INTEGRATED BIOMETRICS

Kojak

FBI Appendix F Certified FAP 60
10-Print Roll Scanner

Hardware Development Manual

The following specifications are valid for Kojak, Kojak Private Label (PL), Kojak OEM, and Kojak OEM Private Label (PL). Kojak is pictured as a representative unit.

Photos and drawings for each are located on pages 6 and 8.

Warranty Information

All products have a 12-month warranty starting from the date of delivery. Additional years warranties available. Inquire with your salesperson.

View the warranty here: DOWNLOAD

Revision History

Revision No.	Issue Date	Comments
1.4	2023.2	New Kojak Model with NBDnano LES film added. KJ220DA-E00: Standard Kojak with NBDnano LES film KP220DA-E00: Kojak PL with NBDnano LES film
1.3	2022.4	Adjust Electrical DC Characteristics
1.2	2021.10	Hazardous material additions
1.1	2019.3	Reformatted; Removed part number
1.0.1	2016.11	Reformatted
1.0	2015.8	1.0 Version Preliminary

Contents

1 KOJAK

Kojak uses Integrated Biometrics' patented light-emitting sensor (LES) technology to deliver fixed and mobile FBI Certified fingerprint imaging in an exceptionally durable, lightweight scanner.

Other benefits include:

Faster

- Rapid dry finger capture
- No need to clean latent prints in high-volume situations
- Easy integration via single SDK for all Integrated Biometrics FBI Certified products

Better

- Unaffected by extreme temperatures, direct sunlight, or bright artificial lights
- Compact, lightweight, and rugged
- Emits no bright lights during scans
- Meets or exceeds US military durability specifications

Smarter

- Extremely low power consumption
- Eliminates consumables (silicone membranes or cleaning tape)
- Lower maintenance costs

Software-Based Autodetect

- Scanner automatically detects the finger capture that generates the highest quality image without user intervention.
- Application developers enable this feature through the Integrated Biometrics software development kit (SDK)

01 **LES: Light Emitting Sensor, Sensing Area**

The patented LES film is a multilayer, polymer composite containing particles that luminesce (give off light) in the presence of an electrical field.

02 **Conductive Bezel**

The bezel, in conjunction with a user's finger, complete a low-level electrical circuit which causes the particles in the film to emit light.

03 **Action Bar**

The action bar includes ten LED indicators and two touch buttons, which are programmable using the IBScanUltimate SDK.

04 **Private Label Area**

The private label area can be customized with your company's logo as a replacement to the Action Bar. Contact Sales for more information and purchasing.

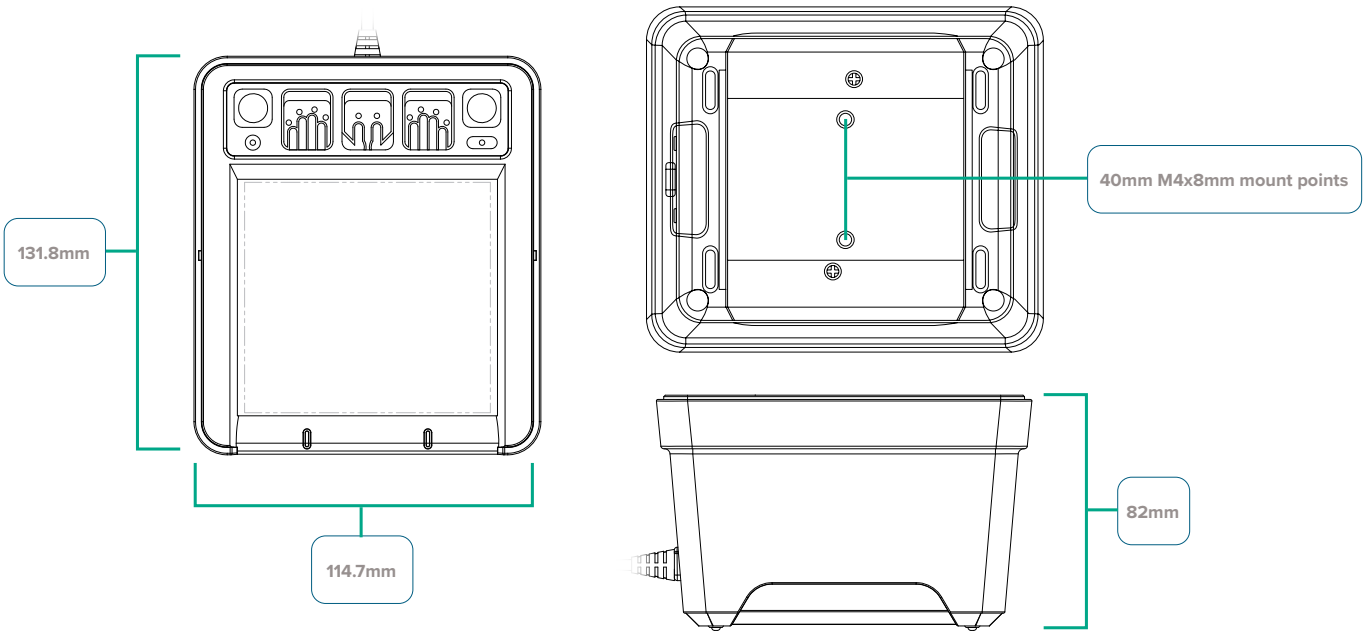
Kojak Private Label (PL)

