



www.ActiveKey.de/en



Active Key a leading designer of hygienic, clinical, industrial keyboards & mice for professional data input that are cleanable and sanitizable for the European market.

Wired, wireless product with IP65 & IP68 rating plus 'back lit' versions...

Founded in 2005 by Gerhard Hahn formerly head of engineering at Cherry keyboards over 25 years

Management teams in Germany & UK have over 75 years experience in the industry of data input products for all applications and environments.

In-house engineering & design capability for custom & special applications.

Large warehouse stocks to support the European market place & language variations.



- **Location:**

- Nürnberg, Germany
- Cambridge, United Kingdom



- **Customers:**

- >1100 customers in 28 countries...
- 17 Distributors & Dealers...
- >90,000 unit sales, medical & industrial...
- Key provider to many European national & private medical institutions, dental, veterinary practices & laboratory bodies...





Areas of Application



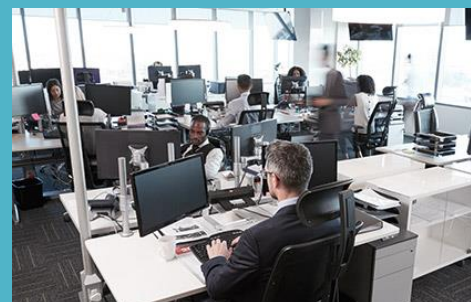
Hygiene & Medical



Industry



POS / Point of Sales



Office



Compatible Active Ingredients Agents for Sanitization in accordance with VAH/DGHM German Healthcare Disinfectant Regulators



<https://vah-online.de/en/>

Aldehydes
Aldehyde-releasing
Alcohol
Alkaline or Alkaline derivatives
Chlorine-releasing
Chloramines
Glycol derivatives
Guanidine or guanidine derivatives
Organic acids
Oxidants
Peroxide compounds
Phenol & Phenol derivatives
Phenol derivatives
Pyrrithione
Quaternary compounds
Oxygen-releasing compounds
Silver
Peracetic Acid - Schülke terralin PAA 5%.

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**Compatible Active Ingredients & Agents for Sanitization
&
in accordance with VAH/DGHM
(German Disinfectant Regulators; <https://vah-online.de/en/>)**

Below is the current list of 'active' ingredients and agents that have been tested and applied to the Active Key product range for the sanitizing and reuse of our hygiene keyboards and mice in medical environments. Delivering a clean surface to a very high degree against bacteria and contagion for medical, laboratory & research applications.

1. Aldehydes
2. Aldehyde-releasing
3. Alcohol
4. Alkaline or Alkaline derivatives
5. Chlorine-releasing
6. Chloramines
7. Glycol derivatives
8. Guanidine or guanidine derivatives
9. Organic acids
10. Oxidants
11. Peroxide compounds
12. Phenol & Phenol derivatives
13. Phenol derivatives
14. Pyrrithione
15. Quaternary compounds
16. Oxygen-releasing compounds
17. Silver
18. Peracetic Acid - Schülke terralin PAA 5%.

In addition, tested & approved leading UK NHS approved products from Gama – Cinell.

a) Cinell - **GREEN** Universal Wipes; NHS Supply Chain VJT118
b) Cinell - **YELLOW** Detergent Wipes; NHS Supply Chain VJT129
c) Cinell - **RED** Sporocidal Wipes (Peracetic Acid) Wipes; NHS Supply Chain VJT113
d) Cinell - **RED** Alcohol Wipes; NHS Supply Chain VJT448

Upon request Active Key would be pleased to test any substances or product not listed above when used separately or in combination with others to ensure confidence in our products in clean environments. Please note that we are NOT in the position to grant a total warranty as it depends on the quality and level of cleaning regime adopted locally but as per our recommended cleaning instructions as stated on the Active Key document 'Sanitizing Instructions' delivers outstanding results.

Rev 2.8 February 2020 – Pegnitz, Germany

ACTIVE KEY**UK**



Compatible Active Ingredients & Agents for Sanitization as used extensively in the NHS

Active Key laboratory have been working closely with Clinell to test and approve their wide ranging sanitizing wipes on the product range. Testing for effectiveness of cleaning & any resulting damage to surfaces or materials.. All types are now approved for use on the 'medical keyboard' range from Active Key

The Clinell logo, consisting of the word 'clinell' in a white, lowercase, sans-serif font, with a registered trademark symbol (®) to the upper right, all set against a light blue rectangular background.



