

**A96G150**  
Starter Kit  
STK-A96G150-SNN-A

**Starter Kit H/W Manual**

Version 1.01

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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.

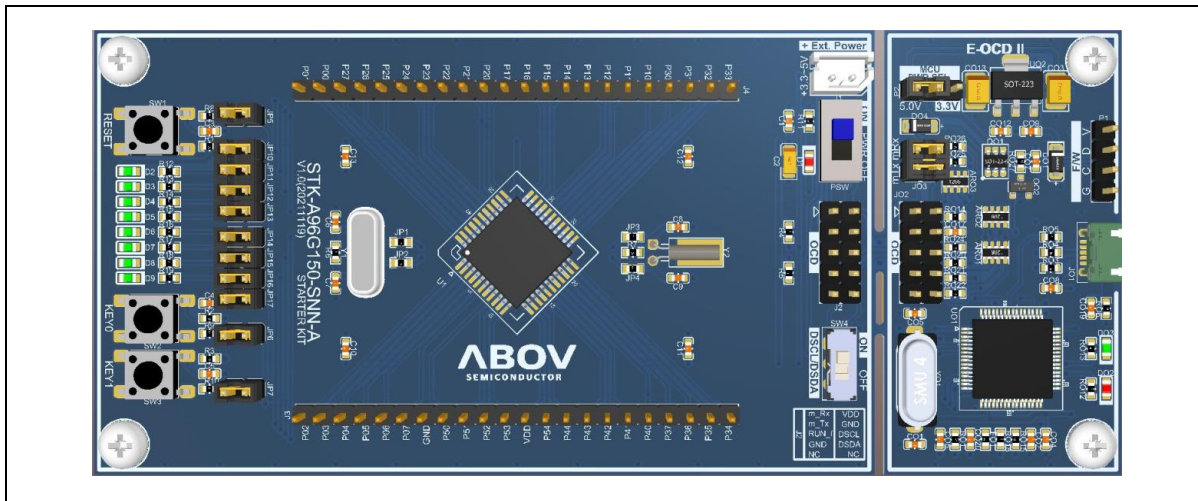


Figure 1. Starter Kit Board

Table 1. Main Features of Starter Kit Board

Main feature	Specifications	Remark
MCU	A96G150	Enhanced 8051
Operating clock	Internal 16MHz	HSI
ROM	64KB flash ROM 2KB EEPROM	Code
XRAM	2304B	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

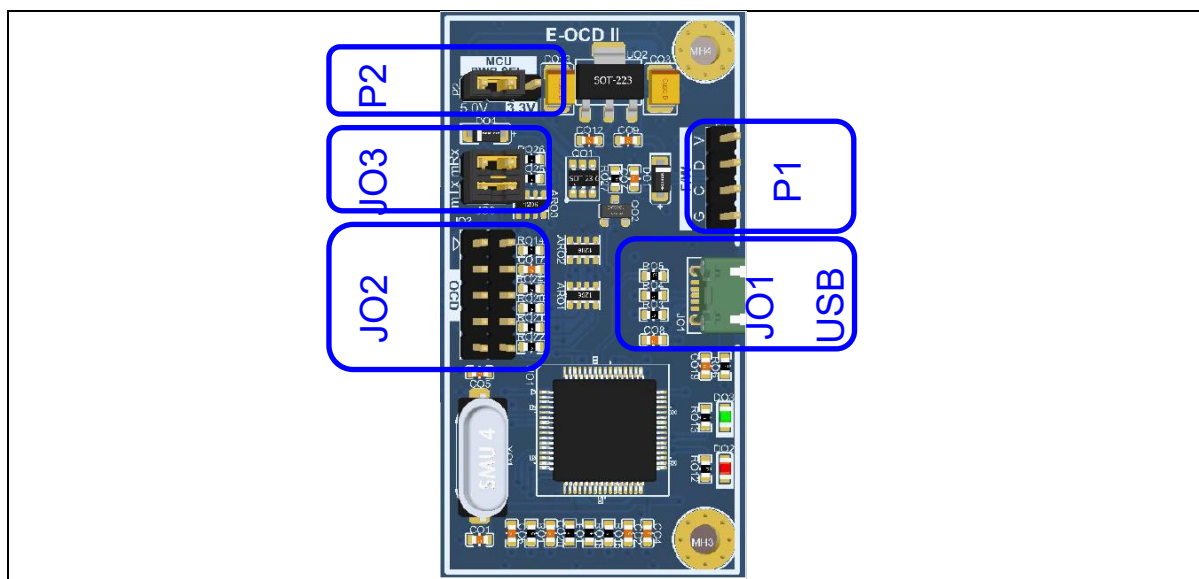


Figure 2. UART to USB Section

#### 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(mRX)	Pin	Connection
	Short	MCU RXD0 ← PC TXD
	Open	MCU RXD0 Open
JO3(mTX)	Pin	Connection
	Short	MCU TXD0 ← PC RXD
	Open	MCU TXD0 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

