

A96G174
Starter Kit
STK-A96G174-FRN-A

Starter Kit H/W Manual

Version 2.01

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1. Starter Kit Board Overview

In this chapter, users can see the Starter Kit Board’s exterior in Figure 1, and learn the main features of it by reading Table 1.

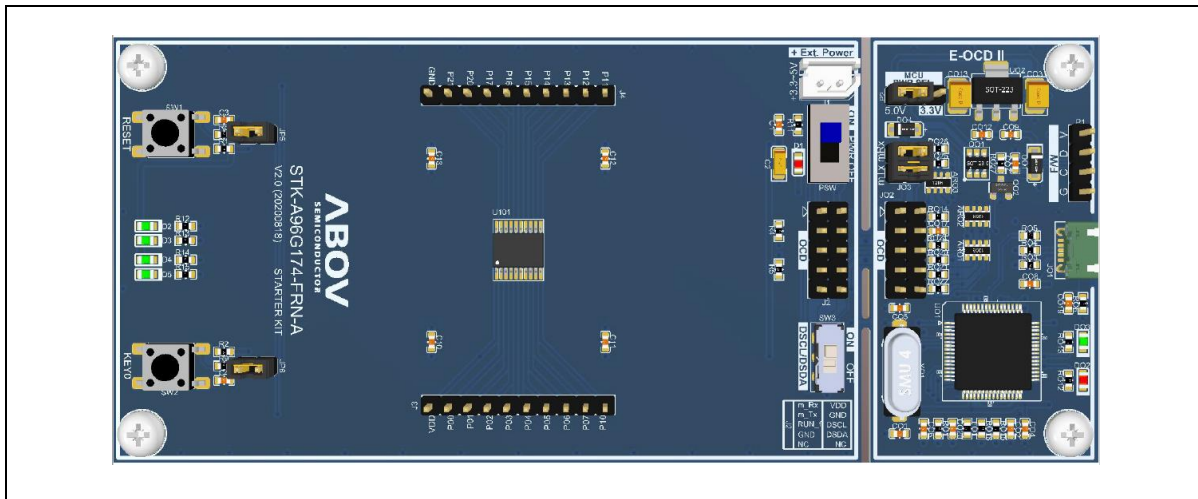


Figure 1. Starter Kit Board

Table 1. Main Features of Starter Kit Board

Main feature	Specifications	Remark
MCU	A96G174	Enhanced 8051
Operating clock	Internal 16MHz	HSI
ROM	8KB flash ROM	Code
XRAM	256B	Data
IRAM	256B	Data
Communication Port	USB 2.0	Micro USB Type B 5-pin
Input Buttons	1 reset, 2 event input	TACT Switch

