OUR GLOBAL COMPETENCE CENTRES
IoT-COMPACT PANELS

ULTRA FLAT DESIGN AND REMARKABLE PERFORMANCE FOR THE INTERNET OF THINGS
## OVERVIEW

### COMPARISON

<table>
<thead>
<tr>
<th>Features</th>
<th>IoT-Compact Panels</th>
<th>POS-MO-PRO</th>
<th>POS-RP-PRO</th>
<th>POS-IQ-PRO</th>
<th>POS-4K-PRO</th>
<th>POS-i-PRO</th>
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<tbody>
<tr>
<td>IP65 protection*</td>
<td>—</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Housing</td>
<td>—</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>CE certification</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Raspberry Pi</td>
<td>Artista-IoT / CM3+</td>
<td>—</td>
<td>Artista-IoT / CM3+</td>
<td>—</td>
<td>—</td>
<td>RP 4</td>
</tr>
<tr>
<td>x86 platform</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>✓</td>
<td>—</td>
<td>—</td>
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<tr>
<td>4K platform</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>✓</td>
<td>—</td>
</tr>
<tr>
<td>Covered controller board</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Open frame</td>
<td>✓</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>✓</td>
</tr>
<tr>
<td>Integrated solution</td>
<td>—</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Mounting solutions</td>
<td>—</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

* Front side/ ** optional

Optical Bonding available for all displays as an option, other displays available upon request.
The IoT-Compact Panels feature our Raspberry Pi based TFT-Controller Artista-IoT and are therefore the perfect platform for Industry 4.0 and Internet of Things projects. The flat and modular design of the housing allows an easy mounting on most available TFT displays.

- Compact solution for the integration of TFT Panels
- Integrated Raspberry Pi Compute Module CM3
- Supports PCAP touchscreens (USB, I²C)
- Interfaces Front:
  - 12V Power, LAN, HDMI-IN, 2xUSB, Line Out, microSD
- Interfaces internal:
  - USB, LVDS, I²C, UART, internal power connector
  - IR-Remote, OSD keypad, ambient light sensor
- Offers all advantages of an ARM-PC such as:
  - low energy device
  - easy maintenance for IT departments
  - integrated cooling solution
- Standard applications such as Video Poster are available
- Simple programming of own applications (community support)
ARTISTA-IoT VS. STANDARD RASPBERRY PI

- Ideal for development departments that seek to develop prototypes based on Raspberry Pi but have so far refrained from an industrial use of the platform due to a lack of professional support.
- The Artista-IoT offers perfect reliability. The BOM and applied firmware can be frozen so that customers exactly receive the evaluated and approved system for many years. There will be no product changes without prior consultation.
- Due to the Artista-IoT’s full compatibility to standard Raspberry Pi, countless projects, freely available from the community, can be used for industrial applications directly without additional development efforts.
- The Artista-IoT expands the Raspberry Pi CM3(+) with ruggedized interfaces typical for the industry (USB, Ethernet 10/100 Mbit, RS 232, Real Time Clock).
- Reliable on-board power supplies ensure proper operation even under demanding conditions and remain stable across the entire temperature range.
- Displays can be controlled directly via LVDS due to an integrated scaler making additional HDMI cables obsolete and providing enormous EMI benefits. The LVDS interface is specifically designed for industrial use and is hardened accordingly. Spread Spectrum can be activated and the LVDS driver current can be adapted. All LVDS cables are equipped with ferrites underlining the Artista-IoT’s professional character.
- Due to an additional HDMI input, image signals can be fed from an external source and the possibility to switch between the external source and Raspberry Pi is given. Various trigger options help to display the appropriate image for each case.
- MicroSD card slot is included for extended memory (as required). All I/Os typical for Raspberry Pi are available.
- Additional sensors (e.g. ambient light sensor) can be connected and controlled by the scaler, preventing the Raspberry Pi from losing any computing power.
- Customers who have started their development with a standard Raspberry Pi can quickly and easily switch from a prototype to an approved serial product. This reduces time-to-market considerably. Distec provides a perfect design-in support.
- The Artista-IoT meets current industry standards and even withstands demanding and rough industrial conditions.
- Fanless cooling solutions allow for full performance 24/7 up to the max. operating temperature. No throttling due to excessively high core temperatures.
**OVERVIEW**

