All-round service for the commissioning, qualification, and maintenance of cleanroom IT systems

Are you planning to use new IT systems in your cleanrooms and GMP environments? We would be pleased to provide you with a wide range of services to support your project. With our comprehensive package, you have everything you need to satisfy GMP standards when working with your new hardware.

Customized products and solutions

Our products are scalable and can be configured to suit individual requirements. Customer-specific product modifications and special designs are no problem - even if only small quantities are involved.

To find out more:

talk@systec-solutions.com
systec-solutions.com

Simple and secure authentication

Electronic authentication solutions, employing an RFID card or Nymi Band for example, permit efficient and secure working. User authentication then takes just a matter of seconds, reduces the risk of incorrect entries, and saves a significant amount of time.

PRODUCT OVERVIEW

HMI SYSTEMS FOR CLEANROOMS AND HYGIENIC PRODUCTION - CUSTOMIZED COMBINATIONS AND CONFIGURATIONS
# PRODUCTS

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Systec & Solutions GmbH, with headquarters in Karlsruhe (Germany), is a specialized manufacturer of hardware solutions for the pharmaceutical, cosmetics and food industry as well as for hospitals to name a few. Our products have been utilized by nearly all established pharmaceuticals companies for years.

GMP-IT - Industry-compatible & durable
Regulated industries comply to GMP standards and our GMP-IT hardware systems are fully equipped to meet the challenges. An uncompromising industrial design, employing only industry-grade components, guarantees highest quality and long-term availability.

Cleanroom-compatible & highly efficient
All of our systems are fully encapsulated and IP65 rated. They are easy to clean and satisfy the hygiene requirements of the pharmaceutical, cosmetics and food industry.

Ruggedly constructed & compatible
Our systems and platforms are specifically developed for long-term operation in demanding production environments. They prove themselves in practice daily, dealing with vibration, shock, humidity, water or dust. They are retrofitable and upgradeable, compatible with established hard- and software systems and are easy to integrate into the existing IT landscape. Our GMP-IT products are ideally suited to applications such as workstations for MES software, Distributed Control Systems (DCS) and ERP software, room status displays and the presentation of KPI and OEE figures.

Pharmaceutical industry
Stainless steel hardware solutions from Systec & Solutions are modeled after GMP guidelines, easy to clean and disinfect, making them especially suitable for use in cleanrooms in the pharmaceutical production. Modern touch-screens make the systems easy to operate. The operation of the multi-touch screens works impeccably with cleanroom gloves. Numerous interfaces, an enclosed stainless steel housing with no edges, and an IPS display offering outstanding clarity are just some of the advantages of the systems from Systec & Solutions.

Cosmetics industry
Systec & Solutions GMP-IT satisfies the IP65 requirements and is ideal for use in the production sector of the cosmetics industry. The HMI- and TROLLEY-systems as well as the keyboards are all of hygienic, edge-free design and resistant to aggressive cleaning agents and disinfectants. Displays with optical bonding and PCT multi-touch provide perfect clarity. We would be pleased to help you work out an individual solution to suit your production environment.

Food industry
Fanless Systec & Solutions PC systems with industrial components in an IP65 rated stainless steel housing satisfy the hygiene requirements of the food industry – and in particular the dairy processing industry. The systems can be used in damp surroundings and dusty production environments. Cleaning with acid-based cleaning agents is also no problem. The PILOT HMI system and glass keyboards can optionally be provided with a laminated polyester film. This shatter-proof glass front then helps to ensure compliance with the HACCP safety requirements.

Systec & Solutions follows the EHEDG guidelines.
THE IDEAL HMI SYSTEM FOR CLEANROOMS AND GMP ENVIRONMENTS IN THE PHARMACEUTICAL INDUSTRY

Straight forward cleaning, cutting-edge technologies, and a modern design – The WAVE HMI system was developed to make everyday working life in cleanrooms easier, safer and better.

Made with an IP65 stainless steel housing, the system permits rapid, thorough cleaning with almost all cleaning agents and disinfectants. It features operation by way of an optically bonded PCT multi-touch display or using suitable cleanroom keyboards. Equipped with a brilliant IPS display, the WAVE HMI system offers high color accuracy, distinct color presentation, and virtually unrestricted viewing angles. It provides an ideal display for MES software, ERP and Distributed Control Systems (DCS).

The WAVE can be configured on flexible support arm systems, on mobile GMP operating stations, or as a laboratory workstation to suit requirements. The system can also be equipped with a keyboard and various other accessories, such as a scanner holder and speakers.

THE IDEAL HMI SYSTEM FOR CLEANROOMS AND GMP ENVIRONMENTS IN THE PHARMACEUTICAL INDUSTRY

Ideal for GMP conditions and cleanrooms in the pharmaceutical industry
Less cleaning work required thanks to fully encapsulated design of stainless steel housing in accordance with protection class IP65
Suitable for regular cleaning with disinfectants and cleaning agents
19”/21.5”/24”/27”/32”/55” LCD display with LED backlight technology
Intuitive multi-touch display with optical bonding. Operable with cleanroom gloves.
Non-reflecting PCT display. IPS panel with up to 178° viewing angle from all sides.
Available as industrial PC, industrial monitor, thin client (e.g. IGEL)
Wide range of mounting systems available for installation on walls, ceilings and stands
Control elements and emergency stop switches can be added on request
Customized solutions available on request

TECHNICAL DATA OF THE HMI SYSTEM WAVE CAN BE FOUND ON PAGE 10.
TECHNICAL DATA

DISPLAYS AND CONTROLS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>Wave 219</th>
<th>Wave 221</th>
<th>Wave 224</th>
<th>Wave 227</th>
<th>Wave 232</th>
<th>Wave 255</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>19&quot; IPS LCD display (140° approx. 178° viewing angle, 300 cd/m²)</td>
<td>21.5&quot; IPS LCD display (140° approx. 178° viewing angle, 300 cd/m²)</td>
<td>24&quot; IPS LCD display (140° approx. 178° viewing angle, 300 cd/m²)</td>
<td>27&quot; IPS LCD display (140° approx. 178° viewing angle, 300 cd/m²)</td>
<td>32&quot; IPS LCD display (140° approx. 178° viewing angle, 300 cd/m²)</td>
<td>55&quot; LCD display (140° approx. 178° viewing angle, 300 cd/m²)</td>
</tr>
<tr>
<td>Resolution</td>
<td>1280 x 1024 SXGA</td>
<td>1920 x 1080 Full HD</td>
<td>1920 x 1080 Full HD</td>
<td>3840 x 2160 UHD</td>
<td>1920 x 1080 Full HD</td>
<td>1920 x 1080 Full HD</td>
</tr>
<tr>
<td>Touchscreen</td>
<td>Analog resistive</td>
<td>Analog resistive</td>
<td>Anti-glare PCT (projected capacitive) multi-touch with optical bonding</td>
<td>Anti-glare PCT (projected capacitive) multi-touch with optical bonding</td>
<td>Anti-glare PCT (projected capacitive) multi-touch with optical bonding</td>
<td>Anti-glare PCT (projected capacitive) multi-touch with optical bonding</td>
</tr>
</tbody>
</table>

CONFIGURATIONS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>Wave 219</th>
<th>Wave 221</th>
<th>Wave 224</th>
<th>Wave 227</th>
<th>Wave 232</th>
<th>Wave 255</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial PC</td>
<td>Intel® Celeron® N2930 1.83 GHz / Burst 2.16 GHz, quad-core*</td>
<td>Intel® Core™ i3-5010U 2.1GHz, Dual-Core*</td>
<td>Intel® Core™ i5-5350U 1.8 GHz / Turbo 2.9 GHz, Dual-Core</td>
<td>Intel® Core™ i5-7300U (7th gen.) 2.6 GHz / Turbo 3.5 GHz, Dual-Core</td>
<td>Intel® Core™ i7-5650U 2.2GHz / Turbo 3.1 GHz, Dual-Core</td>
<td>Intel® Core™ i7-7600U (7th gen.) 2.8 GHz / Turbo 3.9 GHz, Dual-Core</td>
</tr>
<tr>
<td>Operating system</td>
<td>Windows® 10; (Android; Linux; Windows 10 Enterprise LTSB/LTSC and others upon request)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>System memory</td>
<td>4 GB DDR3 up to 16 GB DDR3 (DDR4 at 7th Gen.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage capacity</td>
<td>120 GB eVATA SSD; additional memory sizes and types upon request</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I/O Interfaces</td>
<td>1-4x USB 3.0; 1-4x USB 2.0; 1-2x Gigabit Ethernet; 1-3x RS 232; additional interfaces upon request</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment PC (optional)</td>
<td>WLAN; Bluetooth®; RFID/NFC/Smart card reader (compatible with hybrid band); speaker, upon request; webcams, microphone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thin Client</td>
<td>Thin Client (e.g. IGEL) for sessions of Microsoft (RDP), VMware, Citrix, other and others upon request</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial monitor</td>
<td>DisplayPort (optional: VGA, HDMI)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment monitor (optional)</td>
<td>DisplayPort (optional: VGA, HDMI)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PHYSICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>Wave 219</th>
<th>Wave 221</th>
<th>Wave 224</th>
<th>Wave 227</th>
<th>Wave 232</th>
<th>Wave 255</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>40 W (Industrial monitor); 33 - 35 W (IPC, depending on configuration)</td>
<td>44 W (Industrial monitor); 31 - 35 W (IPC, depending on configuration)</td>
<td>45 W (Industrial monitor); 33 - 35 W (IPC, depending on configuration)</td>
<td>45 W (Industrial monitor); 33 - 35 W (IPC, depending on configuration)</td>
<td>58 W (Industrial monitor); 45 - 46 W (IPC, depending on configuration)</td>
<td>130 W (Industrial monitor); 110 - 120 W (IPC, depending on configuration)</td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 9 kg</td>
<td>Approx. 12 kg</td>
<td>Approx. 14 kg</td>
<td>Approx. 23 kg</td>
<td>Approx. 45 kg</td>
<td>Approx. 45 kg</td>
</tr>
<tr>
<td>Hinge</td>
<td>Stainless steel, type 1.4301 (AISI 304)</td>
<td>Stainless steel, type 1.4301 (AISI 304)</td>
<td>Stainless steel, type 1.4301 (AISI 304)</td>
<td>Stainless steel, type 1.4301 (AISI 304)</td>
<td>Stainless steel, type 1.4301 (AISI 304)</td>
<td>Stainless steel, type 1.4301 (AISI 304)</td>
</tr>
</tbody>
</table>

HMI SYSTEMS
PILOT

THE PERFECT PC FOR HYGIENE REQUIREMENTS IN THE FOOD, BEVERAGE AND COSMETICS INDUSTRIES

The PILOT HMI system is the compact solution for 17.3 to 21.5 inch applications. The system is exceptionally well suited to use in the food and beverage industry, for example. With a laminated polyester film to reduce reflection and guard against splinters of glass, they are optimally designed for specialized fields such as the manufacture of dairy products.