2. E-OCD II Part

2.1 E-OCD II

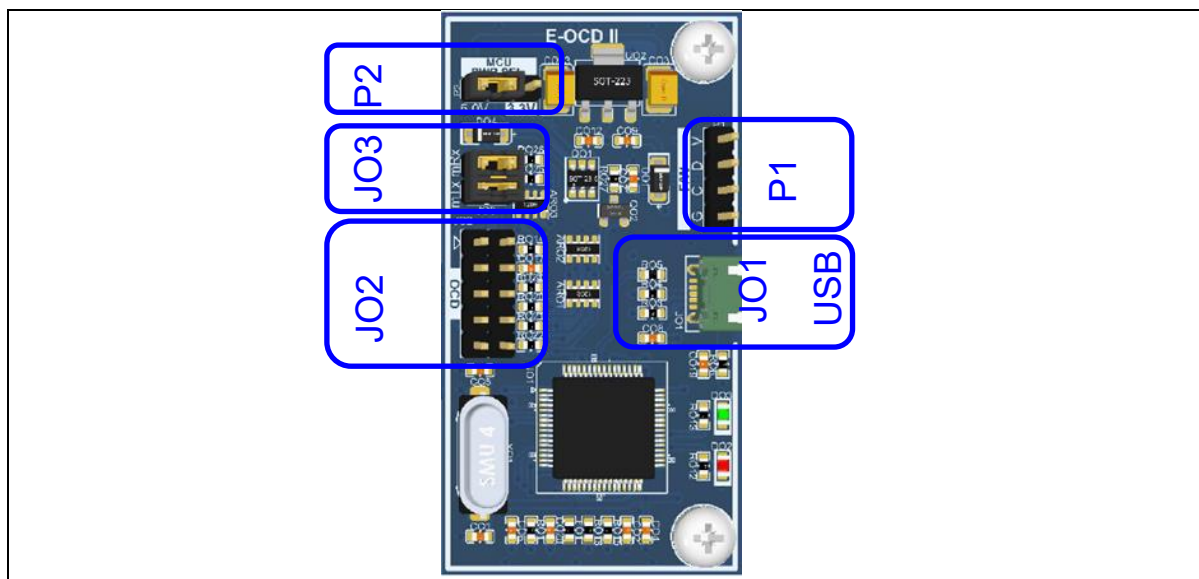


Figure 2. UART to USB Section

2.1.1 JO1: E-OCD II USB Connector

- Micro USB type B
- A 1.5M USB cable is required.
- The E-OCD II is included.

2.1.2 P2 (Pin Header): MCU Power Connection

The operating voltage is different for each device. Refer to the Device spec to use 5V power.

Table 2. P2 MCU Power Selector

P2	VDD	P2	VDD	P2	VDD
	5.0V		3.3V		External Power





2.1.3 JO2 (Pin Header): E-OCD II Connector

Table 3. E-OCD II Writing Interface

Pin name	Pin number	Pin number	Pin name
