MVC Reference Manual

Mpression Machine Vision Camera

Revision 0.1

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1. Specifications

1.1 General Specifications

Table 1-1 General Specifications

Specification	CYMVC-ON5MGS-MNGEA
Sensor Part	ON Semiconductor PYTHON NOIP3SN5000A
Sensor Type	CMOS Sensor, 5MP, Global Shutter
Optical Size	1"
Pixel Size	4.8 µm x 4.8 µm
Resolution	2592 x 2048
Frame Rate	22 fps (max)
Mono / Color	Mono
Pixel Formats	Mono 10bit
Synchronization	Software trigger Free run
Exposure Time Control	Auto Exposure; Programmable via the camera API
Power Requirements	12V DC supplied via I/O connector
Data Interface	Gigabit Ethernet
I/O Lines	1 opto-coupled input line 1 opto-coupled output line 1 general purpose I/O (GPIO) line
Lens Mount	C-mount
Size (L x W x H)	50mm x 50mm x 47 mm
Weight	176 g
Conformity	GenICam, GigE Vision
Software	OCT SDK Available for Win 7 and Win 10
Accessories	Cables for your camera model

1.2 Mechanical Specifications

1.2.1 Camera Dimensions and Mounting Points
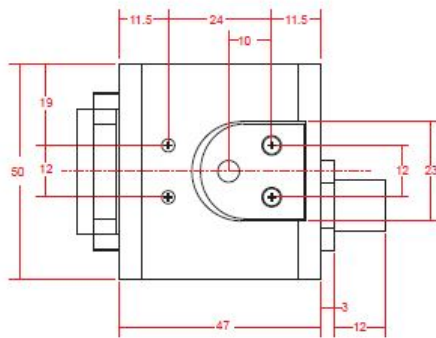
Unit: mm
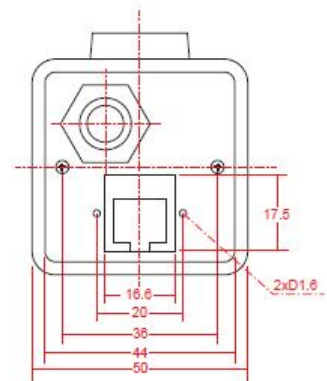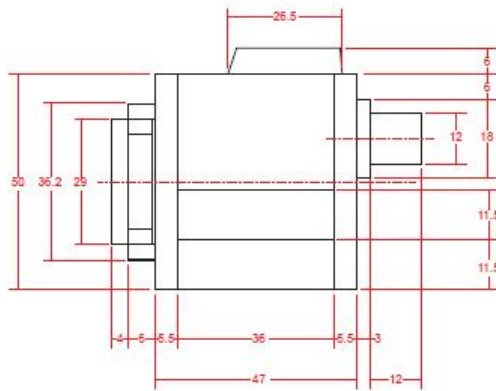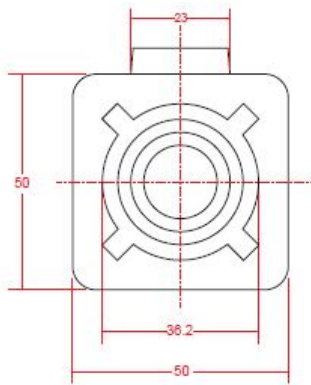
2. Physical Interface

2.1 Camera Power

The operation voltage is 12 VDC. To avoid camera damage, a maximum of 18 VDC must be not exceed.

2.2 Opto-Coupled I/O Input Line

Voltage	Description
30 VDC	Absolute maximum voltage
0~24 VDC	Safe operation voltage
0~1.0 VDC	Logical 0
>2.2 VDC	Logical 1

2.3 Opto-Coupled I/O Output Line

Voltage	Description
30 VDC	Absolute maximum voltage
3.3~24 VDC	Safe high voltage

2.4 General Purpose I/O Lines

2.4.1 Operation as Input

Voltage	Description
30 VDC	Absolute maximum voltage
0~5 VDC	Safe operation voltage
0~0.5 VDC	Logical 0
>2 VDC	Logical 1