Clinell - **GREEN** Universal Wipes; NHS Supply Chain VJT118

Clinell - **YELLOW** Detergent Wipes; NHS Supply Chain VJT129

Clinell – **RED** Sporicidal Wipes (Peracetic Acid) Wipes; NHS Supply Chain VJT113

Clinell – **RED** Alcohol Wipes; NHS Supply Chain VJT448

Compatible Active Ingredients & Agents for Sanitization NHS - CORONAVIRUS



clinell®

It has been widely advertised that agents with > 70% alcohol content is an effective cleaning agent against Coronavirus..

With our testing this relates to the Clinell – **RED** Alcohol Wipes; NHS Supply Chain VJT448...

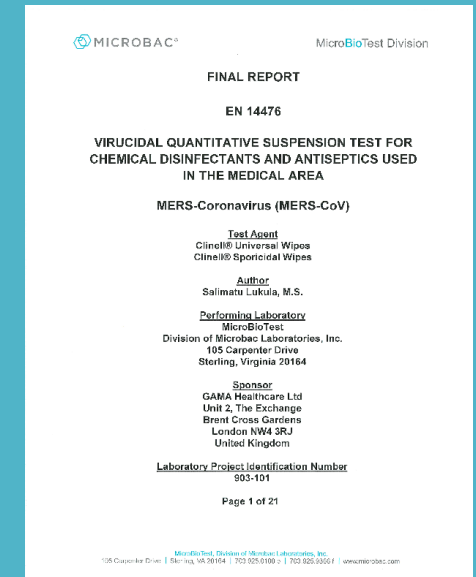
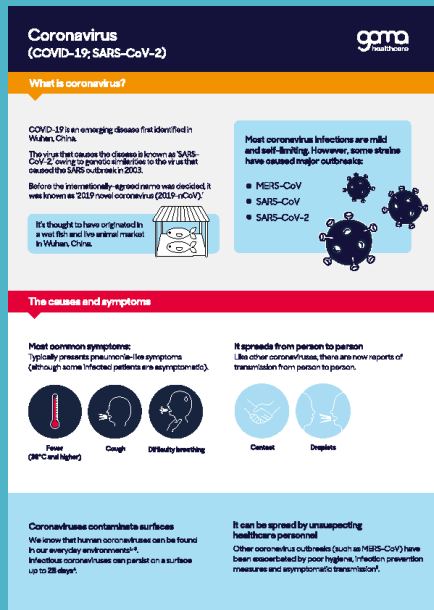
Active Key has sought clarification from Gama / Clinell and have been advised the following are the most effective:

Clinell - **GREEN** Universal Wipes; NHS Supply Chain VJT118

Clinell – **RED** Sporicidal Wipes; NHS Supply Chain VJT113

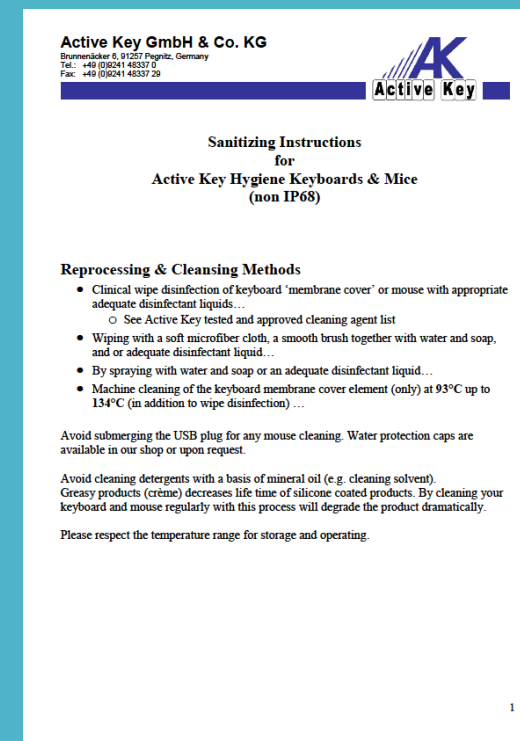
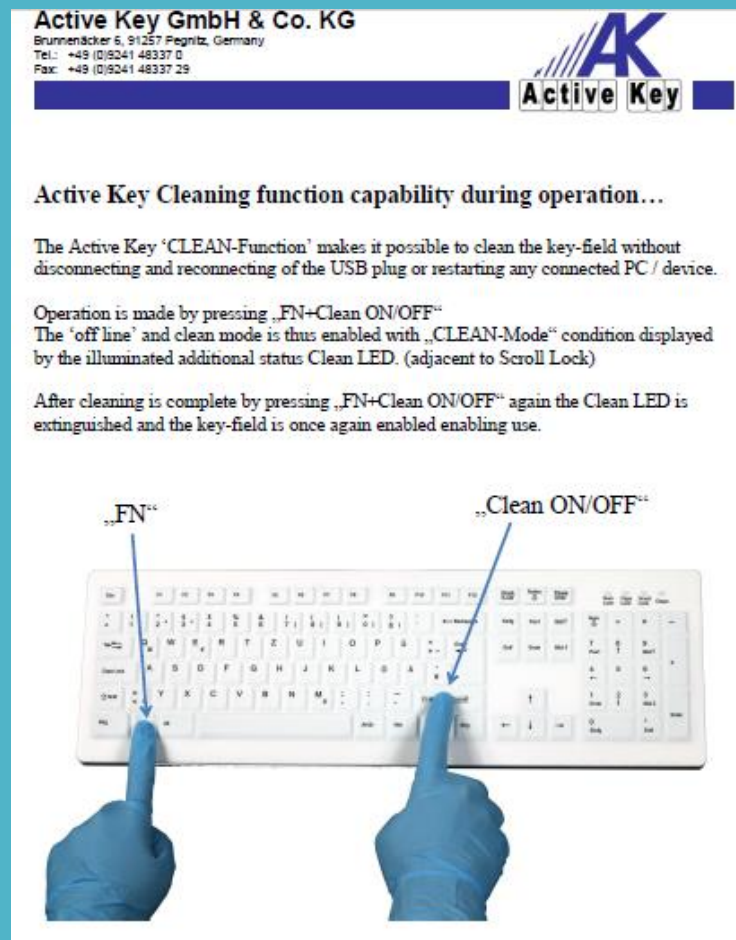
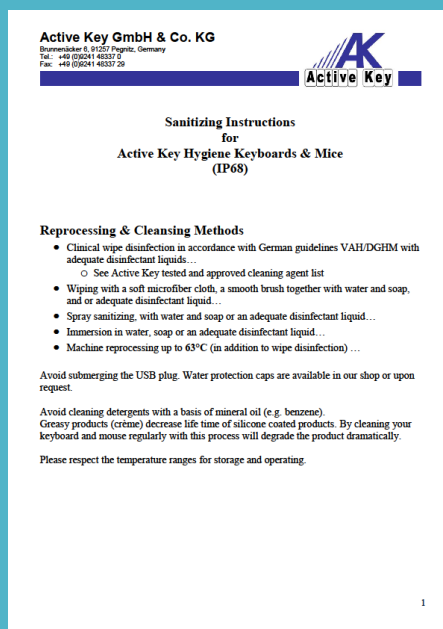
<https://www.gamahealthcare.com/latest/clinell-efficacy-against-wuhan-coronavirus-wn-cov>

Advised status @ 5.3.2020





Active Key Sanitizing & Cleaning Instructions for IP65 & IP68 products





Active Key Conformance & Compliances

IP 65 & IP68
- where specified



Official confirmation from MHRA that Active Key products require no formal testing as not deemed as medical equipment save normal compliances such as CE, EU & BSI norms, confirmed.

