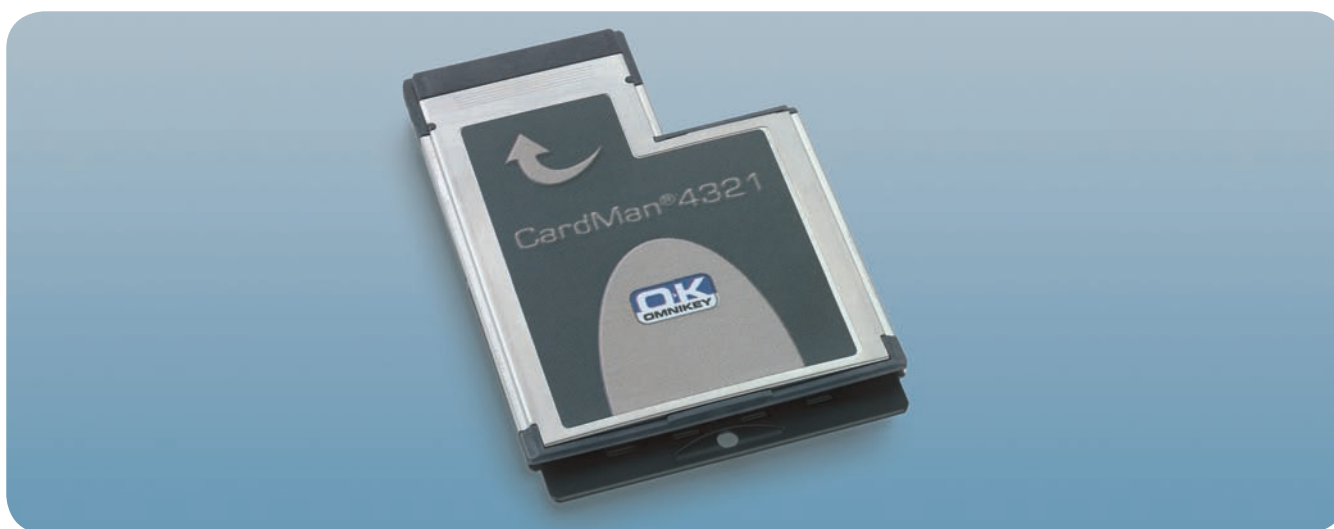




CardMan® 4321 ExpressCard™ Reader

OMNIKEY, one of the world's leading manufacturers of innovative smart card readers, offers with the CardMan® 4321 a smart card reader that can be used in laptops with the new ExpressCard™ interface. The OMNIKEY technology and drivers guarantee the highest level of interoperability and stability in conjunction with this new standard.



The New ExpressCard™ Standard

The ExpressCard™ host interface is the new connectivity standard in laptops and PDA's, in addition or as replacement of the so far existing PCMCIA standard. The new interface is based on the well-established USB 2.0 standard and enables high-speed transmission rates, as well as huge interoperability of portable devices.

High-Speed

Based on revolutionary chip technology, jointly developed with Atmel, the CardMan® 4321 supports reader-to-card data transmission rates of up to 420 KBits per second, exceeding the performance of other smart card readers.

Applications

Applications for the new ExpressCard reader include logon to Windows®, online transactions, home banking, loyalty programs, healthcare solutions and many more future applications.

Standards

The CardMan® 4321 complies with the major relevant industry standards such as ISO 7816, PC/SC, Microsoft® WHQL and HBCI (Home Banking Computer Interface) and EMV (Europay, MasterCard, Visa) 2000 certification. The usage within an application is based on standardized interfaces such as PC/SC, CT-API or OCF (Open Card Framework).



OMNIKEY's CardMan® 4321 is your first choice to secure laptops with modern and fast smart card reader technology

CardMan® 4321 ExpressCard™ 54 Reader

Host Interface

ExpressCard™ (USB 2.0 full-speed)	✓
Transmission speed	12 Mbps
Power supply	Bus powered

Smart Card Interface

Compliant with ISO 7816	✓
EMV ² 2000	✓
Supports T=0, T=1	✓
Supports 2-wire: SLE 4432/42 (S=10), 3-wire: SLE 4418/28 (S=9)	✓
Supports I ² C	✓
Card size	ID - 1 (full size)
High performance smart card interface (up to 420 Kbps when supported by card)	✓
Smart card clock frequency up to 8 MHz	✓
Supports 5V, 3V, and 1.8V smart cards (ISO 7816 Class A, AB, C)	✓
Supplies 60 mA current to power the smart card	✓
Smart card movement detection with auto power-off	✓
Automatic detection of smart card type	✓
Short circuit and thermal protection	✓
8 pin handling (C4/C8 supported)	✓

Options

Customer specific logo or label	On request
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Compliance/Certification

Microsoft® WHQL ³	✓
EMV ² 2000 Level 1	✓
ISO 7816	✓
HBCI ⁴	✓

API

PC/SC 2.0 driver	✓
CT-API (on top of PC/SC)	✓
Synchronous API (on top of PC/SC)	✓
OCF (on top of PC/SC)	✓

PC/SC Driver Support

Windows® 98	✓
Windows® ME	✓
Windows® 2000	✓
Windows® XP	✓
Windows® XP 64bit, IA64 and AMD64	✓
Windows® CE 5.0/CE.NET (depending on hardware)	✓
Linux® with PC/SC	✓
Mac® OS	✓

Hardware Specifications

Color	Metallic
Dimensions (LxBxH)	79 x 54 x 5mm 3.11" x 2.13" x 0.20"
Weight	26 gr/0.91 ounces
Operating temperature	10-55°C/32-131°F
Operating humidity	10-90% rH
Composition	Alloy
Durability	100,000 Insertions
Meantime between failure (MTBF)	500,000 Hours

Safety and Environmental Standards

CE	✓
FCC	✓
UL	✓
VCCI	In preparation
MIC	In preparation

1 = Chip Card Interface Device 2 = Europay® MasterCard® Visa® 3 = Windows® Hardware Quality Labs 4 = Homebanking Computer Interface



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