xperix

BM-Slim2

Ultra-Slim FAP20 Authentication Scanner

User Manual



INTRODUCTION

1. BM-Slim2

BM-Slim2 is FAP20 certified fingerprint scanner featuring an array of cutting-edge technologies. Along with its 13.5mm slim optical sensor, BM-Slim2 features Xperix's proprietary Multi-dynamic Range(MDR) technology, FBI PIV/Mobile ID FAP20 compliance and Android device support. BM-Slim2 also provides developers more physical flexibility with its reduced form factor and the ultra-slim optical sensor ensures robust operation over time. BM-Slim2 provides advanced artificial Intelligence-based Live Finger Detection technology which is compliant with ISO 30107-3 PAD Level 1 & 2 Standard. Applying LFD technology, BM-Slim2 distinguishes fake fingerprints made from various materials including clay, rubber, silicon, glue, paper, film, and more.

2. Features



- World's slimmest FAP 20 optical sensor
- MDR(Multi Dynamic Range) Technology
  - Operates under max 100,000 lux of direct sunlight
- Advanced Live Fingerprint Detection (LFD) technology



- FBI PIV and FBI Mobile ID FAP20 certificates
- NIST certified interoperable image & template format standards (ANSI-378, ISO19794-2/4)
- Image compression standard (WSQ)



- Live Finger Detection (LFD) Technology
  - Distinguishes fake fingerprints made from various materials including clay, rubber, silicon, glue, paper, film and more



- Easy Integration
  - BioMini SDK for easy application development
  - Android, MS Windows & Linux compatible
  - Multi-threaded code design for multi-core CPU utilization



- World's best performing fingerprint algorithm: Top results in NIST MINEX test and FVC
- NIST certified interoperable image & template format standards (ANSI-378, ISO19794-2/4)
- Image Compression Standard (WSQ)
- Fast matching speed : 100,000 match / second (with Intel Core2Duo)

FEATURES AND SPECIFICATIONS

1. Specifications

1.1. Specifications

Sensor	Image Quality Standards	FBI PIV / FBI Mobile ID FAP20
	Live Finger Detection	PAD Level 1,2 confirmed by Bixelab
	Sensor Type	Optical
	Resolution	500 ppi
	Gray Scale	256 levels
	Platen Size (W x L mm)	16.5 x 21.0
	Sensing Area (W x H mm)	15.24 x 20.32
	Image Size (W x H pixels)	300 x 400
HW	Interface	USB 2.0 High Speed
	Operating Temperature (℃)	-10 ~ 50℃
	Storage Temperature (℃)	-20 ~ 70℃
	Operating Humidity	10 ~ 90% RH, non-condensing
	Ingress Protection	IP65 (Sensor Surface)
	Dimensions (W x L x H mm)	59 x 32 x 13.5 mm
	Weight (g)	30g
SW	Windows	Windows 7, 8, 8.1, 10 32/64bits
	Linux	Ubuntu, Debian, Fedora, CentOS 32/64bits
	Android Android 4.1(Jelly Bean) and above	O
	Image Format	RAW, BMP, WSQ, ISO19794-4
	Template Type	Xperix, ISO19794-2, ANSI-378
Certification	CE	O
	FCC	O
	KC	O
	ROHS	O
	CB	O
	REACH	O
	IEC62471	O
	WEEE	O
	WHQL	O

1.2. Firmware

Firmware Version: V1.3.0

1.3. Electrical Features

Range of working Voltage		5V±0.5V
Power Consumption (mA)	Idle	85
	Sleep	25
	Capture Single	131
	Inrush (fingerprint put on)	140

