# signotec Omega (NFC)

Highlights & Data Sheet

HIGHLIGHTS

- 5" (12,8 cm) full-colour display with integrated palm-rest.
- Signature capturing with 500 Hz 4D samples and 1.024 pressure stages (x, y, z, t).
- Unique RSA-signature creation and RSA-encryption methods inside the pad.
- Self-sufficient slideshow with up to 10 pictures.
- No special pen required (cheap replacement available).
- Battery-free pen with changeable pen tip.
- „Content Signing" allows signing the LCD-content with the captured signature.
- Secure Mode to display the signature on the screen in real-time.
- Optionally available Near Field Communication (NFC) Sensor.
- Delivery comes with completely assembled USB cable, pen and cord.
- Including free of charge software packages.
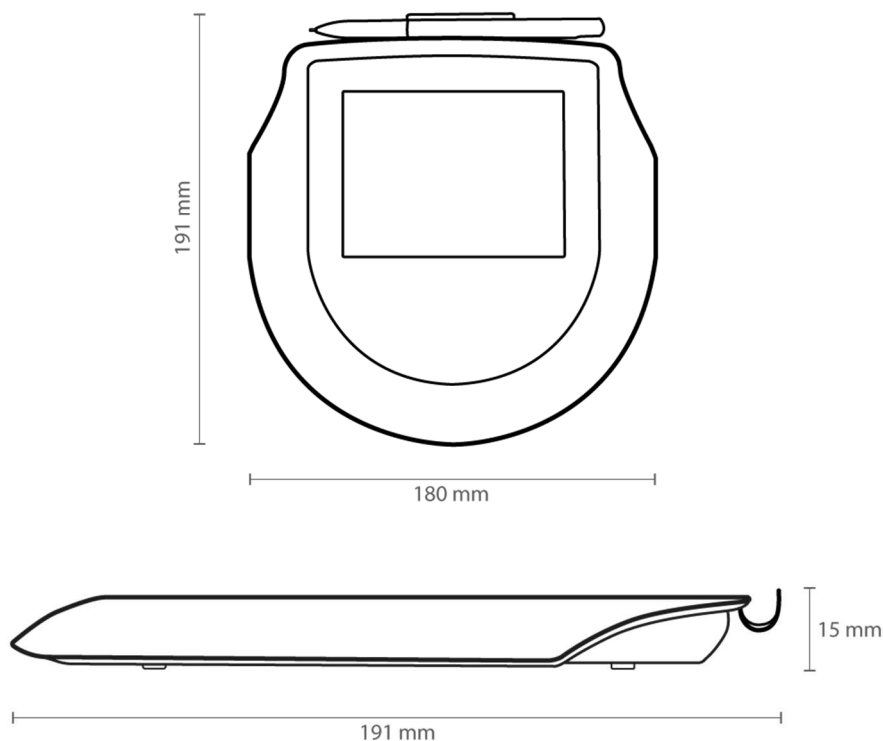
TECHNICAL DATA

General data

Dimensions	180 x 191 x 15 mm (W x D x H)
Casing colours	Upper shell: RAL 7021, black-grey Lower shell: RAL 7021, black-grey
Cable port	USB
Cable length	Approx. 2 meters, optional 5 meters
Power consumption	430mA; Standby 13mA (HID/WinUSB) and 8mA (FTDI)
Power supply	USB
Status-LED	2 coloured and freely programmable LEDs
Stand	Mounting stand on the backside, compatible Multigrip™ plate available
Weight	Approx. 320 grams (incl. cable)
Warranty	2 years, optional extension up to 5 years.
Country of origin	Germany

Display

Type	Full-Colour-TFT
Size	5" (12,8 cm)
Colour space	65.536
Backlight	LED-Backlight, brightness: 250 cd/m²
Configuration of backlight	The backlight can be configured with an API or configuration file.
Resolution	640 x 480 pixels ≙ 161 x 161 ppi
Pixel size	0,0529 x 0,1587 mm
Visible area	101 x 76 mm
Line of sight	6 o'clock
Scroll-function	Maximum size of the displayed image: 640 x 960 pixels.

Sensor

Type	Resistive Touch Panel (RTP)
Active signing area	100 x 75 mm
Resolution	4.096 x 4.096 pixels ≙ 1.388 x 1.040 ppi
Linearity	±1,5 % in x-, y- and z- direction
Method of input	Special sensor for pen input
Surface	Special foil surface with wear-protection.
Surface hardness	3H
Life expectancy	Approx. 1 million signatures
Pressure stages	1.024 pressure stages
Output rate of coordinates	500 Hz 4D-samples (x, y, z, t)
Internal sampling rate	6.000 samples per second
Stability of output rate	Constant through integrated quartz
Pen	Battery-less pen with special, springy mine (changeable).
Life expectancy of the pen	Approx. 150.000 signatures at 250 Gramm pressure and 2,5 cm length.
Pen tilt angle	n/a
Possible height of the pen	n/a
Pen attachment	Highly flexible textile-cord and horizontal pen holder. (assembled at the factory)

