xperix

BM-Slim3

Ultra-Slim FAP30 Authentication Module

User Manual



INTRODUCTION

1. BM-Slim3

BM-Slim3 is FAP30 certified fingerprint scanner featuring an array of cutting-edge technologies. Along with its 15.0mm slim optical sensor, BM-Slim3 features Xperix's proprietary Multi-dynamic Range (MDR) technology, FBI PIV/Mobile ID FAP30 compliance and Android device support. BM-Slim3 also provides developers more physical flexibility with its reduced form factor and the ultra-slim optical sensor ensures robust operation over time. BM-Slim3 provides new and advanced Live Finger Detection (LFD) technology by applying a machine learning method based AI(Artificial Intelligence) as an World-class Trained Inspector which can be upgradeable by BioMini SDK.

2. Features



- World's thinnest FAP30 optical fingerprint sensor



- FBI PIV and FBI Mobile ID FAP30 certificates
- Image compression standard (WSQ)



- Capturing high-quality fingerprint images even when the finger is dry & wet.
- Operates under direct sunlight up to 100,000 LUX



- Live Fingerprint 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

FEATURES AND SPECIFICATIONS

1.1. Specifications

Sensor	Image Certificate	FBI PIV / FBI Mobile ID FAP30 compliant
	Sensor Type	Optical
	Resolution	500 ppi
	Gray Scale	256 level
	Platen Size	21.5 x 26.5 (W x L mm)
	Sensing Area	20.32 x 25.4 (W x H mm)
	Image Size	400 x 500 (W x H pixels)
HW	Interface	USB 2.0 High Speed
	Operating Temperature	-10 ~ 50℃
	Storage Temperature	-20 ~ 70℃
	Operating Humidity	0 ~ 90% RH
	Ingress Protection	IP65 (Sensor Surface)
	Dimensions (W x L x H mm)	67.5 x 36 x 15
	Weight	48.6g
SW	Windows	Windows 7 or Above (32/64bit)
	Linux	Linux Kernel 3.10.X or Above
	Android	Android 5.0 (Lollipop) or Above, USB Host
	Image Format	RAW, BMP, WSQ, ISO19794-4
	Template Type	Xperix, ISO19794-2, ANSI-378
	LFD	Supported
Certification	CE, FCC, KC, RoHS, CB, REACH, IEC62471, WEEE, WHQL	

1.2. Firmware

Firmware Version: v01.04.19 or above

1.3. Electrical Features

Range of working Voltage		5V±0.5V
Power Consumption (mA)	Idle	103
	Sleep	30
	Capture Single	195
	When finger is placed	211

2. Exterior

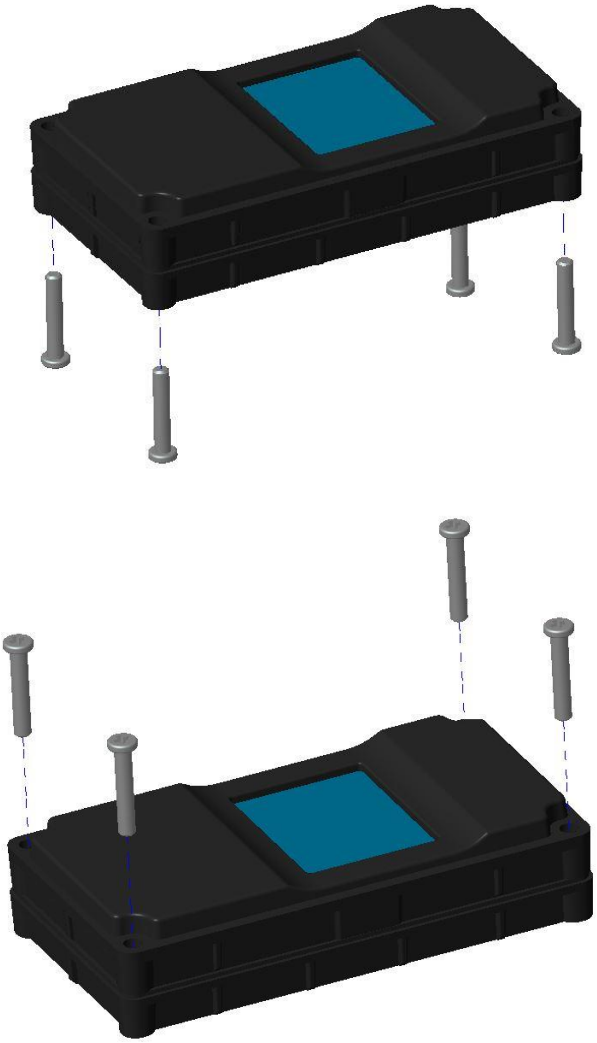
2.1. Fixing for mechanical installation

2.1.1. Fixing and Installation

[Screw fixing]

