

A96G166
Starter Kit
STK-A96G166-KNN-A

Starter Kit H/W Manual

Version 1.11

Contents

1. Starter Kit Board Overview.....	3
2. OCD Part.....	4
2.1 OCD	4
2.1.1 JO1: OCD USB Connector	4
2.1.2 PO2 (Pin Header): MCU Power Connection	4
2.1.3 JO2 (Pin Header): OCD Connector	5
3. Device Part.....	6
3.1 Power, OCD Interface and Switch.....	6
3.1.1 J1: External Power (Not Used).....	6
3.1.2 PSW: VDD Power Switch (ON/OFF).....	6
3.1.3 SW1, SW2 and SW3 : Switch.....	7
3.1.4 J2: OCD Interface	7
3.2 LED Display (D2 – D9).....	8
3.2.1 LED Schematic.....	8
3.2.2 LED Pin Assignment.....	9
3.3 Pin Assignment.....	10
4. OCD and MCU Power Connection	11
Revision History	12

List of Figures

Figure 1. Starter Kit Board	3
Figure 2. UART to USB Section	4
Figure 3. Power, OCD Interface and Switch	6
Figure 4. LED Display	8
Figure 5. LED Schematic	8
Figure 6. Pin Header	10
Figure 7. OCD and MCU Power Connection to Starter Kit	11

List of Tables

Table 1. Main Features of Starter Kit Board.....	3
Table 2. PO2 MCU Power Selector.....	4
Table 3. OCD Writing Interface	5
Table 4. J1 Description and Connection	6
Table 5. SW1, SW2 and SW3 Description and Function	7
Table 6. OCD Debug Interface	7
Table 7. LED Pin Description	9

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.

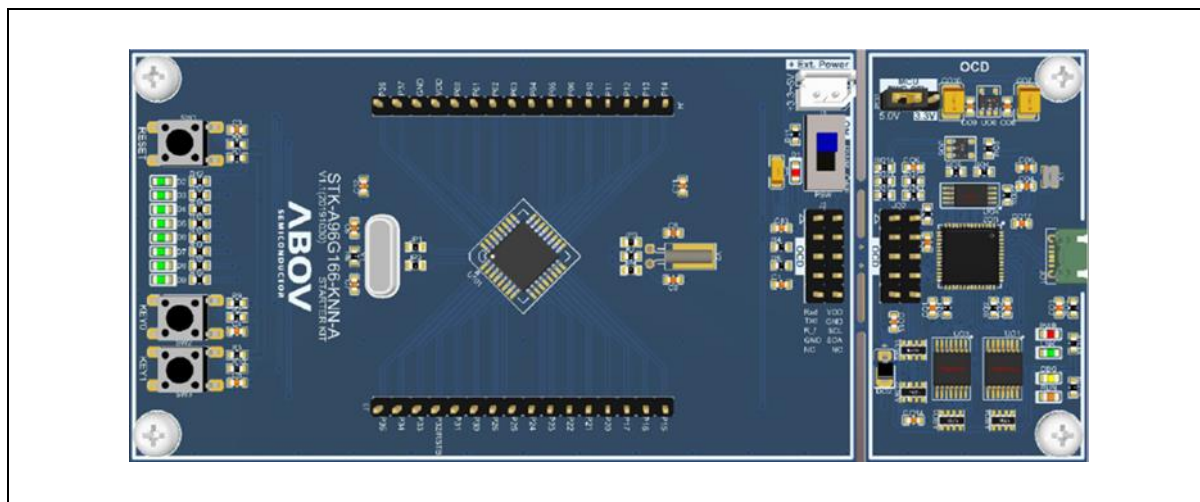


Figure 1. Starter Kit Board

Table 1. Main Features of Starter Kit Board

Main feature	Specifications	Remark
MCU	A96G166	High Speed 8051 CPU
Operating clock	Int. 16MHz (Ext. 12MHz)	HSI, HSE
ROM	16KB flash ROM	Code
XRAM	512B	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. OCD Part

