INTEGRATED BIOMETRICS

# Columbo

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

- Software-Based Autodetect
- Automatic Spoof Rejection
- Presentation Attack Detection w/SDK

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.

Suitable as an embedded or standalone device.

- Embedded/standalone versions
- Intuitive, ergonomic, lightweight
- Built for mobile and desktop applications
- Compact PIV-certified single-finger scanner
- USB C compliant (cable not included)

## Features & Benefits

**Faster**

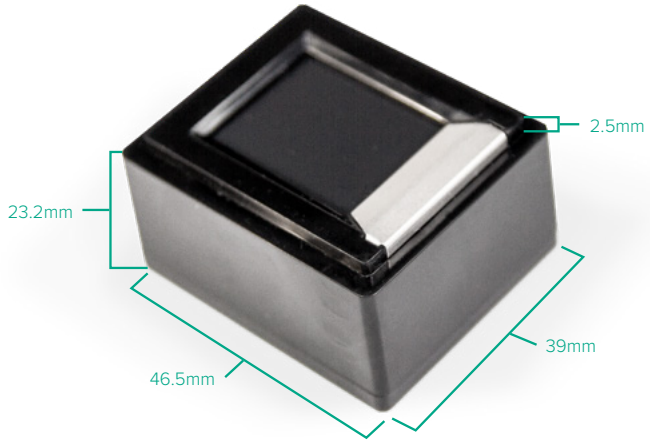
- Rapid, dry finger capture
- No need to clean latent prints in high-volume situations
- Easy integration via single SDK for all Integrated Biometrics FBI-certified products

**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




** MITRE certification in process*

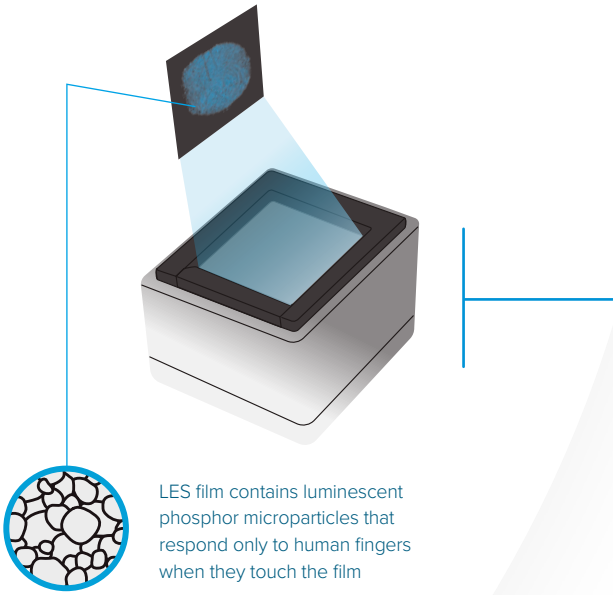
For more on Columbo, visit us at
integratedbiometrics.com/products/columbo

UNMISTAKABLE ID,
UNMISTAKABLY IB

# 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.

To learn more, go to integratedbiometrics.com/technology



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

### Hardware-based Automatic Spoof Rejection

IB's LES film technology cannot be activated using common types of manufactured, fake fingerprints. Leveraging the electrical properties of human skin, LES film does not luminesce in the presence of fingerprints based on silicone, glues, rubbers, and other non-conductive materials.

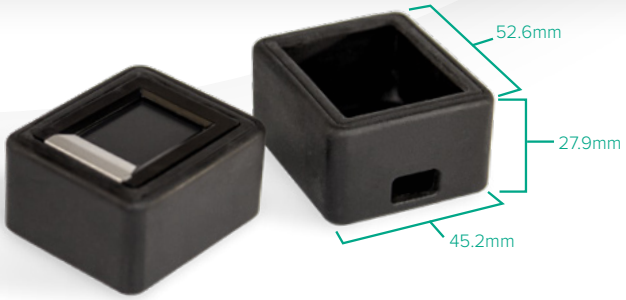
### Software-based Autodetect

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

| GENERATION | PART NUMBER | HOUSING/BEZEL STYLE | CONNECTION TYPE | AVAILABLE CABLES |
|---|---|---|---|---|
| Columbo | CL2100C – 000 | Embedded/Original | USB-C Port | USB-C to USB-C (61cm/24″) |
| | | | | USB-C to USB-A (90cm/36″) |
| | | | | USB-C to USB-Micro-B (61cm/24″) |
| | | | | USB-C to Molex Adapter |
| | | | | 3rd Party |

### Available Accessory(s)

Grip Case
Part number: CMSSGCA-000




Mounting Bracket
Part number: CMBRAK-001

Desktop Enclosure
Part number: CMDTPEC-000


MOSIP COMPLIANT

## ABOUT INTEGRATED BIOMETRICS

Integrated Biometrics (IB), a pioneer in biometrics technology, designs and manufactures advanced, high-resolution touchless identification SDK software and the world's most mobile, durable and reliable FBI-certified fingerprint sensors. Law enforcement, military, homeland security, national identity, election validation, financial and social services organizations around the world rely on Integrated Biometrics products for fast, accurate enrollment, identification and verification, even in remote locations under extreme conditions.

# COLUMBO 2.0/COLUMBO DESKTOP SPECIFICATIONS

## OS Support & System Requirements

**OS Support**
- Android 10, 11, 12
- Windows Desktop Editions 7, 8, 10, 11
- Linux Kernel 4.0 or newer (32/64 bit, ARMv6, ARMv7)
  - Ubuntu 18.04, 20.04 or newer
  - Debian 10, 11, or newer

**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)

**Encryption**
- N/A

**FBI / Image Certifications**
- PIV 071006, FIPS 201, FAP 30 / Certified to Mobile ID Requirements

**Speed**
- Min frame rate > 10fps, slaps and rolls

**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**
- < 41 grams (not including cable or bracket) - 2.0
- < 170 grams / 0.40 lbs (not including cable) - Desktop

**Platen Size**
- 20.32 mm x 25.4 mm / 0.8” x 1.0” - 2.0
- 20.32 mm x 25.4 mm / 0.8” x 1.0” - Desktop

**Sensing Area**
- 20.32 mm x 25.4 mm / 0.8” x 1.0” - 2.0
- 20.32 mm x 25.4 mm / 0.8” x 1.0” - Desktop

**Scanner Assembly Dimensions**
- 46.5 mm x 39 mm x 25.7 mm / 1.8″ x 1.5” x 1.0” - 2.0
- 77.5 mm x 65.9 mm x 49.6 mm / 3.05″ x 2.59” x 1.95” - Desktop

## Power & Connectors

**Interface**
- USB 2.0

**Power Source**
- USB Host

**USB Voltage Level**
- 4.4V to 5.25V

## 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: 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

## Temperature & 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

## Surface & 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.