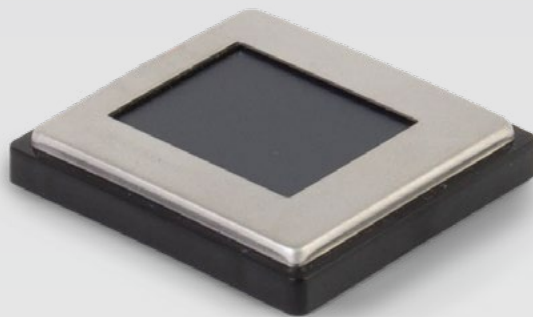**ib**

INTEGRATED
BIOMETRICS

Danno

**FBI Certified FAP 30
TFT Fingerprint Sensor**

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:

Revision History

Revision No.	Issue Date	Comments
0.7	2022.4	Adjust Electrical DC Characteristics
0.6	2020.07	Added product cleaning and sanitization, and warranty information
0.5	2020.04	Updated product image and outline dimensions Added Test Cable information
0.4	2019.12	Updated Safety information
0.3	2019.8	Updated the current consumption
0.2	2019.6	Updated product image Applied official product name to "Danno"
0.1	2019.4	Draft for USB module (Molex connector type)

Contents

Danno uses Integrated Biometrics' patented light-emitting sensor (LES) technology with a thin film transistor (TFT) 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 | 02

03

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.

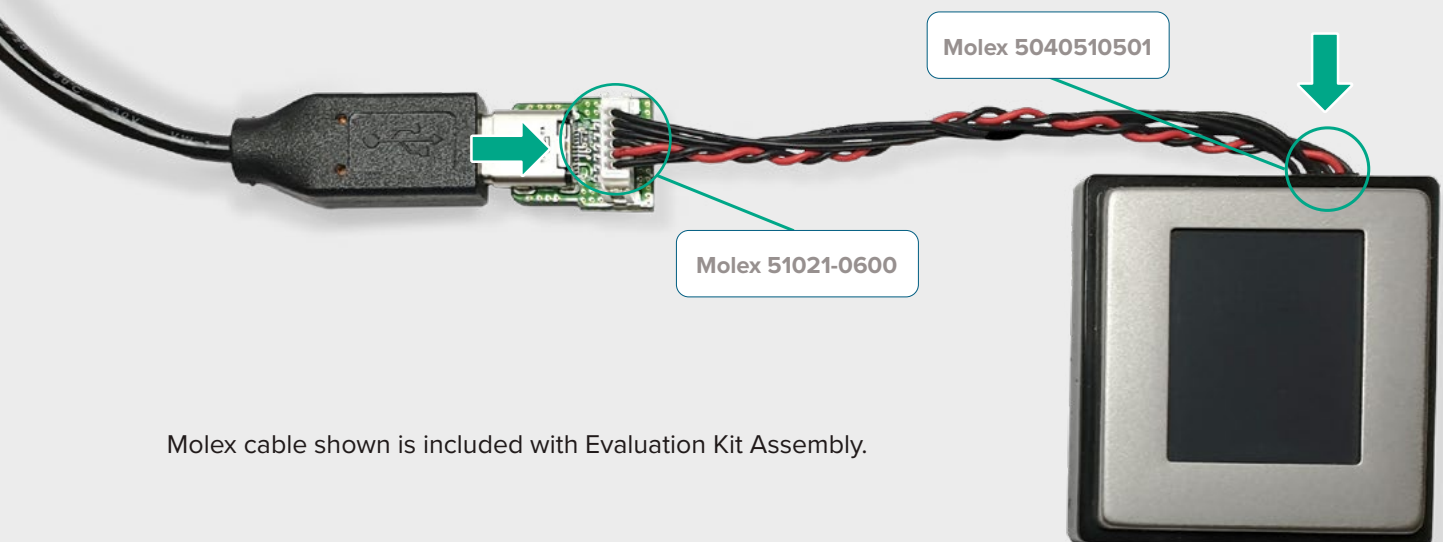**02** **Conductive Bezel**

The stainless bezel creates a low-level electric circuit which causes the particles in the film to luminesce or emit light.

