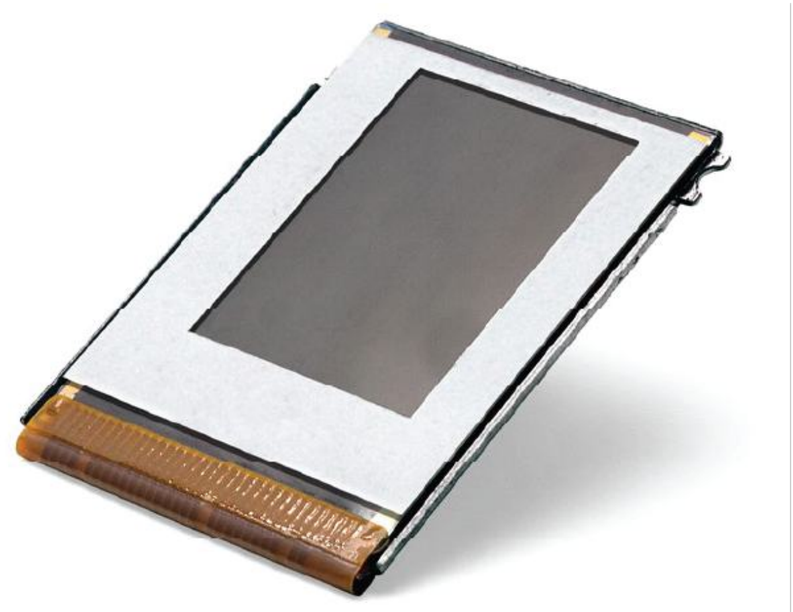
NEXT BIOMETRICS
NB-2023-S2-V



The Next biometrics NB-2023-S2-V product is a high quality, bezel-less SPI fingerprint area sensor module designed for integration into a wide range of products such as notebooks, tablets, tokens, time and attendance terminals, and access control products such as door locks and safes.

It relies on the NEXT sensor chipset mounted on a small printed circuit board for seamless hardware integration. The module connects to the host system via a SPI interface using a flex cable.

The sensor module works with the patented NEXT Active Thermal® principle. The sensor technology is tolerant against dirt, grease and varying environmental conditions. The large active area of the NB-2023-S2-V allows stable imaging, intuitive user operation and and is ideally suited for mass market applications in need of both security and convenience.

The NEXT technology enables an economical production process that makes quality sensors available to price sensitive applications without compromising functionality or performance.

NEXT Biometrics offers a turnkey biometric subsystem by providing hardware drivers and a complete biometric SDK based on a NEXT-certified partner algorithm for a variety of host platforms.

APPLICATION EXAMPLES

- Notebooks
- Tablets
- OTP/USB tokens
- Time and attendance terminals
- Access control terminals
- Door locks and safes

TECHNICAL SPECIFICATIONS

Sensor technology	*NEXT Active Thermal®* sensing (patented)
Total dimensions	20.9 × 27.39 × 2.97 mm³ (including connector)
Active sensing area	11.9 × 16.9 mm²
Pixels	180 × 256
Resolution	385 ppi (pixel size 66 µm * 66 µm)
Gray scale levels	256
Image scan time	0.53 s
Power supply	3.3 V
Scan mode current draw	90 mA (typical)
Standby mode current draw	30 µA (maximum)
Logical interface	SPI 4–8 Mbps

Physical interface	12-pin FFC connector
ESD protection	±8 kV contact discharge, ±15 kV air discharge per IEC 61000-4-2
Mechanical durability	> 2 million touches @ 2.45 N
UV light resistance	ASTM D-4329-5, cycle A
Ingress protection	Designed to enable IP68 rating in end products
Scratch resistance	Durable lifetime coating, hardness ≥ 9H
Operating conditions	-20 °C to +60 °C at 95% RH (non-condensing)
Storage conditions	-20 °C to +70 °C at 95% RH (non-condensing)
Certifications	CE, FCC, RoHS, and WEEE
Ordering options	SPI module without biometric algorithm license: NB-2023-S2-VANO SPI module with NB Biometrics AMX Lite license: NB-2023-S2-VAMX

www.nextbiometrics.com