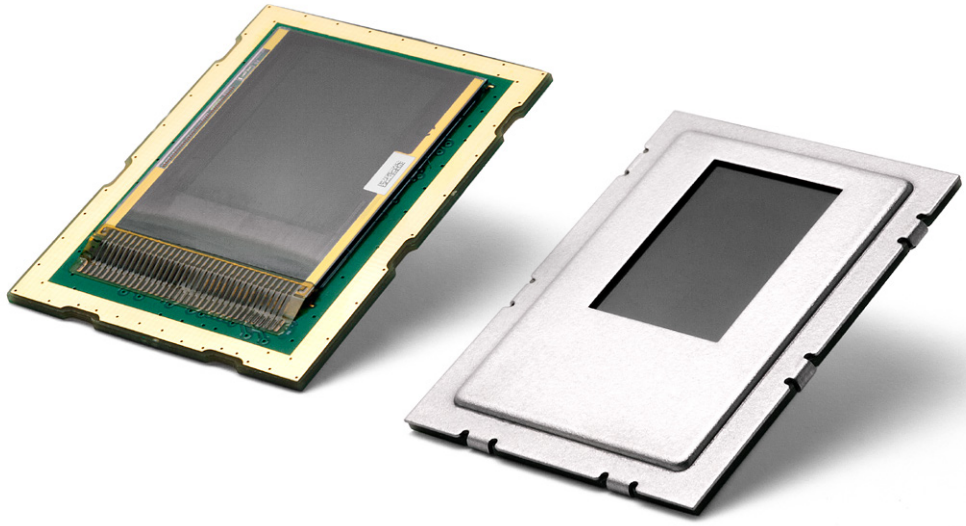
NEXT BIOMETRICS EMBEDDED FINGERPRINT MODULE

NB-1411-S



The NEXT Biometrics NB-1411-S is a high quality fingerprint area sensor embedded module designed for integration into custom application products such as remote controls, tokens and door locks. It relies on the NEXT sensor chipset combined with a high performance security processor to provide a complete fingerprint system solution that supports in-module fingerprint recognition (extraction and matching) as well as fingerprint template storage. The module connects to the host system via an SPI interface using a flex cable.

The embedded sensor module works with the patented NEXT Active Thermal™ principle. The sensor technology is tolerant against dirt, water and varying environmental conditions. The large active area of the NB-1411-S allows stable imaging, intuitive user operation and is ideally suited for mass market applications in need of both security and convenience. The combination of large area and low cost facilitates use of fingerprinting in many new applications.

NEXT Biometrics offers a turnkey biometric subsystem by providing host libraries for a variety of platforms including M4 embedded microcontrollers and Windows 10 IoT.

APPLICATION EXAMPLES:

- Remote controls
- Tokens
- Portable hard drives
- Time & Attendance terminals
- Door locks
- Physical access controls
- Safety boxes
- Smart card readers

TECHNICAL SPECIFICATIONS

Sensor technology	NEXT Active Thermal™ sensing (patented)
Total dimensions in mm	26.0 x 35.0 x 3.34 (flat bezel)
(including connector)	26.0 x 35.0 x 3.09 (no bezel)
Active sensing area in mm	11.9 x 16.9
Pixels	180 x 256
Resolution	385 ppi (Pixel size 66 µm * 66 µm)
Gray scale levels	256
Image scan time	0.45 s
Processing & Matching time	1.0 second (for 10 users/templates)
Standards supported	ISO/IEC 19794-2 template output ISO/IEC 19794-4 image export
Maximum number of users	768 fingerprints
Cryptographic capability	Secure channel protocol to host system, AES 256-bit encryption
FAR	0.01% (configurable)
FRR	<1% (at 0.01% FAR)
Power supply	3.3 V
Scan current consumption (typical)	75 mA
Standby current consumption (maximum)	4 µA
Logical Interface	SPI - 8 Mbps
Physical Interface	15-pin FFC connector
ESD protection	±8 kV contact discharge , ±15 kV air discharge.
Ingress Protection	IP55
Mechanical durability	1 million finger touches guaranteed
Scratch resistance	Durable lifetime coating, hardness > 9H
Operating conditions	-10 °C to +60 °C at 95% RH (non condensing)
Storage conditions	-20 °C to +70 °C at 95% RH (non condensing)
Sensor Module offerings	Flat bezel: NB-1411-S-NF No bezel: NB-1411-S-X
The sensor is designed to enable	CE, FCC, RoHS and WEEE product certifications

www.nextbiometrics.com

Document version: V1.0