2. Exterior

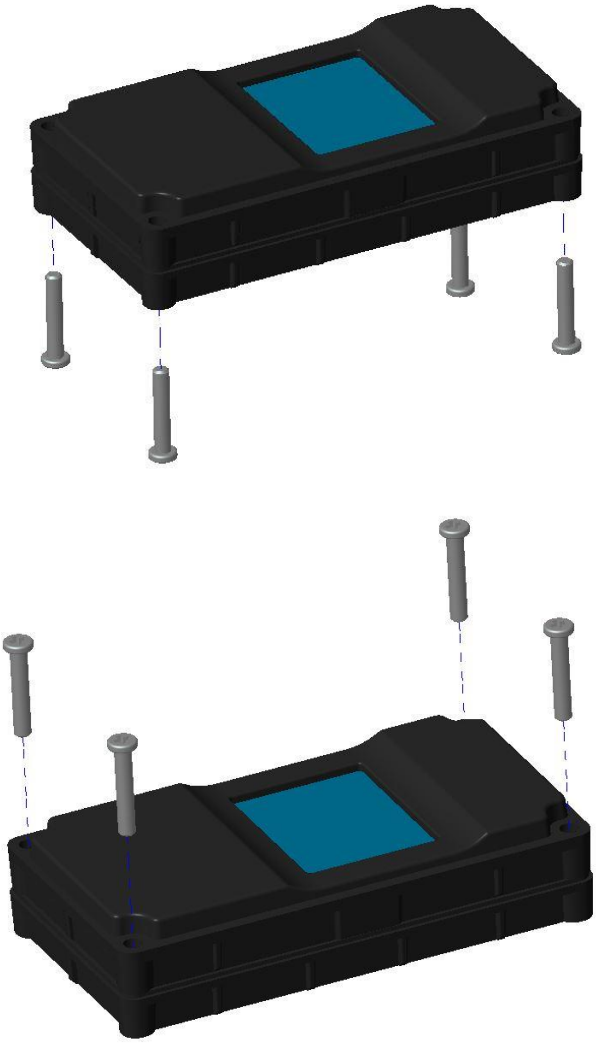
2.1. Fixing for mechanical installation

2.1.1. Fixing and Installation

[Screw fixing]

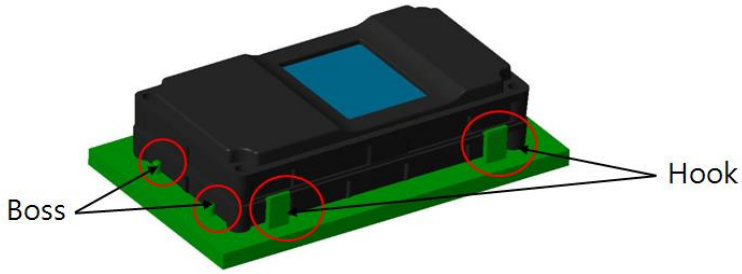
From either top or bottom side, BM-Slim2 can be mounted with using 4 screws.

(Diameter: 2.0 mm, Tightening torque: 2.0kgf.cm±0.1)



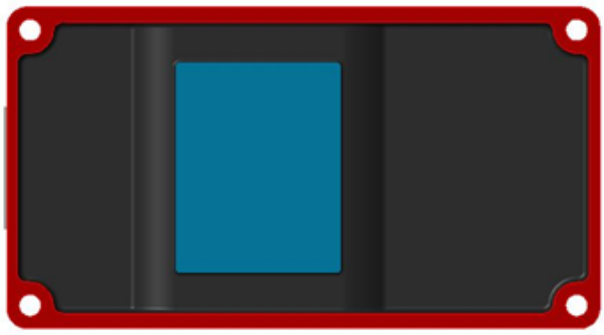
[Clip fixing]

BM-Slim2 can be fixed by 4hooks and 4bosses.