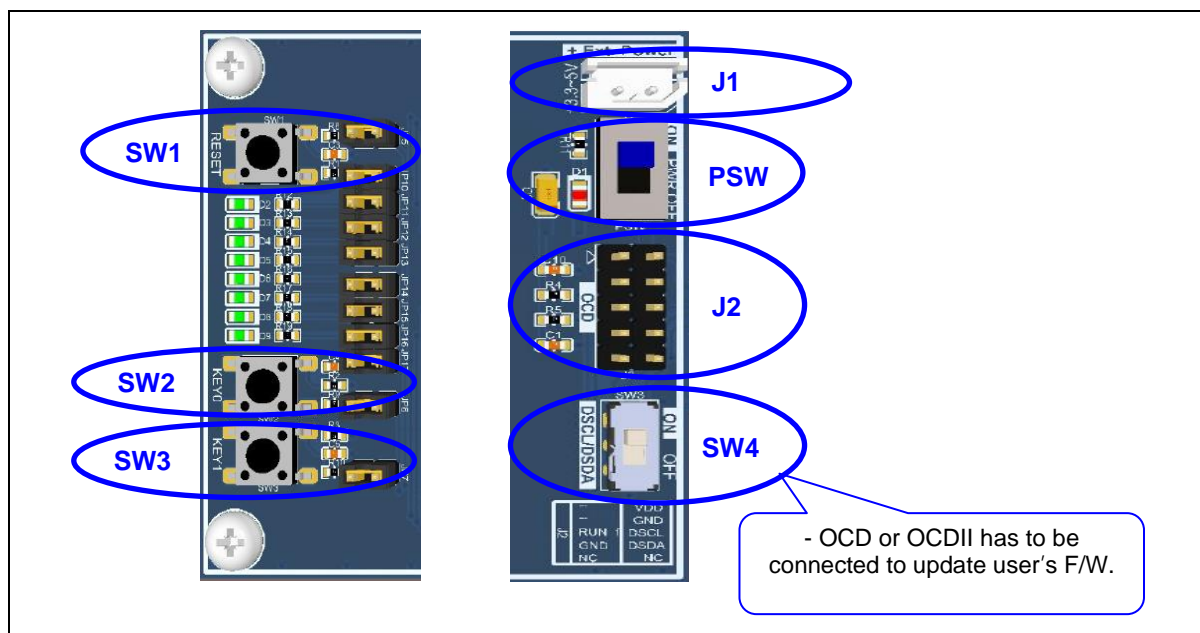
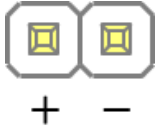


Figure 3. Power, E-OCD II Interface and Switch

##### 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, SW3 : Switch

Table 6. SW1, SW2, SW3 Description and Function

Switch	Function	JUMP
SW1	RESETB(P52)	JP5
SW2	P04	JP6
SW3	P40	JP7

## 3.1.4 SW4 : DSCL/DSDA OCD Connection-Switch

Table 7. SW4 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	NC (RESETB)