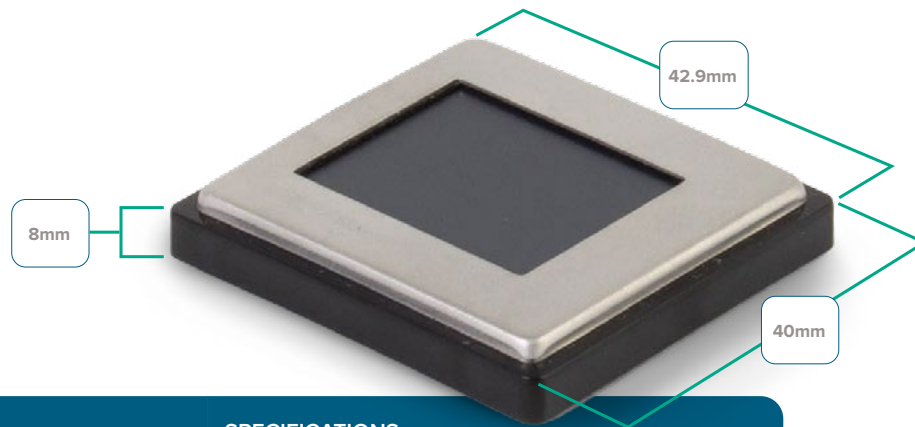**03** **Female Molex Connector – 5040500591**

EVALUATION KIT ASSEMBLY

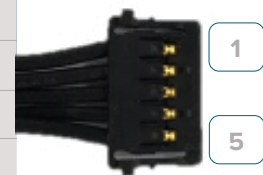Part Number: DNCA1KT-000. For rapid evaluation, development, and testing.

Molex 5040510501

Molex 51021-0600

Molex cable shown is included with Evaluation Kit Assembly.

ITEM	SPECIFICATIONS
Scanner Physical Size	40.0mm x 42.9mm x 8.0mm
Total Weight	20 grams

Molex Pin Number Description

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

1.50mm Pitch, Pico-Lock PCB Header, Single Row, Right-Angle, Surface Mount, Gold (Au) Plating, Positive Lock, 5 Circuits

More information can be found at the following link:
https://www.molex.com/molex/products/part-detail/pcb_headers/5040500591

PIN NUMBER	TYPE	DESCRIPTION
1	V_BUS	+5 VDC
2	USB	Data (+)
3	USB	Data (-)
4	G	Ground
5	I/O	N/C
6	G	Shield (Ground)

Molex Connector Series 51021, Part Number 510210600, 1.25mm Pitch, PicoBlade Receptacle Crimp Housing, Single Row, Friction Lock, 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

Customer Casing

0.3mm Waterproof Tape
(e.g. Nitto, No.57120B)