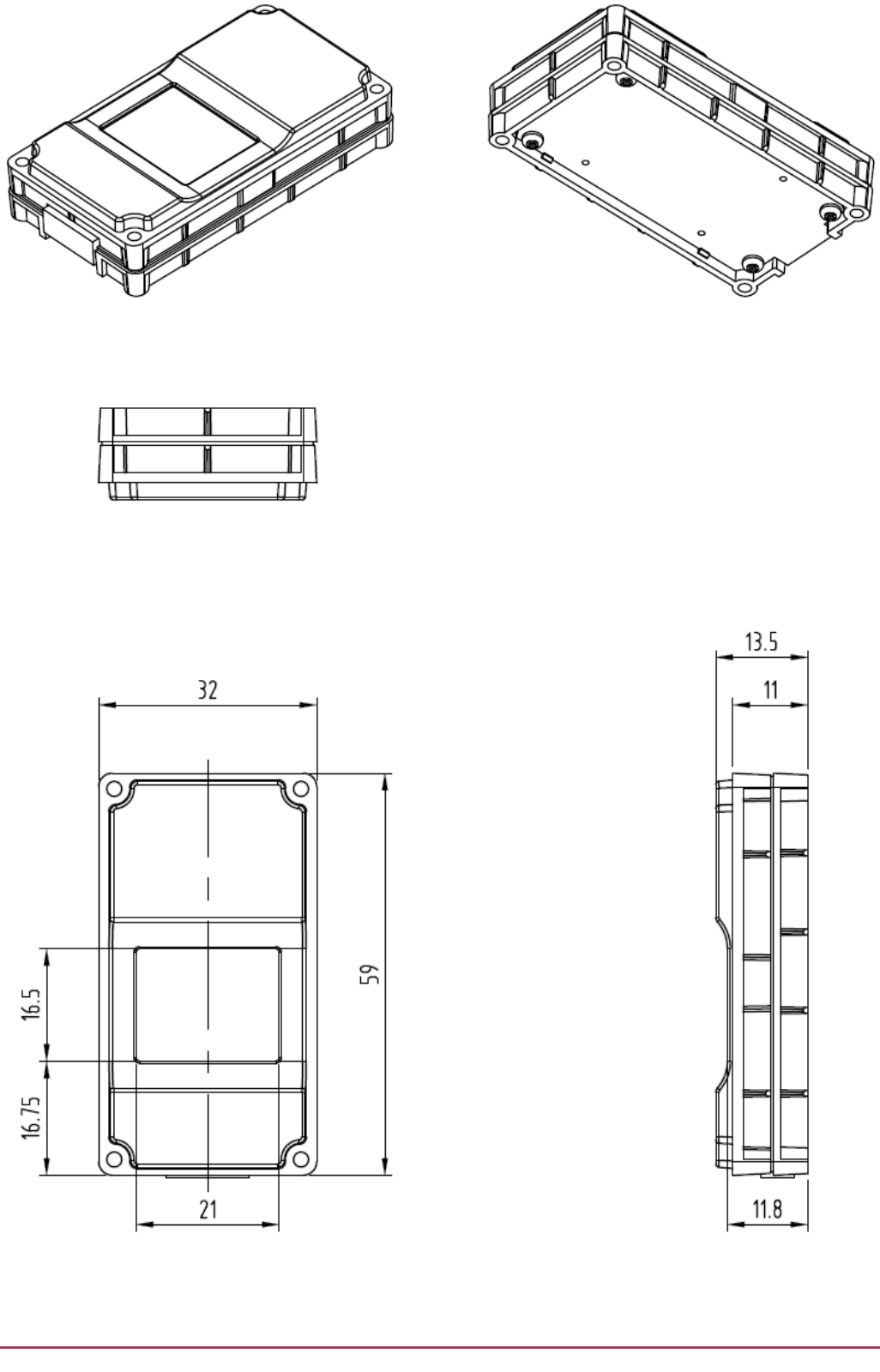
2.1.2. Sensor Positioning

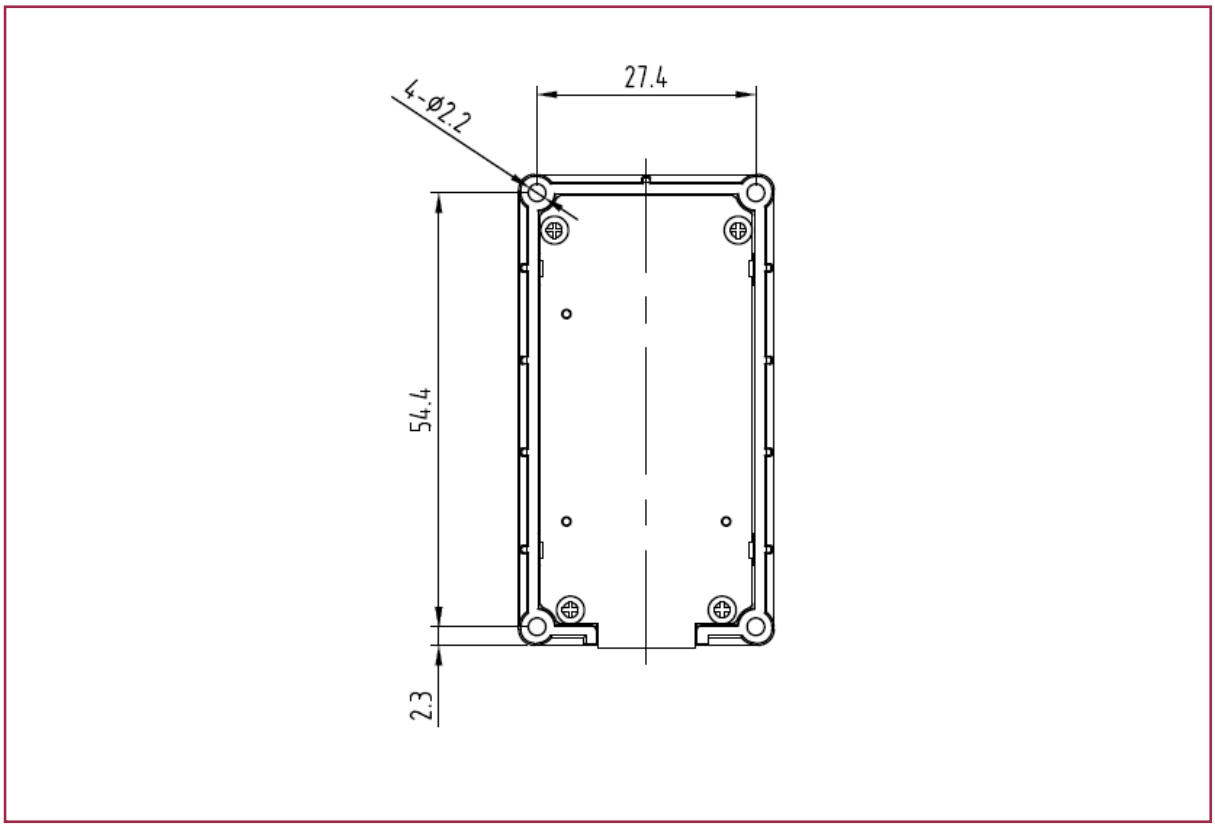
The default positioning of BM-Slim2 is as shown below. (0°)



For full IP65-rated water and dust proof integration of entire surface part of BM-Slim2, you can attach a double-sided waterproof tape on an area highlighted in red above. (Recommended tape model - KSP WSR200BK 0.2T)