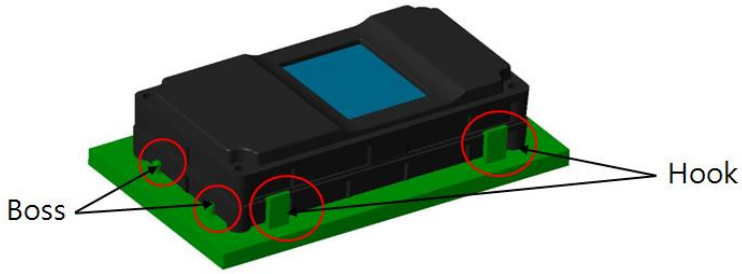
From either top or bottom side, BM-Slim3 can be mounted with using 4 screws.

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



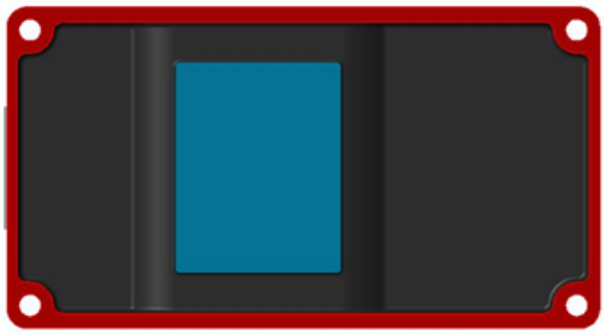
[Clip fixing]

BM-Slim3 can be fixed by 4 hooks and 4 bosses.



2.1.2. Sensor Positioning

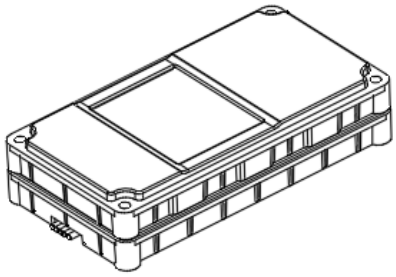
The default position of BM-Slim3 is shown as below. (0°)

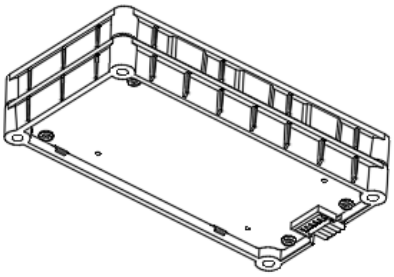


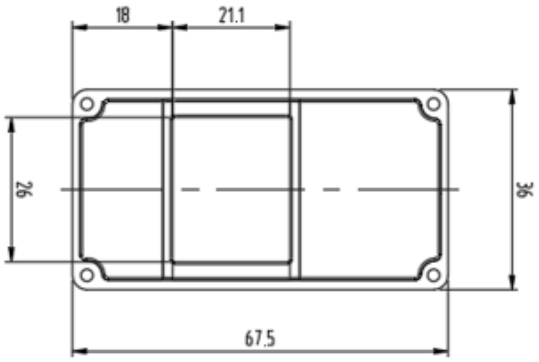
BM-Slim3 supports up to 360° rotation by using 'Rotation' and 'Rotate Image' settings. Auto-on functionality is not supported when BM-Slim3 is rotated by 90° and 270°.

For full IP65-rated water and dust proof integration of entire surface part of BM-Slim3, you can attach a double-sided waterproof tape on an area highlighted in red above. (Recommended tape model - KSP WSR200BK 0.2T)