Danno

Customer Casing

Mounting Screws
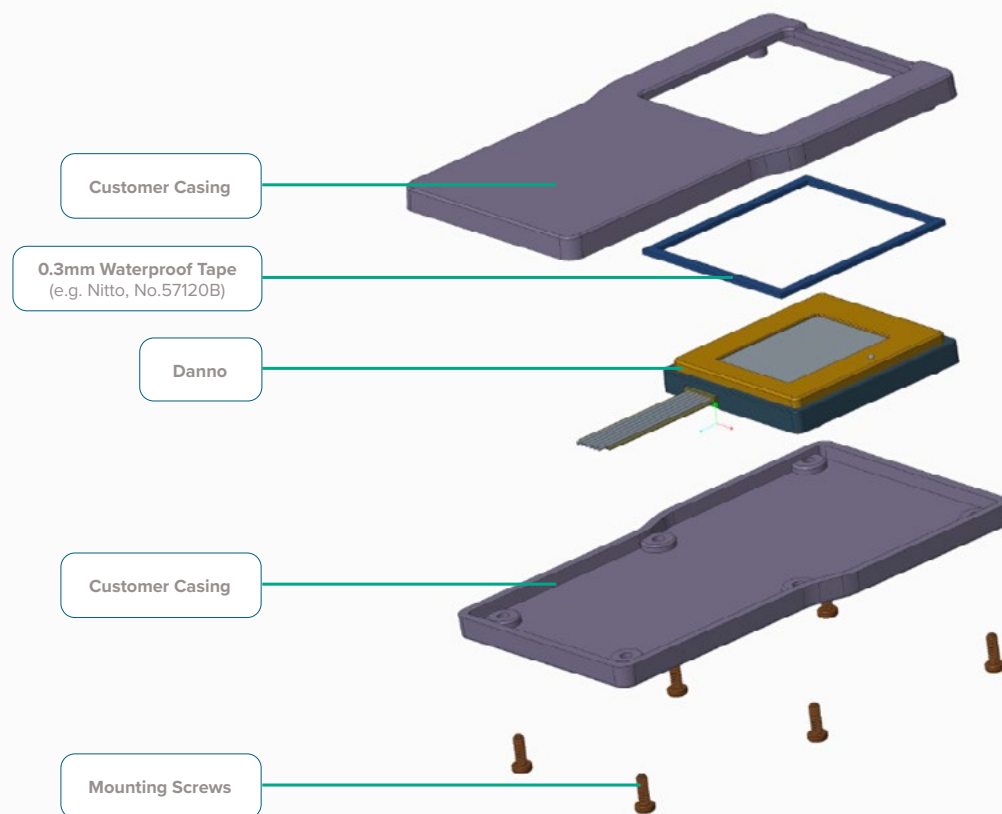
Mechanical Components – Waterproof Tape

Double side waterproof adhesive tape
Manufacturer: Nitto (No.57120B)

0.3mm
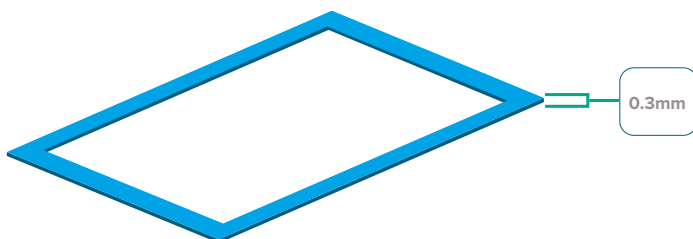
Structure

No. 57120B [Tape thickness: 0.20mm (excluding release liner)]

Acrylic Adhesive
Polyolefin foam carrier (black or white)
Acrylic Adhesive
Release Liner

No.57120B

Properties

Waterproof test (based on IPX7, JIS code C0920, IEC code 60529)

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	2.0GHz or higher ARM	1.0 GHz or higher
Memory	512MB or higher

General Specifications

SECTION	SPEC.
Sensor Type	LE Polymer Film
Camera	TFT (Thin Film Transistor)
Resolution	500PPI
Platen Size	0.85" x 1.05" / 21.52mm x 26.6mm
Sensing Area	0.8" x 1.0" / 20.32mm x 25.4mm
Grayscale	256 grayscale dynamic range
Image Size	400 x 500 pixels
Supported Image Formats	RAW, JPEG2000, BMP, PNG, WSQ
FBI Certification/Image Certifications	PIV 071006, FIPS 201, FAP30 / Certified to Mobile ID Requirements
Interface	USB 2.0 (Molex)
API Interface	Capture single finger, Multi-device/muti-thread support
USB Certification Spec	USB-IF USB.org
USB Level	4.75V ~ 5.25V
Speed	Min. frame rate > 10FPS
Equipment Safety	IEC 60950-1
Product Weight	20 grams
Power Source	USB Host
Air Discharge / Contact Discharge	In compliance with IEC 61000-4-2
Operating Temperature	-10°C ~ +55°C
Storage Temperature	-40°C ~ +80°C
Humidity	30 ~ 85 %RH < 40°C (Non-condensing)

General Specifications continued...

