





The NEXT Biometrics NB-2033-S2-V has been specifically designed for integration into applications such as time and attendance terminals, outdoor access control readers, door locks and mobile devices. Due to its thin form factor, the module offers seamless hardware integration and is ideally suited for a broad range of applications.

Equipped with a Very High Bond (VHB) double-sided tape on its top surface, The NEXT Biometrics NB-2033-S2-V provides the necessary water-tight seal to enable IP rating in end products. The module is connected to the host system via a SPI interface using a flex cable.

The NEXT Biometrics NB-2033-S2-V module is based on the patented NEXT Active Thermal® principle. The large active sensor area offers stable imaging and intuitive user operation. The sensor technology is tolerant against dirt, grease and varying environmental conditions.

NEXT Biometrics fingerprint sensor technology is ideally suited for mass market applications in need of both security and convenience. The NEXT technology enables economic production of high-quality sensors for price sensitive applications without compromising functionality or performance.

NEXT Biometrics offers a turnkey biometric subsystem by providing hardware drivers and a NEXT certified partner algorithm SDK's for a variety of host platforms.

APPLICATION EXAMPLES

- Time and attendance terminals
- Access control readers
- Door locks
- Mobile devices
- Bike locks

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 mm ²
Pixels	180 × 256
Resolution	385 ppi (pixel size 66 µm * 66 µm)
Gray scale levels	256
Image scan time	0.56 s
Power supply	3.3 V
Scan mode current draw	83 mA (typical)
Standby mode current draw	200 μA (maximum)

Logical interface	SPI 4-18 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
Ingress protection	Designed to enable IP rating in end products
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)
Ordering Part Number	NB-2033-S2-V