IP RATING GUIDE

INGRESS PROTECTION

LEVEL	EFFECTIVE AGAINST	DESCRIPTION	LEVEL	PROTECTIVE AGAINST	EFFECTIVE AGAINST
X	—	X means there is no data available to specify a protection rating with regard to one of the criteria.	0	None	—
0	—	No protection against contact and ingress of objects.	1	Dripping water	Dripping water vertically falling drops shall have no harmful effect on the enclosure when mounted in its normal operating position onto a turntable and rotated at 1 RPM.
1	>50mm	Any large surface of the body, such as the back of a hand, is not in protective contact with a body part.	2	Dripping water	Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle of 15° from its normal position. A total of 6 positions are tested within 2 mins.
2	>12.5mm	Fingers or similar objects.	3	Spraying water	Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effect on the enclosure when it is subjected to a water jet with a nozzle diameter of 6.3mm.
3	>2.5mm	Tools, thick wires, etc.	4	Spraying of water	Water splashing against the enclosure from any direction shall have no harmful effect on the enclosure when it is subjected to a water jet with a nozzle diameter of 6.3mm.
4	>1mm	Most wires, thinner screws, large pins etc.	5	Water jets	Water projected by a nozzle (6.3mm) at 12.5 litres/minute against enclosure from any direction shall have no harmful effects.
5	Dust protected	Ingress of dust is not entirely prevented, but it shall not enter in sufficient quantity to interfere with the satisfactory operation of the equipment.	6	Powerful water jets	Water projected in powerful jets (12.5mm nozzle at 100 litres/minute) against the enclosure from any direction shall have no harmful effects.
6	Dust tight	No ingress of dust; complete protection against contact dust tight; a vacuum must be applied, but duration of up to 10 hours based on airflow.	6k	Powerful water jets with increased pressure	Water projected in powerful jets (6.3mm nozzle at 75 litres/minute) against the enclosure from any direction, under increased pressure, shall have no harmful effects.
EXAMPLE:			7	Immersion, 1m depth	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in 1 metre of water for 30 minutes.
			8	Immersion, 1m or more depth	The enclosure is suitable for continuous immersion in water under conditions specified by the manufacturer with depth & duration greater than requirements for IPX7.
			9k	Powerful high temperature water jets	Protected against showering high pressure, high temperature (80°C) water down.

QUALITY STANDARD
Brown & Watson International Pty Ltd is fully accredited to ISO9001. We have an In House Environmental Laboratory which we use to test our products for Ingress Protection (IP) from dust, water and humidity to help ensure they withstand our harsh Australia conditions and international standards. Some of the tests and equipment we use to check the quality of our products include a Dust Chamber, Thermal Shock Chamber, Submersion Tank, Rain Chamber and Climate Chamber.

NARVA
THE VISION TO GO FURTHER

DIN - EN- 60601- 1 – 2

EMC validation under consideration of EN 60601-1-2
Sanitizable keyboards and mice from Active Key addressing healthcare applications

The EU directive 2014/53/EU on Electromagnetic Compatibility (EMC), EU directive 2014/53/EU on Radio Equipment (RED) and the EU regulation (EU) 2017/745 on Medical Devices (MDR) are referencing through harmonized standards finally the same basic EMC standards for tests and measurements concerning Electromagnetic Compatibility. The EMC validation is performed under consideration of risk management for the product under test. The risk evaluation needs to consider the application of the product. The device under EMC validation shall generally work without degradation during and after the EMC test with the exception of tests on ESD and Burst. During the EMC exposure to ESD or Burst events a degradation of performance is allowed. After the test, the equipment shall continue to operate as intended. This is deemed to be acceptable for the normal healthcare application.

Electromagnetic phenomena	Standard	Tests for EMC immunity tests			
		EMC/Pharma Equipment directive	Medical electrical equipment	Professional Health	Domestic Health
Electrostatic discharge	Contact Air	EN 61000-4-2 2 kV	EN 61000-4-2 2 kV	EN 61000-4-2 2 kV	EN 61000-4-2 2 kV
Radio frequency field	EN 61000-4-3	3 V/m 10 MHz – 1 GHz 10 V/m 10 MHz – 1 GHz	3 V/m 10 MHz – 1 GHz 10 V/m 10 MHz – 1 GHz	3 V/m 10 MHz – 1 GHz 10 V/m 10 MHz – 1 GHz	3 V/m 10 MHz – 1 GHz 10 V/m 10 MHz – 1 GHz
Electric fast transient/burst	EN 61000-4-4	1 kV 10 V/m 10 V/m	1 kV 10 V/m 10 V/m	1 kV 10 V/m 10 V/m	1 kV 10 V/m 10 V/m
Conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	3 V 10 V 10 V	3 V 10 V 10 V	3 V 10 V 10 V	3 V 10 V 10 V

Electromagnetic phenomena	Standard	Frequency range (MHz)	Tests for EMC emission tests			
			EMC/Pharma Equipment directive	Medical electrical equipment	Professional Health	Domestic Health
Reduction emission	EN 55011 / EN 55012	30 – 230 230 – 1000	30 dBµV/m 30 dBµV/m	30 dBµV/m 30 dBµV/m	30 dBµV/m 30 dBµV/m	30 dBµV/m 30 dBµV/m