The brilliant IPS display provides ideal presentation for MES software, ERP and Distributed Control Systems (DCS). Thanks to its robust IP65 stainless steel housing, the system is just right for mechanical engineering applications as well. Any necessary control elements and emergency stop switches can be added.

The PILOT can be configured on flexible support arm systems, on mobile GMP operating stations, or as a laboratory workstation to suit local application and installation requirements.

Ideally equipped to satisfy hygiene requirements in the food, beverage and cosmetics industries.
Laminated polyester film to guard against splinters of glass.
Less cleaning work required thanks to fully encapsulated design of stainless steel housing in accordance with protection class IP65.
Suitable for regular cleaning with disinfectants and cleaning agents.
17.3”/19”/21.5” LCD display with LED backlight technology.
Intuitive multi-touch display with optical bonding. Operable with cleanroom gloves.
Non-reflecting PCT display. IPS panel with up to 178° viewing angle from all sides.
Available as industrial PC, industrial monitor, thin client (e.g. IGEL).
Wide range of mounting systems available for installation on walls, ceilings and stands.
Control elements and emergency stop switches can be added on request.
Customized solutions available on request.

TECHNICAL DATA OF THE HMI SYSTEM PILOT CAN BE FOUND ON PAGE 14.
## TECHNICAL DATA

### PILOT

#### TECHNICAL DATA

**PILOT 217**
- **Variants**
  - Industrial PC, Thin Client, Monitor
- **Design**
  - Compact, enclosed stainless steel housing
- **Displays and Controls**
  - **Display**
    - PILOT 217: 17.3" TN-LCD display (16:9), LED backlight
    - PILOT 219: 19" IPS-LCD display (5:4), LED backlight
    - PILOT 221: 21.5" IPS-LCD display (16:9), LED backlight
  - **Resolution**
    - PILOT 217: 1920 x 1080 Full HD
    - PILOT 219: 1920 x 1080 Full HD
    - PILOT 221: 1920 x 1080 Full HD
  - **Touchscreen**
    - PILOT 217: PCT (projected capacitive) multi-touch with optical bonding and anti-reflective protection, layer front side (anti-glare/splinter protection)
    - PILOT 219: Keyboard with glass or foil surface, mounted on torque hinge with concealed cabling, with touchpad
  - **Keyboard (optional)**
    - PILOT 217: Keyboard with glass or foil surface, mounted on torque hinge with concealed cabling, with touchpad
  - **Network**
    - PILOT 217: 1-4x USB 3.0, 1-6x USB 2.0, 1-2x Gigabit Ethernet, 1-3x RS 232, additional interfaces upon request
  - **Equipment PC (optional)**
    - WLAN, Bluetooth®, RFID/NFC/Smartcard reader (compatible with Nymi Band), speaker, upon request: webcam, microphone

#### PILOT 219
- **Variants**
  - Industrial PC, Thin Client, Monitor
- **Design**
  - Compact, enclosed stainless steel housing
- **Displays and Controls**
  - **Display**
    - PILOT 219: 19" IPS-LCD display (5:4), LED backlight
  - **Resolution**
    - PILOT 219: 1280 x 1024 SXGA
  - **Touchscreen**
    - PILOT 219: PCT (projected capacitive) multi-touch with optical bonding and anti-reflective protection, layer front side (anti-glare/splinter protection)
  - **Keyboard (optional)**
    - PILOT 219: Keyboard with glass or foil surface, mounted on torque hinge with concealed cabling, with touchpad
  - **Network**
    - PILOT 219: 1-4x USB 3.0, 1-6x USB 2.0, 1-2x Gigabit Ethernet, 1-3x RS 232, additional interfaces upon request
  - **Equipment PC (optional)**
    - WLAN, Bluetooth®, RFID/NFC/Smartcard reader (compatible with Nymi Band), speaker, upon request: webcam, microphone

#### PILOT 221
- **Variants**
  - Industrial PC, Thin Client, Monitor
- **Design**
  - Compact, enclosed stainless steel housing
- **Displays and Controls**
  - **Display**
    - PILOT 221: 21.5" IPS-LCD display (16:9), LED backlight
  - **Resolution**
    - PILOT 221: 1920 x 1080 Full HD
  - **Touchscreen**
    - PILOT 221: PCT (projected capacitive) multi-touch with optical bonding and anti-reflective protection, layer front side (anti-glare/splinter protection)
  - **Keyboard (optional)**
    - PILOT 221: Keyboard with glass or foil surface, mounted on torque hinge with concealed cabling, with touchpad
  - **Network**
    - PILOT 221: 1-4x USB 3.0, 1-6x USB 2.0, 1-2x Gigabit Ethernet, 1-3x RS 232, additional interfaces upon request
  - **Equipment PC (optional)**
    - WLAN, Bluetooth®, RFID/NFC/Smartcard reader (compatible with Nymi Band), speaker, upon request: webcam, microphone

### PHYSICAL CHARACTERISTICS

#### PILOT 217
- **Power supply**
  - 100-240 V AC à 50-60 Hz, or 9-36 V DC
- **Power consumption**
  - 20W (industrial monitor)
  - 35 - 50 W (IPC, depending on configuration)
- **Dimensions (approx. mm)**
  - W: 461 / H: 324 / D: 55
- **Weight**
  - Approx. 8 kg
- **Housing**
  - Stainless steel, type 1.4301 (AISI 304), type 1.4404 (AISI 316L) optional
- **Interoperability**
  - CE, FCC (optional)
  - IP rating: IP5X

#### PILOT 219
- **Power supply**
  - 100-240 V AC à 50-60 Hz, or 9-36 V DC
- **Power consumption**
  - 20W (industrial monitor)
  - 35 - 50 W (IPC, depending on configuration)
- **Dimensions (approx. mm)**
  - W: 470 / H: 400 / D: 55
- **Weight**
  - Approx. 10 kg
- **Housing**
  - Stainless steel, type 1.4301 (AISI 304), type 1.4404 (AISI 316L) optional
- **Interoperability**
  - CE, FCC (optional)
  - IP rating: IP5X

#### PILOT 221
- **Power supply**
  - 100-240 V AC à 50-60 Hz, or 9-36 V DC
- **Power consumption**
  - 30W (industrial monitor)
  - 65 - 80 W (IPC, depending on configuration)
- **Dimensions (approx. mm)**
  - W: 570 / H: 367 / D: 55
- **Weight**
  - Approx. 11 kg
- **Housing**
  - Stainless steel, type 1.4301 (AISI 304), type 1.4404 (AISI 316L) optional
- **Interoperability**
  - CE, FCC (optional)
  - IP rating: IP5X

---

**Example configuration**: PILOT 219 + keyboard TNG + scanner holder
CONTROL

THE FITTED PANEL FOR OPTIMAL INTEGRATION INTO WALLS IN CLEANROOMS AND GMP ENVIRONMENTS

The CONTROL HMI system is a particularly space-saving and easy to clean option for integration into walls, machines and cabinets. It can be fitted from the front with a stainless steel frame or flush-mounted without a frame from the back. The front of both versions conforms to IP65.

The system comes with an optically bonded PCT multi-touch display for intuitive operation, offering high color accuracy, distinct color presentation, and virtually unrestricted viewing angles. It provides an ideal display for MES software, ERP and Distributed Control Systems (DCS).

An outstanding feature of the fitted panel is its shallow installation depth. An IP65 stainless steel protective enclosure for fitting between display and wall is also available on request. This retains the cleanroom status if the panel has to be removed.