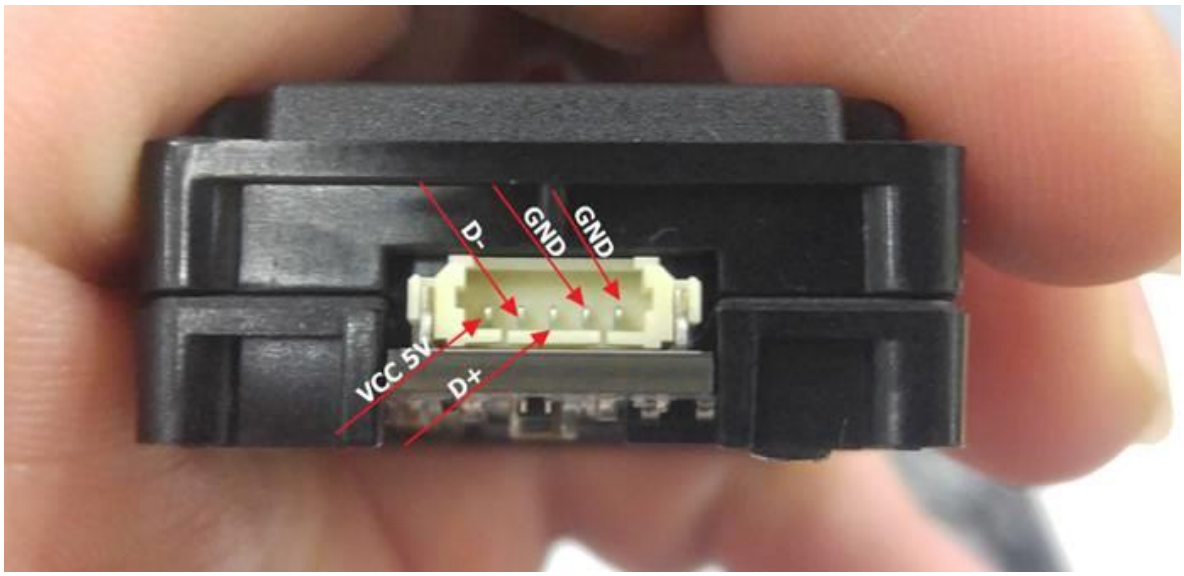
2.2. 3D Drawing





3. Interface

3.1. Picture



3.2. Drawing

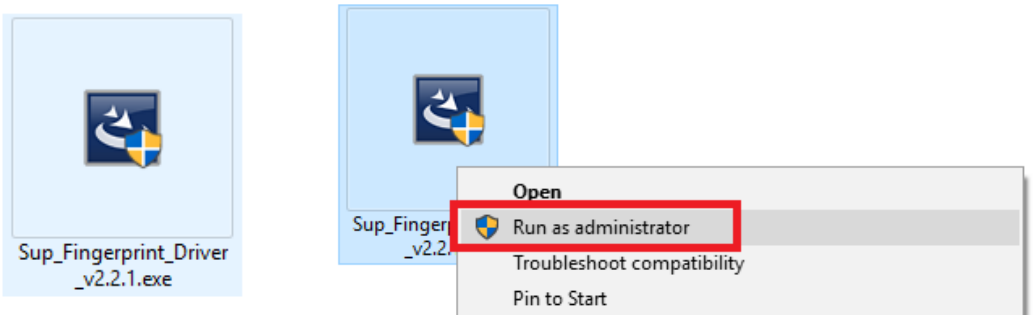


FROM PIN DESCRIPTION	FROM CONN	FROM PIN	TO PIN	TO CONN	TO PIN DESCRIPTION	WIRE	LENGTH
VBUS	A	1	1	B	VBUS	28AWG/RED	1600
D-	A	2	2	B	D-	28AWG/WHITE	1600
D+	A	3	3	B	D+	28AWG/GREEN	1600
GND	A	4	4	B	GND	28AWG/BLACK	1600
SHIELD	A	-	5	B	SHIELD	GRAY shield	1600

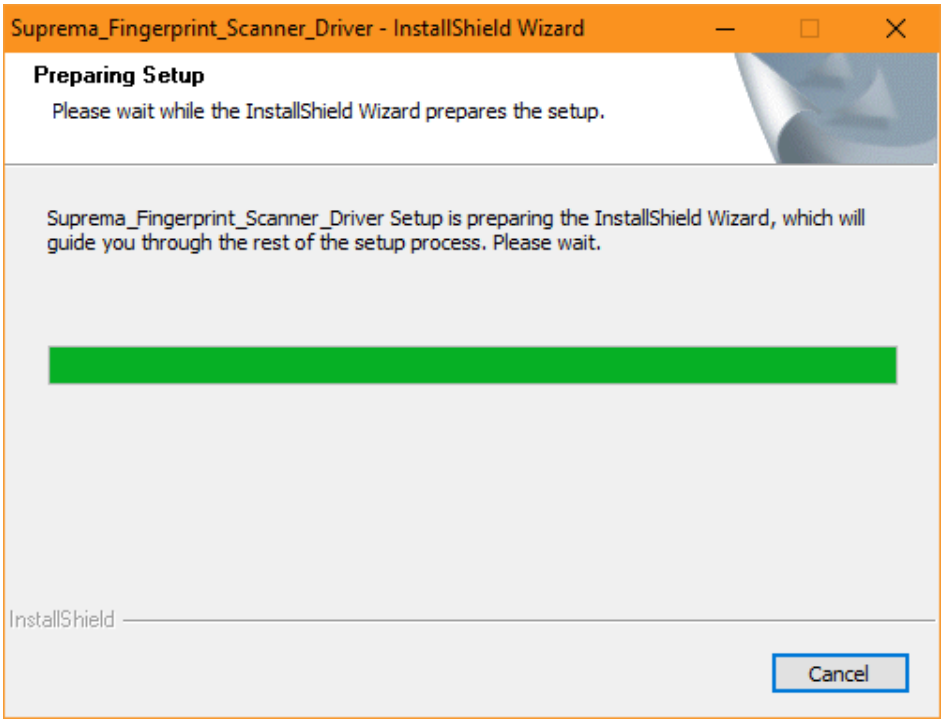
No	Part List	수량	Vendor	비고
1	12505HS-05	1	Yeonho	Housing
2	12505TS	5	Yeonho	Terminal, RoHS
3	E203693	-	DUSUNG	USB2.0 Cable,UL2725, RoHS
4	**Shrinkable tube**	1	Any	RoHS
5	USB A TYPE CONN	1	Any	RoHS
	- 이 하 여 백 -			