SECTION	SPEC.
Hazardous Material	RoHS Directive 2011/65/EU with amendment 2015/863
Ingress Protection / Water/Dust	IP65 Sealed bezel to scanning surface
Surface Durability	MIL-C-675c4.5010, MIL-STD-810F
Vibration Test	Per Mil-STD-810F (Method 514.5), Category 24, Flg.514.5C-17

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

SECTION	MIN.	TYP.	MAX.	UNIT
Power Supply Voltage (VBUS)	4.75		5.25	V
Full Scanning	—	—	170	mA
USB only (Driver connection)			40	mA
D+ and D-	USB			

Safety information

- Safety Instructions and marketing
- General
  - *Sufficient information shall be provided to the user concerning any condition necessary to ensure that, when used as prescribed by the manufacturer, the equipment is unlikely to present a hazard within the meaning of this standard.*
  - *If it is necessary to take special precautions to avoid the introduction of hazards when operating, installing, servicing, transporting or storing equipment, the necessary instructions shall be made available.*
- Parts not requiring a fire enclosure
  - *Supplied by limited power sources comply with 2.5 and mounted on V-1 CLASS MATERIAL;*

Outline Dimensions

* 3D Model is available upon request (*.step)

Molex Cable

Molex 5040510501 (Device)		Molex 510210600 (Connector Board)

Small Connector Board (for testing purposes only)

Molex 51021-0660 (Danno Side)		USB Type C connector (PC Side)
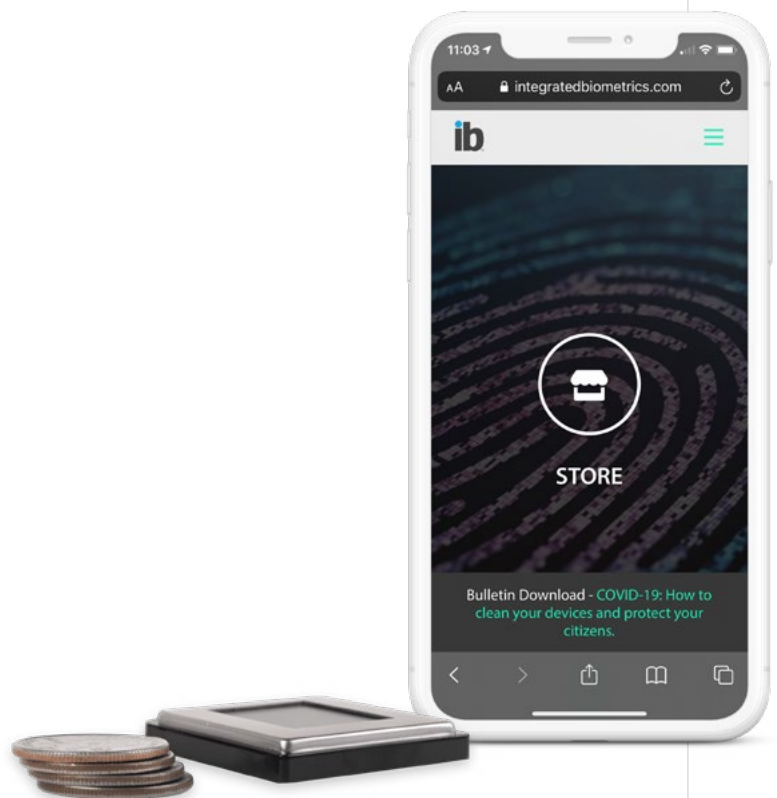
All accessories are available for purchase.

Contact Sales to inquire.

North American Office

For Package Delivery
121 Broadcast Drive
Spartanburg, SC 29303

For Mailing & Correspondence
PO Box 170938
Spartanburg, SC 29301

Phone: US & Canada
(864) 990-3711
Toll-free (888) 840-8034

Sales & Pricing Inquiries

- sales@integratedbiometrics.com

Technical Support

- technical@integratedbiometrics.com

South Korean Office

Physical & Mailing Address
#910 SunTech City Building #1,
Dunchon-daero Jungwon-gu,
Seongnam-si Gyeonggi-do,
13229, Republic of Korea

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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