TECHNICAL DATA OF THE HMI SYSTEM CONTROL CAN BE FOUND ON PAGE 18.
TECHNICAL DATA

**MODEL**

- CONTROL (FM) 217
- CONTROL (FM) 219
- CONTROL (FM) 221
- CONTROL (FM) 224
- CONTROL (FM) 232

**VARIANTS**

- Industrial PC, Thin Client, Monitor

**DISPLAYS AND CONTROLS**

- **DISPLAY**
  - 17.7” TN LCD display (16:9), LED backlight
  - 19” IPS LCD display (16:9 with approx. 178° viewing angle and optical bonding)
  - 21.5” IPS LCD display (16:9 with approx. 178° viewing angle and optical bonding)
  - 24” IPS LCD display (16:9 with approx. 178° viewing angle and LED backlight)
  - 32” LED display (16:9 with approx. 178° viewing angle and LED backlight)

- **RESOLUTION**
  - 1920 x 1080 Full HD
  - 1280 x 1024 SXGA
  - 1920 x 1080 Full HD
  - 1920 x 1080 Full HD
  - 1920 x 1080 Full HD

- **TOUCHSCREEN**
  - Analog resistive or anti-glare PCT (projected capacitive) multi-touch with optical bonding
  - Analog resistive or PCT (projected capacitive) multi-touch with optical bonding upon request
  - Analog resistive or anti-glare PCT (projected capacitive) multi-touch with optical bonding
  - Anti-glare PCT (projected capacitive) multi-touch with optical bonding

**CONFIGURATIONS**

- **INDUSTRIAL PC**
  - Intel® Celeron® N2930 1,83 GHz / Burst 2,16 GHz, quad-core
  - Intel® Core™ i3-5010U 2.1GHz, Dual-Core
  - Intel® Core™ i5-5350U 1,8 GHz / Turbo 2,9 GHz, Dual-Core
  - Intel® Core™ i5-7300U (7th Gen.) 2,6 GHz / Turbo 3,5 GHz, Dual-Core
  - Intel® Core™ i7-5650U 2.2GHz / Turbo 3,1 GHz, Dual-Core
  - Intel® Core™ i7-7600U (7th Gen.) 2,8 GHz / Turbo 3,9 GHz, Dual-Core

- **OPERATING SYSTEMS**
  - Windows® 10; (Android; Linux; Windows 10 Enterprise LTSB/LTSC and others upon request)

- **SYSTEM MEMORY**
  - 4 GB DDR3 bis 16 GB DDR3 (DDR4 at 7th Gen.)

- **STORAGE CAPACITY**
  - 128 GB mSATA SSD; additional memory sizes and types upon request

- **I/O INTERFACES**
  - 1-4x USB 3.0, 1-6x USB 2.0, 1-2x Gigabit Ethernet, 1-3x RS 232, additional interfaces upon request

- **Equipment PC (optional)**
  - WLAN, Bluetooth®, RFID/NFC/Smartcard reader (compatible with Nymi Band), speaker, upon request: webcam, microphone

- **THIN CLIENT**
  - Thin Client e.g. iFCS for versions of Microsoft® Windows, Linux, and others
  - DH and VGA

- **INDUSTRIAL MONITOR**
  - DisplayPort and DVI

- **Equipment monitor (optional)**
  - RFID/NFC/Smartcard reader (compatible with Nymi Band), speaker, upon request: webcam, microphone

**PHYSICAL CHARACTERISTICS**

- **POWER SOURCE**
  - nominal voltage: 230 V AC, 50 – 60 Hz; or 9 – 36 VDC

- **POWER CONSUMPTION**
  - 20 W (Industrial monitor)
  - 35 – 75 W (PC, depending on configuration)

- **DIMENSIONS (approx., mm)**
  - **Frontframe CONTROLS**
    - W 94 / H 177
    - W 694 / H 452
    - W 616 / H 416
    - W 672 / H 560
    - W 800 / H 552
  - **Mounting depth**
    - Approx. 96 mm
    - Approx. 111 mm
    - Approx. 115 mm
    - Approx. 12.2 kg
    - Approx. 22.9 kg

- **WEIGHT**
  - Approx. 9 kg
  - Approx. 11 kg
  - Approx. 12.2 kg

- **FREESTAND CONTROLS**
  - Stainless steel, type 1.4301 (AISI 304), type 1.4404 (AISI 316L) optional, brushed

- **FREESTAND WALL CONTROLS**
  - Stainless steel, type 1.4301 (AISI 304), type 1.4404 (AISI 316L) optional, brushed

- **CERTIFICATIONS**
  - CE, FCC / ISED (optional)

- **IP RATING**
  - IP65 Front plate

**EXAMPLE CONFIGURATION**

- Example configuration: CONTROL 221 - For front side mounting on the cleanroom wall
- Example configuration: CONTROL FLUSH-MOUNTED 224 - For flush-mounted integration into the cleanroom wall
MODI

IOT HMI SYSTEM FOR ROOM INFORMATION AND FOR BUILDING AUTOMATION IN A GMP ENVIRONMENT

All information on room and production status at a glance - this is what the intelligent, energy-efficient, network-capable MODI IoT HMI system has to offer. Conforming to GMP standards, the panel is also the perfect choice for building automation.

Intuitive operation is provided by an optically bonded PCT multi-touch display. It can be incorporated into a network via Ethernet or WLAN. The required data can thus be displayed on the MODI straight from the network, via a browser or by your own applications.

The special Easy Click Magnetic Mount (see Page 22) makes it particularly easy to install and remove the MODI. Flush-mounted installation in the wall ensures simple cleaning of the IP65 front panel. Alternatively, it can be installed on the wall using a stainless steel IP65 surface-mounted housing.

TECHNICAL DATA OF THE HMI SYSTEM MODI CAN BE FOUND ON PAGE 23.

The HMI system MODI is available in 7” and 10”.
MODI

INNOVATIVE MOUNTING CONCEPT FOR SIMPLE INSTALLATION & REMOVAL - EASY CLICK MAGNETIC MOUNT

The MODI HMI system is flush-mounted in the cleanroom wall and provided with a silicone seal. Simple, quick & reliable - Easy Click Magnetic Mount

To install, simply connect up the cable and insert the MODI in the opening. The Easy Click Magnetic Mount automatically fastens the MODI in the correct position. Once it has been sealed with silicone, the device is flush-mounted and easy to clean. The system can be replaced from the front after removing the silicone seal. This involves picking up the device with a suction cup and detaching it from the magnetic holders on the back. The connected cables can be detached after lifting the MODI out of the wall.

TECHNICAL DATA

MODI

<table>
<thead>
<tr>
<th>MODEL</th>
<th>MODI 107</th>
<th>MODI 110</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DISPLAYS AND CONTROLS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display</td>
<td>7&quot; IPS LCD display (16:9), LED backlight</td>
<td>10.1&quot; IPS LCD display (16:10), LED backlight</td>
</tr>
<tr>
<td>Resolution</td>
<td>1024 x 600 WVGA</td>
<td>1280 x 800 WVGA</td>
</tr>
<tr>
<td>PCT multi-touch screen</td>
<td>PCT multi-touch screen with capacitive touch and optical bonding</td>
<td></td>
</tr>
</tbody>
</table>

| CONFIGURATIONS | | |
| Processor | ARM Cortex-A53 1,4 GHz quad-core | Intel® Atom™ x5-Z8350 1,44 GHz / Turbo 1,92 GHz, quad-core |
| Operating system | Linux (Raspbian), optional: Windows 10 Pro or IoT Core™, Android emteria. OS | |
| System memory | 1 GB with ARM CPU, 2 GB with Intel CPU | better configurations upon request |
| Storage capacity | 16 GB with ARM CPU, 32 GB with Intel CPU (additional flash memory upon request) | |
| USB interfaces | 2x USB 2.0, 1x Gigabit Ethernet | additional interfaces upon request |
| Equipment PC (optional) | RS232/RS485, UART, Ethernet, CAN Bus, WiFi | additional equipment upon request |

| PHYSICAL CHARACTERISTICS | | |
| Power supply | 5 V DC, optional: 12-24 V DC, PoE | 12-24 V or PoE (depending on type) |
| Power consumption | 6-23 W (depending on type) | 10-30 W (depending on type) |
| Dimensions (approx. mm) | W 175 / H 110 / D 37 | W 245 / H 163 / D 37 |
| Weigh | Approx. 0.5 kg | Approx. 0.8 kg |
| Surface | Toughened glass | |
| Certification | CE, FCC / ISED (optional) | |
| UL rating | IP65 front side | |

HMI SYSTEMS
ACCESSORIES

EXTENSIVE RANGE OF CLEANROOM-COMPATIBLE ACCESSORIES TO SUIT EVERY REQUIREMENT

We can offer additional accessories for our systems to ensure simple and ergonomic everyday operation for users. These make it possible to tailor the HMI systems exactly to specific work processes and production environments.

All components were developed and optimized specially for use in cleanrooms. They are made entirely of stainless steel and cleanroom-compatible materials. The accessories can be seamlessly combined with the WAVE and PILOT HMI systems.

Please contact us for advice if you do not find exactly what you need. We would be pleased to offer you our customized modifications or designs.
AUTHENTICATION

SIMPLE AND SECURE AUTHENTICATION IN A MATTER OF SECONDS

Regular login, confirmation, and electronic signatures in accordance with 21 CFR Part 11 take up a lot of time and may become a security risk if workers fail to comply with the regulations for the secure use of passwords. Electronic or biometric authentication solutions, employing an RFID card or Nymi Band for example, permit more efficient and secure working. User authentication then takes just a matter of seconds, reduces incorrect entries, and saves a significant amount of time.

There are various options for incorporating the authentication interface - including integration into the glass keyboard or the use of a special CONNECT BOX attached to the HMI system. All the solutions conform to IP65 and were developed specially for cleanroom applications.

COMPATIBLE WITH NYMI

Nymi is a leading edge biometric security company. Our enterprise authentication delivers data integrity and security, allowing highly regulated industries to achieve compliance and productivity.
CLEANROOM KEYBOARDS

GMP-STANDARD GLASS OR FOIL KEYBOARDS - IDEAL FOR CLEANROOMS

The glass and foil keyboards were developed specially for cleanroom applications - both are provided with particularly smooth and easy to clean surfaces. They are designed to withstand regular cleaning with the standard cleaning agents and disinfectants used in cleanrooms.

The keyboards are flush-mounted in a high-grade stainless steel housing and conform to protection class IP65. Glass keyboards operate on the capacitive principle with audio feedback. The short-stroke keys of foil keyboards feature tactile feedback.

Desktop, rack and built-in versions of the cleanroom keyboards are available and can be combined with WAVE, PILOT, CONTROL and TROLLEY systems. A freely adjustable torque hinge connects the keyboard to the HMI system. Wall mounting or cabinet installation is also possible using a double torque hinge. This permits internal cable routing and ergonomic setting of the angle of inclination to suit the user.

