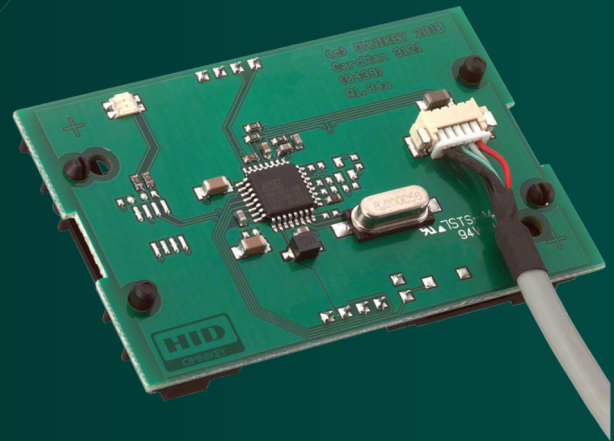# IDCR@FT
RFID & NFC EXPERTS

ISO 7816 - Reader Module
HID - OMNIKEY® 3121

- ISO 7816 & EMVCo Level 1 compliant
- USB 2.0 CCID plug-and-play support
- High-speed contact smart card performance
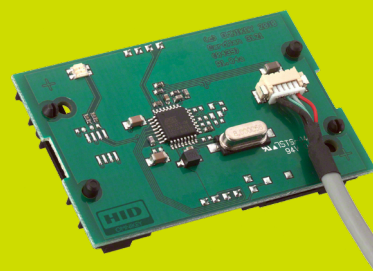- Broad multi-OS integration
- Durable, OEM-optimized board design

ISO 7816 - Reader Module
Compact OEM Reader Board

The OMNIKEY® 3121 Reader Board USB delivers high-performance smart card functionality in a compact board-level design tailored for OEM integration. Built to meet all major industry standards—including ISO 7816, EMVCo Level 1, and Microsoft WHQL—the reader provides maximum compatibility across Windows, Android, Mac OS X, Linux, and embedded environments. Its full USB 2.0 CCID support enables true plug-and-play installation, eliminating the need for additional drivers and ensuring fast, seamless system integration. With high-speed data transmission and support for virtually all contact smart cards (5V, 3V, 1.8V; Class A/B/C), the OMNIKEY 3121 is ideal for a wide range of security-driven applications such as authentication, digital signatures, secure logon, and financial services.

Designed for flexibility and reliability, the OMNIKEY 3121 board incorporates advanced smart card detection features, including automatic card type recognition, short-circuit protection, and auto power-off for enhanced device safety. Its rugged construction delivers up to 100,000 insertions and an impressive 500,000-hour MTBF, offering exceptional long-term durability for OEM products. Optional mounting brackets and integrated PCB mounting holes enable easy mechanical installation in kiosks, terminals, and dedicated hardware builds. With its combination of performance, compliance, and integration-friendly design, the OMNIKEY 3121 Reader Board USB provides a robust and future-ready solution for secure smart card operations.

Common Applications

- e-Government
- eHealthcare
- Single Sign On
- Banking & Digital Signature
- Enterprise Authentication
- Secure Workstation Access

TECHNICAL SPECIFICATIONS

Contact Smart Card Interface

Standards	ISO 7816 & EMV2 2000 Level 1
Protocols	T=0, T=1, 2-wire: SLE 4432/42 (S=10), 3-wire: SLE 4418/28 (S=9), I2C (S=8)
Card Size	ID-1 (full-size)
Smart Card Interface Speed	420 kbps (when supported by card)
Supported Card Types	5V, 3V and 1.8V Smart Cards, ISO 7816 Class A, B and C
Power to Smart Card	60 mA
Smart Card Detection	Movement detection with auto power-off / Automatic detection of smart card type/ Short circuit and thermal protection
8-Pin Handling	C4 / C8 supported
Supported APIs	Works with the default CCID driver shipped with your system No CT-API available at this point No need for Synch-API, Synchronous cards supported via pseudo-APDU's
Operating System Support	Windows Vista/7/8/8.1/10, Windows CE 6.0, Android, Mac OS X, Linux
Embedded Technology	Smart@Link Chipset

Host Interface

Host Interface	USB 2.0 CCID1 USB Suspend mode compliant (<2.5mA)
Transmission Speed	12 Mbps (USB 2.0 full speed)

Human Interface

Status Indicator	Dual color LED

Physical Characteristics

Dimensions	66 x 42,4 x 12mm
Weight	~ 75g
Connector Cable	180 cm
Options	Mounting Bracket: Available upon request

Operating Conditions

Power Supply	Bus powered
Operating Temperature	0°-55°C
Operating Humidity	10-90% rH
Durability	100,000 insertions
Meantime Between Failure	500,000 hours

Compliance Regulatory

Compliance / Certification	Microsoft® WHQL[3], EMVCo Level 1, ISO 7816, CE, UKCA, USB 2.0, CCID1
Safety / Environmental	WEEE, RoHS

Part No. / Model

	HID - OMNIKEY® 3121