



COLUMBO

**Compact, Durable FBI Certified PIV
FAP 30 Single-Print Scanner**

- Automatic Spoof Rejection
- Software-Based Autodetect



COLUMBO

Embedded and standalone versions



Intuitive, ergonomic,
lightweight

Built for mobile and
desktop applications

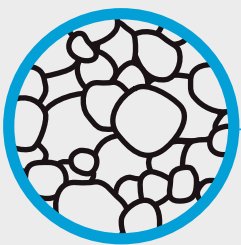
Compact PIV certified
single-finger scanner

COLUMBO DESKTOP

Columbo sets the standard for fast, compact, FBI PIV single-print sensors. This FAP 30 scanner delivers exceptional quality and durability along with greater accuracy than FAP 10 or FAP 20 units, yet does so in a thin, lightweight form factor. Columbo sensors, whether standalone or embedded, require very little power to operate. Their low maintenance design accurately scans old or damaged fingers and delivers reliable results even under extreme environmental conditions. Built for high-volume environments, Columbo also features a comprehensive software development kit (SDK) to streamline application integration.

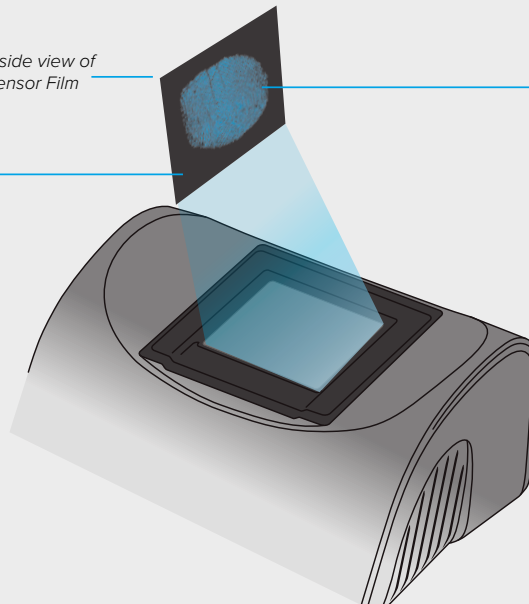
LES Light Emitting Sensor Technology

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



LES film contains luminescent phosphor microparticles that respond only to human fingers when they touch the film

Underside view of
LES Sensor Film



A CMOS camera captures the glow from the phosphor particles, producing a high-resolution fingerprint image

LES Phosphor Particle	•	13-32 μm
Human Hair	•	50-70 μm
Fine Beach Sand	•	90 μm

FEATURES & BENEFITS

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
- Rejects common spoofing attacks
- Emits no bright lights during scans
- Meets or exceeds US military durability specifications

Smarter

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

Hardware-based Automatic Spoof Rejection

IB's LES film recognizes real versus manufactured fingerprints. LES-based scanners automatically reject fingerprints based on silicone, glue, rubber, and other common spoofing materials.

Two options for PKCS (Public Key Cryptology Standard)

PKCS – Elliptical Curve NIST P-521 or RSA 2048;
AES-256, TRNG - NIST SP-800-90 A, B, C; Optional
SHA-256, HMAC, MAC

Software-Based Autodetect

IB's LES technology automatically detects the finger capture that generates the highest quality image without user intervention. Application developers enable this feature through the IB's software development kit (SDK).