Ideal for cleanroom conditions and cleanrooms
Less cleaning work required thanks to fully encapsulated design in high-grade stainless steel housing in accordance with protection class IP65
Suitable for regular cleaning with disinfectants and cleaning agents
Different language layouts with glass or foil keyboard
Ergonomically adjustable to user and suitable for operation wearing cleanroom gloves
Glass keyboard operates on the capacitive principle with audio feedback. Cleaning function/Auto-Lock (optional)
Foil keyboard with short-stroke keys and tactile feedback
Touchpad operates on the capacitive principle
Glass keyboard optionally with integrated Nymi/RFID/NFC/Smartcard reader and/or laminated protective film
Available as desktop, wall mounted, rack and built-in versions

TECHNICAL DATA OF THE GLASS AND FOIL KEYBOARDS CAN BE FOUND ON PAGE 30.
## TECHNICAL DATA

### CLEANROOM KEYBOARDS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>TNG / TNGR</th>
<th>TNFA</th>
<th>ING / INGR</th>
<th>INFA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variants</strong></td>
<td>Desktop unit / torque hinge</td>
<td>Stainless steel, glass surface</td>
<td>Stainless steel, foil keyboard</td>
<td>Glass surface</td>
</tr>
<tr>
<td><strong>Design</strong></td>
<td>Stainless steel, glass surface</td>
<td>Stainless steel, foil keyboard</td>
<td>Glass surface</td>
<td>Full keyboard</td>
</tr>
<tr>
<td><strong>Fittings</strong></td>
<td>Capacitive technology, tested with cleanroom gloves of varying thickness</td>
<td>Capacitive technology, tested with cleanroom gloves of varying thickness</td>
<td>Capacitive technology, tested with cleanroom gloves of varying thickness</td>
<td>Capacitive technology, tested with cleanroom gloves of varying thickness</td>
</tr>
<tr>
<td><strong>RFID/NFC/Smart card reader</strong></td>
<td>Optional TNG with integrated RFID/NFC/Smart card reader (compatible with Nymi Band)</td>
<td>Optional ING with integrated RFID/NFC/Smart card reader (compatible with Nymi Band)</td>
<td>Optional ING with integrated RFID/NFC/Smart card reader (compatible with Nymi Band)</td>
<td>Optional ING with integrated RFID/NFC/Smart card reader (compatible with Nymi Band)</td>
</tr>
<tr>
<td><strong>Keyboard layout</strong></td>
<td>Touch pad (integrated)</td>
<td>Capacitive technology, tested with cleanroom gloves of varying thickness</td>
<td>Capacitive technology, tested with cleanroom gloves of varying thickness</td>
<td>Capacitive technology, tested with cleanroom gloves of varying thickness</td>
</tr>
<tr>
<td><strong>Keyboard surface</strong></td>
<td>Stainless steel, foil keyboard</td>
<td>Glass surface</td>
<td>Glass surface</td>
<td>Glass surface</td>
</tr>
<tr>
<td><strong>Physiological characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dimensions (approx. mm)</strong></td>
<td>W 517 / H 30 / D 230</td>
<td>W 482 / H 20 / D 177</td>
<td>W 482 / H 20 / D 177</td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>Approx. 4.5 kg</td>
<td>Approx. 2 kg</td>
<td>Approx. 2 kg</td>
<td></td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td>Stainless steel, type 1.4301 (AISI 304)</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Surface</strong></td>
<td>Brushed, glass bead blasted (optional)</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Certification</strong></td>
<td>CE, FCC/ISED (optional)</td>
<td>CE</td>
<td>CE</td>
<td>CE</td>
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<tr>
<td><strong>IP rating</strong></td>
<td>IP65</td>
<td>IP65 front side</td>
<td>IP65 front side</td>
<td>IP65 front side</td>
</tr>
</tbody>
</table>

### HMI SYSTEMS

- **Keyboard TNG**: TNGR keyboard with Nymi/RFID/NFC/Smart card reader
- **Keyboard TNFA**: TNG keyboard with adjustable torque hinge
- **Keyboard ING and INFA**: e.g. integrated in TROLLEY MAXI or COMPACT
You are sure to find the best solution for your particular situation among our wide choice of available options, ranging from fixed installation to rotating and swivel-mounted systems. Dual-display solutions in vertical or horizontal arrangement are just as feasible as direct mounting on a wall, ceiling, floor or desktop.

The mounting systems can be implemented with our WAVE and PILOT HMI systems. It is also possible to add a keyboard, mounted on the HMI system by way of a torque hinge. This enables the keyboard to be ergonomically adjusted to suit each user.

The mounting arrangement is designed to ensure smooth transitions between the individual components. This considerably simplifies cleaning. Made entirely of stainless steel, all mounting solutions are IP65 rated.

We would also be pleased to produce a customized solution for you on request. And we can offer you assistance with installation, qualification and documentation as well.

**CONFIGURATIONS**

- For optimum integration of IT systems in GMP environments and cleanrooms
- Less cleaning work required thanks to smooth transitions between stainless steel components in accordance with protection class IP65
- Suitable for regular cleaning with disinfectants and cleaning agents
- Wide range of reliable mounting versions available, customized modifications and designs on request
- HMI systems can be fitted in horizontal or upright position
- Particularly ergonomic with rotating and swivel mounting
- Comprehensive extra services such as hardware IQ and individual maintenance contracts, for example

**SUPPORT ARM SYSTEMS**

**FLEXIBLE SUPPORT ARM SYSTEMS ARE THE RIGHT SOLUTION FOR ALL CLEANROOM ENVIRONMENTS**

L-tube for wall mounting, rotates up to 350 degrees.

U-tube for wall mounting, pivots and rotates up to 350 degrees.

2-point fixation for wall mounting, rotates up to 350 degrees.

Ceiling mounting, as single or duplex system, rotates up to 350 degrees.

Duplex system vertical for use of two HMI systems, up to 350 degree rotation.

Direct wall mounting

Duplex system horizontal for use of two HMI systems, rotating and tilting.

Table mounting with stainless steel tabletop, rotates up to 350 degrees.

Pedestal / table mounting with flange, rotates up to 350 degrees.

Rear view, all supply lines routed in protective stainless steel tube.

Configuration examples - further options available
THE TROLLEY CONCEPT

MOBILE OPERATING STATIONS FOR CLEANROOMS - WITH CUSTOMIZABLE CONFIGURATION

The TROLLEY systems are mobile, flexible cleanroom workstations suitable for customized configuration. They offer the right solution for every situation, ranging from the space-saving version right through to a complete system.

The TROLLEYS can be combined with the WAVE and PILOT HMI systems. The TROLLEY MAXI and the TROLLEY COMPACT are designed to also accommodate a label printer or other hardware. Provided with cleanroom-compatible castors, battery and WLAN, the workstations can be moved around as required in the production environment. On request, certain TROLLEYS can also be equipped with inductive charging technology for a wireless cleanroom.

There is no need for complex and expensive HMI system installation and wiring work on walls, ceilings or the floor. The TROLLEY systems are always ready for use wherever they are required.

To permit simple adaptation of the monitor height, we can supply ergonomic height adjustable pipes for the TROLLEY system. The height adjustable system is made entirely of stainless steel.

Configuration examples - further options available

Ideal for GMP conditions and cleanrooms
Less cleaning work required thanks to sophisticated stainless steel design in accordance with protection class IP65
Suitable for regular cleaning with disinfectants and cleaning agents
Cleanroom suitable castors, integrated WLAN and high-power batteries for full mobility
Plug & Work: Quick, inexpensive and simple installation without the need for structural modifications
Customized solutions available on request
Comprehensive extra services such as hardware IQ and individual maintenance contracts, for example

CONFIGURATIONS

Can be combined with HMI systems WAVE (Page 8) and PILOT (Page 12)
**TROLLEY LIGHT TRAPEZOID**

**MOBILE, SPACE-SAVING WORKSTATION WITH POWERFUL BATTERY FOR CLEANROOM APPLICATIONS**

Space-saving and stable - The TROLLEY LIGHT with trapezoid stand. With a platform diameter of just around 550 mm, this base is perfect for use where space is at a premium. The TROLLEY LIGHT can be pushed right up against a wall. Thanks to its lightweight design, the TROLLEY LIGHT is particularly easy to move. The integrated battery guarantees continuous operation for up to two shifts.

Optionally the height of the operating unit can be adjusted by up to 250 mm.
TROLLEY LIGHT 5-STAR/ TRAPEZOID INDUCTIVE

COMPACT STAND WITH INDUCTIVE CHARGING TECHNOLOGY FOR A WIRELESS CLEANROOM

Maximum mobility and wireless power transmission to avoid cross-contamination by cables and plugs - the trapezoid stand for the TROLLEY LIGHT with inductive battery charging technology. The trapezoid stand is magnetically centered with the charging station, and charging starts automatically.

Optionally, the charging rate can be doubled using a second coupler, and charging is then faster than with conventional charging via a cable. If required, inductive charging stations can be distributed around the room to permit both charging and working at different locations. And so the system is always ready for use.

Ideal for GMP conditions and cleanrooms
Less cleaning work required thanks to sophisticated, fully encapsulated stainless steel design in accordance with protection class IP65
Suitable for regular cleaning with disinfectants and cleaning agents
Cleanroom suitable castors, integrated WLAN and high-power batteries for full mobility
Plug & Work: Quick, inexpensive and simple installation without the need for structural modifications
Wireless power transmission starts automatically on docking to the station. The TROLLEY is magnetically centered.
Simultaneous charging and operation possible
Made in Germany. With utility model and industrial design protection

TECHNICAL DATA OF THE TROLLEY LIGHT CAN BE FOUND ON PAGE 48.

Can be combined with HMI systems WAVE (Page 8) and PILOT (Page 12).

Can be combined with HMI systems WAVE (Page 8) and PILOT (Page 12).