### 3.2 LED Display (D2 – D3)

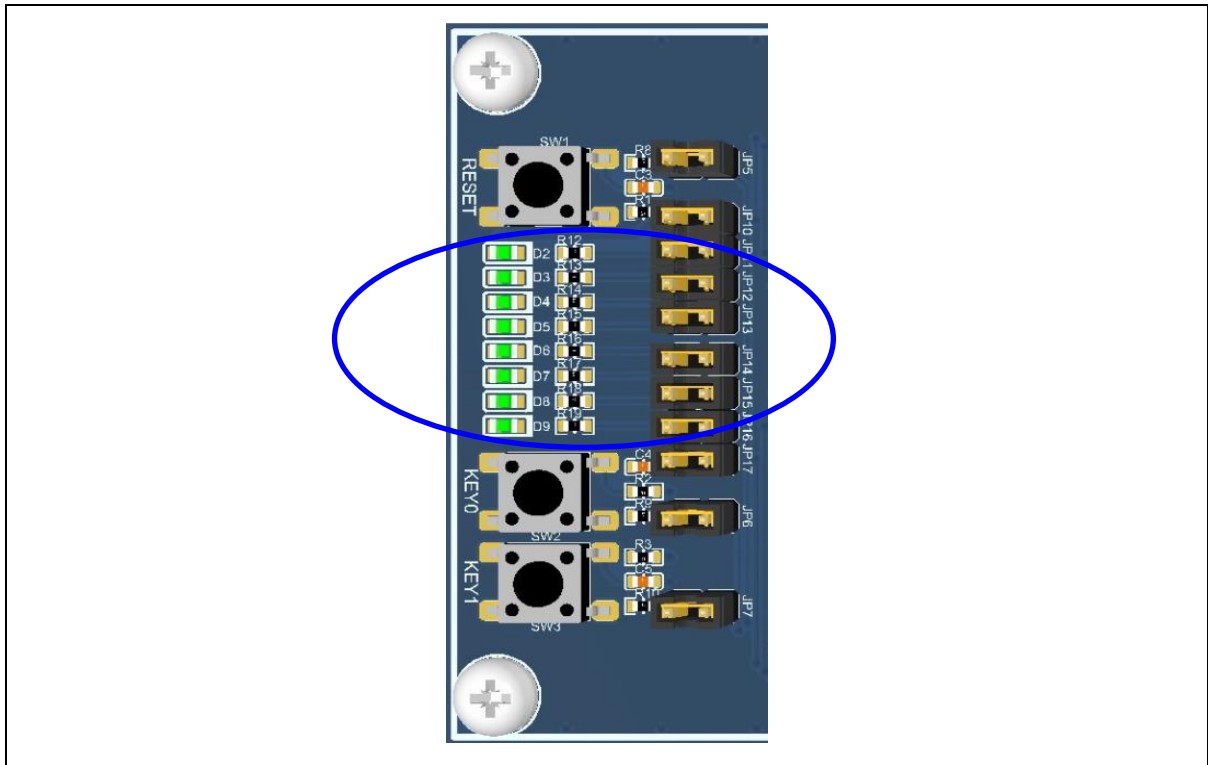


Figure 4. LED Display

### 3.2.1 LED Schematic

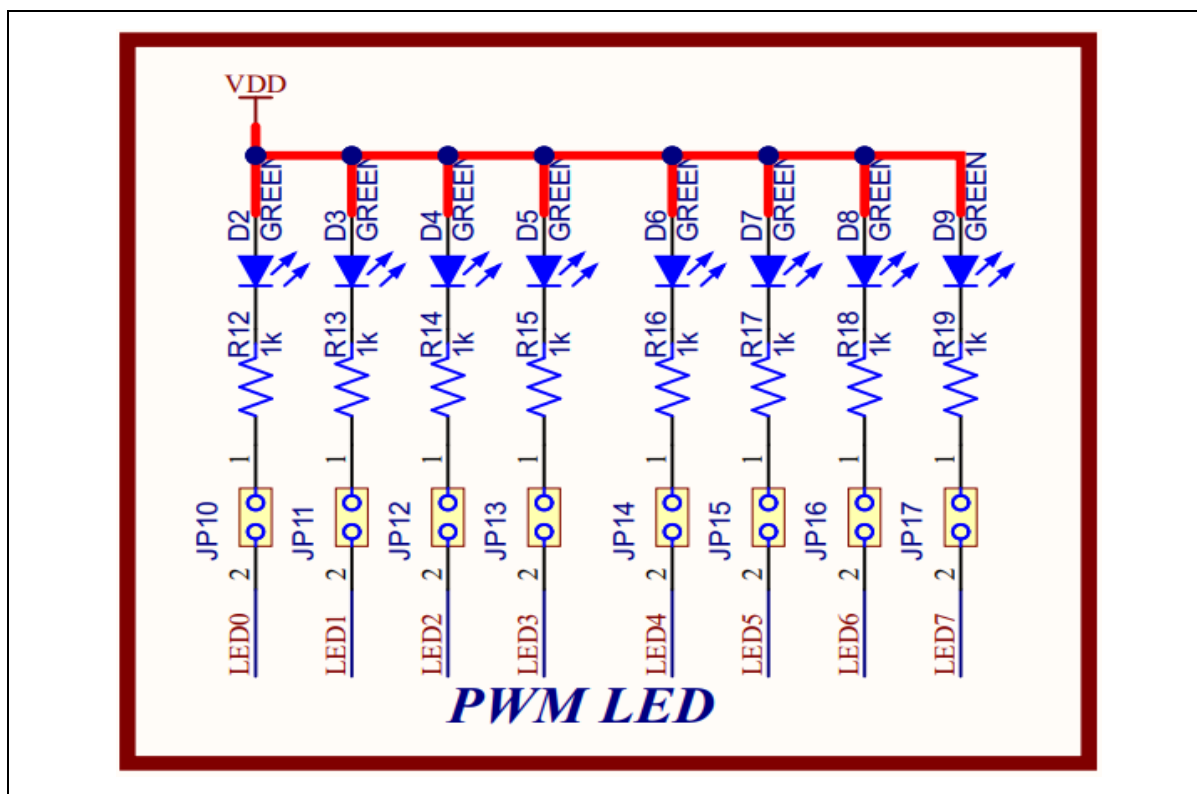


Figure 5. LED Schematic

### 3.2.2 LED Pin Assignment

Table 9. LED Pin Description