MCU_RxD	1	2	VDD
MCU_RxD	3	4	GND
RUN_flag	5	6	DSCL
GND	7	8	DSDA
NC	9	10	NC

2.1.4 JO3 : UART Connector (No function)

Table 4. JO3 UART Connection

JO3(m_RXD)	Pin	Connection
	Short	MCU RXD(MISO) ← PC TXD
	Open	MCU RXD(MISO) Open
JO3(m_TXD)	Pin	Connection
	Short	MCU TXD(MOSI) ← PC RXD
	Open	MCU TXD(MOSI) Open

2.1.5 P1(Pin Header) : SWD Connector

- It is used to update F/W of E-OCD II
- User should not use it

3. Device Part

3.1 Power, E-OCD II Interface and Switch

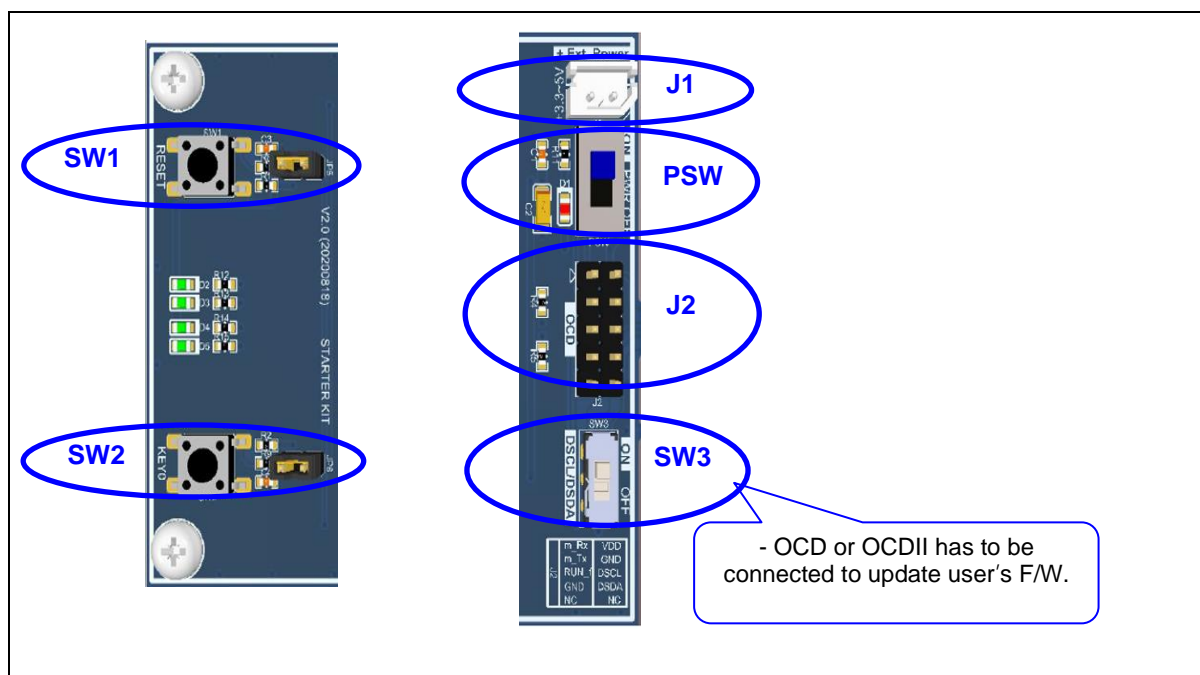
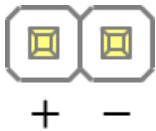