Devices with EMC Validation under consideration of DIN EN 60601-1-2

Description	Article Group	Model	Interface
Medical PC keyboard for cleaning and hygiene	AK-C3100P	C3100P	Cabled
AK-C3100P-F	C3100P-F	2.4 GHz prp.	
Disinfectant hygiene keyboard with touchpad	AK-C7412P	C7412P	Cabled
AK-C7412P-F	C7412P-F	2.4 GHz prp.	
Disinfectant hygiene keyboard with numeric pad and a low profile of keys	AK-C8130P	C8130P	Cabled
AK-C8130P-F	C8130P-F	2.4 GHz prp.	
Disinfectant hygiene keyboard with numeric pad, with backlit option	AK-C8130P-F	C8130P-F	2.4 GHz prp.
Disinfectant keyboard with integrated touchpad in front	AK-A430-GRUVS	A430	Cabled
AK-A430-GRUVS	A430	Cabled	
Compact keyboard with large touchpad and a low profile of keys	AK-A430-GRUVS	A430	Cabled
AK-A430-GRUVS	A430	Cabled	
Disinfectant hygiene keyboard with touchpad, with backlit option	AK-C4412P	C4412P	Cabled
AK-C4412P-F	C4412P-F	2.4 GHz prp.	
Compact disinfectant hygiene keyboard with touchpad and a low profile of keys	AK-C4412P-F	C4412P-F	2.4 GHz prp.
AK-C4412P-F	C4412P-F	2.4 GHz prp.	
Compact disinfectant hygiene keyboard, with backlit option	AK-C4412P-F	C4412P-F	2.4 GHz prp.
AK-C4412P-F	C4412P-F	2.4 GHz prp.	
Hygiene mouse	AK-M403	M403	Cabled
AK-M403	M403	Cabled	
Wireless disinfection medical mouse IP 68	AK-M403-IP68	M403-IP68	2.4 GHz prp.
AK-M403-IP68	M403-IP68	2.4 GHz prp.	
Disinfectant mouse with touch scroll wheel sensor	AK-M403-IP68	M403-IP68	2.4 GHz prp.
AK-M403-IP68	M403-IP68	2.4 GHz prp.	
Disinfectant wireless optical mouse with touch scroll wheel sensor	AK-M403-IP68	M403-IP68	2.4 GHz prp.
AK-M403-IP68	M403-IP68	2.4 GHz prp.	

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Personal & Environmental Safety

Active Key products employ no additives nor NANO SILVER in its products for sanitization for both personal and environmental protection & safety....



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Hygiene Keyboards and Mice without Nano Silver
NO NANO

Active Key consciously concentrates on keyboards and mice without antimicrobial silver coatings!
 Released nano silver particles jeopardize users and the environment.
 Effectiveness and safety of nano silver in clinical disinfection applications is unconfirmed. Test procedures under real conditions are not available.
 According to the German Robert-Koch-Institut (RKI), sector for applied infections and hospital hygiene, there are possible limitations of antimicrobial coatings:

- Slow and minor germ reduction (ISO 22196/JIS Z2801)
- Germ reduction not detectable by common test procedures
- Temporarily limited effectiveness by wiping
- Effectiveness retarded by cumulative pollution of the surface
- Cross reactions with other chemical substances
- Promoting resistance formation/selection
- Toxic to humans and the environment
- Conveying into a wrong sense of security and neglecting evidence-based standard hygiene
- Financial resources are tied up and not available in other important sectors

The Robert-Koch-Institut (RKI) recommends:

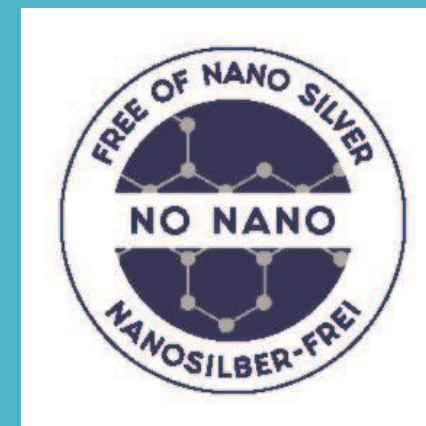
- (disinfecting) Sanitization / Disinfection by wiping.
- Using antimicrobial silver coating **not recommended!**

Mutual statement of the Deutschen Gesellschaft für Krankenhaushygiene e.V. (DGKH) and the Desinfektionsmittelkommission des Verbunds für Angewandte Hygiene e.V. (VAH):

- „Overall, the quality management of the hygiene is rather essential to protect patients from infections within hospitals than equipping the surfaces with antimicrobial nano coatings.“

The German Bundesinstitut für Risikobewertung also sees the usage of nano silver or nano silver compounds with more critical eyes.