2.4.2 Operation as Output
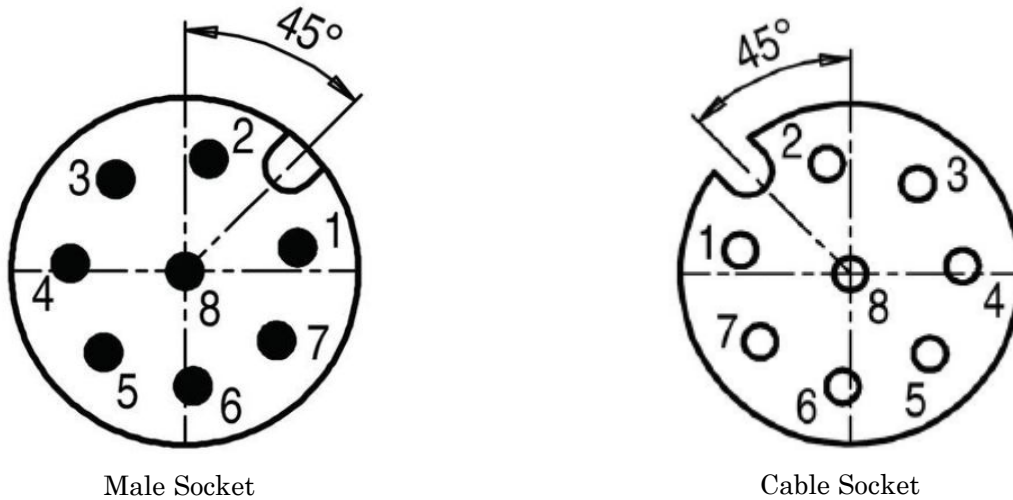
Voltage	Description
30 VDC	Absolute maximum voltage
2.5~5 VDC	High voltage
0 VDC	Low voltage

2.5 Camera Cables

Ethernet Cable: Use of shielded CAT 5E or better cables with STP shielding is recommended.

I/O Cable: Connecting thread M12, 8 pins, IP67.

## 2.6 Connector Pin Numbering and Assignments

Male Socket   Cable Socket

| Location	Cable Color	Description
PIN 1	White	GND
PIN 2	Brown	Power 12 VDC
PIN 3	Green	General purpose in/out line
PIN 4	Yellow	Reserved
PIN 5	Grey	Opto-coupled input line
PIN 6	Pink	Opto-coupled output line
PIN 7	Blue	GND for opto-coupled
PIN 8	Red	Power for opto-coupled (Max 30VDC)

3. Installation

OCT SDK can run in Windows 7 or Windows 10. It includes two parts, OCT tool and OCT drivers (U3V and GigE).
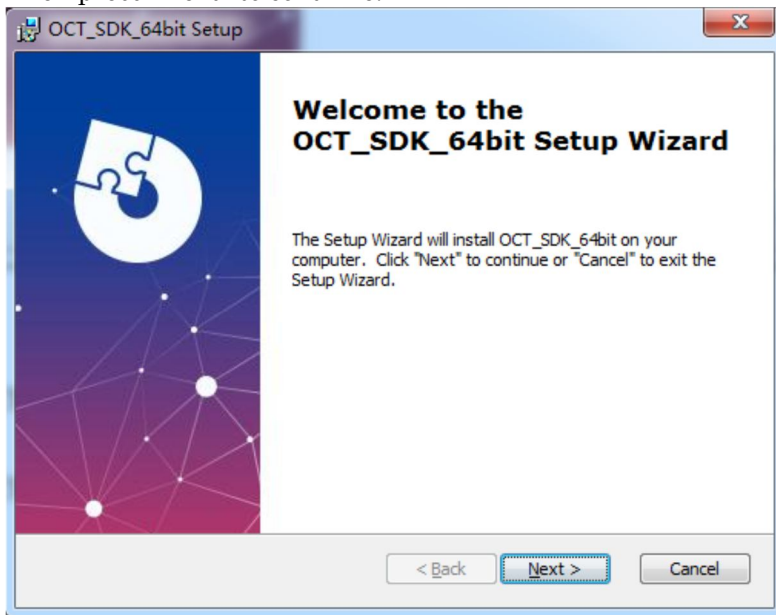
3.1 Software Installation (Windows)

