IMAGE MATCH DESIGN

FINGERPRINT MODULE
FAP 50 · EDM 2026

ROSSII

GF851EM · FAP 50

Enhanced 4-4-2 Enrollment & Verification



RESOLUTION	IMAGE SIZE	SENSING AREA	CAPTURE RATE	PROTECTION
500 dpi	1600 × 1000 pixels	81.28 × 50.8 mm	10 / 15 flats / rolls per sec	IP65 dust & water

4-4-2 capture, built to integrate.

The ROSSII GF851EM is a high-resolution fingerprint module built for 4-4-2 enrollment and multi-finger verification. With MatriXcan™ imaging, IP65-sealed durability and strong spoof detection, it delivers clear, reliable performance for advanced identity-management systems.

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

One Touch. Infinite Trust.

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FEATURES

Key features

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

SPECIFICATIONS

Technical specifications

GENERAL

Model name	GF851EM
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 Type-C / 4-pin wafer connector
Power (read image)	450 mA
Power (standby)	160 mA
ESD level	IEC 61000-4-2 Level 4
Encryption	AES CBC 128/192/256 · AES ECB 128/192/256

OS SUPPORT

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

PHYSICAL & ENVIRONMENTAL

Device size	115.87 × 90.87 × 15 mm
Device weight	110.1 g
Operating temp.	−10 °C to +55 °C
Storage temp.	−40 °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

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Specifications per ROSSII_GF851EM_Module_datasheet (250904 V1.1) · subject to change without notice

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