OMNIKEY® Embedded Technology

OMNIKEY® 5121 Reader Board USB

The OMNIKEY® 5121 Reader Board is a dual interface PC-linked reader that reads/writes to both a 13.56 MHz contactless smart card and virtually any contact smart card. The dual interface feature, implemented on a small PCB, economically supports end-user environments where both contactless and contact smart card technology may be in use. The reader supports contactless smart cards with up to 424 kbps in ISO 14443 transmission mode with its driver base identical to the OMNIKEY® 5321.

Main features:

- Supported cards include NXP: MIFARE®, DESFire, SMART-*MX*, ICODE & HID: iCLASS®
- Supports ISO 14443 A&B, ISO 15693 and ISO 7816
- Contact unit based on OMNIKEY® 3121
- Up to 424 Kbps transmission rate
- Mounting bracket available
- Small PCB

Host Interface	
Host Interface	USB 2.0 CCID [1] (also supports USB 1.1)
Transmission speed	12 Mbps (USB 2.0 full speed)
Power supply	Bus powered
Smart Card Interface	
Standards	ISO 7816 & EMV[2] 2000 Level 1
Protocols	T=0, T=1, 2-wire: SLE 4432/42 (S=10), 3-wire: SLE 4418/28 (S=9), I^2C (S=8)
Card size	ID-1 (full-size)
Smart Card interface speed	420 Kbps (when supported by card)
Smart Card clock frequency	Up to 8 MHz
Supported card types	5V, 3V and 1.8V Smart Cards ISO 7816 Class A, AB and C
Power to Smart Card	60 mA
Smart Card detection	Movement detection with auto power-off / Autom. Detection of smart card type / Short circuit and thermal protection
8 Pin Handling	C4 / C8 supported
Contactless (RFID) Smart Card Interface	
ISO 14443 A with 424 Kbps transmission rate (depending on card)	
ISO 14443 B with 424 Kbps transmission rate (depending on card)	
ISO 15693 with 26 Kbps transmission rate (depending on card)	
Other Features	
Status indicator	Two LED
Mounting bracket	On request

Supported APIs	
PC/SC driver (ready for 2.01)	
CT-API (on top of PC/SC, for contact interface)	
OCF (on top of PC/SC, for contact interface)	
Synchronous API (on top of PC/SC)	
PC/SC Driver Support	
Windows® 98 / ME, 2000 / XP (32bit), 2003 Server	
Windows® CE 5.0 / CE.NET (depending on hardware)	
Windows® XP 64bit (AMD64, EM64T, IA64)	
Windows® Vista (32bit / 64bit)	
Linux®	
Mac® OS X (for contact interface only)	
Hardware Specifications	
Dimensions (LxWxH)	66 x 55 x 11mm 2.6" x 2.16" x 0.43"
Weight (incl. cable)	Approx 75 gr / 2.65 oz
Operating temperature	0°-55°C / 32-131°F
Operating humidity	10-90% rH
Connector cable	180 cm / 70.9"
Durability	100.000 insertions
Meantime between failure (MTBF)	500.000 hours
Compliance / Certification	**Safety / Environmental**
Microsoft WHQL[3]	CE[5]
EMV[2] 2000 Level 1	FCC[5]
ISO 7816	UL
HBCI[4]	RoHS
USB 2.0 (USB 1.1 compatible)	WEEE
CCID[1] (contact interface only)	

1 = Chip Card Interface Device 2 = Europay® MasterCard® Visa® 3 = Windows® Hardware Quality Lab 4 = Homebanking Computer Interface 5 = In housed readers only

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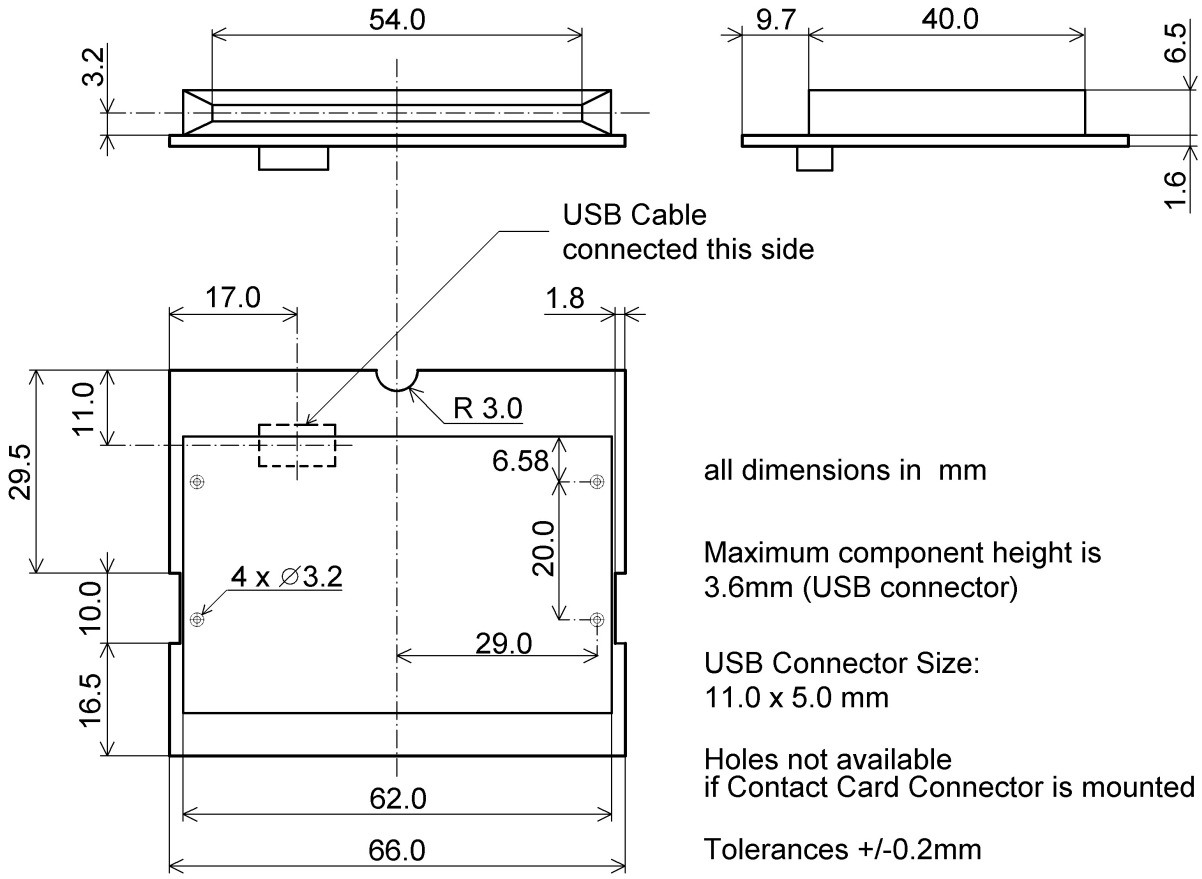
CardMan® 5121 Reader Board USB
Technical Drawing



all dimensions in mm

Maximum component height is
3.6mm (USB connector)

USB Connector Size:
11.0 x 5.0 mm

Holes not available
if Contact Card Connector is mounted

Tolerances +/-0.2mm

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