4. Device Driver Installation

4.1. Run a driver installer as administrator. (Sup_Fingerprint_Driver_v2.2.1.exe)

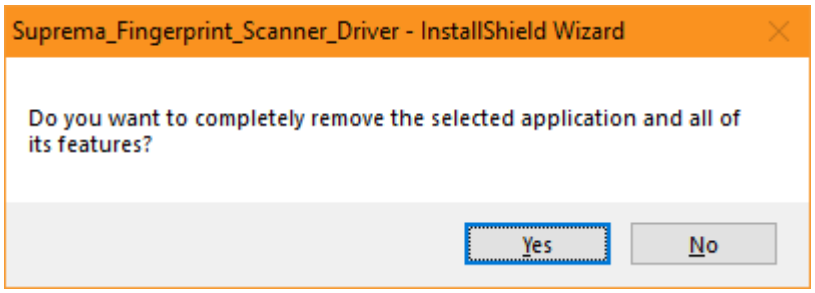


The driver installer starts to run.

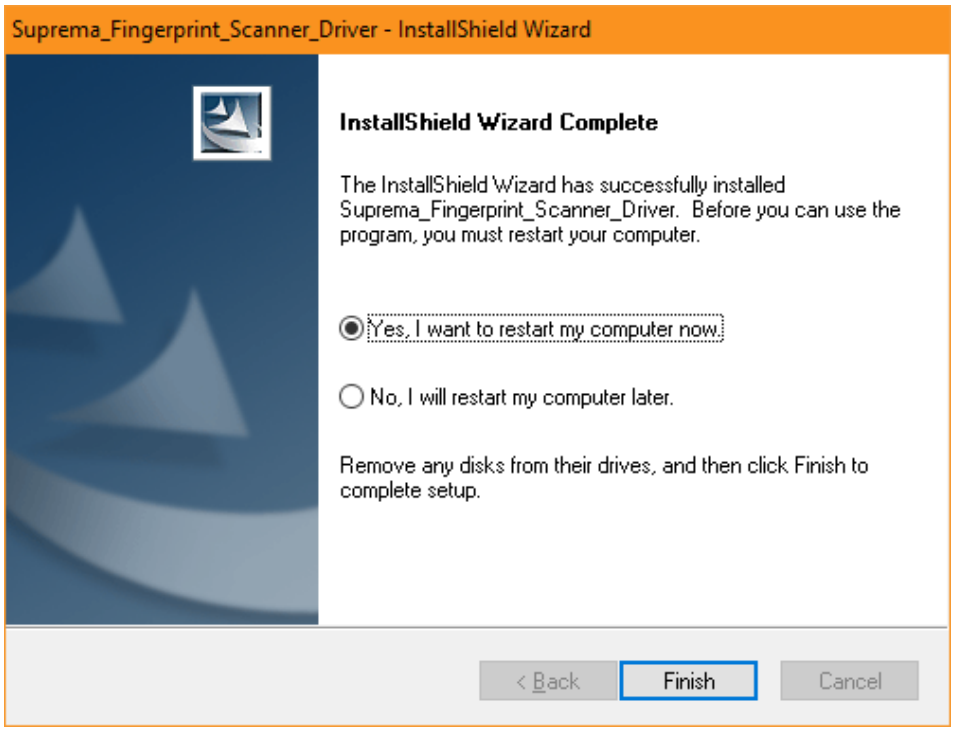


! If the driver is installed already in a computer, the message box like below is popped up.

If you want to install the driver newly again, and select 'Yes', otherwise, select 'No'



If you delete the driver which has already been installed, click 'Finish' to restart the computer.



4.2. Follow the instructions in the installation file and click 'Next' to complete the driver installation. Connect the device to the PC to see it in Device Manager.