2.1 OCD

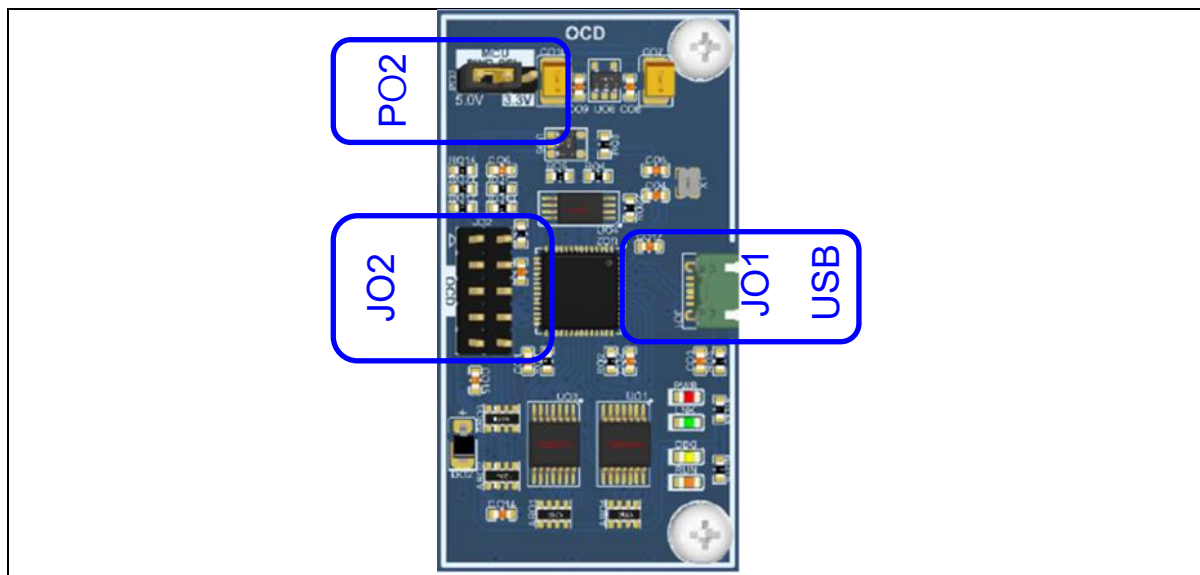


Figure 2. UART to USB Section

2.1.1 J01: OCD USB Connector

- Micro USB type B
- Use a 1.5M USB cable

2.1.2 PO2 (Pin Header): MCU Power Connection

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

Table 2. PO2 MCU Power Selector

PO2	VDD	PO2	VDD	PO2	VDD
	5.0V		3.3V		External Power

2.1.3 JO2 (Pin Header): OCD Connector**Table 3. OCD 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

3. Device Part

3.1 Power, OCD Interface and Switch

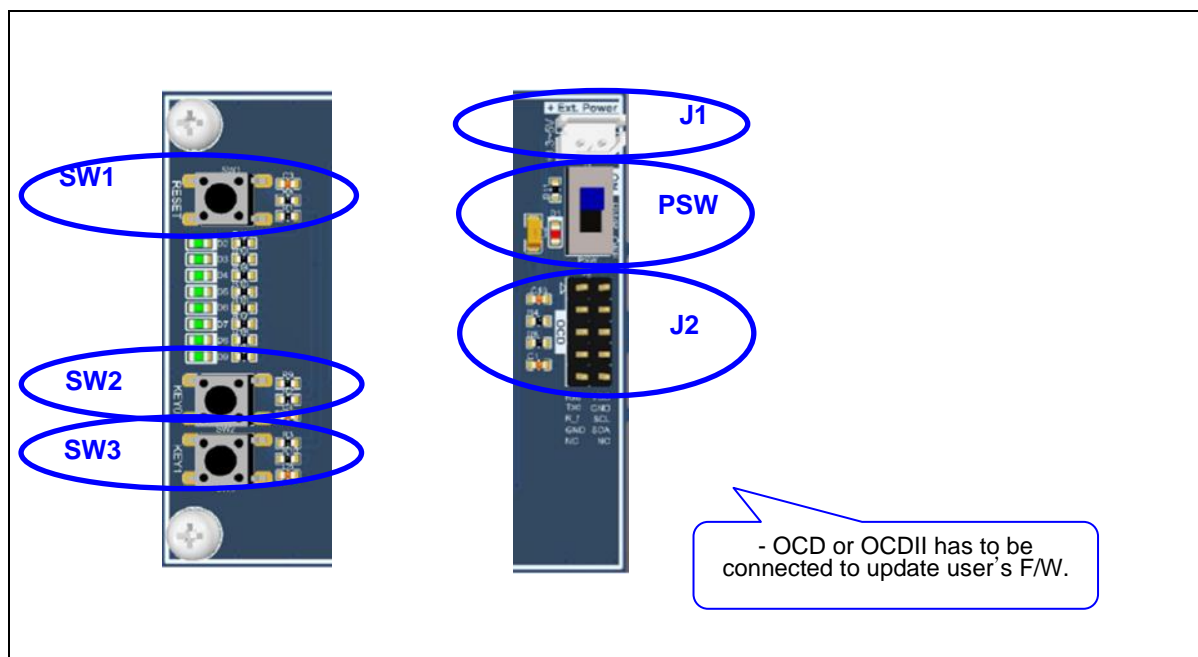
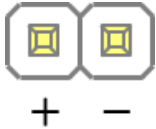


Figure 3. Power, OCD Interface and Switch

3.1.1 J1: External Power (Not Used)

If OCD Power is not used in PO2 (Pin Header): MCU Power Connection, Use External Power.

