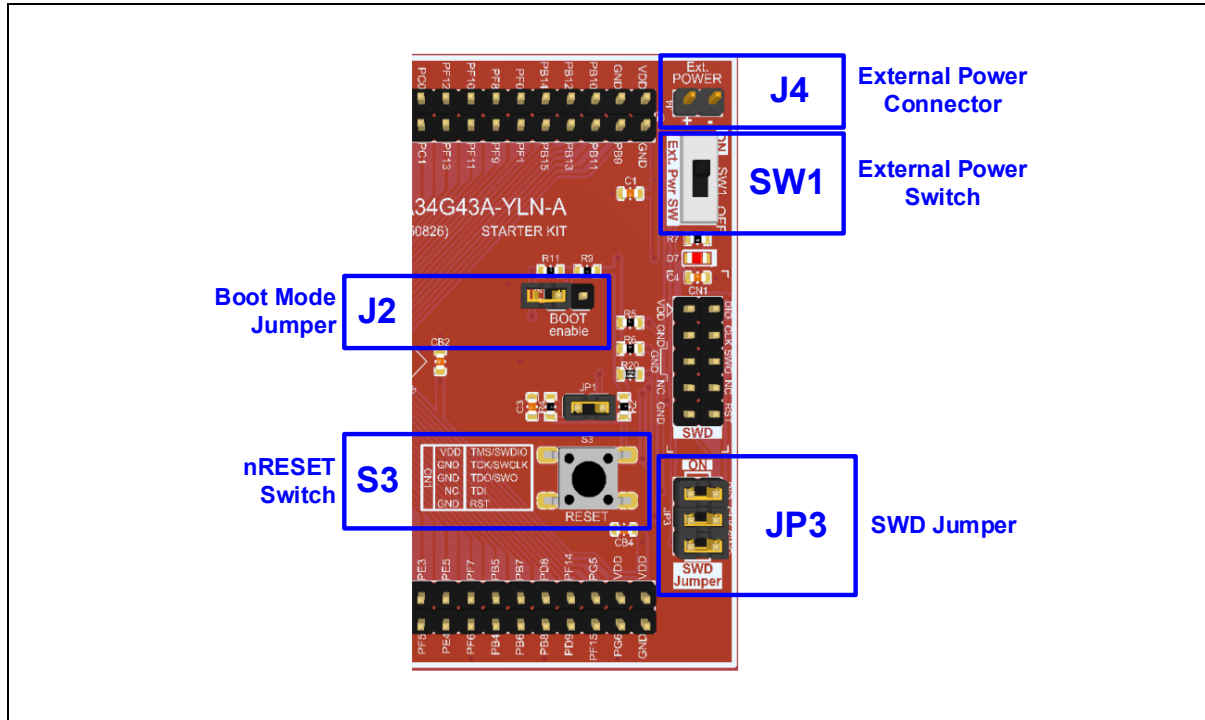
Chapter 3 describes the power, nRESET, BOOT mode, jumper and switches, and LEDs on the starter kit board.

Figure 4. Microcontroller Part of Starter Kit Board



3.1 External Power Connector and Switch, BOOT Mode Jumper, nRESET Button and SWD Jumper

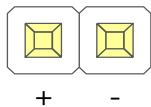
Figure 5. External Power Connector (J4) and Switch (SW1), BOOT Mode Jumper (JP2), nRESET Button (S3) and SWD Switch (JP3)



3.1.1 J4: External Power Connector

If the USB connector (J200) is not used for power supply, the J4 pin can be used to supply external power to the microcontroller part.

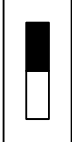
Table 7. Pin Description of External Power Connector (J4)

J4	Pin Name	Description
	VDD	2.7 to 5.0 V
	GND	0 V

3.1.2 SW1: External Power Switch

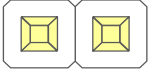
Depending on the SW1 on and off conditions, an external power source can be selected as the microcontroller power source.

Table 8. Usage of SWD Switch

SW1 State	ON	SW1 State	OFF
	External power is connected to A-Link.		External power pin is disconnected from A-Link.

