IMAGE MATCH DESIGN

FINGERPRINT MODULE
FAP 50 · EDM 2026

ROSSII PLUS

GF851EM-D / GF851EM-L • FAP 50

Advanced Display-Integrated Fingerprint Enrollment & Verification



RESOLUTION	IMAGE SIZE	SENSING AREA	CAPTURE RATE	LIVE DISPLAY
500	1600 × 1000	81.28 × 50.8	10 / 15	3.97″
dpi	pixels	mm	flats / rolls per sec	IPS · 480 × 800

Display-integrated capture for your platform.

The ROSSII Plus is a high-resolution fingerprint module designed for display-based systems. Powered by MatriXcan™, it delivers clear images in all conditions while supporting 4-4-2 enrollment, multi-finger verification and signature capture. With Live Display, spoof detection and IP65-sealed durability, it is ideal for secure modern authentication platforms.

MOSIP COMPLIANT	FBI	FCC	CE	ISO
	Appendix F	Part 15	EN 55032 / 55035	19794-4
	FAP 50 certified	Class B	Class B · Immunity	Template output

One Touch. Infinite Trust.

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FEATURES

Key features

- MatriXcan™ fingerprint sensor
- 4-4-2 fingers registration / verification
- Live Display
- Signature function (GF851EM-D)
- Outstanding image quality on dry / worn fingers
- Hard surface for scratch protection
- Excellent ESD performance
- High security and reliability
- Liveness finger detection
- Finger type detection and classification
- Latent print, UV, strong light resistance
- RoHS compliant and low-halogen
- Slim and compact design
- Automatically detects the finger captured
- Encryption function
- IP65, sealed bezel to scanning surface

SPECIFICATIONS

Technical specifications

GENERAL

Model name	GF851EM-D / GF851EM-L
Image size	1600 × 1000 pixels
Rolled size	800 × 750 pixels
Sensing area	81.28 × 50.8 mm
Platen area	83.32 × 69.75 mm
Rolled area	40.64 × 38.1 mm
Resolution	500 dpi
Grayscale	256 (8 bit)
Image format	PNG, BMP, JPEG, WSQ, Raw, JPEG2000, ISO 19794-4 (*.fir)
FPS	Flats 10/sec, Rolls 15/sec
LFD	Supported (HW / SW)
Interface	USB 2.0 10-pin wafer connector (0.8 mm pitch)
Power (read image)	900 mA
Power (standby)	600 mA
ESD level	IEC 61000-4-2 Level 4
Encryption	AES CBC 128/192/256 · AES ECB 128/192/256

SYNCRETIC DISPLAY

Resolution	480 × 800 pixels
Size	3.97 inch
Panel type	IPS
Luminance	300 nit

DIGITAL PEN (GF851EM-D)

Weight	17.8 g
Size	122.5 mm (L) × 7.65 mm (Ø)
Connection	Wireless
Tip-on force	10 gw (typical)
Max. tilt	± 50° from vertical

SIGNATURE (GF851EM-D)

Sensing type	EMR
Active area	52.5 × 87 mm
Coordinate resolution	5080 LPI
Pressure levels	4096 / 8192
Report rate	250 PPS
Coordinate accuracy	± 0.5 mm

PHYSICAL & ENVIRONMENTAL

Device size	115.87 × 90.87 × 15 mm
Device weight	157.8 g
Operating temp.	−10 °C to +55 °C
Storage temp.	−20 °C to +80 °C
Protection	IP65 (sealed bezel to scanning surface)
RCA	200 cycles
MTBF	> 25 years

CERTIFICATIONS

FBI	Appendix F (FAP 50)
FCC	Part 15 (per ANSI C63.4:2014) Class B
CE	EN 55032:2015+A1:2020 Class B · Immunity EN 55035:2017+A11:2020 · IEC 61000-4-2:2008 · IEC 61000-4-3:2020
Standards	ISO/IEC 19794-4:2005 / 2011
Compliance	MOSIP · RoHS

OS SUPPORT

Windows	Windows 7 or higher
Linux	Linux (x64, ARM)
Android	Android 4.2 or higher

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Specifications per ROSSII_Plus_GF851EM-D_L_Module_V2_datasheet (251107 V1.0) · subject to change without notice

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