Charging starts on docking to the station
Magnetic couplers center the TROLLEY on the charging station
Optional: Double charging rate with two couplers
Watch video: systec-solutions.com/inductive
Cleanroom suitable, antistatic castors with stainless steel holder
The most powerful battery with an operating time of up to three shifts can be accommodated in the 5-arm base of the TROLLEY LIGHT. Whilst offering full mobility, this base mounted on 5 castors provides a stable stand ideally suited to a mobile dual-display solution with keyboard, for example. The dual-display version with an additional display is the perfect choice for working with two applications in parallel, such as MES and Distributed Control Systems (DCS). Even with just one display, this TROLLEY LIGHT version is an excellent option for cleanroom operation.

The TROLLEY LIGHT can also be configured as a tall version with the display at a 10° angle and provided with a keyboard. A half-height version is possible as well, with a display at a 60° angle. Both options can be supplied with or without a keyboard.

New. Also available as version with inductive charging technology.

Ideal for GMP conditions and cleanrooms
Less cleaning work required thanks to sophisticated, fully encapsulated stainless steel design in accordance with protection class IP65
Suitable for regular cleaning with disinfectants and cleaning agents
Cleanroom suitable castors, integrated WLAN and high-power batteries for full mobility
Plug & Work. Quick, inexpensive and simple installation without the need for structural modifications
Made in Germany. With utility model and industrial design protection
Customized solutions available on request
Comprehensive extra services such as hardware IQ and individual maintenance contracts, for example

TECHNICAL DATA OF THE TROLLEY LIGHT CAN BE FOUND ON PAGE 48.
The TROLLEY LIGHT with 3-arm base is the most compact, lightest and most mobile version of the TROLLEY LIGHT. The optional use of an integrated battery makes it possible to work in places with no direct power supply. The system can be moved around as required without having to shut down the HMI.

The operating unit can be controlled either using a keyboard or alternatively via the touch display, like a large tablet. The 3-arm base is ideal for configuration as a half-height version with or without a keyboard.

**TECHNICAL DATA OF THE TROLLEY LIGHT**

CAN BE FOUND ON PAGE 48.

- Ideal for GMP conditions and cleanrooms
- Less cleaning work required thanks to sophisticated, fully encapsulated stainless steel design in accordance with protection class IP65
- Suitable for regular cleaning with disinfectants and cleaning agents
- Cleanroom suitable castors, integrated WLAN and high-power batteries for full mobility
- Plug & Work. Quick, inexpensive and simple installation without the need for structural modifications
- Made in Germany. With utility model and industrial design protection
- Customized solutions available on request
- Comprehensive extra services such as hardware IQ and individual maintenance contracts, for example

**PARTICULARLY LIGHT CLEANROOM OPERATING STATION FOR MOBILE USE**

**TROLLEY LIGHT 3-STAR**

**CONFIGURATIONS**

Can be combined with HMI systems WAVE (Page 8) and PILOT (Page 12)

**PARTICULARLY LIGHT CLEANROOM OPERATING STATION FOR MOBILE USE**

**TROLLEY LIGHT 3-STAR**

The TROLLEY LIGHT with 3-arm base is the most compact, lightest and most mobile version of the TROLLEY LIGHT. The optional use of an integrated battery makes it possible to work in places with no direct power supply. The system can be moved around as required without having to shut down the HMI.

The operating unit can be controlled either using a keyboard or alternatively via the touch display, like a large tablet. The 3-arm base is ideal for configuration as a half-height version with or without a keyboard.

**TECHNICAL DATA OF THE TROLLEY LIGHT**

CAN BE FOUND ON PAGE 48.

- Ideal for GMP conditions and cleanrooms
- Less cleaning work required thanks to sophisticated, fully encapsulated stainless steel design in accordance with protection class IP65
- Suitable for regular cleaning with disinfectants and cleaning agents
- Cleanroom suitable castors, integrated WLAN and high-power batteries for full mobility
- Plug & Work. Quick, inexpensive and simple installation without the need for structural modifications
- Made in Germany. With utility model and industrial design protection
- Customized solutions available on request
- Comprehensive extra services such as hardware IQ and individual maintenance contracts, for example

**PARTICULARLY LIGHT CLEANROOM OPERATING STATION FOR MOBILE USE**

**TROLLEY LIGHT 3-STAR**

**CONFIGURATIONS**

Can be combined with HMI systems WAVE (Page 8) and PILOT (Page 12)

**PARTICULARLY LIGHT CLEANROOM OPERATING STATION FOR MOBILE USE**

**TROLLEY LIGHT 3-STAR**

The TROLLEY LIGHT with 3-arm base is the most compact, lightest and most mobile version of the TROLLEY LIGHT. The optional use of an integrated battery makes it possible to work in places with no direct power supply. The system can be moved around as required without having to shut down the HMI.

The operating unit can be controlled either using a keyboard or alternatively via the touch display, like a large tablet. The 3-arm base is ideal for configuration as a half-height version with or without a keyboard.

**TECHNICAL DATA OF THE TROLLEY LIGHT**

CAN BE FOUND ON PAGE 48.

- Ideal for GMP conditions and cleanrooms
- Less cleaning work required thanks to sophisticated, fully encapsulated stainless steel design in accordance with protection class IP65
- Suitable for regular cleaning with disinfectants and cleaning agents
- Cleanroom suitable castors, integrated WLAN and high-power batteries for full mobility
- Plug & Work. Quick, inexpensive and simple installation without the need for structural modifications
- Made in Germany. With utility model and industrial design protection
- Customized solutions available on request
- Comprehensive extra services such as hardware IQ and individual maintenance contracts, for example

**PARTICULARLY LIGHT CLEANROOM OPERATING STATION FOR MOBILE USE**

**TROLLEY LIGHT 3-STAR**

**CONFIGURATIONS**

Can be combined with HMI systems WAVE (Page 8) and PILOT (Page 12)
The TROLLEY COMPACT workstation is the ideal complete system for confined spaces in cleanrooms. It is equipped with an HMI system, an integrated keyboard and a stable mobile stand. There is also a front drawer for documents and space to accommodate a label printer. The labels can be simply removed by way of the printer flap on the side.

The design of the TROLLEY COMPACT is based on ergonomic principles and allows full mobile working all day thanks to the integrated WLAN and battery.

The workstation is supplied ready for connection and ready to use – without the need for costly structural installation work.
**TROLLEY MAXI**

CLEANROOM OPERATING STATION FEATURING HYGIENIC DESIGN - CONFIGURABLE AND READY TO USE

The TROLLEY MAXI is a complete cleanroom system based on hygienic design principles. Special double seals, fasteners and inside hinges ensure compliance with maximum hygiene standards and protection class IP65. It can be used as a stationary complete system or fitted with an (optional) battery for mobile applications.

The TROLLEY MAXI is equipped with an HMI system, an integrated keyboard, drawer and offers space for a label printer. The labels can be simply removed by way of the door with viewing window. The workstation is designed in accordance with ergonomic principles.

The workstation is supplied ready for connection and ready to use. The connector plate on the back facilitates the installation of peripherals (e.g. scales) on site, thus saving both time and installation expense.

**TECHNICAL DATA OF THE TROLLEY MAXI**

Can be found on page 49.

**CONFIGURATIONS**

- Ideal for GMP conditions and cleanrooms
- Based on hygienic design principles: Special seals, fasteners and inside hinges ensure compliance with maximum hygiene standards
- Less cleaning work required thanks to sophisticated stainless steel design in accordance with protection class IP65
- Suitable for regular cleaning with disinfectants and cleaning agents
- Use as stationary system or mobile solution with cleanroom suitable castors and integrated WLAN
- Also available with battery on request
- With integrated keyboard and space inside for equipment as required by customer, for instance a label printer
- Plug & Work: Quick, inexpensive and simple installation without the need for structural modifications
- Customized solutions available on request
- Comprehensive extra services such as hardware IQ and individual maintenance contracts, for example

**TECHNICAL DATA OF THE TROLLEY MAXI**

Can be found on page 49.
TECHNICAL DATA
MOBILE SYSTEMS

MODEL
Variant
MOBILE SYSTEMS
Model
TROLLEY LIGHT
TROLLEY LIGHT
TROLLEY LIGHT
FITTINGS
Base
Compact trapezoid stand
5-arm base (optional)
3-arm base (optional)
Height adjustment
Ergonomic ±250 mm height adjustment with gas spring (optional)
PHYSICAL CHARACTERISTICS
Power supply
220-240 V AC or 100-120 V AC, 50 - 60 Hz, cable-free via INDUCTIVE CHARGER (optional)
Battery option AGM
AGM / sealed lead-acid battery, 12 V, 56 Ah or 12 V, 107 Ah
Battery option Li-ion
Li-ion battery (LiFePO4), 12 V, 50 Ah or 12V, 100 Ah or Li-ion battery (UPS)
Dimensions (approx. mm)
Trapezoid: H 510 (without flange), Base: 490 x 415
Standard design: Height of center of monitor: H 1450
Half-high design: Height of center of monitor: H 1130
Weight
approx. 25 kg (without battery)
Housing and surface
Stainless steel, type 1.4301 (AISI 304), brushed
Castors
With stainless steel holder, electrically conductive, 2x guide castors with brakes, 1x guide caster
Certification
CE, FCC / ISED (optional)
IP rating
IP65
TECHNOLOGY
Inductive charging station (transmitter)
Inductive coupling with 240 W output. For wall-mounting or for flush-mounted integration into the wall, with optional 100-240 V AC power supply unit. (Station supplied separately)
Certification
CE, FCC / ISED (optional)
IP rating
IP65