ITEM	SPECIFICATIONS
Scanner Physical Size	131.8mm x 114.7mm x 82mm
Total Weight	< 725 grams (not including cable)

Action Bar

HARDWARE CONNECTION SETUP

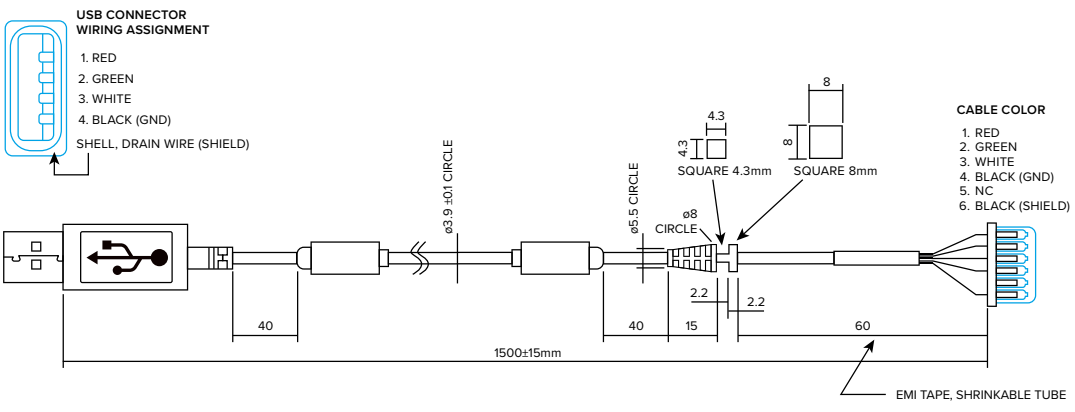
Outline Dimension



USB Connector Pin Description

PIN NUMBER	TYPE	DESCRIPTION
1	V_BUS	+5 VDC
2	USB	Data (+)
3	USB	Data (-)
4	G	Ground
5	–	NC
6	G	Shield Ground

USB Cable

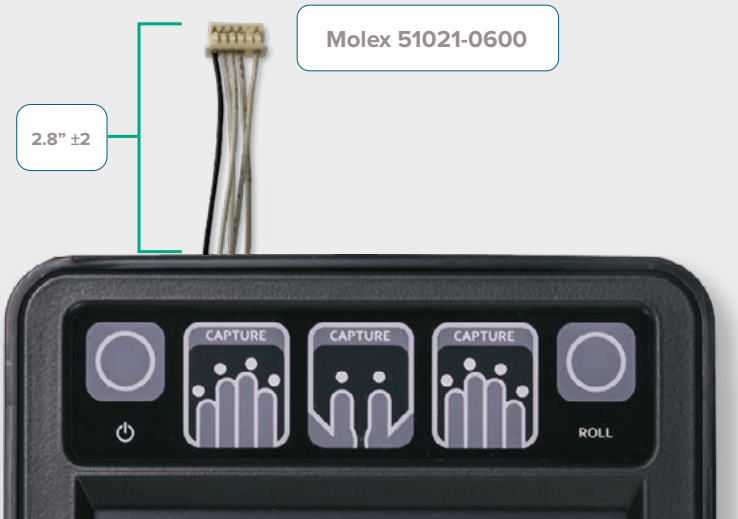


ITEM	SPECIFICATIONS
Scanner Physical Size	114.7mm x 131.8mm x 77mm
Total Weight	< 725 grams (not including cable)

HARDWARE CONNECTION SETUP

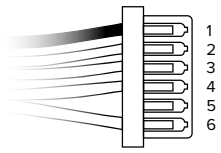
Kojak Module Specific Cable shown below:

- Molex Connector Series 51021, Part Number 51021-0600, 1.25mm Pitch PicoBlade Wire to Wire Female, 6 Circuits
- More information can be found at the following link:
  - *https://www.molex.com/molex/products/datasheet.jsp?part=active/0510210600_CRIMP_HOUSINGS.xml&channel=Product*

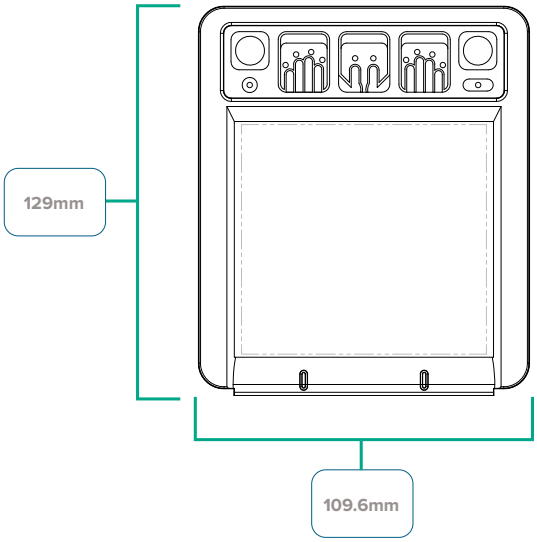


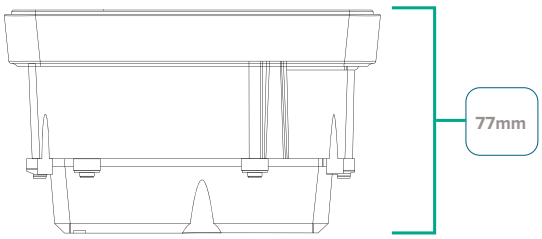
Molex Pin Number Description

PIN NUMBER	DESCRIPTION
1	+5 VDC
2	Data (+)
3	Data (-)
4	Ground
5	NC
6	Shield Ground