Figure 3. Power, E-OCD II Interface and Switch

3.1.1 J1: External Power (Not Used)

If E-OCD II Power is not used in P2 (Pin Header): MCU Power Connection, Use External Power.

Table 5. J1 Description and Connection

J1	Pin name	Connection
	VDD	+3.3 ~ 5.0V
	GND	0V

3.1.2 PSW: VDD Power Switch (ON/OFF)



Using PSW, users can turn on and turn off the power.

- On : Power on
- Off : Power off

3.1.3 SW1, SW2: Switch**Table 6. SW1, SW2 Description and Function**

Switch	Function	JUMP
SW1	RESETB(P02)	JP5
SW2	P13	JP6

3.1.4 SW3 : DSCL/DSDA OCD Connection-Switch**Table 7. SW3 Description and Function**

SW3	ON	SW3	OFF
	DSCL/DSDA ON		DSCL/DSDA OFF

3.1.5 J2: E-OCD II Interface**Table 8. E-OCD II Debug Interface**

Pin name	Pin number	Pin number	Pin name
NC (RXD)	1	2	VDD
NC (TXD)	3	4	GND
RUN_flag	5	6	DSCL
GND	7	8	DSDA
NC	9	10	RESETB

3.2 LED Display (D2 – D5)

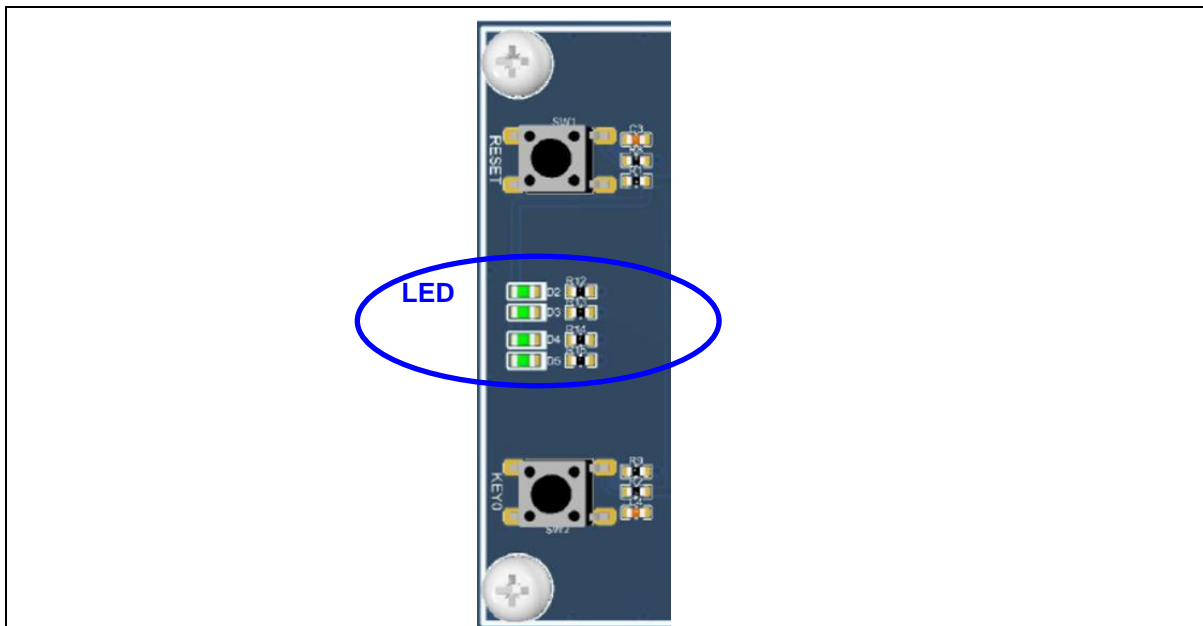


Figure 4. LED Display

3.2.1 LED Schematic

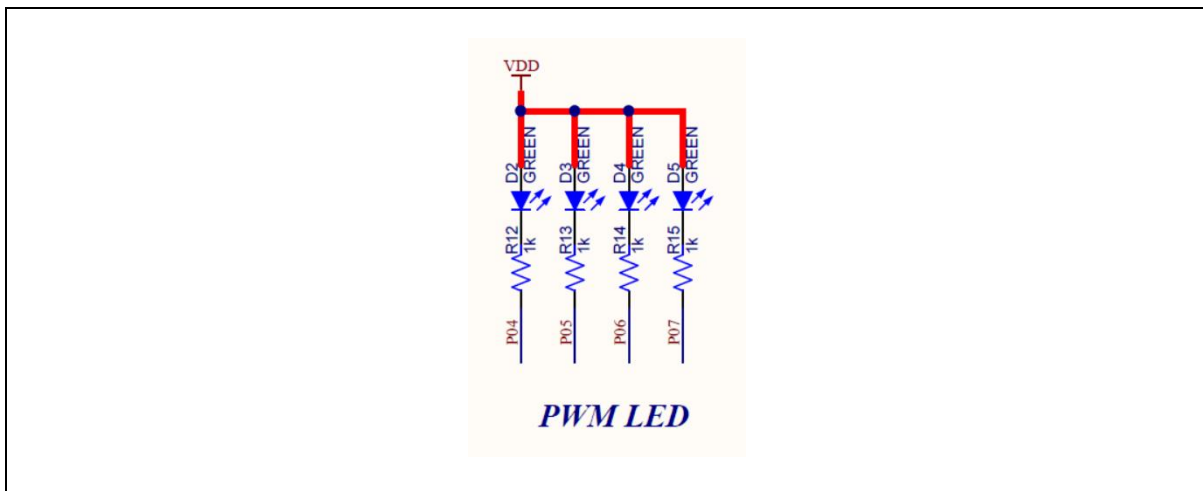


Figure 5. LED Schematic

3.2.2 LED Pin Assignment

Table 9. LED Pin Description

LED name	PORT
D2	P04
D3	P05
D4	P06
D5	P07

3.3 Pin Assignment



Figure 6. Pin Header

4. E-OCD II and MCU Power Connection

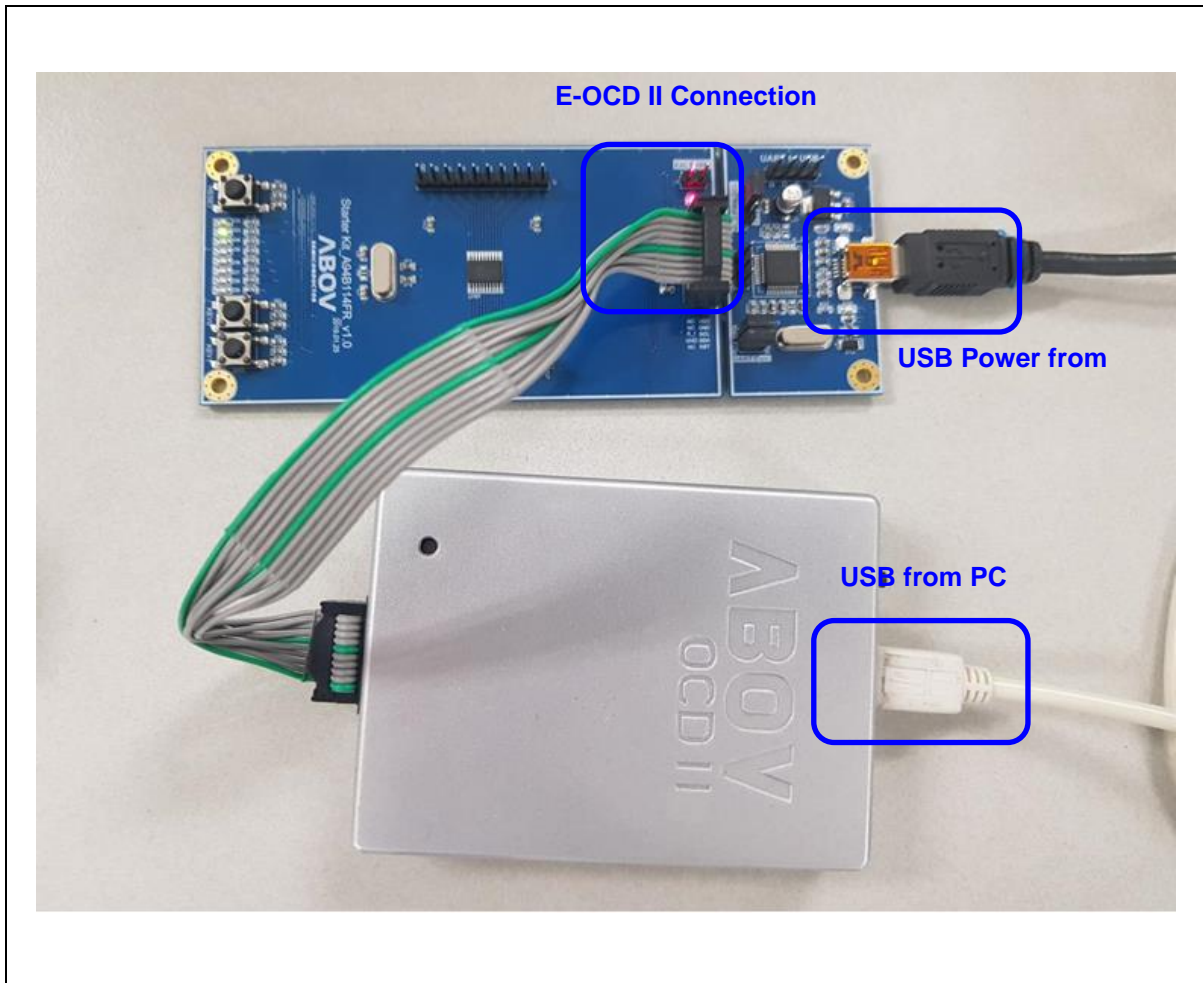


Figure 7. E-OCD II and MCU Power Connection to Starter Kit

Revision History

Date	Version	Description
19.10.30	1.00	Document created
21.02.01	2.00	H/W design modified to V2.0. Updated OCD II Lite -> E-OCD II
22.10.24	2.01	Revised the font of this document

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