LED name	PORT	JUMP
D2	P30	JP10
D3	P31	JP11
D4	P32	JP12
D5	P33	JP13
D6	P34	JP14
D7	P35	JP15
D8	P36	JP16
D9	P37	JP17

### 3.3 Pin Assignment

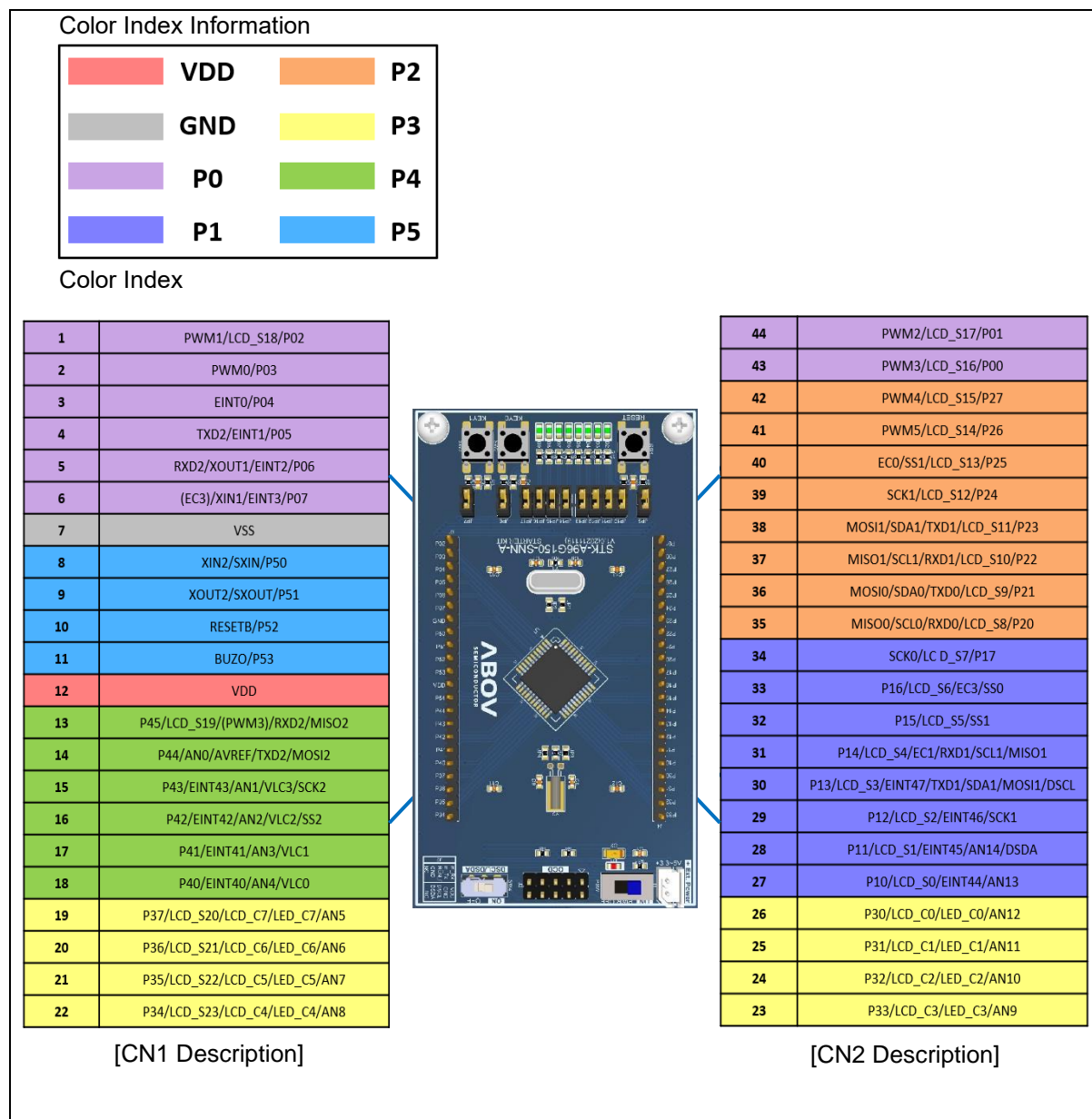


Figure 6. Pin Header

