xperix

BioMini Slim 2S

Ultra-Slim FAP20 Authentication Scanner

User Manual



INTRODUCTION

1. BioMini Slim 2S

BM-Slim 2S is a FBI PIV and Mobile ID FAP20 certified fingerprint module that provides a number of industry-leading features under its sleek design. Featuring range-leading powerful 1.0GHz CPU, BM-Slim 2S provides high-speed extraction and matching of fingerprints within the scanner.

BM-Slim 2S also supports true plug-n-play by featuring HID (human interface device) protocol. BM-Slim 2S is a versatile identification solution for both public and civil ID applications.

2. Features



- True plug-n-play operation
  - HID (Human Interface Device) protocol



- Standalone operation
  - 1.0GHz MIPS-base Xburst Core CPU
  - On-device fingerprint extraction and matching
  - OS independent fingerprint scanner



- Enhanced Security
  - On-device template encryption
  - On-device template extraction



- World's slimmest FAP20 optical sensor



- FBI PIV/FIPS201 and FBI Mobile ID FAP20 certificates
- Image compression standard: WSQ



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



- Live Finger Detection (LFD) Technology
  - Distinguishes fake fingerprints made from various materials including clay, rubber, silicon, glue, paper, film and more
- Automated power saving by smart sleep mode
- BM-Slim 2S now consumes up to 95% less power than competitors



FEATURES AND SPECIFICATIONS

1. Specifications

1.1. Specifications

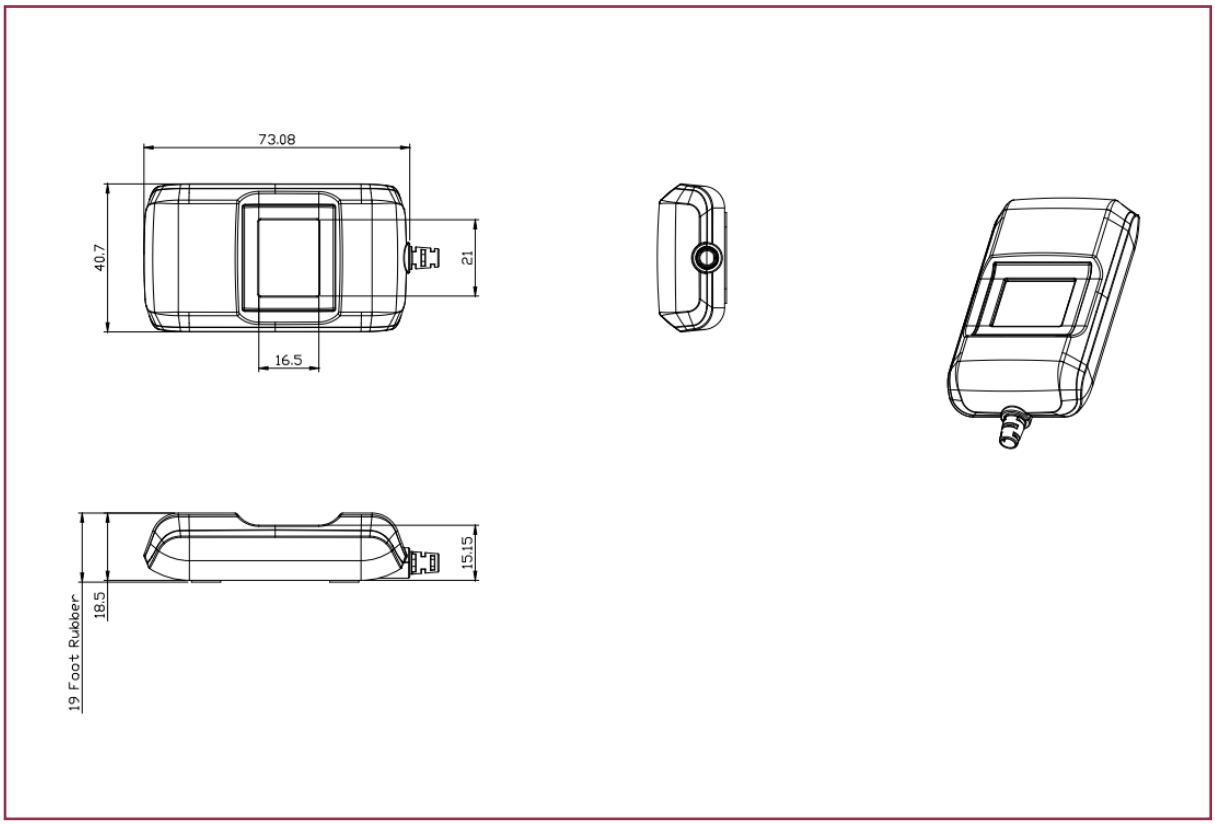
Sensor	Image Quality Standards	FBI PIV / FBI Mobile ID FAP20
	Live Finger Detection	O
	Sensor Type	Optical
	Resolution	500 ppi
	Gray Scale	256 levels
	Platen Size (W x L mm)	16.5 x 21.0
	Sensing Area (W x H mm)	15.24 x 20.32
	Image Size (W x H pixels)	300 x 400
HW	Interface	USB 2.0 High Speed
	Operating Temperature (℃)	-10 ~ 50℃
	Storage Temperature (℃)	-20 ~ 70℃
	Operating Humidity	10 ~ 90% RH
	Ingress Protection	IP65 (Sensor Surface)
	Dimensions (W x L x H mm)	72.8 x 40.7 x 18.5 mm
	Weight (g)	91g
SW	Operating System	OS/Platform Independent, Standalone Operation
	Image Format	RAW, BMP, WSQ, ISO19794-4
	Template Type	Xperix, ISO19794-2, ANSI-378
Certification	CE	O
	FCC	O
	KC	O
	CB	O
	IEC62471	O
	WEEE	O
	WHQL	O