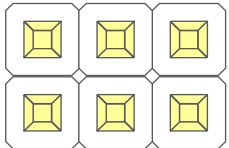
3.1.3 JP2: BOOT Mode Jumper

Table 9. Usage of BOOT Jumper (JP2)

JP2	Connection State	Description
	Short	BOOT Mode
	Open	Normal Mode

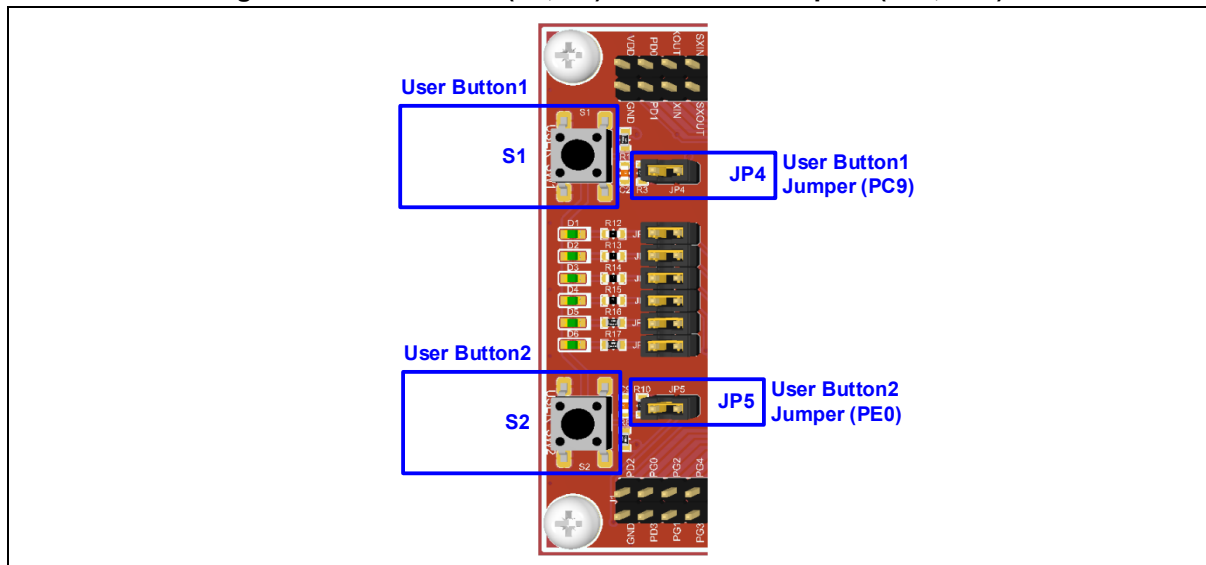
3.1.4 JP3: SWD Connection Jumper

Table 10. Usage of SWD Jumper (JP3)

JP3	Connection State	Description
	Short	SWCLK pin is connected to the host SWCLK signal. SWDIO pin is connected to the host SWDIO signal. SWO pin is connected to the host SWO signal.
	Open	SWCLK pin is not connected with the host. SWDIO pin is not connected with the host. SWO pin is not connected with the host.

3.2 User Button

Figure 6. User Buttons (S1, S2) and Button Jumpers (JP4, JP5)



3.2.1 S1, S2, JP4, JP5: Button and Button Jumpers

Table 11. Description of Input Buttons (S1, S2)

Switch	Function	Connection pin
S1	Ext. user input switch	PC9/T8IO/CLKO connected with JP4.
S2	Ext. user input switch	PE0 connected with JP5.

Table 12. Usage of User Button Jumper (J4)

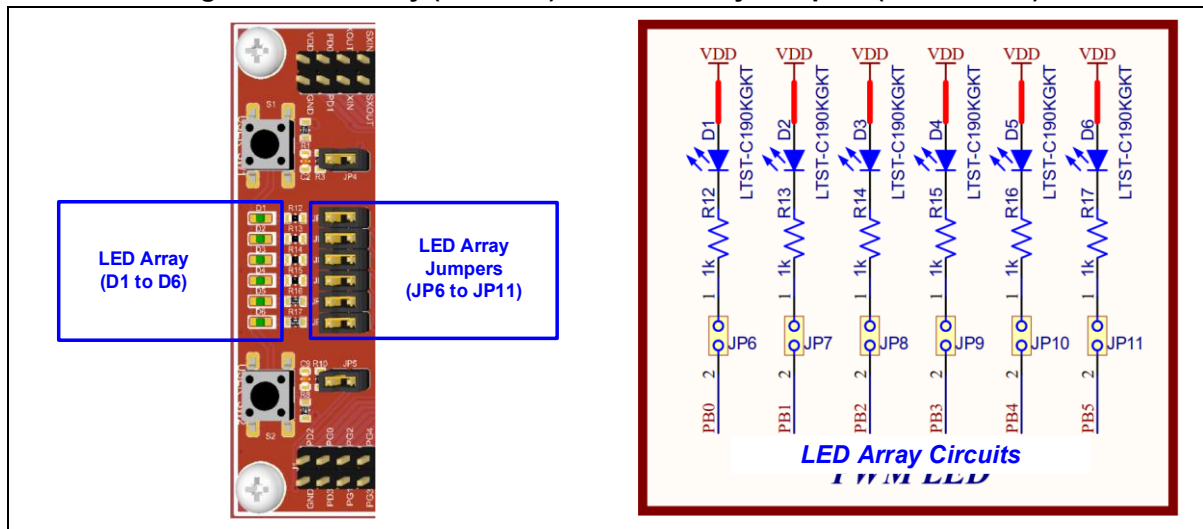
J5	Connection Status	Description
	Short	Connected to PE0 pin.
	Open	Not connected to S1.