**IoT-COMPACT PANELS**

The IoT-Compact Panel family offers a large number of standard display sizes:

<table>
<thead>
<tr>
<th>Product</th>
<th>Part Number</th>
<th>Size</th>
<th>Resolution</th>
<th>Brightness cd/m²</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>IoT-CP-TM070JVHG33-01-00</td>
<td>DI-06-013</td>
<td>7.0”</td>
<td>WXGA 1280x800</td>
<td>500</td>
<td>with PCAP</td>
</tr>
<tr>
<td>IoT-CP-TM101JDHG30-00-00</td>
<td>DI-06-000</td>
<td>10.1”</td>
<td>WXGA 1280x800</td>
<td>400</td>
<td>with PCAP, on request: custom glass</td>
</tr>
<tr>
<td>IoT-CP-TM101JVHG32-01-00</td>
<td>DI-06-015</td>
<td>10.1”</td>
<td>WXGA 1280x800</td>
<td>850</td>
<td>with PCAP</td>
</tr>
<tr>
<td>IoT-CP-G150XNE-L01-00</td>
<td>DI-06-004</td>
<td>15.0”</td>
<td>XGA 1024x768</td>
<td>500</td>
<td>on request: PCAP / custom glass</td>
</tr>
<tr>
<td>IoT-CP-G215HVN01.0-00</td>
<td>DI-06-006</td>
<td>21.5”</td>
<td>FHD 1920x1080</td>
<td>300</td>
<td>on request: PCAP / custom glass</td>
</tr>
<tr>
<td>IoT-CP-P270HVN01.0-00</td>
<td>DI-06-007</td>
<td>27.0”</td>
<td>FHD 1920x1080</td>
<td>350</td>
<td>on request: PCAP / custom glass</td>
</tr>
</tbody>
</table>

Optical Bonding available for all displays as an option. Other displays available upon request.
## COMPATIBILITY MATRIX

### IoT-COMPACT PANELS – HARDWARE

<table>
<thead>
<tr>
<th>Product</th>
<th>Part Number</th>
<th>PCAP</th>
<th>Cover Glass</th>
<th>Flash Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>IoT-CP-TM070JVHG33-01-00</td>
<td>DI-06-013</td>
<td>5 touch points</td>
<td>---</td>
<td>4GB (on request: 8GB/16GB/32GB)</td>
</tr>
<tr>
<td>IoT-CP-TM101JDHG30-00-00</td>
<td>DI-06-000</td>
<td>10 touch points</td>
<td>on request</td>
<td></td>
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<tr>
<td>IoT-CP-TM101JVHG32-01-00</td>
<td>DI-06-015</td>
<td>5 touch points</td>
<td>---</td>
<td></td>
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<tr>
<td>IoT-CP-G150XNE-L01-00</td>
<td>DI-06-004</td>
<td>on request</td>
<td>On request</td>
<td></td>
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<tr>
<td>IoT-CP-G215HVN01.0-00</td>
<td>DI-06-006</td>
<td>on request</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IoT-CP-P270HVN01.0-00</td>
<td>DI-06-007</td>
<td>on request</td>
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## COMPATIBILITY MATRIX