2. Electrical Features

Range of working Voltage		5V±0.5V
Power Consumption (mA)	Idle	109
	Sleep	46
	Capture Single	173
	Inrush (fingerprint put on)	191

3. Exterior

3.1. Drawing

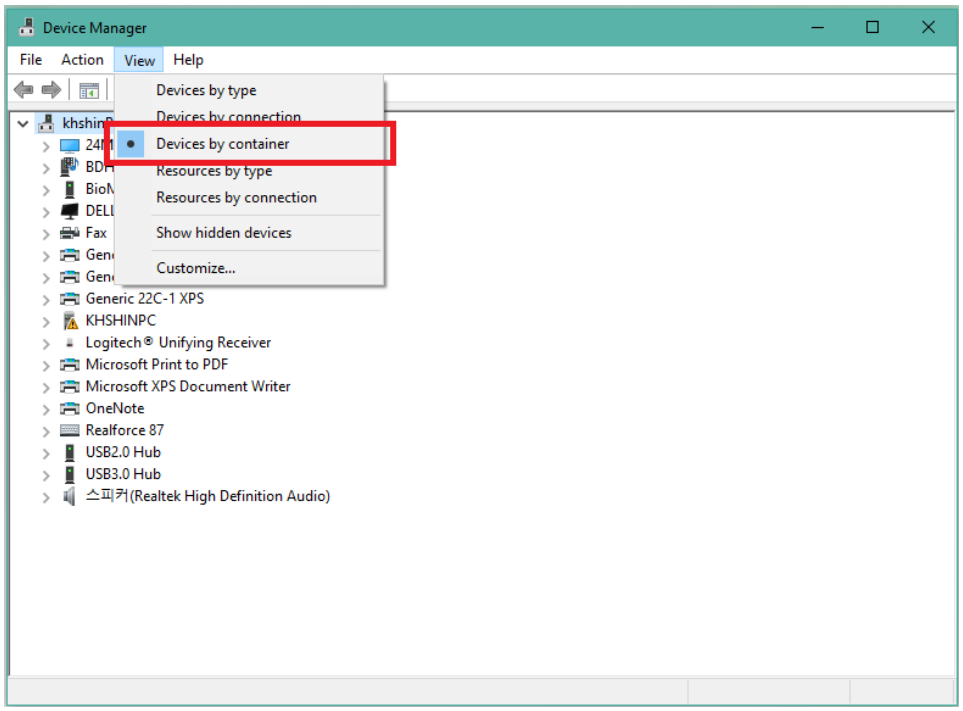


4. Check BM-Slim 2S on Windows

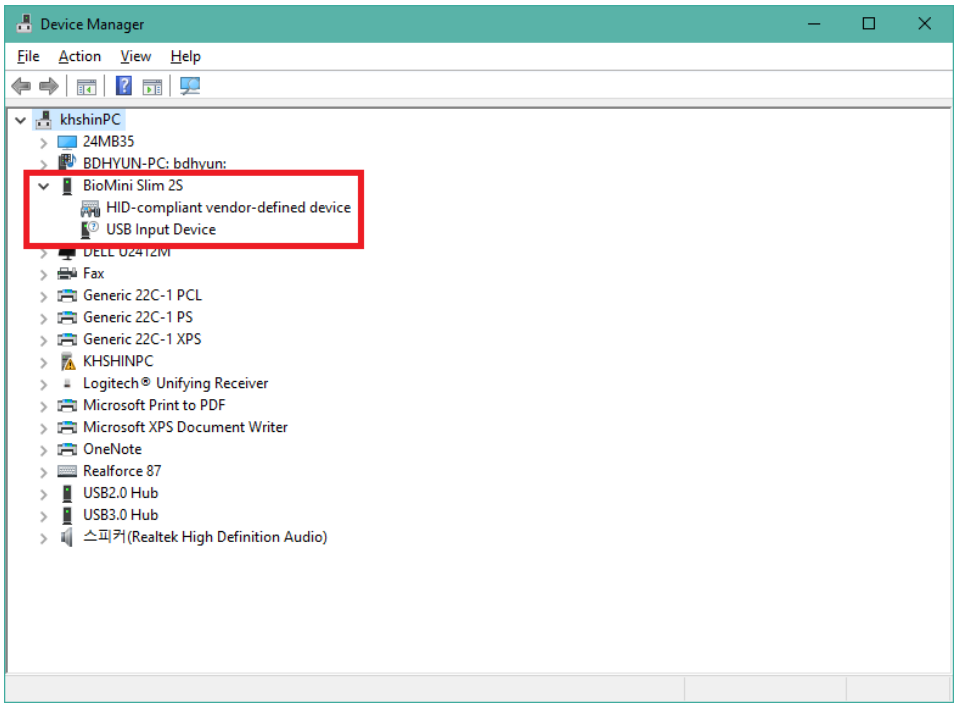
4.1. Connect to Windows PC by USB

4.2. Check BM-Slim 2S on the Device Manager

4.2.1. Change 'View' menu to 'Devices by container'



4.2.2. Can check BM-Slim 2S like below as HID-compliant device



Capture

1. Notes for Fingerprint Scanning



Top Scanning



Side Scanning

- Top Scanning: If only the top of a finger is placed on the scanning area, only the top of the finger part will be scanned.
- Side Scanning: If only the side of a finger is placed on the scanning area, and if the center of the finger is not placed on the scanning area, only the side of the finger part will be scanned.



Distorted image

- Distorted Image: When a finger is placed on the scanning area with too much pressure, the image may become distorted as the important data in the fingerprint disappear.



Good Fingerprint Image

- To scan a fingerprint successfully, place the finger at the center of the scanning area with reasonable pressure.
- If a fingerprint image is blurred, remove pressure from the finger and scan the fingerprint again when a fingerprint image is good.