Outline Dimension





USB Connector Pin Description

PIN NUMBER	TYPE	DESCRIPTION
1	V_BUS	+5 VDC
2	USB	Data (+)
3	USB	Data (-)
4	G	Ground
5	–	NC
6	G	Shield Ground

OS Support

SECTION	SPEC.
Windows	Windows 7 or later (32-bit and 64-bit)
Linux	Kernel 2.6 or later (32-bit, 64-bit, ARMv7-A, and ARMv8-A)
Android	Android 4.0 or later (32-bit, 64-bit, ARMv7-A, and ARMv8-A)

System Requirements

SECTION	SPEC.
CPU	x86 and x64 I 2.0GHz or higher ARM I 1.0 GHz or higher
Memory	512MB or higher

General Specifications

SECTION	SPEC.
Sensor Type	LES
Camera	CMOS
Resolution	500PPI
Platen Size	3.5” x 3.15” / 88.9mm x 80.01mm
Grayscale	256 grayscale dynamic range
Image Size	1600 x 1500 pixels
Supported Image Formats	RAW, JPEG2000, BMP, PNG, WSQ
Functions: Touch Buttons	2x programmable touch buttons*
Notifications: Audible & Visual	Built in programmable chime 10x programmable red/green LEDS*
Sensing Area	3.2” x 3.0” / 81.28mm x 76.3mm
FBI Certification/Image Certifications	FBI Appendix F, PIV, GSA FIPS201, FAP60
Interface	USB 2.0
API Interface	Capture single-finger/four-finger direct, single-finger rolls, multi-device / multi-thread support
USB Certification Spec	USB-IF USB.org
USB Voltage Level	4.4V ~ 5.25V

*Not applicable to Kojak PL variants

General Specifications continued...

SECTION	SPEC.
Speed	Min frame rate > 8FPS, slaps and rolls
Equipment Safety	IEC 62368-1
Product Weight	< 725 grams (not including cable)
Power Source	USB Host
Air Discharge / Contact Discharge	In compliance with IEC 61000-4-2
Operating Temperature	-10°C ~ +55°C
Storage Temperature	-30°C ~ +60°C
Humidity	10~95% RH < 40°C / 104°F (Non-condensing)
Hazardous Material	RoHS Directive 2002/95/EC TSCA* Proposition 65* Canada Prohibition*
Ingress Protection / Water/Dust	IP65 Sealed bezel to scanning surface
Surface Durability	MIL-C-675c4.5010, MIL-STD-810F

*Not applicable to Kojak PL variants

Electrical DC Characteristics (VDD = 5Vdc, Top = 25°C)

SECTION	MIN.	TYP.	MAX.	UNIT
Power Supply Voltage (VBUS)	4.5		5.25	V
Full Scanning	—	275mA	320	mA
Standby			40	mA
D+ and D-	USB			

Kojak Protective Cover

- 1 protective rubber top cover
- Part Number: KJTPCVR-001

Kojak Instructions Placard

- Sturdy plastic panel that affixes to the underside of Kojak scanners with an adhesive sticker applied explaining how to properly use a Kojak
- Part Number: KJPLACD-001

All accessories are available for purchase.

PURCHASE

Contact Sales to inquire.

North American Office

For Package Delivery
121 Broadcast Drive
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Spartanburg, SC 29301

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Phone
+82-31-777-2200

Sales Administration

- info.kr@integratedbiometrics.com

CLEANING AND SANITIZATION

For proper cleaning and disinfection of IB products, visit:
https://integratedbiometrics.com/cleaning

ABOUT INTEGRATED BIOMETRICS

Integrated Biometrics (IB) designs and manufactures FBI-certified fingerprint sensors for law enforcement, military operations, homeland security, national identity, election validation, social services, and a wide range of commercial applications. The company's patented Light Emitting Sensor (LES) Film results in lightweight scanners that outperform traditional prism-based devices in size, power consumption, speed, portability, spoof-detection and reliability. Identity management solution providers, government agencies, and corporations around the world rely on IB sensors for fast and accurate enrollment, verification and identification, even in remote locations and hostile environmental conditions.

Far more effective in mobile applications environments than silicon or other traditional prism-based sensors, Integrated Biometrics' FBI-certified fingerprint sensors work in any natural or artificial light, on dry or moist fingers and in dusty conditions. LES film resists abrasion and does not require the frequent cleaning cycles of other technologies.

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