



Multi-ISO Embedded Reader Platform



13.56 MHZ CONTACTLESS READER MODULES FOR CASHLESS PAYMENT APPLICATIONS

- **Flexible and interoperable** – Single integration enables PC connected, embedded and mobile solutions; supports broad portfolio of contactless card technologies
- **Fast, efficient, secure** – Up to 848 kBits data transfer speed, optimized data throughput between card and host. Integrated SAM support maximizes security between card, reader and host
- **Integration-friendly** – Supports major tag IC features allowing for easy system integration; employs OS-independent interfacing concept

KEY FEATURES

- Easy to integrate with full feature support of most transponder ICs
- Supports contactless payment (EMVCo 2.0.1) and is NFC-ready
- Full access to data of contactless memory, high security and micro-controller-based cards
- Compact reader board and antenna design is ideal for virtually any size-constrained application
- Fast reading with up to 848 kBit/s data rate on air interface
- Future-proof through field upgradeable firmware
- Key management
- Enhanced anti-collision algorithm for multi-card handling
- Connectivity with the support of TTL, RS232

The family of 13.56 MHz Multi-ISO Reader Boards supports one of the broadest ranges of transmission protocols and transponder ICs available on the market.

Designed to meet the requirements of both secure personal identity verification and supply chain management applications, the Multi-ISO Embedded Reader Platform is ideal for access control, as well as Automatic Fare Collection (AFC), ticketing, vending and mobile solutions.

Featuring integrated SAM support that enables state-of-the-art security, the interoperable reader platform supports a wide range of industry standards, including ISO 14443 A/B, ISO 15693, ISO 18000-3 and EPC, allowing the reader to be used for public transport, financial transactions and many other applications.

Multi-ISO reader boards are also optimized for maximum data throughput times on both the air and serial interface, and are available with a variety of antenna size options for easy integration in virtually any mobile or compact application.

SPECIFICATIONS



	Reader Core	Reader Board RS232
Base Order Number¹	0701800159-1	0701800160
RF Transmit Frequency	13.56 MHz	
Supported Standards	ISO14443A, ISO14443B, ISO 15693, ISO 18000-3, NFC enabled, ICODE	
Supported Tag-ICs	MIFARE™ Standard, MIFARE 4k, MIFARE Plus, MIFARE Pro, MIFARE Ultralight, MIFARE Ultralight C, MIFARE DESFire®, MIFARE DESFire EV1, MIFARE SmartMX, I-CODE SLI (SL2 ICS 20), I-CODE EPC (SL2 ICS 10), I-CODE UID, (SL2 ICS 11), I-CODE, NFC (Reader To Tag Mode) SLE 55Rxx, SRF55VxxP +S, SLE 66CL160S, SLE 66CLX320P, SR176, SR1X4K, LRI 64, LRI 512, EM4135, KSW Temp Sens Tag-it™ HF-I Standard, Tag-it™ HF-I Pro, Jewel Tag, Sharp B, ISO14443A Tags, ISO14443B Tags, ISO15693 Tags, ISO18000-3 Tags, MasterCard PayPass and Visa payWave compliant tags	
Host Communication	Point-to-Point	
Communications Interface	CMOS-TTL	RS232
Communications Protocol	Specific ASCII or Binary Protocol	
Communications Parameter	9600 Bit/s to 460 kBit/s, 8, N, 1	9600 Bit/s to 115 kBit/s, 8, N, 1
Firmware Boot-Loader	Supported via Serial Interface	
S/W Driver	Virtual COM port, API - DLL (MSVC++)	
Power Supply	5 VDC ± 10% regulated	
Power Consumption	90 - 200 mA depending on antenna (without connected SAM) < 10 µA at power down mode	< 150 mA (without SAM) < 10 mA at power down mode
Reading distance	Up to 90 mm / 3.54", depending on tag and antenna	Up to 75 mm / 2.95", depending on tag
RF Transmission Speed	Up to 848 kBit/s	
Antenna	External	Integrated
Input/Output Connector	2 status indicator LED lines SAM Interface	2 status indicator LED lines SAM Socket
Size	25.5 x 30.0 x 4.8 mm ± (L/W) 0.5 (H) 1.0 / 1.00" x 1.18" x 0.19" ± (L/W) 0.02" (H) 0.04"	70.0 x 45.0 x 12.1 mm ± 1.0 mm / 2.76 x 1.77" x 0.48" ± 0.04"
Weight	5g ± 5% / 0.01 lb ± 5%	17g ± 10% / 0.04 lb ± 10%
Operating Temperature	-20°C to + 80°C / -4°F to +176°F	
Storage Temperature	-40°C to + 85°C / -40°F to +185°F	
Firmware Version	1.2.5	
Approvals/Compliances	RoHS compliant, EMVCo 2.0.1	ETS 300-330, CE, FCC part 15, RoHS compliant, ISO 14443 1-4,, EMVCo 2.0.1
MTBF	3.000.000 h	200.000h

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