

Biometric *Tri Scan* Reader with capacitive finger sensor for the Motorola MC70/75/75A

+ *Features and benefits:*

- + High resolution (508dpi) capacitive fingerprint sensor
- + ISO7816 compliant contact smartcard reader
- + Contactless smartcard reader supporting ISO14443 (including MIFARE, CAC, TWIC, FRAC cards as well as ICAO ePassports) and ISO15693 and HID *iClass*
- + Standards based solution simplifies application development.
- + Rugged, snap on peripheral for MC70/75/75A
- + Powered by MC70/75/75A



PART NO.
1084-02-SO-TSR

- + The Biometric *Tri Scan* reader combines **CONTACT SMART CARD**, **CONTACTLESS SMART CARD** and **FINGERPRINT BIOMETRIC CAPTURE**. The biometric core uses a rugged, high image quality fingerprint area sensor. The *Tri scan* reader is compatible with most contact AND contactless Smart Cards including all *Mifare* and *iClass* contactless cards. The contactless card reader is hardware compatible with the CAC, TWIC, FRAC cards as well as ICAO ePassports.
- + The *Tri Scan* reader attaches as a snap-on unit to the base of the terminal - the mechanical design of the module enables the attachment to remain compatible with existing MC70/75/75A accessories such as the desktop charge cradle and the car charger. The module may be quickly removed from the MC70/75/75A, or semi permanently attached with two screws.
- + The fingerprint reader sensor has a rugged coating to provide Electro Static Discharge immunity to 15kV and the ability to withstand everyday wear and tear (rated to >2 million touches). The sensor has a high resolution (508 dpi) and high pixel resolution (256 level grey scale) and is capable of producing very high contrast ratio images operating in the Enhanced Image Mode. The reader conforms to the FIPS 201 specification for Single Finger Capture Devices.
- + The contact smartcard reader is compliant to ISO7816-1,2,3,4, and supports T=0 and T=1 protocols and 2-wire and 3-wire modes. The reader is based on industry standards, including PC/SC and EMV 2000 Level 1 to address a wide range of applications across government, enterprise and financial sectors.
- + The contactless smartcard reader provides the ability to read and write to a wide variety of transponders at 13.56 MHz compliant to ISO14443A, ISO14443B, ISO 15693 and HID *iClass*.
- + The *Tri Scan* reader is supported by demonstration software and a Software Development Kit (SDK). The SDK is required for application development and provides the means to capture finger images. It can be used with many third party Matchers (for example Innovatrics proprietary and ANSI compliant) to extract and match fingerprint templates. Templates may be stored on a remote database or on a contact or contactless smartcard and used for 1:1 and 1:N verification.
- + Communication is via the MC70/75/75A USB port which is automatically switched to allow ActiveSync of the MC70/75/75A with a host device.

Fingerprint Sensor

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|-------------------|---|
| Acquisition rate | 15 frames/second |
| Sensor resolution | 508dpi |
| Pixel array | 256 x 360 pixels |
| Sensor area | 12.8 x 18.0 mm |
| ESD protection | IEC 61000-4-2 Level 4 ±15kV |
| Raw image size | Approximately 100kbyte |
| Template size | Algorithm dependent – typically 300-400 bytes |

Contact Smartcard Reader

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|--------------|---|
| Compliance | ISO7816-1,2,3,4 PC/SC, EMV2000 Level 1 capable. T=0, T=1 Protocol. I2C |
| Connector | Meets ISO 7816-2, rated for >100 000 insertions. |
| Card size | Full (ID-1) |
| Card support | Up to 420Kbps card interface, clock frequency up to 8MHz, 5V, 3V, 1.8V smart cards. |

Contactless Smartcard Reader

| | |
|-----------------------------|--|
| RF Transmit Frequency | 13.56MHz |
| Supported RFID Standards | ISO14443A, ISO14443B, ISO 15693 |
| Supported contactless cards | <ul style="list-style-type: none"> ✓ ISO15693 ✓ ISO14443A/B ✓ Philips: MIFARE[®], DESFire[®], MIFARE ProX[®], SMART MX, and iCode[®] ✓ HID: iCLASS[®] |
| Reading distance | Intended for in-slot card reading, capable of reading up to 2.5cm (1") from back surface dependent on transponder type. |

Connection Interfaces

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|---------------------------|--|
| Charging of host terminal | Host terminal charged through the reader |
| Reader power supply | Powered from host terminal |
| ActiveSync | via USB, automatically switched when connected to a PC |

Physical Characteristics

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|-----------------------|---|
| Dimensions | 90 (h)×82(w)×36(d)mm (3.54"×3.23"×1.42") maximum |
| Weight | 100g (3.6 oz) |
| Enclosure material | Lexan Polycarbonate |
| Colour | Grey |
| Material finish | Sparked surface |
| Mechanical attachment | Snap-on action with optional locking screws |
| Docking | Attachment maintains dockability with Motorola docking cradle for charging and ActiveSync |

Environmental

| | |
|-------------------------|---|
| Operating Temperature | -10°C to +50°C (14°F to 122°F) |
| Storage Temperature | -40°C to +60°C (-40°F to 140°F) |
| Humidity | Up to 90% Relative humidity Non Condensing |
| Drop specification | 1.3m (4.26ft) to concrete, 6 drops per 6 sides over operating temperature; 1.5m (5ft) to concrete, 2 drops per 6 sides at ambient temperature 23°C (73°F) |
| Sealing | Internal components conformal coated |
| Electrostatic discharge | +/-15kV air discharge, +/-8kV direct discharge |
| Construction | RoHS compliant |

Regulatory

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|-------------------|-----|
| EMI/RFI | TBC |
| Electrical Safety | TBC |



+ About TSL

TSL designs and manufactures both standard and custom embedded, snap on and standalone peripherals for handheld computer terminals. Embedded technologies include:

- RFID - Low Frequency, High Frequency and UHF
- Bluetooth
- GPRS/GSM
- IrDA
- Contact Smartcard
- Fingerprint Biometrics
- 1D and 2D Barcode Scanning
- GPS
- 802.11 Wi-Fi
- Magnetic Card Readers
- OCR-B and ePassport

Utilizing class leading Industrial design, TSL develops products from concept through to high volume manufacture for Blue Chip companies around the world. Using the above technologies TSL develops innovative products in a timely and cost effective manner for a broad range of handheld devices.

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ALSO AVAILABLE:

1084-03-SO-TSR

Optical Triscan reader

1084-04-SO-TSR

Contact and Contactless

Smart Card reader



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