AVAILABLE VERSIONS

Product

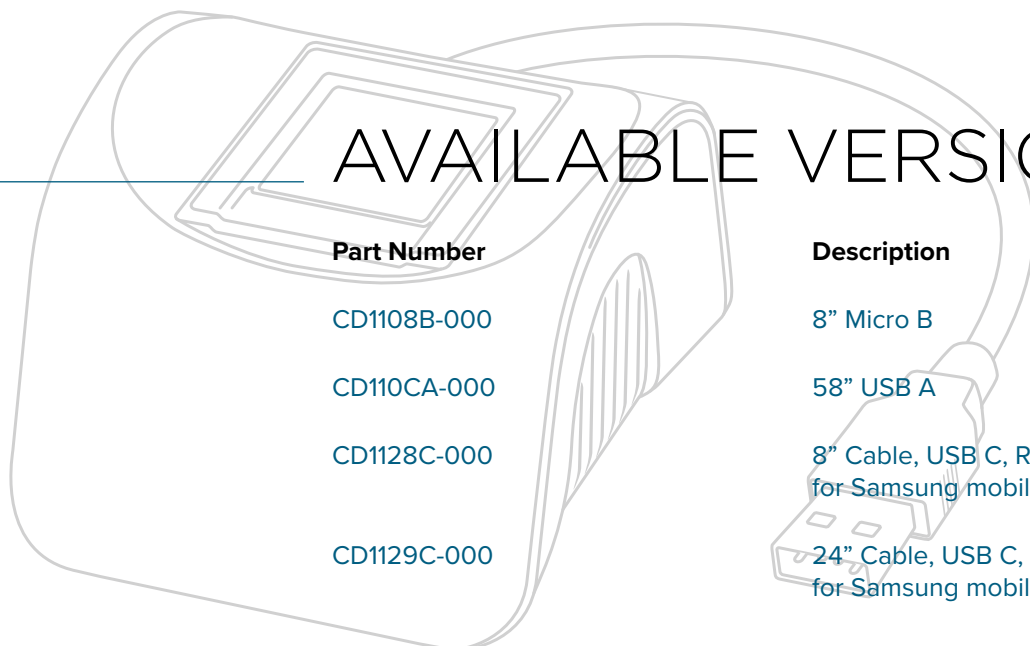
- Columbo Desktop

Part Number

- CD1108B-000
- CD110CA-000
- CD1128C-000
- CD1129C-000

Description

- 8" Micro B
- 58" USB A
- 8" Cable, USB C, Required for Samsung mobile devices
- 24" Cable, USB C, Required for Samsung mobile devices



OS Support & System Requirements

OS Support

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

CPU

x86 and x64 | 2.0GHz or higher
ARM | 1.0 GHz or higher

Memory

512MB or higher

Images & Capture

Sensor Type

LES

Camera

CMOS

Resolution

500 PPI

Grayscale

256 grayscale dynamic range

Image Size

400 x 500 pixels

Supported Image Formats

RAW, JPEG2000, BMP, PNG, WSQ ([FBI-approved](#))

FBI / Image Certifications

PIV 071006, FIPS 201, FAP 30 / Certified to Mobile ID Requirements

Speed

Minimum frame rate > 8 FPS

API Interface

Capture single finger, multi-device / multi-thread support

Quality Scoring

NFIQ v1 supported on all OSes and NFIQ2 for Windows

Weight & Dimensions

Product Weight

< 170 grams / 0.40 lbs (not including cable)

Platen Size

20.32 mm x 25.4 mm / 0.8" x 1.0"

Sensing Area

20.32 mm x 25.4 mm / 0.8" x 1.0"

Scanner Assembly Dimensions

77.5 mm x 65.9 mm x 49.6 mm / 3.05" x 2.59" x 1.95"

Power & Connectors

Interface

USB 2.0

Power Source

USB Host

USB Voltage Level

4.40V to 5.25V

Sleep*

< 2.5mA

**Feature not available on all models. Ask technical support for further information.*

Conformance & Certifications

USB Certification

USB-IF [USB.ORG](#)

FCC/CE Conformance

FCC Part15 (per ANSI C62.4:2003) Class A, CSA ICES-003 Class A, CE Emissions: EN55022:2006 Class A, CE Immunity EN 55024:1998/A1:2001/A2:2003, IEC61000-4-2

Air Discharge / Contact Discharge

In compliance with IEC 61000-4-2

Equipment Safety

IEC 60950-1

Hazardous Material

RoHS directive 2002/95/EC

Vibration Test

Per Mil-STD-810F (Method 514.5), Category 24, Flg.514.5C-17

Temperatures & Humidity

Operating Temperature

-10°C ~ +55°C / 14°F ~ 131°F

Humidity

30~85% RH < 40°C / 104°F (Non-condensing)

Storage Temperature

-40°C ~ +80°C / -40°F ~ 176°F

Surfaces & Systems

Ingress Protection / Water / Dust

IP65 Sealed bezel to scanning surface

Surface Durability

MIL-C-675c 4.5010, MIL-STD-810F

Cleaning & Sanitization

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

Mean-Time Between Failures (MTBF)

Based on 200 full single-finger enrollments per day, the Columbo MTBF is 66 years.

Warranty

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: integratedbiometrics.com/warranty

