



COLUMBO

**Compact, Durable FBI Certified
PIV 071006 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

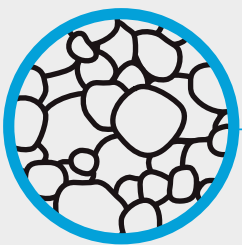
COLUMBO DESKTOP

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 on a wide variety of common platforms including Windows, Android, and Linux.

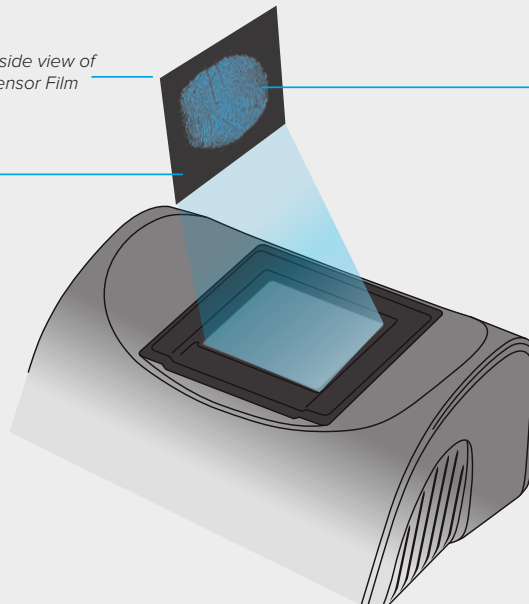
LES Light Emitting Sensor Technology

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	•	13-37 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

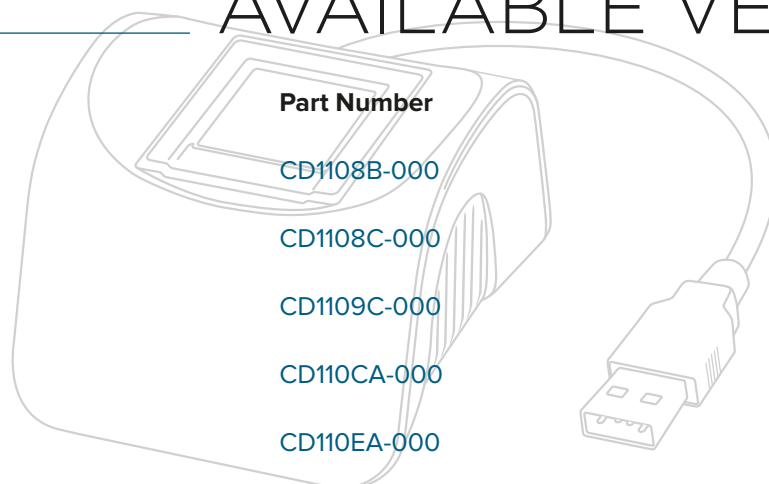
- Columbo Desktop
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Part Number

- CD1108B-000
- CD1108C-000
- CD1109C-000
- CD110CA-000
- CD110EA-000

Description

- 8" Micro B
- 8" USB C
- 24" USB C
- 58" USB A
- 2.5M USB A



Images & Capture

Sensor Type

Light-emitting sensor (LES) CMOS CIS camera

Resolution

500 PPI

Gray Scale

256 grayscale dynamic range

Image Size

400 W x 500 H pixels

Supported Image Formats

RAW, JPEG2000, BMP, PNG, WSQ

FBI Certification / Image Certifications

PIV 071006, FIPS 201, FAP 30 /

Certified to Mobile ID Requirements

Speed

Min frame rate > 8 FPS

API Interface

Single-finger flat,

Multi-device / multi-thread support

Encryption

Encryption (single board version only)

X.509 Certificate with ECDSA; PKCS - Elliptical Curve

NIST P-521 or RSA 2048; AES-256, TRNG -

NIST SP-800-90 A, B, C; Optional SHA-256, HMAC, MAC

Weight & Dimensions

Product Weight

170 grams / 6.00 oz | OEM <70 grams

Platen Size

20.32mm x 25.4mm / 0.8" x 1.0"

Sensing Area

20.32mm x 25.4mm / 0.8" x 1.0"

Scanner Assembly Dimensions

75mm x 66mm x 48mm / 2.95" x 2.6" x 1.89"

OEM 46.5mm x 39mm x 27.5mm / 1.83" x 1.53" x 1.08"

Power & Connectors

Interface

USB 2.0, Micro USB and USB C; OEM: Molex

Power Source

USB Host

USB Power Requirement / Consumption

4.4 to 5.25v, full scanning <115ma, standby <50 ma

Conformance & Certifications

USB Certification

USB-IF USB.ORG

FCC/CE Conformance

FCC Part 15 (per ANSI C62.4:2003) Class A; CSA ICES-003

Class A; CE Emissions: EN 55022:2006 Class A;

CE Immunity: EN 55024:1998/A1:2001/A2:2003, IEC 61000-4-2

Air Discharge / Contact Discharge

In compliance with IEC 61000-4-2

Equipment Safety

IEC 60950-1

Hazardous Material RoHS Certified

RoHS directive 2002/95/EC

Vibration Test

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

Temperatures & Humidity

Operating Temperature

-10°C ~ +55°C / 14°F ~ 131°F

Humidity

20~95% RH < 40°C (non-condensing)

Storage Temperature

-30°C ~ +80°C / -22°F ~ 176°F

Surfaces & Systems

Ingress Protection / Water / Dust

Desktop IP65 sealed bezel to scanning surface

OEM IP65

Surface Durability

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

Surface Resistance / Allowable Cleaning Chemicals

Ammonia, IPA, methanol, soaps, detergents, salt water

OS Support

Windows Desktop 32/64 bit (7, 8, 10), Windows Server, Linux,

Android 4.0+, Java

Warranty

1 year hardware warranty

(extended warranty available upon request)

