



Advanced Card Systems Ltd.
Card & Reader Technologies

AET62 NFC Reader with Fingerprint Sensor



Technical Specifications



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1.0. Introduction



The AET62 aims to make security and flexibility in contactless (RFID) applications a notch higher. With ACS' ACR122U NFC Contactless Smart Card Reader core and UPEK's swipe fingerprint sensor combined into a single device, you can only think of security and convenience.

Near Field Communication (NFC) Technology is rapidly taking worldwide popularity and fingerprint technology has remained to be the top choice for security measures. Merging these two technologies makes way for high-level and flexible authentication: AET62 verifies something "you have" (smart card), something "you are" (fingerprint) and something "you know" (PIN/password). Its match-on device feature (on-board fingerprint template extraction and matching) and the optional secure access module (SAM) further elevate the level of security delivered by AET62.

The AET62 is compliant with the BioAPI specification, which gives way for interoperability between different software applications and biometric technologies developed by different vendors. In addition, the integration of the widely supported UPEK swipe sensor enables easy adoption of various 3rd-party fingerprint enrollment and matching solutions. This allows a simple and cost-effective hardware maintenance or expansion of existing systems utilizing these 3rd-party fingerprint algorithms.

The AET62 facilitates a simple and intuitive exchange of information, providing convenience that is vital to the user's acceptance of a system. The reader's ergonomic design also lets users scan their finger effortlessly, enabling hassle-free authentication.



2.0. Features

- Integrated fingerprint scanner and 13.56 MHz contactless (RFID/NFC) smart card reader
- Full-speed USB interface
- Encrypted fingerprint template stored inside smart card
- AET62 NFC Contactless Smart Card Reader:
 - Compliant with PC/SC and CCID specifications
 - Read/write speed up to 424 kbps
 - Built-in antenna for contactless tag access, with reading distance up to 30 mm (depending on tag type)
 - Supports ISO 14443 Type A and B, Mifare, FeliCa, and all 4 types of NFC (ISO/IEC 18092) tags
 - Supports new Mifare Ultralight C, Plus SL1 (4 Byte UID) and SL3, and DESFire EV1
 - Supports all 3 modes of NFC: reader, card emulation and peer-to-peer
 - Built-in anti-collision feature (only one tag can be accessed at any time)
 - ISO 7816-compliant SAM slot (*Upon request*)
- Fingerprint scanner:
 - Match-on reader: Template extraction and matching algorithms run within the device itself, not in the PC (*Using default fingerprint algorithm*)
 - UPEK TCS4-TCD50 swipe fingerprint sensor
 - Swipe speed of up to 40 cm/sec (15 in/sec)
 - Active sensor size – 9.6 mm x 0.2 mm
 - High-resolution 508 DPI imaging, array size of 192 x 4 pixels
 - Supports image optimization and filtering
 - Utilizes CMOS active capacitive pixel-sensing technology, resulting to high-quality fingerprint images in any environment
 - Compliant with BioAPI 1.1 specification and Windows Biometric Framework
 - Supports 3rd-party fingerprint algorithms



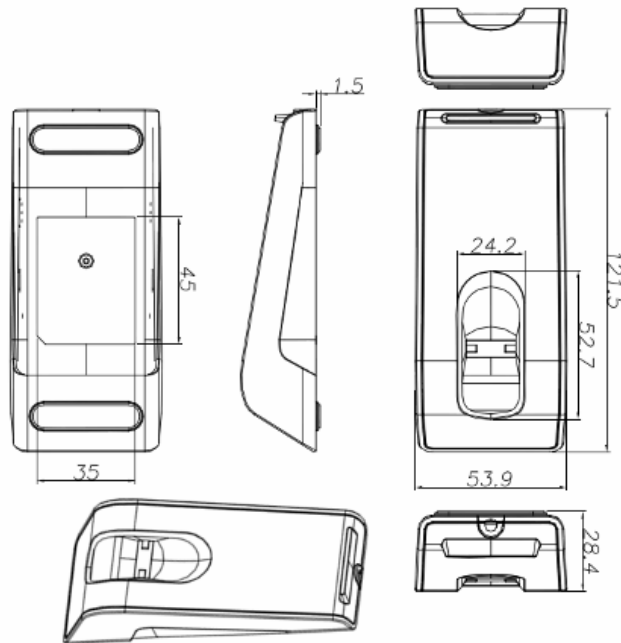
3.0. Typical Applications

- e-Government
- e-Banking and e-Payment
- e-Healthcare
- Public Key Infrastructure
- Network and Security
- Access Control





4.0. Technical Specifications



Universal Serial Bus Interface

Power source From USB
 Speed 12 Mbps (Full Speed)
 Supply Voltage Regulated 5V DC
 Supply Current 300mA (maximum); 70mA (standby); 200mA (normal)

Contactless Smart Card Interface

Standard ISO/IEC 18092 NFC, ISO14443 A and B, FeliCa, Mifare
 Protocol FeliCa protocol, T=CL protocol, NFCIP-1 protocol
 Operating Frequency 13.56 MHz
 Smart card read / write speed 106 kbps, 212 kbps, 424 kbps

Fingerprint Scanner Interface

Sensor UPEK TCS4-TCD50 swipe fingerprint sensor
 Active sensor size 9.6 mm X 0.2 mm
 Width 12.4 mm
 Array size 192 x 4 pixels
 Array pitch 50 microns
 Image resolution 508 DPI
 Maximum swipe speed 40 cm/s

Casing

Dimensions 121.5 mm (L) x 53.9 mm (W) x 28.4 mm (H)
 Weight 170 g
 Color Pearl white
 Operating distance Up to 30 mm

Built-In Peripheral

Bi-Color LED Bi-color LED, red and green

Operating Condition

Operating temperature 0 – 50 °C

Certifications/Compliance

PC/SC, CCID, BioAPI 1.1, Windows Biometric Framework, CE, FCC, RoHS Compliant, USB Full-Speed
 Microsoft © WHQL Server 2003, XP, Vista, Server 2008, Server 2008 R2, 7

Device Driver Operating System Support

Windows Server 2003, XP, Vista, Server 2008, Server 2008 R2, 7
 Linux