Table 4. 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 and SW3 : Switch**Table 5. SW1, SW2 and SW3 Description and Function**

Switch	Function	JUMP
SW1	RESETB(P32)	JP5
SW2	P02	JP6
SW3	P03	JP7

3.1.4 J2: OCD Interface**Table 6. OCD 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 – D9)

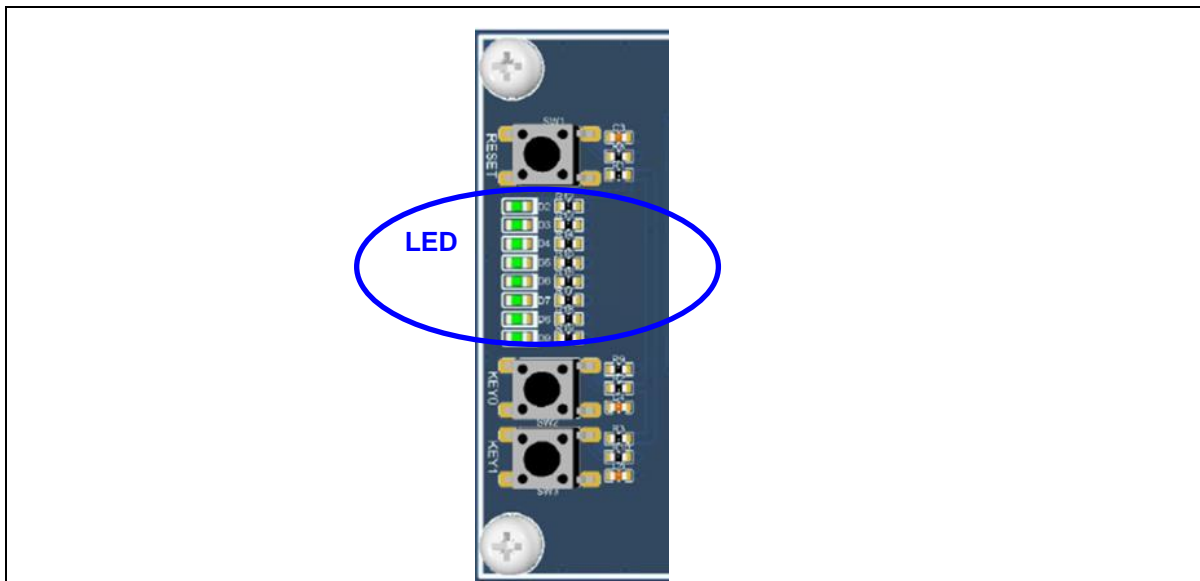


