xperix

BioMini Slim 2

Ultra-Slim FAP20 Authentication Scanner

User Manual



INTRODUCTION

1. BioMini Slim 2

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

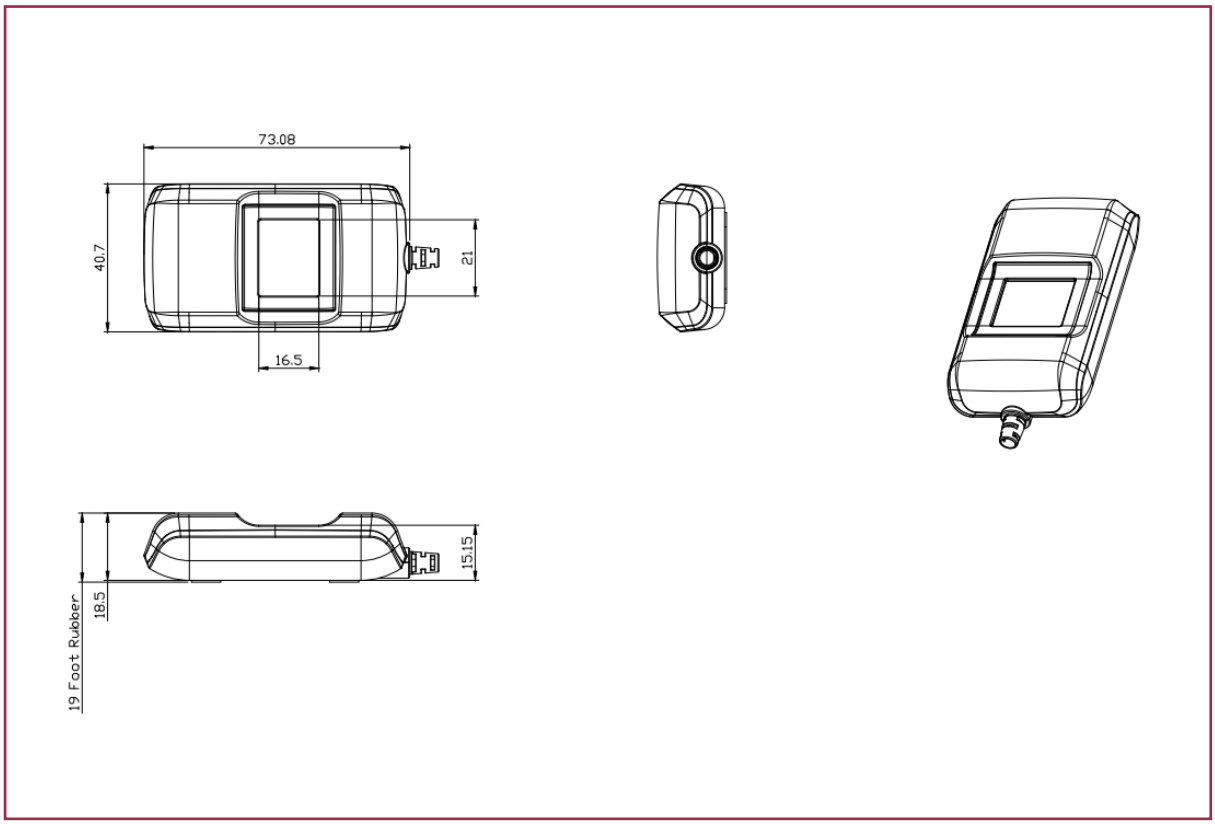
Sensor	Image Quality Standards	FBI PIV / FBI Mobile ID FAP20
	Live Finger Detection	PAD Level 1,2 confirmed by Bixelab
	Sensor Type	Optical
	Resolution	500 ppi
	Gray Scale	256 levels
	Platen Size (W x L mm)	16.5 x 21.0
	Sensing Area (W x H mm)	15.24 x 20.32
	Image Size (W x H pixels)	300 x 400
HW	Interface	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)	72.8 x 40.7 x 18.5 mm
	Weight (g)	91g
SW	Windows	Windows 7 or later 32/64bit
	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

2. Electrical Features

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

3. Exterior

3.1. Drawing



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.