Near Field Communication (NFC)

Availability	Optional, Integration below the hand rest.
Type	NXP PR533
Integration	Microsoft or Linux Smart Card API
Power consumption	The power consumption is enhanced by approx. 90mA with NFC-Reader active.
Compatibility	• Read / write functionality compatible with the tag types ISO / IEC 14443 A & B, MIFARE ™, FeliCa and NFC Forum (Jewel, MIFARE Ultra-light, FeliCa, FeliCalite, MIFARE DESFire) and supports I-Class (modulation from Picopass B type) Passive Initiator ISO18092 • Corresponding to the German eID, ICAO and EMVCo 2.1 • Supports PCSC Part 3 Release 2.01.07 • Integrated support for the MIFARE-Reader • CCID-Protocol supported, validated with Microsoft Windows and Linux CCID native Drivers.

Connection Types

USB	HID-USB and WinUSB
Serial	Optional with internal USB-Serial-Converter (VCOM-Port) using FTDI or chargeable VCOM-Port-Driver.
USB-Standby-Support	Yes, if the corresponding signal is given, the device switches off.
Ethernet	Yes, with an optionally available USB-to-Ethernet adapter.

Driver and Software

Driver	No special driver is required for a USB connection.
Plug and Play	Yes, available for all connection types.
SDK (API)	Several SDKs including updates and support available.
Tools	Tools free of charge including updates and support.
Software	Further chargeable software available.

System environment

Operating System	Windows 7 and newer, Windows Server 2012 and newer, 32- and 64-Bit, Linux
Terminal Server and Citrix	Compatible with Windows Remote Desktop and Citrix ICA
Citrix Virtual Channel	Optionally available

Security mechanisms

Data transfer	AES-256 encrypted data transfer between host and pad via RSA key exchange.
Encryption	RSA-Encryption unit inside the pad.
Firmware	Flash memory is protected against data theft.
Secure Mode	Real-time display of the signature without usable biometrics.
Signature unit	RSA signature creation unit in the pad.
Key storage	Creation and storage of certificates in the pad.
Key size	4096 Bit
Certificate Signing Request (CSR)	CSR can be generated in the pad and extracted.
Trusted certificates	The CSR can be signed by a root authority. Additional information: eIDAS Pad Signature Seal
Supported Hash-algorithms	SHA-1, SHA-256 und SHA-512
Signature-Performance	Transmission and Signing of a SHA-256 Hash via WinUSB: 2048 Bit: 800 ms; 3072 Bit: 2.400 ms; 4096 Bit: 5.500 ms
signotec „Content-Signing"	Yes
Protection against forceful break in	The casing can be glued optionally.

Miscellaneous

Transport protection	No
Individualization	Change of casing colour and logo print (on request).
Slideshow	A standby slideshow with up to 10 images is freely configurable.
Certifications and standards	CE, FCC, DIN EN 60950-1, DIN EN 61000-6-1, EN 61000-6-3, EN 55022, EN 55024
RoHS	RoHS-compliant according to EU-regulations.
WEEE-Reg.-No. (German register for used devices)	DE 41995888
Packaging law Reg.-No.:	DE 3470684644700
Serial number	Unique and retrievable, internal serial number.
Device label	There is a label on the packaging and the device with information regarding the article number, hardware revision and serial number, including a barcode.

Operating- and storage conditions

Operating temperature	-10°C to +60°C
Storage temperature	-25°C to +70°C
Air humidity for operation and storage	<= 90%, non-condensing
Air pressure for operation and storage	> 700 hPa
Degree of protection	IP 52

Reliability / Quality assurance

Quality test	Individual testing of devices with test log.
High temperature test of the components	240 hours at 80°C
Low temperature test of the components	240 hours at - 40°C
Humidity test of the components	240 hours at 60°C and 90% humidity
Thermal shock test of the components	30 minutes at – 40°C and directly 30 minutes at + 80°C (10x in succession)

Article numbers

ST-CE1075-2-U100	Signotec Omega with HID-USB- 2 m
ST-CE1075-2-FT100	signotec Omega FTDI (VCOM) and approx. USB – 2 m (USB2serial)
ST-CE1075-5-U100	signotec Omega with HID-USB – 5 m
ST-CE1075-5-FT100	signotec Omega FTDI (VCOM) and approx. USB – 5 m (USB2serial)
ST-CE1075-2-UNFC100	signotec Omega NFC, HID-USB with integrated NFC-Reader, 2 m *Note: For technical reasons, the hybrid system with NFC reader is only available with a 2 m cable length.*

Fulcrum Biometrics Southern Africa

Block A, Regent Hill Office Park,
Corner Leslie & Turley Roads,
Lonehill, 2191, Sandton,
Gauteng, South Africa
+27 (0)11 702 8550
sales@fulcrumbiometrics.co.za
www.fulcrumbiometrics.co.za