

# Technical Features

## Industrial Front Panel

With our modular system you can configure the Touch Panels of the Industrial Front Panel series exactly according to your requirements. In addition, you get an extensive range of expansion options and different CPUs. So you are extremely flexible without leaving the standard. This saves you high development costs.



### Industrial Front Panel for Installation

The Industrial Front Panel can be inserted from the front into the recess provided for this purpose. They get the protection class IP65 due to the tight aluminum frame on the front side. On the rear side, the built-in Touch Panel is fixed with the help of threaded pins.

### Benefits of the Industrial Front Panel at a glance:

- Different display diagonals from 7 to 24 inches
- 13.3 to 24 inches in Full HD
- Performance classes from monitor to powerful built-in Touch Panel PC
- Interface extensions and memory upgrades allow individual configuration
- Intelligence with uniform form factor is compactly integrated in the back cover
- Development and production in Germany
- Image and BIOS customization for Windows and Linux on demand
- New, modern and functional design
- Quick display replacement in case of service, due to separate front and rear unit
- Retrofitting in the field possible

To product web page:



From ideas to reality

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ELECTRONIC SYSTEMS

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### Possible applications:

Monitor, Distance Monitor, Web Panel,  
Panel PC, All-in-One PLC

### Display diagonals:

7 - 24 inch, 13.3 inch to 24 inch available in  
Full HD

### Possible CPUs:

- NXP® i.MX 8M Plus Quad Core
- Intel® Celeron™ N3350 1.1 GHz
- Intel® Celeron™ 3965U 2.2 GHz
- Intel® Core™ i3-7100U 2.4 GHz
- Intel® Core™ i5-7300U 2.6 GHz
- Intel® Core™ i7-7600U 2.8 GHz

### Memory:

- RAM: max. 4GB DDR4 (i.MX8)
- RAM: max. 8GB DDR3L (N3350)
- RAM: max. 32GB DDR4
- Mass storage: eMMC 8 GB to 64 GB,  
Micro SD Card
- Mass storage: 3D TLC SSD 64 GB to 512  
GB

### System overview i.MX8:

- USB 3.0 Host: 2 (Type A, bottom)
- Ethernet 10/100/1000-BaseT: 2 (RJ45)
- EIA-232: 1 (Sub-D)
- RTC: Yes
- Temperature range: 0 to +50°C
- Cooling: Passive (fanless)
- Power: 12 - 24 VDC ± 20%
- Power Button: Optional

### System overview N3350:

- TPM 2.0: Yes
- USB 3.0 Host: 2 (Type A, bottom)
- Ethernet 10/100/1000-BaseT: 2 (RJ45)
- EIA-232/EIA-422/EIA-485: 1 (RJ50)
- DisplayPort: 1 (DP 1.0)
- RTC: Yes
- Temperature range: 0 to +50°C
- Cooling: Passive (fanless)
- Power: 12 - 24 VDC ± 20%
- Power Button: Optional

### System overview 3965U, i3, i5, i7:

- TPM 2.0: Yes
- USB 2.0 Host: 2 (Type A, bottom)
- USB 3.0 Host: 2 (Type A, bottom)
- Ethernet 10/100/1000-BaseT: 2 (RJ45)
- EIA-232/422/485: 1 (Sub-D)
- DisplayPort: 1 (DP 1.1)
- RTC: Yes
- Temperature range: 0 to +50°C
- Cooling: Passive (fanless)
- Power: 12 - 24 VDC ± 20%
- Power Button: Optional

### System overview All-in-One PLC with CODESYS:

- CPU: NXP® i.MX 8M Plus QuadCore (1.35 GHz or 1.8 GHz; license-dependent)
- TPM 2.0: Infineon SLB9670
- NVRAM: 128 kB
- RTC: RV-8803-C7 (±5 ppm)
- RAM: 1 GB DDR4
- Primary Mass Storage: eMMC, 8 GB
- USB 3.0 Host: 2 (Type A, bottom)
- Ethernet 10/100/1000-BaseT: 2 (RJ45)
- Operating temperature: 0 to +50°C
- Cooling: Passive (fanless)
- Power: 24 VDC ± 30%
- Reset Button: Yes
- UPS: Yes (internal, for system use)
- Run/Stop Switch: Yes (lighted)
- Service Button: Yes
- Power/Error/User LED: Yes (RGB-LED)

**There are numerous extensions for all variants**