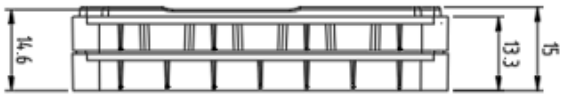
2.2. 3D Drawing

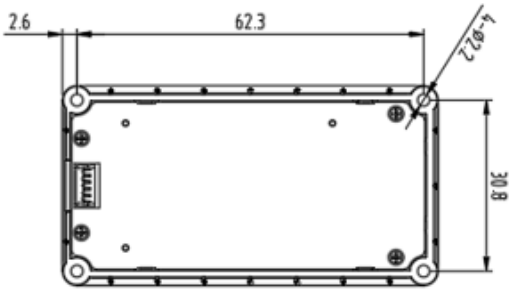






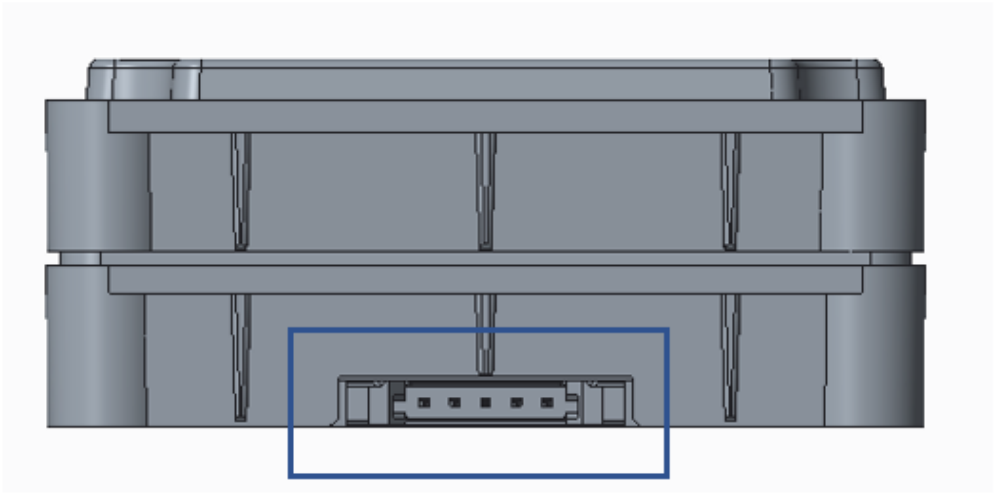


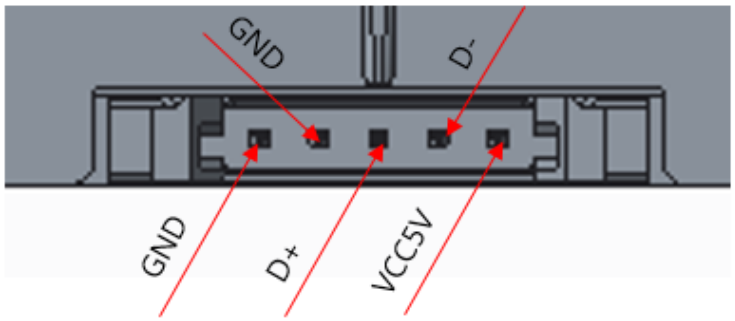




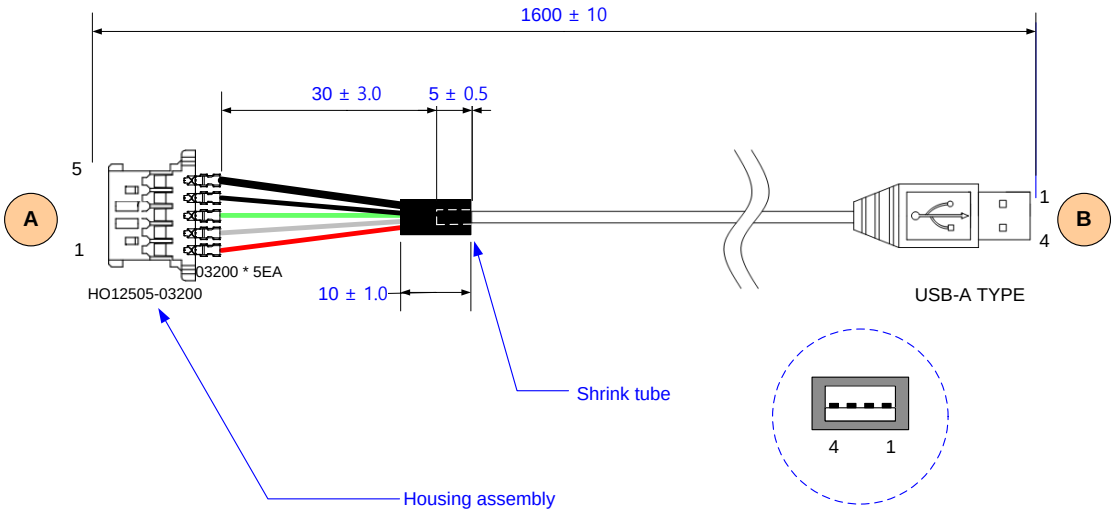
3. Interface

3.1. Picture





3.2. Drawing



No	Part List	Q'ty	Vendor	Remark
1	USB-A TYPE	1	Any	RoHS
2	03200	5	ATOM	Terminal RoHS
3	HO12505-03200	1	ATOM	Housing RoHS
4	UL 2725 Cable (AWG 26X2C, 28X1Pr)	-	DUSUNG	AWG 26X2C, 28X1Pr BLACK, UL2725, E203693, VW-1, 80℃, 30V RoHS
5	Shrink tube	-	LS CABLE ANY VENDOR	SHS-1625G/BLACK/4Φ RoHS