### 4. E-OCD II and MCU Power Connection

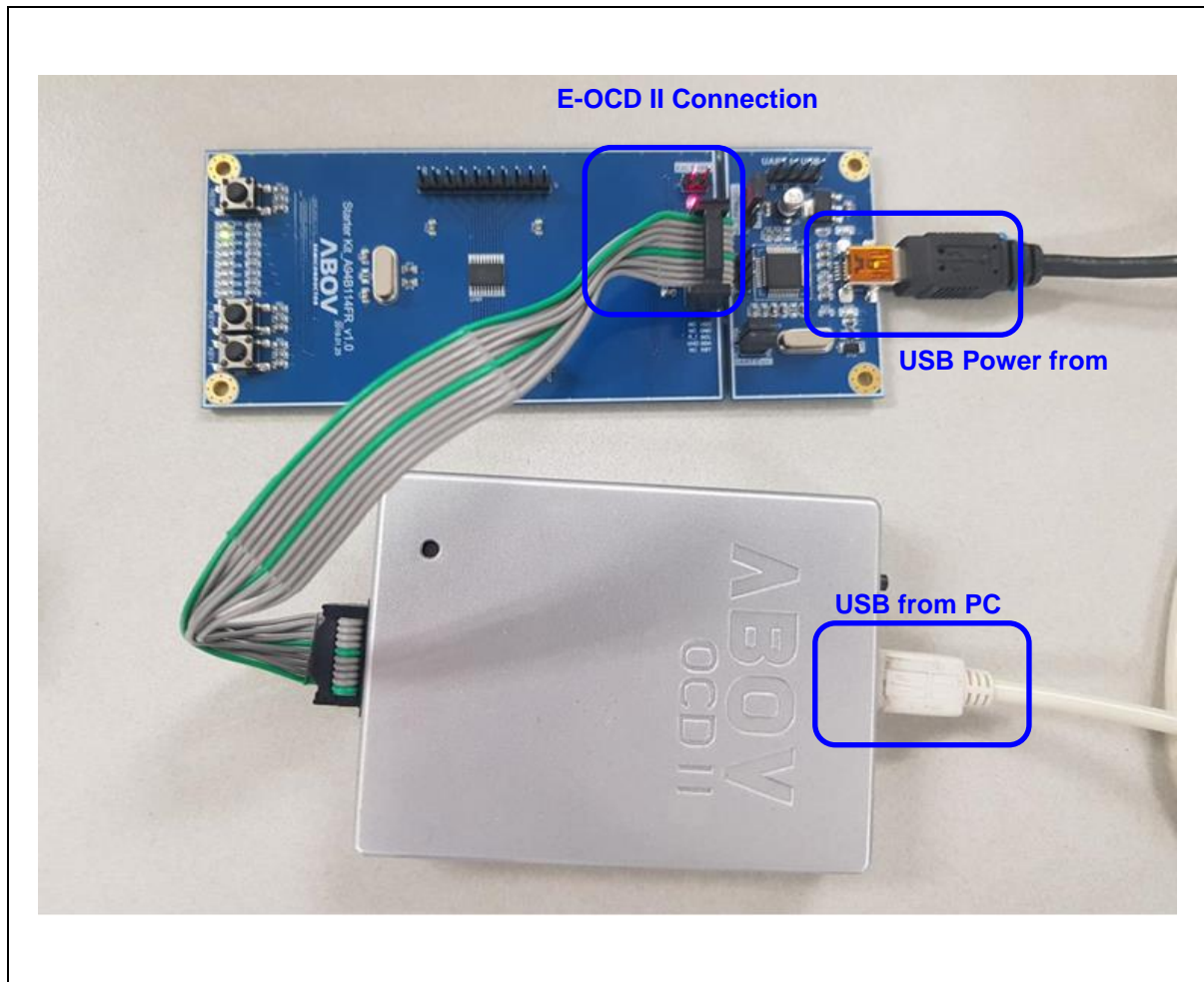


Figure 7. E-OCD II and MCU Power Connection to Starter Kit

## Revision History

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