Table 13. Usage of User Button Jumper (J5)

J6	Connection Status	Description
	Short	Connected to PC9/T8IO/CLKO pin.
	Open	Not connected to S2.

3.3 LED Array

Figure 7. LED Array (D1 to D6) and LED Array Jumpers (JP6 to JP11)

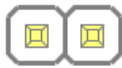


3.3.1 LED Array and Jumpers

Table 14. LED Array Pin Description (D1 to D6)

LED Name	LED Jumper	Connected Pin
D1	JP6	PB0/MP0UH
D2	JP7	PB1/MP0UL
D3	JP8	PB2/MP0VH
D4	JP9	PB3/MP0VL
D5	JP10	PB4/MP0WH
D6	JP11	PB5/MP0WL

Table 15. Usage of LED Array Jumpers (JP6 to JP11)

JP10 to JP15	Connection Status	Description
	Short	Use LED.
	Open	Not use LED.

3.4 Pin Assignment

Figure 8. Pin Assignment of Starter Kit-A34G43AYLN

1	GND	PD2/MOS1/SC13	2
3	PD3/MISO1/SDA3	PG0/SS2	4
5	PG1/SCK2	PG2/MOSI2	6
7	PG3/MISO2	PG4	8
9	PE0	PE1/SS8/AN20/CP2A	10
11	PE2/SC8/AN21/CP2B	PF2/RXD8/MISO8/AN22/CP3A	12
13	PF3/TXD8/MOS8/AN23/CP3B	PA0/SS7/AN0/DA/CO	14
15	PA1/SC7/AN1/DA/CO	PA2/RXD7/MISO7/AN2	16
17	PA3/TXD7/MOS7/AN3	PA4/SS2/TO0/AN4/CP0A0	18
19	PA5/SC2/T1/IO/AN5/CP0A1	PA6/MISO2/T2/IO/AN6/CP0A2	20
21	PA7/MOS2/T3/IO/AN7/CP0B	AGND	22
23	AVDD	PA8/RXD2/PWM0A/CANFD1_RX/AN8/CP1A0	24
25	PA9/TXD2/PWM1A/CANFD1_TX/AN9/CP1A1	PA10/RXD1/PWM2A/CANFD_STB/AN10/CP1A2	26
27	PA11/TXD1/PWM3A/SC1/AN11/CP1B	PA12/SS0/PWM4A/SDA1/AN12	28
29	PD4/SC11/PWM5A/AN16	PD5/SDA1/PWM6A/AN17	30
31	VDD	GND	32
33	PD6/TXD2/PWM7A/AN18	PD7/RXD2/PWM8A/AN19	34
35	PA13/SC0/PWM8A/AN13	PA14/MOS0/PWM0B/AN14	36
37	PA15/MOS0/PWM1B/AN15	PB0/SS3/PWM2B/MP0UH	38
39	PB1/SC03/PWM3B/MP0UL	PB2/MOS3/PWM4B/MP0VH	40
41	PB3/MISO3/PWM5B/MP0VL	PF4/TXD5/PWM6B/MOSI5	42
43	PF5/RXD5/PWM7B/MISO5	PE3/SS0/PWM8B/SCK5	44
45	PE4/SDA0/PWM9B/SS5	PE5/T3/IO/CANFD0_STBY	46
47	PF6/SC13/CANFD0_TX	PF7/SDA3/CANFD0_RX	48
49	PB4/T8/IO/MP0VH	PB5/T9/IO/MP0WL	50
51	PB6/SS02/MP0PRT	PB7/SDA2/MP0OCP	52
53	PB8/RXD3/MP0PRT	PD8/RXD12/T8/IO/MDTO	54
55	PD9/TXD12/T7/IO/STBY0	PF14/PWM0A/SS11	56
57	PF15/PWM1A/SCK11	PG5/RXD11/PWM2A/MISO11	58
59	PG6/TXD11/PWM3A/MOSI11	VDD	60
120	GND	VDD	119
