



mi microread® Suite

Multi-standard 13.56MHz contactless reader IC



Features

- Interoperable with ISO 14443 A&B, ISO 15693, ISO 18092 (includes Sony protocol), and NFC mode.
- Operating distance: up to 10cm
- Powerful command set
- Cryptographic functions
- Flexible integration functions
- Single Wire Protocol (SWP) interface with SIM card
- 2 UART interfaces for easy integration
- Baud rates of up to 424kbps
- Powerful router function
- Low-power
- Small footprint

Applications

- Peer-to-peer communication
- Card emulation
- NFC card reader

microread® is an innovative, next-generation RF chip that uses Near Field Communication (NFC) for proximity data transactions. Incorporated into cell phones, PDAs or PCs, it enables them to operate like RF readers AND contactless smart cards or RF tags.

Compatible

Because it complies with the ISO 14443 A/B, ISO 15693, and 18092 (includes Sony protocol), a **microread®** enabled device can communicate with the installed base of readers worldwide.

A **microread®** enabled device can also act as a reader, accessing peer devices and smart objects like Contactless payment cards, NFC enabled PC's or the tags on posters or adverts.

Deployable

In the fast-growing NFC market, **microread®** emerges as a low-cost, low-power, versatile solution. Its small footprint and deployability meet the demands of cell phone, PC and other consumer device manufacturers to add value to their products.

Configurable and Flexible

microread® routes applications wherever they reside in a device thus enabling different architecture configurations. It can, for example, act as a router while applications are located in an external Secure Element (SE).

Its powerful command set allows all elements of the chosen architecture to interact in a controlled manner (SIM, SE, Application Processor and NFC interface)

The single communication link between the SIM and the RF chip is implemented using the Single Wire Protocol (SWP). This frees up connections for additional architecture.

The powerful processor which **microread®** contains is a guarantee of high levels of flexibility.

Versatile

microread® makes cell phones and PDAs extremely versatile. Among their uses could be:

- Access control or ticketing, where a NFC-enabled device is presented to a reader
- Mobile payment
- Data capture, e.g. reading a smart tag on a poster for service discovery
- Peer-to-peer transactions between two NFC-enabled devices, e.g. downloading music, exchanging addresses.

microread®

Key Technical Data

Electrical Characteristics

Standby current	<10 μ A
Idle and current detection	<100 μ A
RF active current	50mA
Typical power supply	3.3V

General Specifications

RF operating frequency	13.56 MHz
Operating temperature	0-70°C
Operating Distance (depending on antenna size)	up to 10 cm
SIM interface	SWP-ISO 7816
Application processor interface	UART
Package	QFN28
Integrated router	Yes
Protocols	ISO 14443A ISO 14443B ISO 15693 SONY
Card detector	Yes
Battery-off operation (field powers external device)	Yes (internal)

