

## signotec Kappa

# Highlights & Data Sheet



## HIGHLIGHTS

- Hybrid-device combining the signature pad Sigma with an integrated fingerprint-sensor.
- Signature capturing with 500 Hz 4D samples and 1.024 pressure stages (x, y, z, t).
- High-resolution fingerprint sensor with infrared-LED from Futronic.
- Separate control of both device units via our own API.
- Only one USB-connection necessary.
- Unique RSA-signature creation and RSA-encryption methods inside the pad.
- Secure mode, to display the signature on the screen in real-time.
- Various options for the secure management of certificates and keys in the pad.
- Delivery comes with completely assembled USB cable, pen and cord.
- Including free of charge software packages.



# TECHNICAL DATA

## General data

Dimensions	175 x 194 x 30 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
Power consumption	Standby status: <math>< 500 \mu A</math>, Running: 165 mA.
Power supply	USB
Status-LED	2 coloured and freely programmable LEDs
Stand	No
Weight	Approx. 400 grams
Warranty	2 years, optional extension up to 5 years.
Country of origin	China

## Display

Type	Mono-TFT
Size	4" (10,5 cm)
Colour space	Monochrome
Backlight	LED-Backlight, brightness: 158 cd/m <sup>2</sup>
Configuration of backlight	The backlight can be configured with an API or configuration file.
Resolution	320 x 160 pixels $\pm$ 86 x 86 ppi
Pixel size	0,275 mm
Visible area	95 x 45 mm
Line of sight	6 o'clock
Scroll-function	No

## Sensor

Type	Resistive Touch Panel (RTP)
Active signing area	92 x 45 mm
Resolution	4.096 x 4.096 pixels $\pm$ 2.214 x 1.130 ppi
Linearity	$\pm 1,5$ % 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	No
Possible height of the pen	No
Pen attachment	Highly flexible textile-cord and horizontal pen holder. (assembled at the factory)

## Fingerprint Sensor

Manufacturer	Futronic
Type	FS80 / FS81
Scan area	16 x 24mm
Resolution	480 x 320 pixels, 500 dpi
Raw Fingerprint data	160kB
Light source	Infrared LED
Power consumption	Active: <600mW (while scanning) Standby: <200mW Sleep: <11mW
ESD Contact	8KV
ESD Air Discharge	Futronic SDK
Integration	<a href="http://www.futronic-tech.com/product_sdk_win.html">http://www.futronic-tech.com/product_sdk_win.html</a>

## 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	<a href="#">Compatible with Windows Remote Desktop and Citrix ICA</a>
Citrix Virtual Channel	<a href="#">Optionally available</a>

## 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: <a href="#">eIDAS Pad Signature Seal</a>
Supported Hash-algorithms	SHA-1, SHA-256 und SHA-512
signotec „Content-Signing“	No
Protection against forceful break in	The casing can be glued optionally.

### Miscellaneous

Transport protection	No
Individualization	No
Slideshow	The standby image 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-FPB105-2-U100	Signature Pad signotec Kappa
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### 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](http://www.fulcrumbiometrics.co.za)



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