The application of antimicrobial coatings is subject to the EU biocide regulation 528/2012 respectively the Bio Compatibility requirements DIN EN10993 in accordance with the ordinance concerning medical devices 2017/745.





Independant Testing of Active Key products In their effectiveness once sanitized against Bacteria - pathogens & contagion



The report from the East Bavarian Institute has provided two reports a) Active key products & b) comparisons against competitive products in their effectiveness.
Control applied pathogens/cleaning and re measuring..

> Loc 6/7 depending on product & process employed – 99.9999%



Added Value Product Highlights



AK-C8100F-U1

Exchangeable membrane, IP65

AK-C8100F-FU1

Wireless, exchangeable membrane,



AK-C8100F-UVS

Fully Sealed, IP68


AK-C8100F-FUS

Fully Sealed, Wireless, IP68



RFID reader + touch pad +
keyboard = 1 single port !

Hygiene Keyboard with integrated Smartcard-Reader
AK-C8200F Series



- Integrated PC/SC Smart Card Reader
- USB Plug and Play
- Keyfield protected against dirt and Splash water
- Flat keys for Routine Disinfection
- PC/SC compatible
- CCID compatible
- LED Indicator for Chipset
- Gemalto Chipset CR20

Features and Benefits

The AK-C8200F-UV is high quality and highly reliable hygiene keyboard with a Smartcard-Reader. It is particularly designed for the use at practitioners and in hospitals. The key-field is sealed by a silicone membrane and protected against the ingress of dirt and fluids.

The integrated smart card reader is the ideal solution for applications in the field of access control and data encryption with digital signature and online payment methods. The Gemalto Chipset stands for the highest level of compatibility and reliability with the default drivers included in BIOS and operating systems.

Technical Data	
Compatibility	All operating systems supporting standard USB keyboard
Temperature Range	Storage -20° to + 50° C Operation 0° to + 50° C
Chemical Resistance	Suitable for most common hospital disinfectants and cleaning agents
Supply Voltage	5V ±5% / -10% (through USB port (low power device))
Power Consumption	appr. 100mA (Low Power Device)
Dimensions	452 mm x 164 mm x 65 mm
Weight	appr. 0.92 kg
Data Transfer Rates	up to 120 kbit/s
Reader to Smart Card	USB 2.0 Full Speed (12 MB/s)
Reader to System	Class A (1.8V), B (3V), C (5V), ISO 7816 - 1, 2, 3, 4, T=0, T=1
Smart Cards, Protocols	PC/SC, CCID
System Interfaces	CE, RoHS
Agency Approvals	CE, RoHS
Operation Cycles	appr. 100.000

Part#: AK-C8200F-UV-yxx

Identifier x - Country Version	Identifier y - Color
WCH - North	B - Black
Further country versions upon request.	Other colors upon request

At ActiveKey we are proud of our products. We are a member of the ActiveKey Group.

www.activekey.de
10.04.2019

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National
Patient Record
System –
sanitizable
keyboard with
compliant
smart card
reader...

Product Highlights – NEW @ MEDICA DUESSELDORF 2019

AK-C7412-GUS



AK-C7412-GUS Fully Sealed
with Touchpad and NumPad,
IP68

AK-C7012F



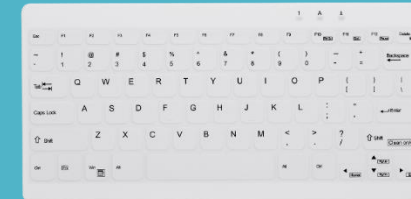
AK-C7012F-U1
with exchangeable membrane
AK-C7012F-UVS
Fully Sealed, IP68

AK-C4412F-GUS



AK-C4412-GUS
Fully Sealed with Touchpad, IP68

AK-CB4112F



AK-CB4112F-U1
with exchangeable membrane
AK-CB4112F-US
Fully Sealed, IP68



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