TABLE 1: TROLLEY LIGHT

<table>
<thead>
<tr>
<th>MODEL</th>
<th>TROLLEY LIGHT</th>
<th>TROLLEY LIGHT</th>
<th>TROLLEY LIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variant</td>
<td>Mobile GMP-IT workstation developed in hygienic design</td>
<td>With integrated drawer and device fixtures for HMI systems of the WAVE or PILOT series</td>
<td>With device fixtures for HMI systems of the WAVE or PILOT series</td>
</tr>
<tr>
<td>Design</td>
<td>With integrated drawer and device fixtures for HMI systems of the WAVE or PILOT series</td>
<td>With device fixtures for HMI systems of the WAVE or PILOT series</td>
<td>With device fixtures for HMI systems of the WAVE or PILOT series</td>
</tr>
<tr>
<td>FITTINGS</td>
<td>Integrated keyboard ING / INGR / INFA</td>
<td>Integrated keyboard ING / INGR / INFA</td>
<td>Integrated keyboard ING / INGR / INFA</td>
</tr>
<tr>
<td>Fittings</td>
<td>1 drawer on telescopic rails with compression latch, 1 drawer on telescopic rails, 1 door with internal hinges and 2 drawers on telescopic rails</td>
<td>1 drawer on telescopic rails with compression latch, 1 door with internal hinges and 2 drawers on telescopic rails</td>
<td>1 drawer on telescopic rails with compression latch, 1 door with internal hinges and 2 drawers on telescopic rails</td>
</tr>
<tr>
<td>PHYSICAL CHARACTERISTICS</td>
<td>Power supply</td>
<td>220-240 V AC or 100-120 V AC, 50 - 60 Hz, cable-free via INDUCTIVE CHARGER (optional)</td>
<td>220-240 V AC or 100-120 V AC, 50 - 60 Hz, cable-free via INDUCTIVE CHARGER (optional)</td>
</tr>
<tr>
<td>Battery option AGM</td>
<td>AGM / sealed lead-acid battery, 12 V, 56 Ah or 12 V, 107 Ah</td>
<td>AGM / sealed lead-acid battery, 12 V, 56 Ah or 12 V, 107 Ah</td>
<td>AGM / sealed lead-acid battery, 12 V, 56 Ah or 12 V, 107 Ah</td>
</tr>
<tr>
<td>Battery option Li-ion</td>
<td>Li-ion battery (LiFePO4), 12 V, 50 Ah or 12 V, 100 Ah or Li-ion battery (UPS)</td>
<td>Li-ion battery (LiFePO4), 12 V, 50 Ah or 12 V, 100 Ah or Li-ion battery (UPS)</td>
<td>Li-ion battery (UPS)</td>
</tr>
<tr>
<td>Dimensions (approx. mm)</td>
<td>T 1450 x D 650, Height of center of monitor: H 1450</td>
<td>T 1450 x D 650, Height of center of monitor: H 1450</td>
<td>T 1450 x D 650, Height of center of monitor: H 1450</td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 65 kg (without batteries)</td>
<td>Approx. 75 kg (without batteries)</td>
<td>Approx. 75 kg (without batteries)</td>
</tr>
<tr>
<td>H: 1150 mm, Width of the desk, 4x adjustable foot (optional)</td>
<td>Height of center of monitor: H 1450</td>
<td>Width of the desk, Height of center of monitor: H 1450</td>
<td>Width of the desk, Height of center of monitor: H 1450</td>
</tr>
<tr>
<td>Weight</td>
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<td>Approx. 75 kg (without batteries)</td>
<td>Approx. 75 kg (without batteries)</td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 65 kg (without batteries)</td>
<td>Approx. 75 kg (without batteries)</td>
<td>Approx. 75 kg (without batteries)</td>
</tr>
<tr>
<td>Castors</td>
<td>With stainless steel holder, electrically conductive, 2x guide castors with brakes, 1x guide caster</td>
<td>With stainless steel holder, electrically conductive, 2x guide castors with brakes, 1x guide caster</td>
<td>With stainless steel holder, electrically conductive, 2x guide castors with brakes, 1x guide caster</td>
</tr>
<tr>
<td>Certification</td>
<td>CE, FCC / ISED</td>
<td>CE, FCC / ISED</td>
<td>CE, FCC / ISED</td>
</tr>
</tbody>
</table>
LABORATORY WORKSTATION

ERGONOMIC WORKSTATIONS TO GMP STANDARDS FOR LABORATORIES AND CLEANROOMS

We offer different laboratory workstation versions for the ergonomic design of laboratory and cleanroom benches. These are based on the WAVE and PILOT HMI systems, with the option of monitor, PC or thin client configuration. All versions conform to IP65 and are particularly easy to clean. They can be operated via the touch screen and using cleanroom keyboards. Both alternatives have been successfully tested wearing cleanroom gloves of different thicknesses.

The HMI systems can be combined with a space-saving stainless steel stand and a desktop keyboard. The angle of the display is infinitely variable. Installation on a stainless steel tube is also possible. The tube-mounted HMI system is then fitted either on a stainless steel stand or directly on the bench, so that cables can be routed through the bench and tube to satisfy cleanroom standards. A further advantage is that the keyboards can be attached directly to the HMI, with the result that no external cables are required and there is no keyboard on the bench. If an external keyboard is required, we can supply a magnetic keyboard shelf for fitting directly to the HMI as an alternative.

| Ideal for laboratories and cleanrooms with GMP conditions |
| Less cleaning work required thanks to fully encapsulated design in accordance with protection class IP65 |
| Suitable for regular cleaning with disinfectants and cleaning agents |
| Different versions available: Stainless steel stand including torque hinge / tube-mounted with stainless steel stand / tube-mounted, fitted on bench |
| Can be combined with WAVE (19”/21.5”/24”/27”) or PILOT (17.3”/19”/21.5”) and glass or foil cleanroom keyboards |
| Non-reflecting LCD display, IPS panel with up to 178° viewing angle from all sides. LCD display with LED backlight technology |
| Intuitive multi-touch display with optical bonding. Operable with cleanroom gloves. |
| Available as industrial PC, industrial monitor, thin client (e.g. IGEL) |

TECHNICAL DATA OF WAVE CAN BE FOUND ON PAGE 10. TECHNICAL DATA OF PILOT CAN BE FOUND ON PAGE 14.
TABLETS

GMP CLEANROOM TABLET - MOBILE COMPUTING WITH STAINLESS STEEL HOUSING

The ideal solution for mobile applications in environments with high hygienic requirements provides the Tablet PC. The fully enclosed housing meets IP65 and can be rapidly and thoroughly cleaned with almost all standard cleaning agents and disinfectants.

The stainless steel tablet is provided with an IP65 on/off switch. Charging is performed by way of a modern, easy to clean IP65 magnetic charging contact (depending on integrated device). So it is ideally equipped for use in cleanrooms. On request, the tablet can be fitted with a handle, a USB interface and volume control buttons.

The stainless steel housing is prepared for/supplied with integrated Microsoft Surface Pro or Apple iPad Pro. We would also be pleased to offer you customized stainless steel housings for other makes on request.

Ideal for mobile use under GMP conditions and in cleanrooms
Less cleaning work required thanks to fully encapsulated design in accordance with protection class IP65
Suitable for regular cleaning with disinfectants and cleaning agents
11”, 12.3” LCD display - other sizes on request
Models available: Microsoft Surface Pro, Apple iPad Pro. Other models on request
Intuitive multi-touch display, suitable for operation wearing cleanroom gloves
Equipped with IP65 On/Off switch, IP65 magnetic charging contact (depending on integrated device)
Handle and holder for wall mounting or placement on a table can be added optionally

TECHNICAL DATA OF THE TABLETS CAN BE FOUND ON PAGE 58.
TECHNICAL DATA

<table>
<thead>
<tr>
<th>TABLETS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MODEL</strong></td>
</tr>
<tr>
<td>Manufacturer</td>
</tr>
<tr>
<td>Product Description</td>
</tr>
<tr>
<td><strong>DISPLAYS AND CONTROLS</strong></td>
</tr>
<tr>
<td>Display</td>
</tr>
<tr>
<td>Resolution</td>
</tr>
<tr>
<td><strong>CONFIGURATIONS</strong></td>
</tr>
<tr>
<td>Configurations</td>
</tr>
<tr>
<td>Upon request: handle, wall mount, additional interfaces</td>
</tr>
<tr>
<td><strong>PHYSICAL CHARACTERISTICS</strong></td>
</tr>
<tr>
<td>Power supply</td>
</tr>
<tr>
<td>Dimensions (approx. mm)</td>
</tr>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>Housing</td>
</tr>
<tr>
<td>IP rating</td>
</tr>
</tbody>
</table>

These pages only show a small selection of our extensive product range. We are pleased to assist you in the selection and configuration of your specific Tablet-PC system.
SCANNER BOX

CLEANROOM-COMPATIBLE CHARGING OF SCANNERS IN STAINLESS STEEL HOUSING WITH PROTECTION CLASS IP65

Makes bar code scanner charging stations fit for cleanroom use - the SCANNER BOX. Up to four scanner charging stations or two battery charging stations can be safely and conveniently accommodated in the stainless steel housing. It is particularly easy to clean and conforms to IP65.

The SCANNER BOX can be set up on a desktop in a cleanroom or integrated into the wall. The current status of charge can be checked through the viewing window in the door of the SCANNER BOX. Once charging has been completed, the door can be opened and closed by means of a door with compression latch.

Inside there is a partition forming a compartment for the power supply units, the cables of which are safely routed through an IP65 opening. The back wall is screwed on and can be detached for service purposes. The SCANNER BOX is supplied fitted with charging stations and power supply units.

Physical features:
- Dimensions (approx. mm): W 470 / H 260 / D 265
- Weight: approx. 22 kg (without equipment)

Scanner systems: You can find a selection of 1D and 2D scanners for the reliable, high-performance recording of data under special operating conditions on pages 64-65.
The PRINTER BOX ensures the best possible integration of printers in cleanrooms. Printers of almost any size can be installed in a sterile environment whilst satisfying GMP requirements. The box is based on hygienic design principles and satisfies the highest hygiene standards thanks to the use of special double seals, fasteners and inside hinges.