### IoT-COMPACT PANELS – SOFTWARE

<table>
<thead>
<tr>
<th>Product</th>
<th>Part Number</th>
<th>Raspbian O/S (Linux)</th>
<th>Yocto (Linux)</th>
<th>Emteria O/S (Android)</th>
<th>Info-Beamer</th>
<th>VideoPoster</th>
</tr>
</thead>
<tbody>
<tr>
<td>IoT-CP-TM070JVHG33-01-00</td>
<td>DI-06-013</td>
<td>✓</td>
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<tr>
<td>IoT-CP-TM101JDHG30-00-00</td>
<td>DI-06-000</td>
<td></td>
<td>✓</td>
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<td></td>
</tr>
<tr>
<td>IoT-CP-TM101JVHG32-01-00</td>
<td>DI-06-015</td>
<td>✓</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>IoT-CP-G150XNE-L01-00</td>
<td>DI-06-004</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IoT-CP-G215HVN01.0-00</td>
<td>DI-06-006</td>
<td>✓</td>
<td></td>
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<tr>
<td>IoT-CP-P270HVN01.0-00</td>
<td>DI-06-007</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* no PCAP functionality

On special request only – please explicitly indicate in order
ROADMAP

COMPACT PANELS – 7” MODELS

7” WXGA 1280x800

MP
H2 2020
H1 2021
H2 2021
H1 2022

DI-06-013

06/18

Development model

5-touch points
20°C to +70°C
170°/170°

Brightness
PCAP
Glass
Operating temperature range
Viewing angle
Transflective
Long term availability
Super long-life LED backlight

DISTEC CONFIDENTIAL 2020
DI-06-013
06/18

500 cd/m²
Development model

20°C to +70°C
170°/170°

MP
Developing
Idea/Planned

DISTEC
A FORTEC GROUP MEMBER
ROADMAP

COMPACT PANELS – 21,5“+ MODELS

21,5“
FHD
1920x1080

DI-06-006
06/18

min. 3-5 years

MP
Developing

Brightness
PCAP
Glass
Operating temperature range
Viewing angle
Transflective
Long term availability
LED
Super long-life LED backlight

27“
FHD
1920x1080

DI-06-007
08/19

min. 3-5 years

MP
Developing

Brightness
PCAP
Glass
Operating temperature range
Viewing angle
Transflective
Long term availability
LED
Super long-life LED backlight
7.0” IoT-COMPACT PANEL IOT-CP-TM070JVHG33-01-00

Development model only – for mass production please use the POS-RP-070-PRO (M0-06-008)

Special Features

- Development model only
- Long-term availability
- SFT wide viewing angle: v/h 170°/170°
- Integrated PCAP touchscreen with 5 touch points
- High resolution: 1280x800
- Wide temperature range from -20°C to 70°C

Frame and optional stand available in following colors: blue, yellow, green, magenta, orange, pearl, red, black, silver metallic, transparent, white
PRODUCT DESCRIPTION IoT-COMPACT PANELS

10.1" IoT-COMPACT PANEL IOT-CP-TM101JDHG30-00-00

Part no. DI-06-000

Special Features

• Integrated PCAP Touchscreen with 10 touch points
• Long-term availability
• Brightness: 400cd/m²
• Backlight MTBF: 50,000h
• SFT wide viewing angle: v/h 170°/170°
• Wide temperature range from -20°C to 70°C
PRODUCT DESCRIPTION IoT-COMPACT PANELS

10.1” IoT-COMPACT PANEL IOT-CP-TM101JVHG32-01-00

Part no. DI-06-015

Special Features

- Integrated PCAP Touchscreen with 5 touch points
- Viewing angle: v/h 170°/170°
- High brightness: 850cd/m²
- Perfect readability from all sides thanks to SFT technology
- Minimal color shifting
PRODUCT DESCRIPTION IoT-COMPACT PANELS

12.1" IoT-COMPACT PANEL IOT-CP-G121X1-L03-00

Special Features

- Wide temperature range from -25°C to 80°C
- Brightness: 600cd/m²
- Backlight MTBF: 50,000h
- Viewing angle: v/h 140°/160°
PRODUCT DESCRIPTION IoT-COMPACT PANELS

15.0" COMPACT PANEL IOT-CP-G150XNE-L01-00

Part no. DI-06-004

Special Features

- Wide temperature range from -25°C to 80°C
- Brightness: 500cd/m²
- Long life LED backlight, MTBF: 70,000h
- NPVA wide viewing angle: v/h 176°/176°
Special Features