Figure 4. LED Display

3.2.1 LED Schematic

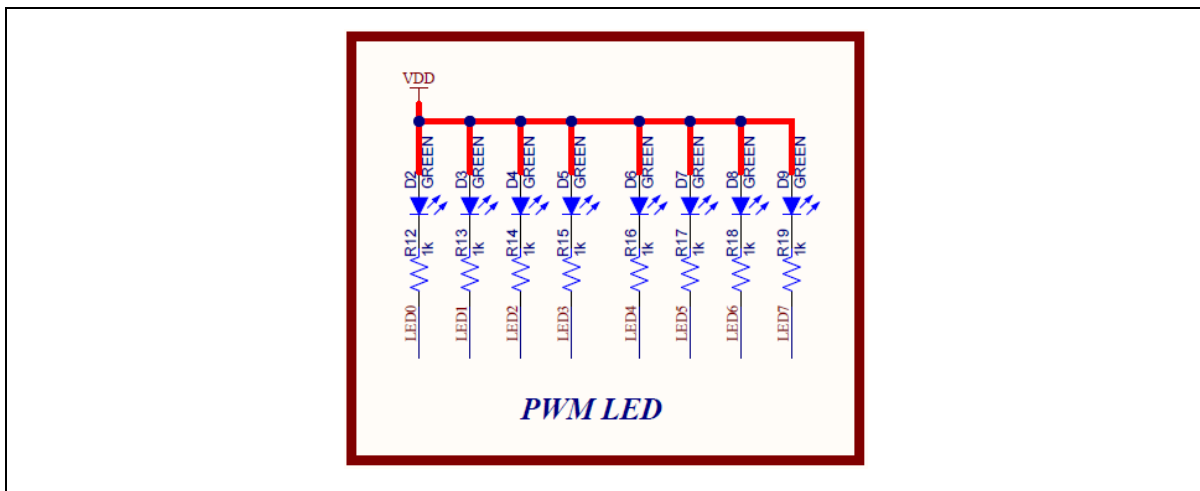


Figure 5. LED Schematic

3.2.2 LED Pin Assignment

Table 7. LED Pin Description

LED name	PORT
D2	P12
D3	P13
D4	P16
D5	P17
D6	P20
D7	P21
D8	P22
D9	P23

3.3 Pin Assignment

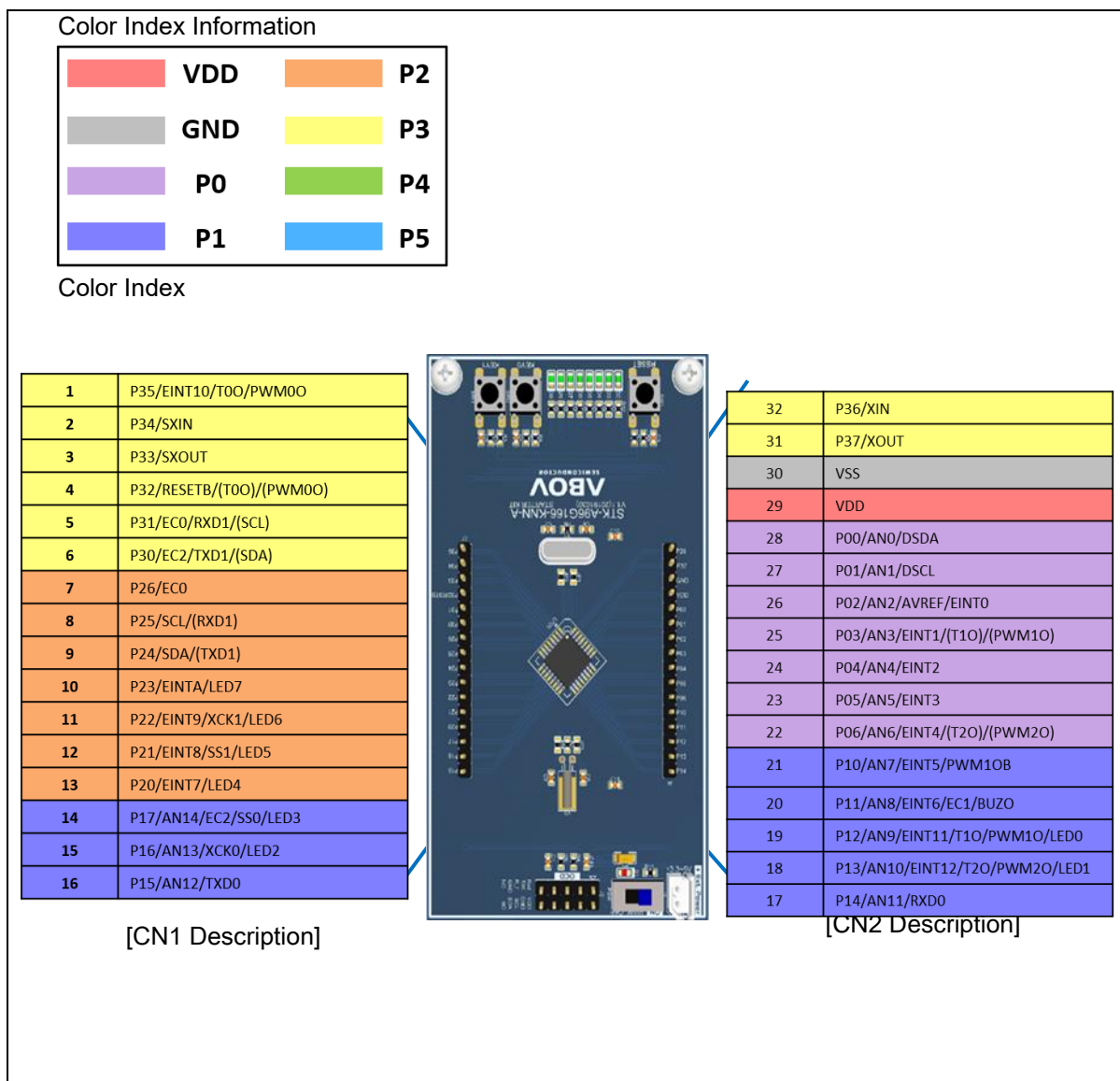


Figure 6. Pin Header