Before software installation, you should get administrator authority. Then double click the installation package "OCT SDK x64.msi".
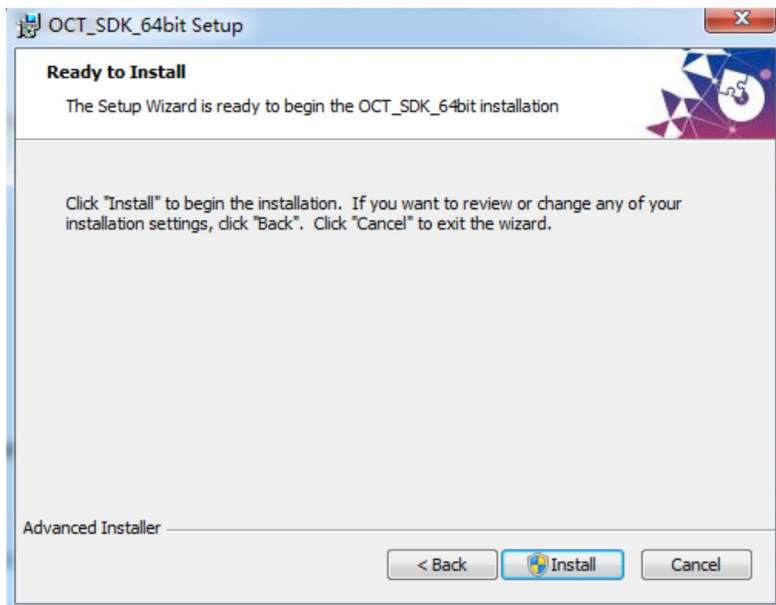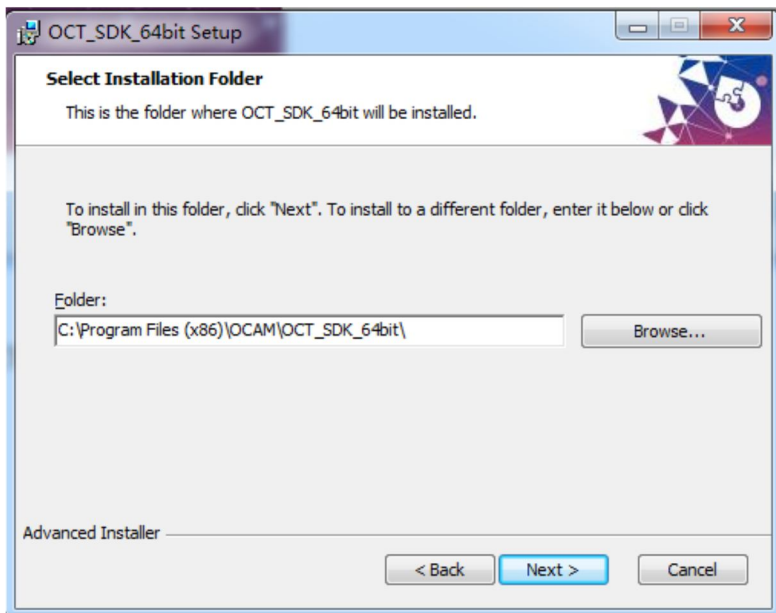

Because installation needs to detect system components, it will wait for 2 minutes in this interface. Please be patient.
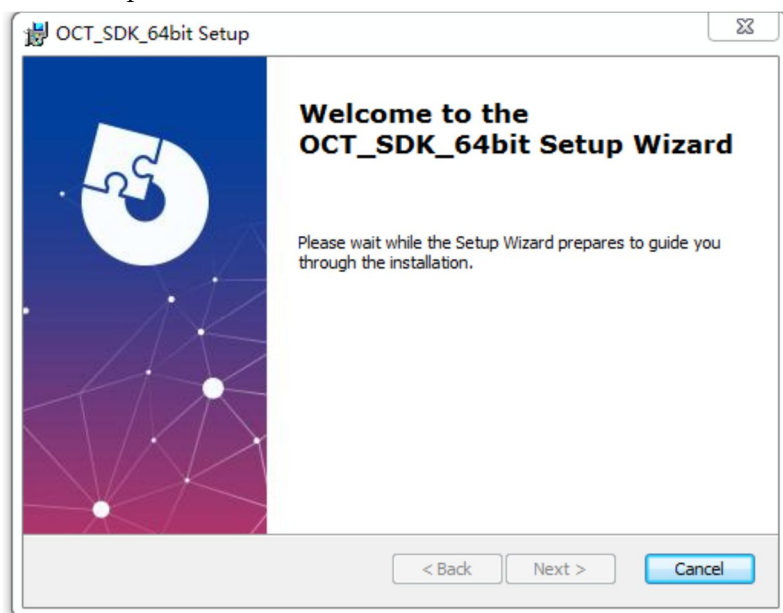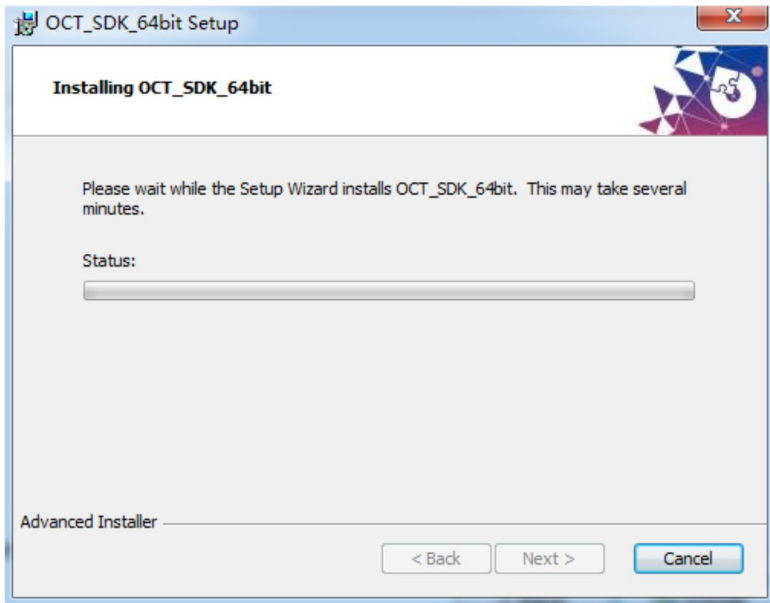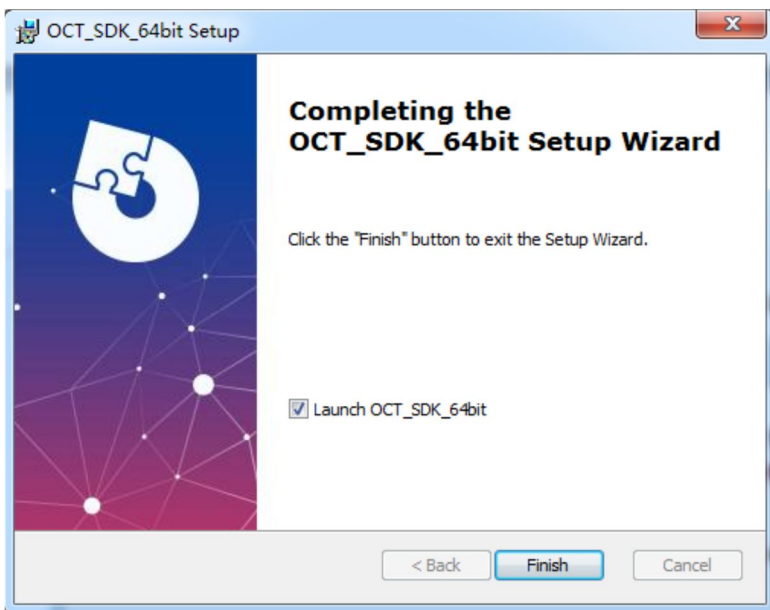
Then press "Next" to continue.