A door with compression latch on the front secures the PRINTER BOX during operation, thus ensuring compliance with IP65. The printed labels can be removed by way of a small door with viewing window. Safe and convenient operation is thus guaranteed. The printer is placed on a pull-out platform and is connected up inside the PRINTER BOX. Connections for power, USB or Ethernet on the rear allow versatile use of the PRINTER BOX. All our stainless steel printer housings can be placed or screwed onto a shelf or be integrated into a wall.

Physical features:
- Option S:
  - Dimensions (approx. mm): W 360 / H 320 / D 445
  - Weight (without equipment): approx. 18 kg
- Option M:
  - Dimensions (approx. mm): W 400 / H 400 / D 650
  - Weight (without equipment): approx. 28 kg
- Option L:
  - Dimensions (approx. mm): W 450 / H 540 / D 630
  - Weight (without equipment): approx. 41.5 kg

Printer systems: You can find a selection of high-performance label printers for thermal transfer and/or direct thermal printing on pages 66-67.

IP65 STAINLESS STEEL HOUSINGS
PRINTER BOX
CLEANROOM-COMPATIBLE INTEGRATION OF PRINTERS IN IP65 STAINLESS STEEL HOUSING IN HYGIENIC DESIGN
### TECHNICAL DATA

#### ADDITIONS

**TECHNICAL DATA SCANNER**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>POWERSCAN PM9501 / PBT9501</th>
<th>POWERSCAN PD9531</th>
<th>ZEBRA DS3678</th>
<th>ZEBRA DS3608</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturer</strong></td>
<td>Datalogic</td>
<td>Datalogic</td>
<td>Zebra</td>
<td>Zebra</td>
</tr>
<tr>
<td><strong>Product description</strong></td>
<td>Wireless 1D / 2D-Imager; wireless Bluetooth® Imager</td>
<td>Wired 1D / 2D-Imager</td>
<td>Wireless Bluetooth® Imager</td>
<td>Wired 1D / 2D-Imager</td>
</tr>
</tbody>
</table>

**Operating range**
- 2 up to 130 cm, Green Light LED System to read confirmation (3GL)
- 6 up to 130 cm (depending on barcode type and density), Green Light LED System to read confirmation (3GL)
- 3,3 up to 152 cm (depending on barcode type and density), LED and vibration as a user display
- 3,3 up to 152 cm (depending on barcode type and density), LED and vibration as a user display

**Reading options**
- 1D- / 2D-Imager
- 1D- / 2D-Imager
- 1D- / 2D-Imager
- 1D- / 2D-Imager

**Operating range**
- 2 up to 130 cm, Green Light LED System to read confirmation (3GL)
- 6 up to 130 cm (depending on barcode type and density), Green Light LED System to read confirmation (3GL)
- 3,3 up to 152 cm (depending on barcode type and density), LED and vibration as a user display
- 3,3 up to 152 cm (depending on barcode type and density), LED and vibration as a user display

**Communications**
- 433,92 MHz, Bluetooth® 3.0
- Bluetooth® 4.0

**PHYSICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Power supply</th>
<th>Scanner: 10 V, 2150 mAh, Li-ion battery</th>
<th>Station: 10 bis 30 V DC</th>
<th>Scanner: USB</th>
<th>Station: USB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (approx. mm)</td>
<td>W 74 / H 212 / D 110</td>
<td>W 240 / H 108 / D 95</td>
<td>W 74 / H 185 / D 132</td>
<td>W 74 / H 185 / D 142</td>
</tr>
<tr>
<td>Weight</td>
<td>380 g</td>
<td>380 g</td>
<td>407 g</td>
<td>410 g</td>
</tr>
<tr>
<td>IP rating</td>
<td>IP65 (without display)</td>
<td>IP65</td>
<td>IP67</td>
<td>IP67</td>
</tr>
</tbody>
</table>

These pages only show a small selection of our extensive product range. All scanner systems are also available as DPM (Direct Part Marking) version.

We are pleased to assist you in the selection and configuration of your specific scanner system. Please contact us so we can inform you about the latest innovations and offers.
These pages only show a small selection of our extensive product range. We are pleased to assist you in the selection and configuration of your specific printer system. Please contact us so we can inform you about the latest innovations and offers.

### TECHNICAL DATA PRINTER

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>ZEBRA ZD620</th>
<th>ZEBRA ZT220</th>
<th>ZEBRA ZT410</th>
<th>CAB XC6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRINTER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ADDITIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MODEL</strong></td>
<td>ZEBRA</td>
<td>ZEBRA</td>
<td>ZEBRA</td>
<td>CAB</td>
</tr>
<tr>
<td><strong>Product description</strong></td>
<td>Printer</td>
<td>Printer</td>
<td>Printer</td>
<td>Color label printer</td>
</tr>
<tr>
<td><strong>PRINT TECHNOLOGY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td>ZEBRA ZD620</td>
<td>ZEBRA ZT220</td>
<td>ZEBRA ZT410</td>
<td>CAB XC6</td>
</tr>
<tr>
<td><strong>Manufacturer</strong></td>
<td>Zebra</td>
<td>Zebra</td>
<td>Zebra</td>
<td>CAB</td>
</tr>
<tr>
<td><strong>Print method</strong></td>
<td>Thermal direct / thermal transfer</td>
<td>Thermal direct / thermal transfer</td>
<td>Thermal direct / thermal transfer</td>
<td>Color thermal transfer</td>
</tr>
<tr>
<td><strong>Print resolution</strong></td>
<td>203 / 300 dpi</td>
<td>203 / 300 dpi</td>
<td>203 / 300 / 600 dpi</td>
<td>300 dpi</td>
</tr>
<tr>
<td><strong>Print speed</strong></td>
<td>152 mm per second (203 dpi)</td>
<td>152 mm per second (203 dpi)</td>
<td>356 mm per second (203 dpi)</td>
<td>Up to 125 mm per second</td>
</tr>
<tr>
<td><strong>Print width</strong></td>
<td>Max. 104 mm</td>
<td>Max. 104 mm</td>
<td>Max. 104 mm</td>
<td>Max. 142.6 mm</td>
</tr>
<tr>
<td><strong>MEDIA SPECIFICATIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td>ZEBRA ZD620</td>
<td>ZEBRA ZT220</td>
<td>ZEBRA ZT410</td>
<td>CAB XC6</td>
</tr>
<tr>
<td><strong>Media width</strong></td>
<td>15.2 to 110 mm</td>
<td>Max. 104 mm</td>
<td>Max. 104 mm</td>
<td>Max. 162.6 mm</td>
</tr>
<tr>
<td><strong>Media length</strong></td>
<td>Not endless: 914 mm</td>
<td>Not endless: 914 mm</td>
<td>Up to 3988 mm</td>
<td>Up to 3048 mm</td>
</tr>
<tr>
<td><strong>Media thickness</strong></td>
<td>0.06 to 0.09 mm</td>
<td>0.057 to 0.07 mm</td>
<td>0.051 to 0.21 mm</td>
<td>0.051 to 0.25 mm</td>
</tr>
<tr>
<td><strong>Roll diameter</strong></td>
<td>Max. 127 mm</td>
<td>Max. 203 mm</td>
<td>Max. 203 mm</td>
<td>Max. 300 mm</td>
</tr>
<tr>
<td><strong>Core diameter</strong></td>
<td>12.7 mm and 25.4 mm</td>
<td>76 mm</td>
<td>76 mm</td>
<td>76 mm</td>
</tr>
<tr>
<td><strong>CONFIGURATIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td>ZEBRA ZD620</td>
<td>ZEBRA ZT220</td>
<td>ZEBRA ZT410</td>
<td>CAB XC6</td>
</tr>
<tr>
<td><strong>System memory</strong></td>
<td>256 MB SDRAM</td>
<td>512 MB Flash</td>
<td>128 MB RAM</td>
<td>64 MB Flash</td>
</tr>
<tr>
<td><strong>I/O interfaces</strong></td>
<td>RS-232, USB 2.0, 802.11b, Bluetooth®</td>
<td>RS-232, USB 2.0, 10/100 Print Server (optional)</td>
<td>RS-232, USB 2.0, Parallel Port, 802.11b, Ethernet (optional)</td>
<td>USB 2.0 Slave and Master, Ethernet, WLAN (optional)</td>
</tr>
<tr>
<td><strong>PHYSICAL CHARACTERISTICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td>ZEBRA ZD620</td>
<td>ZEBRA ZT220</td>
<td>ZEBRA ZT410</td>
<td>CAB XC6</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>100 - 240 V AC</td>
<td>100 - 240 V AC</td>
<td>100 - 240 V AC</td>
<td>100 - 240 V AC</td>
</tr>
<tr>
<td><strong>Dimensions (approx. mm)</strong></td>
<td>ZD620 W 177 / H 151 / D 221</td>
<td>ZD620 W 202 / H 192 / D 267</td>
<td>ZD620 W 239 / H 280 / D 432</td>
<td>ZD620 W 358 / H 395 / D 554</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1.6 kg / 2.5 kg</td>
<td>2.5 kg</td>
<td>7 kg</td>
<td>14 kg</td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td>Double wall plastic</td>
<td>Robust metal construction</td>
<td>Robust metal construction</td>
<td>Diecast aluminum casing, metal cover with large inspection glass</td>
</tr>
</tbody>
</table>
**THIN CLIENT SYSTEMS**

**IGEL ENDPOINT / THIN CLIENT – SIMPLE AND CENTRAL REMOTE ADMINISTRATION LOW COSTS AND LITTLE MAINTENANCE**

In combination with the IGEL Workspace Edition, the IGEL Endpoint / Thin Client represents a fully equivalent alternative to standard thin client hardware. The software is installed as operating system on the WAVE, PILOT or CONTROL HMI system and turns the hardware used into a powerful, universally applicable thin client for secure access to a variety of IT infrastructures. It provides extremely powerful graphics capabilities for access to server systems such as Microsoft TSE (RDP, ICA protocol and VDI) or UNIX/LINUX (VNC protocol).