118	PD1/SCK1	PD0/SS1	117
116	XIN	XOUT	115
114	SKOUT	SKIN	113
112	PC14/MOSI0/RXD0	PC15/MISO0/TXD0	111
110	PD15/SCK0	PD14/SS0	109
108	PE15	PE14/RXD4/T3/IO/MISO4	107
106	PE13/TXD4/T2/IO/MOSI4	PE12/SDA1/T1/IO/SCK4	105
104	PE11/SC11/T0/IO/SS4	PC11/T9/IO/BOOT	103
102	PC10/RESET	PC9/T8/IO/CLKD	101
100	PC8/SDA0/T4/IO/CP30	PC7/SC13/T3/IO/CANFD_STB/YCP20	99
98	PC6/TXD1/T2/IO/CANFD0_TX/CP10	PC5/RXD1/T1/IO/CANFD0_RX/CP00	97
96	PG7	PG8/RXD3	95
94	PG9/TXD3	PC4/T0/IO/TRST	93
92	PC3/TDI	PC2/TDO/SWO	91
90	GND	VDD	89
88	PD13/QSP1_SS/T30	PD12/QSP1_SCK/T2IO	87
86	PG10/QSP1_Q0/PWM9B	PD11/QSP1_Q1/T1IO	85
84	PD10/QSP1_Q2/T0IO	PE10/QSP1_Q3/T9IO	83
82	PE9/T8/IO/SS6	PE8/T7/IO/SCK6	81
80	PE7/TXD6/T8/IO/MOSI6	PE6/RXD6/T9/IO/MISO6	79
78	PC1/TXD0/TMS/SWDIO	PC0/RXD0/CK/SWCLK	77
76	PF13/TXD10/PWM8B/MOSI10	PF12/RXD10/PWM7B/MISO10	75
74	PF11/PWM8B/SCK10	PF10/PWM9B/SS10	73
72	PF9/TXD9/PWM4B/MOSI9	PF8/RXD9/PWM3B/MISO9	71
70	PF1/PWM2B/SCK9	PF0/PWM1B/SS9	69
68	PB15/QSP1_SS/PWM8B/MP1WL	PB14/QSP1_SCK/PWM9A/MP1WH	67
66	PB13/QSP1_Q0/PWM8A/MP1VL	PB12/QSP1_Q1/PWM7A/MP1VH	65
64	PB11/QSP1_Q2/PWM8A/MP1UL	PB10/QSP1_Q3/PWM5A/MP1UH	63
62	PB9/TXD3/PWM4A/MP10CP	GND	61

VDD	PC
GND	PD
PA	PE
PB	PF
PG	HSE/LSE

Revision History

Revision	Date	Notes
1.00	Dec. 24, 2025	Initial release

Korea**Regional Office, Seoul
R&D, Marketing & Sales**

8th Fl., 330, Yeongdong-daero, Gangnam-gu, Seoul,
06177, Korea

Tel: +82-2-2193-2200
Fax: +82-2-508-6903

www.abovsemi.com

HQ, Ochang**R&D, QA, and Test Center**

37, Gangni 1-gil, Ochang-eup, Cheongwon-gun,
Chungcheongbuk-do, 28126, Korea

Tel: +82-43-219-5200
Fax: +82-43-217-3534

www.abovsemi.com

Domestic Sales

Tel: +82-2-2193-2206

Fax: +82-2-508-6903

Email: sales_kr@abov.co.kr

Global Sales

Tel: +82-2-2193-2281

Fax: +82-2-508-6903

Email: sales_gl@abov.co.kr

China Sales

Tel: +86-755-8287-2205

Fax: +86-755-8287-2204

Email: sales_cn@abov.co.kr

Japan Sales

Email: sales_jp@abov.co.kr

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