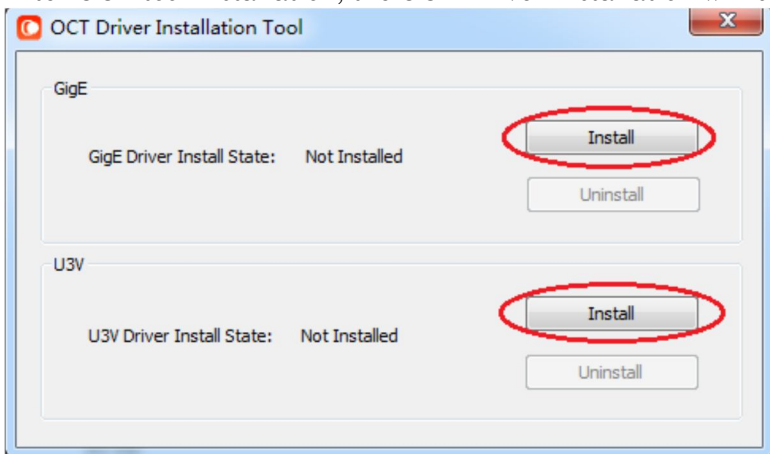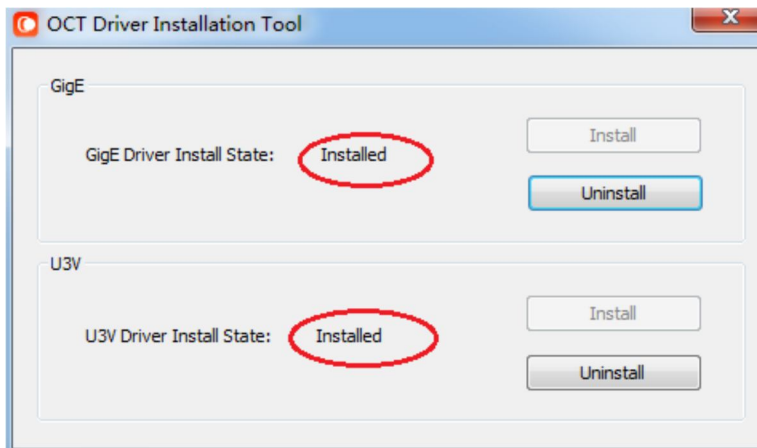Please select install folder from below interface.

Click "Finish" to implement installation.

After OCT tool installation, the OCT Driver installation will start automatically.

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Please select drivers to install.

4. Document Revision History

Date	Revision	Changes
June 20, 2020	0.1	• Document created
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