- Wide temperature range from -25°C to 80°C
- PCAP on-cell touchscreen with 5 touch points
- Super slim design including touch
- Long life LED backlight, MTBF: 70,000h
- Brightness: 390cd/m²
PRODUCT DESCRIPTION  IoT-COMPACT PANELS

21.5” IoT-COMPACT PANEL  **IOT-CP-G215HVN01.0-00**

Part no. DI-06-06

**Special Features**

- High resolution: 1920 x 1080
- AMVA wide viewing angle: v/h 178°/178°
- Brightness: 300cd/m²
- Backlight MTBF: 50,000h
27.0" IoT-COMPACT PANEL **IOT-CP-P270HV01.0-00**

**Special Features**

- High resolution: 1920 x 1080
- AMVA wide viewing angle: v/h 178°/178°
- Brightness: 350cd/m²
- Backlight MTBF: 30,000h
OPERATING SYSTEMS

Operating Systems for the IoT-Compact Panels

- **Raspbian O/S** is a free operating system based on Debian and optimized for the Raspberry Pi Compute Module. This operating system provides all the basic programs that get your Raspberry Pi started and additional precompiled software for easy installation on your Compute module. The large Raspberry Pi developer community provides support via the forum.

- The **Emteria** operating system provides industrial Android™ for our Artista-IoT. Quickly installed and based on AOSP 7.1, it simplifies your development process and is the perfect basis for all types of human-machine interaction. Emteria includes all major enhancements and security updates and is backward compatible.
User Software for the IoT-Compact Panels

- The Info Beamer software was developed specifically for all types of digital signage applications and also supports the Artista-IoT with info-beamer hosted. The software is installed fast and easily, offering a variety of options from synchronized video walls, via conference room management, to electronic public transport timetables.

- Based on our BaseBoard with Raspberry Pi, we developed the network player VideoPoster-IV. It is full HD capable and plays various media files either from the 3GB internal flash memory or from a microSD card. Videos are either transmitted via Ethernet or USB. An FTP connection is also possible.
PASSIVE COOLING – COMPACT PANELS

A passive cooling solution is standard for all Artista-IoT Compact Panels. Two different versions are available:

- Passive cooling KI-90-020 mounted under the Box-Set, integrated as standard in all IoT-Compact Panels (included in KI-90-017)
- Passive cooling KI-90-019 for solutions without Box-Set
- Passive cooling reduces the CPU temperature by up to 30°C
- Allows 100% CPU performance even at high ambient temperatures up to 80°C (1)
- Thermal compound is used between components to ensure maximum heat transfer (Prolima.PK-1 Nano Alu recommended)

(1) Depending on TFT-panel operating temperature specification
LIFETIME STRATEGY

EOL PROCEDURE – 12 MONTHS

1. EOL ANNOUNCEMENT
2. OFFICIAL EOL NOTICE
3. LAST TIME BUY ORDER
4. LAST PRODUCTION & PHASE OUT
## CONTACT FORTEC GROUP

### Headquarters

<table>
<thead>
<tr>
<th>Country</th>
<th>Company Name</th>
<th>Address</th>
<th>Phone</th>
<th>E-Mail</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
<tr>
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<td><a href="http://www.fortecag.de">www.fortecag.de</a></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Country</th>
<th>Company Name</th>
<th>Address</th>
<th>Phone</th>
<th>E-Mail</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
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</tr>
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<td>Switzerland</td>
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<td><a href="http://www.altrac.ch">www.altrac.ch</a></td>
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</tr>
<tr>
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<td>Apollo Display Technologies, Corp.</td>
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<td>+1 631 5804360</td>
<td><a href="mailto:info@apollodisplays.com">info@apollodisplays.com</a></td>
<td><a href="http://www.apollodisplays.com">www.apollodisplays.com</a></td>
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