Only a few clicks are needed to connect the IGEL Endpoint / Thin Client to the server, and it is then immediately ready for operation. The IGEL Endpoint / Thin Client supports USB devices such as keyboard, mouse, scanner, printer, touchscreens, WLAN, Bluetooth, NFC, smartcard reader, audio etc. The versatile IGEL Universal Management Suite (UMS) permits IT remote maintenance for remote clients, for example.

We also support other thin client software including ThinManager®.

We would be pleased to advise you accordingly on customer-specific solutions.

---

**THIN CLIENT SYSTEMS**

**IGEL ENDPOINT / THIN CLIENT SOLUTION**

- Secure plug-and-play connection via Ethernet / RJ45 to server / PC
- Connection of USB devices possible
- No local software, no installation and maintenance
- Central administration with remote management software
- Less expensive than conventional KVM solutions, thin clients, or PCs
- Simple integration of IGEL Endpoint / Thin Client into existing IGEL infrastructure
- IGEL Endpoint / Thin Client with WLAN and Bluetooth

**IGEL ENDPOINT / THIN CLIENT**

- **Product description**: Thin Client for complete integration into WAVE, PILOT and CONTROL
- **Operating system**: IGEL OS / IGEL Workspace Edition
- **Administration**: IGEL Universal Management Suite (UMS)
- **SESSIONS**: IGEL ENDPOINT / THIN CLIENT
  - **Presessions**: Deparonig custom sessions
  - **Sessions**: Support of all common IGEL remote protocols, e.g. RDP, Citrix, VMware or VNC
- **INTERFACES**: IGEL ENDPOINT / THIN CLIENT
  - **USB / RS-232**: No local software, no installation and maintenance
  - **Network**: Depending on the HMI

**ThinManager®** is compatible with Systec & Solutions HMI systems.
**VISUNET**

**THE EX-PROTECTED VISUNET IS SETTING NEW STANDARDS**

For use in hazardous areas we recommend the VisuNet EX1 (e.g. VisuNet EX1 CXP RM or VisuNet EX1 CXP PC) and VisuNet EX2 (e.g. VisuNet EX2 CXP RM or VisuNet EX2 CXP PC) systems from Pepperl + Fuchs, which are able to meet the most demanding requirements.

The ex-protected VisuNet PC offers the optimal solution for decentralized displaying and working with information right where the process is happening. Other selected Atex products upon request.

---

**EX-PROTECTED SYSTEMS**

<table>
<thead>
<tr>
<th>Type</th>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>19&quot; / 21.5&quot; EX1 / EX2</td>
<td>EX1 with capacitive multi-touch display</td>
<td>Minimal heat generation, Industrial monitor, VGA and DVI actuation, fiber optic (optional), Remote monitors up to 2 km from the nearest network element, Robust, wireless architecture, Easy-to-clean stainless steel housing, Protection class IP66</td>
</tr>
</tbody>
</table>

---

**TECHNICAL DATA VISUNET**

### VISUNET \(GXP\) RM

**MODEL**

<table>
<thead>
<tr>
<th>VISUNET EX1 GXP RM</th>
<th>VISUNET EX2 GXP RM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variants</strong></td>
<td><strong>Variants</strong></td>
</tr>
<tr>
<td>Remote monitor designed for use in explosion-hazardous areas as per zone 21 / Class I, Div. 2 as well as under GMP conditions</td>
<td>Remote monitor designed for use in explosion-hazardous areas as per zone 21+22 and under GMP conditions</td>
</tr>
<tr>
<td>Panel PC</td>
<td>Panel PC</td>
</tr>
</tbody>
</table>

**DISPLAY AND CONTROLS**

<table>
<thead>
<tr>
<th>VISUNET EX1 GXP RM</th>
<th>VISUNET EX2 GXP RM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Display</strong></td>
<td><strong>Display</strong></td>
</tr>
<tr>
<td>19&quot; / 21.5&quot; TFT Display</td>
<td>19&quot; / 21.5&quot; TFT Display</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td><strong>Resolution</strong></td>
</tr>
<tr>
<td>1280 x 1024 / 1920 x 1080 Full HD</td>
<td>1280 x 1024 / 1920 x 1080 Full HD</td>
</tr>
<tr>
<td><strong>Touchscreen</strong></td>
<td><strong>Touchscreen</strong></td>
</tr>
<tr>
<td>Capacitive</td>
<td>Capacitive</td>
</tr>
</tbody>
</table>

**EX-PROTECTED SYSTEMS**

<table>
<thead>
<tr>
<th>VISUNET EX1 GXP RM</th>
<th>VISUNET EX2 GXP RM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stainless steel keyboard (optional)</strong></td>
<td><strong>Stainless steel keyboard (optional)</strong></td>
</tr>
<tr>
<td>Optional keyboard, imprints with ergonomic finger guidance, with touchpad (steel)</td>
<td>Optional keyboard, imprints with ergonomic finger guidance, with touchpad (steel)</td>
</tr>
</tbody>
</table>

**CONIFICATIONS**

<table>
<thead>
<tr>
<th>VISUNET EX1 GXP RM</th>
<th>VISUNET EX2 GXP RM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industrial PC</strong></td>
<td><strong>Industrial PC</strong></td>
</tr>
<tr>
<td>Intel® Atom Bay Trail E3827 (1.75 GHz) Dual-Core</td>
<td>Intel® Atom Bay Trail E3845 (1.91 GHz) Dual-Core</td>
</tr>
<tr>
<td><strong>Operating system</strong></td>
<td><strong>Operating system</strong></td>
</tr>
<tr>
<td><strong>System memory</strong></td>
<td><strong>System memory</strong></td>
</tr>
<tr>
<td>2 GB</td>
<td>4 GB</td>
</tr>
<tr>
<td><strong>Storage capacity</strong></td>
<td><strong>Storage capacity</strong></td>
</tr>
<tr>
<td>32 GB SSD</td>
<td>128 GB SSD</td>
</tr>
<tr>
<td><strong>USB/Serials</strong></td>
<td><strong>USB/Serials</strong></td>
</tr>
<tr>
<td>1x USB 2.0 (Ethernet), 1x USB, 1x RS232/422, 1x RS485, Ex 2x USB (Keyboard, mouse, 1x TTY Barcode reader) - optional</td>
<td>1x USB 2.0 (Ethernet), 1x USB, 1x RS232/422, 1x RS485, Ex 2x USB (Keyboard, mouse, 1x TTY Barcode reader) - optional</td>
</tr>
</tbody>
</table>

**PHYSICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>VISUNET EX1 GXP RM</th>
<th>VISUNET EX2 GXP RM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power supply</strong></td>
<td><strong>Power supply</strong></td>
</tr>
<tr>
<td>24 V DC / 90 - 260 V AC</td>
<td>24 V DC / 90 - 260 V AC</td>
</tr>
<tr>
<td><strong>Dimensions (approx. mm)</strong></td>
<td><strong>Dimensions (approx. mm)</strong></td>
</tr>
<tr>
<td>W 618 / H 452 / D 120</td>
<td>W 618 / H 452 / D 120</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td><strong>Weight</strong></td>
</tr>
<tr>
<td>Approx. 23 kg (screw)</td>
<td>Approx. 23 kg (screw)</td>
</tr>
<tr>
<td><strong>Certification</strong></td>
<td><strong>Certification</strong></td>
</tr>
<tr>
<td>ATEX, CE, C Us</td>
<td>ATEX, CE, C Us</td>
</tr>
<tr>
<td>CE (other certifications on request)</td>
<td>CE (other certifications on request)</td>
</tr>
</tbody>
</table>

Example configuration: VisuNet GXP/RM + keyboard
ALL-ROUND SERVICE FOR THE COMMISSIONING, QUALIFICATION, AND MAINTENANCE OF CLEANROOM IT SYSTEMS

Do you plan to use new IT systems in your cleanrooms and GMP environments? We would be pleased to provide you with a wide range of services to support your project. With our comprehensive package, you have everything you need to satisfy GMP standards when working with your new hardware.

Comprehensive consultation: We provide you with exactly the right IT solution to satisfy GMP standards. We would be pleased to assist you with the planning and management of your project. We can advise you with regard to IT systems when planning installations and cleanrooms, as well as on the topic of ergonomic mounting options. With our experience we can help you produce a detailed specification (URS) for your IT project and also provide assistance with subsequent Design Qualification (DQ).

Full installation package: Our experienced service team will make sure that the systems you order are put into operation as quickly as possible and in conformity with GMP standards. We will gladly perform installation work and IT system commissioning, as well as connecting up peripherals and accessories. Our team will conduct the system function tests on your premises and document the entire procedure accordingly. We will of course also be pleased to assist you if you wish to convert or upgrade your hardware.

Hardware Installation Qualification (HW-IQ): We can handle the entire hardware qualification procedure, including the signature rules, in accordance with GMP requirements. Our templates enable us to produce the full IQ documentation for your IT hardware in the shortest possible time. Our experienced team will visit your premises to conduct all the activities involved in the qualification procedure. That saves you time, expense and organizational work, and guarantees professional qualification for your IT systems.

Professional maintenance: We will continue to support you after commissioning with maintenance contracts tailored to your requirements. A network of professional specialists throughout Europe and around the world can offer both remote and on site service. This includes the servicing of wearing parts at the necessary maintenance intervals, for example.

Individual solutions: Alongside our successful standard systems we can supply customized solutions, even if only small quantities are involved. Just tell us what you are looking for, and we will document the requirements and draw up the specification. Our experienced team of engineers will support you in this process with their specialist knowledge.

Contact us: Hardware support inquiries: support@systec-solutions.com