4. OCD and MCU Power Connection

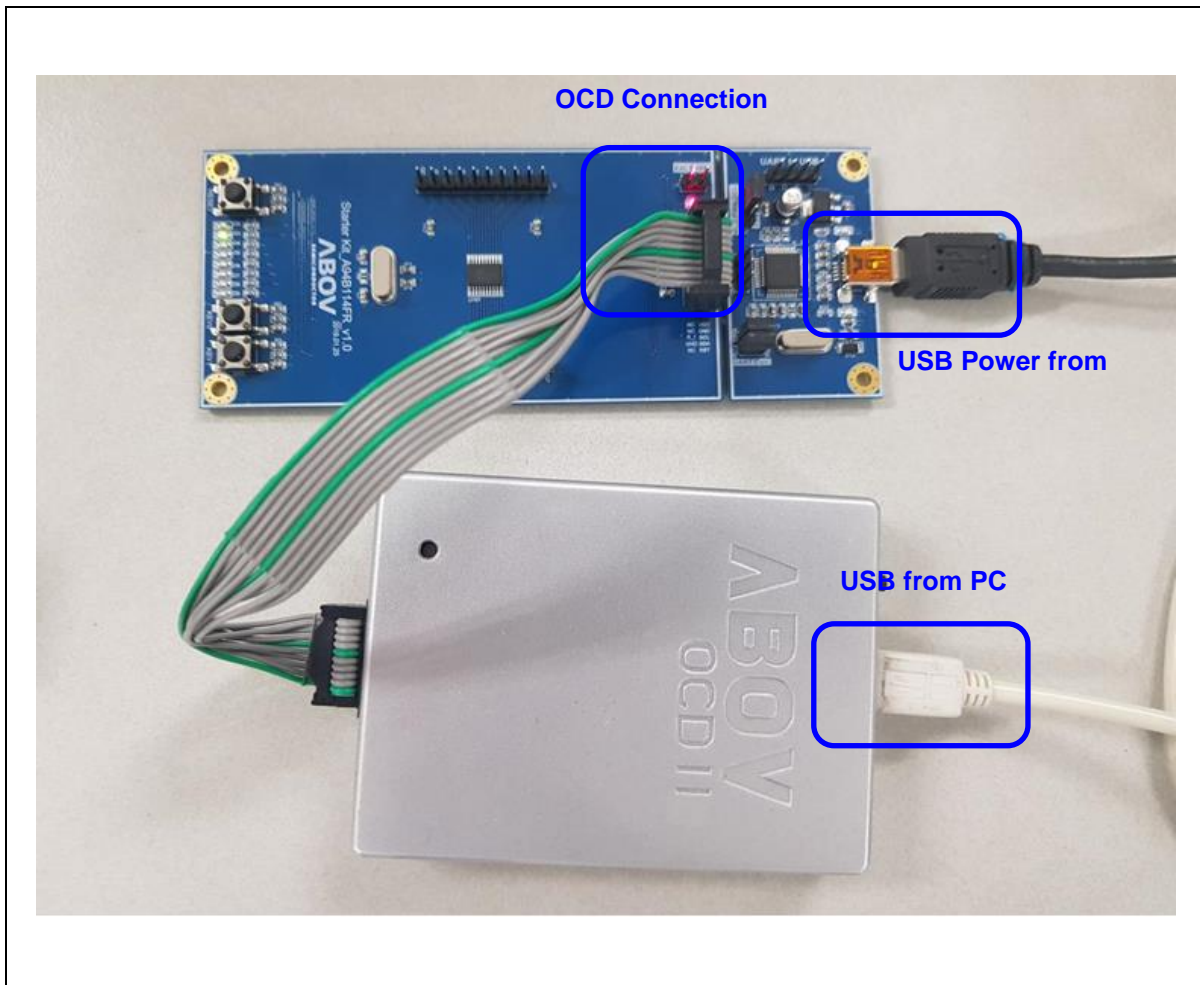


Figure 7. OCD and MCU Power Connection to Starter Kit

Revision History

Date	Version	Description
19.10.30	1.00	Document created
21.02.05	1.10	Document format changed
22.10.13	1.11	Revised the font of this document

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