



## TIGERSHARK READER

TigerShark is a card neutral reader that consists of a FIPS 140-2 Level 3 certified cryptographic core and integrates interfaces to contactless Type A, B, and C cards. The reader is designed to connect easily to existing POS terminals for secure contactless payment or merchant loyalty programs. TigerShark employs advanced cryptographic algorithms including DES, 3DES and AES to provide high data security assurance.

### Technical Specifications

#### Configuration

- Processor – ARM-based processing core
- Main Memory – 2MB Flash ROM and 80KB SRAM
  - Upgradeable to 4MB Flash ROM

#### Electrical

- Power source – +5V  $\pm$ 5% DC, 400mA max.
- Compliant to 47 CFR FCC Part 15C

#### Contactless Smart Card Interface

- Supports ISO14443A/B and ISO 18092
  - Operating frequency: 13.56MHz
  - Operating Distance: up to 4 cm from reader's surface<sup>1</sup>

#### Connections / Peripheral Interfaces

- EIAJ RC-5320A std  $\varnothing$ 5mm DC power jack
- EIA561 (DCE) Host Interface
  - Max baud rate of 460.8Kbps
  - Interfaces directly to PoS and other devices.
- Configuration and Key Loading Interface
  - 3-wire TTL-serial port operating at 115.2Kbps

#### Built-In Peripheral

- 128 X 64 Graphic LCD with blue LED backlight
- Integrated buzzer

#### Security

- Secure micro O/S
- BiST (Built-in Self-Test)
- 256-bit factory-programmed un-erasable Factory ID
- 256-bit one-time programmable User ID
- 32-character one-time programmable Serial Number
- UTC clock
- Code loading verification
- Tamper Resistant and Evident construction
- Certified to FIPS 140-2 Security Level 3 requirements<sup>2</sup>

#### Cryptography

- Algorithms supported:

Algorithm (Mode)	Key Length
DES (ECB, CBC, CFB64, OFB64)	64
TDEA (ECB, CBC, CFB64, OFB64)	128, 192
AES (ECB, CBC, CFB128, OFB128)	128, 192, 256
RSA (Encrypt/Decrypt/Sign/Verify)	512 – 2048
HMAC-SHA-1	80 – 160
SHA-1	–
PRNG (ANSI X9.31-compliant)	128

- All cryptographic algorithms are FIPS-approved and are operated in FIPS-approved modes
- CRYPTO OFFICER and multiple user roles
- Identity-based challenge-response authentication
- Key Management
  - Comprehensive key-management framework customizable through key profiles
  - APIs reference keys through opaque handles
  - Encrypted key entry (loading) and exit (archival)
  - Key generation using FIPS-approved RNG
- Application loaded and verified with 2048-bit RSA signature
- Application Partition
  - Dedicated application partition with separate code, stack, and data space

#### Application Development

- Linux/GNU based software development environment
- Supports Windows 2K/NT/XP and Linux

#### Environment

- Operating temperature: +5°C to +60°C
- Storage temperature: 0°C to +80°C
- Humidity: maximum 85% non-condensing

#### Module Size (dimensions in mm)

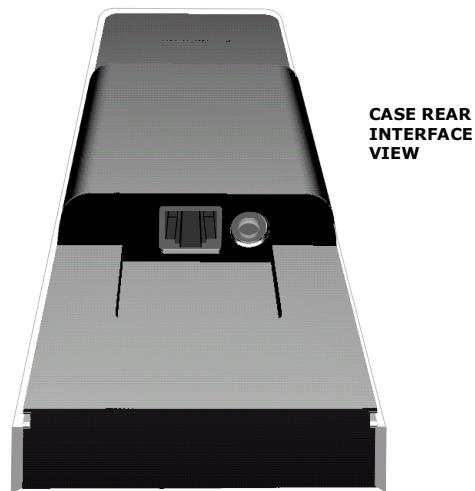
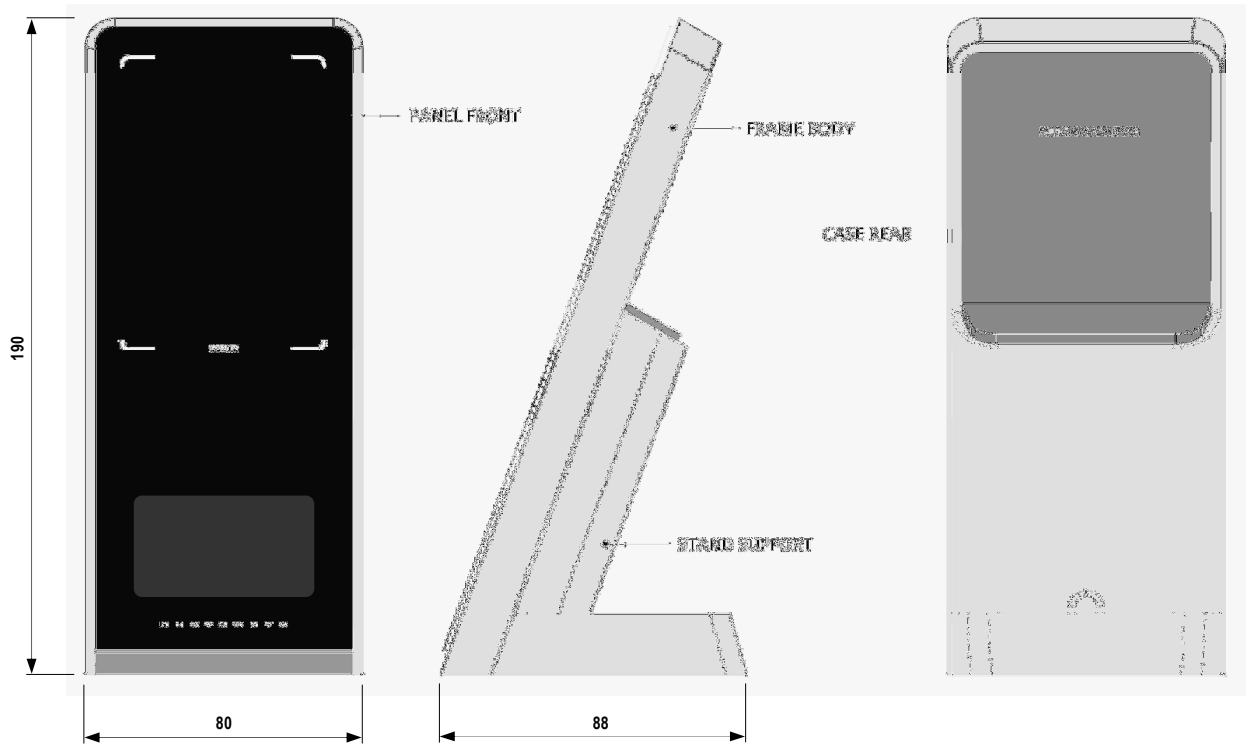
- 88 x 80 x 190 mm (Depth x Width x Height)

*\*Specifications subject to change without notice*

<sup>1</sup> Centre of Contactless Smart Card (CSC) shall be aligned to the center of the antenna. CSC detection range is the distance between the top surface of the reader and the surface of the CSC. The actual read range may be affected by site installation condition.

<sup>2</sup> Certification No.637

## TigerShark Dimensions



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