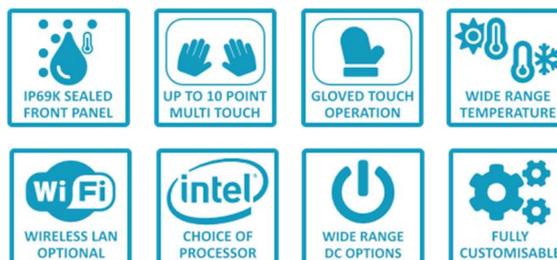




Fully customisable 17.0" Industrial Panel PC / Thin Client / Monitor



Overview

Our X17 Product Range offers high-performance, low-power industrial computing in an 17.0" form factor, with flexible configurations as a Panel PC, Thin Client, or Industrial Monitor. Its IP69K front seal ensures protection against dust ingress and high temperature, high-pressure water, making it an ideal choice for sanitary environments such as in the Food Industry. For specifications and custom requirements, reach out to us. We're here to provide tailored solutions.

General Specifications

| DISPLAY | |
|---------------------------------|--|
| LCD Size | 17.0" (4:3) |
| Max Resolution | 1280 x 1024 |
| Brightness (cd/m ²) | 400, (High-Bright options available) |
| Contrast Ratio | 1000 : 1 |
| Viewing Angle (H/V) | 178 / 178 |
| Colour Depth | 16.7M |
| TOUCHSCREEN | |
| Technology | PCAP |
| Cover Lens | 4mm flush Polycarbonate filter UV stabilised |
| Surface Hardness | 5H |
| Connectivity | USB or RS232 |
| Multi-Touch | Up to 10 points |
| POWER | |
| Supply Voltage | 90-264VAC or 9-36VDC |
| Power Consumption | PC – See Appendix A Monitor – 20W typ. |
| MECHANICAL | |
| Material | Stainless Steel (304) |
| Mounting | Cased, Bezel, Uncased |
| Dimensions (mm) | 420 (W) x 419.43 (H) x 72.5 (D) cased |
| Weight (g) | 10Kg |
| ENVIRONMENTAL | |
| Operating Temperature | -5°C to +50°C * * Extendable to -25°C to +65°C |
| Storage Temperature | -20°C to +70°C |
| Relative Humidity | 90% non-condensing |
| IP Seal Level | IP66 / IP67 / IP69K |
| WARRANTY | |
| Warranty Period | 3 Years standard return to base. Extendable to 5 Years if required |

Main System Options

| | |
|---------------------|---|
| Panel PC | See Appendix A for specifications |
| Thin Client | See Appendix B for details |
| Raspberry Pi Client | See Appendix C for specifications |
| Monitor Only | VGA, DVI and HDMI. (DP+ via an adapter cable) |

| APPENDIX A – PANEL PC | | | |
|-----------------------|--|--|--|
| MOTHERBOARD | EL | N100 | I3 / I5 |
| Form Factor | Mini-ITX | Mini-ITX | Mini-ITX |
| CPU | Intel® Celeron® J6412 2.0Ghz | Intel® N100 up to 3.4Ghz | Intel® Core™ i3-1215U 3.30Ghz / Intel® Core™ i5-1235U 3.30Ghz |
| Core Number | 4 | 4 | 6 / 10 |
| Chipset | - | - | - |
| BIOS | AMI UEFI | AMI UEFI | AMI UEFI |
| Graphics | Intel® UHD Graphics | Intel® UHD Graphics | Intel® Iris® Xe Graphics |
| HDMI | 1 x Supports HDMI 1.4b, max resolution 4096 x 2160 @ 24Hz | 1 x Supports HDMI 2.0, max resolution 4096 x 2160 @ 60Hz | 4 x Supports HDMI 2.0, max resolution 4096 x 2160 @ 60Hz |
| DisplayPort | N/A | 1 x DisplayPort++, max resolution 4096 x 2304 @ 60Hz | N/A |
| RAM | Up to 32GB (DDR4-2666) | Up to 32GB (DDR4-3200) | Up to 64GB (DDR4-3200) |
| SATA | 1 x SATA3 (6.0Gb/s) | 1 x SATA3 (6.0Gb/s) | 1 x SATA3 (6.0Gb/s) |
| Mini-PCIe | 1 x Full-Sized | N/A | N/A |
| M.2 | 1 x M.2 Key B 2242 (SATA) | 1 x M.2 Key M 2280 (SATA), 1 x M.2 Key E 2230 (PCIe x1 & USB2.0 & CNVi) | 1 x M.2 Key M 2280 (NVMe), 1 x M.2 Key E 2230 (PCIe x1 & USB2.0 & CNVi) |
| Serial Ports | 1 x RS232/RS422/485, 2 x RS232 | 1 x RS232/485, 2 x RS232 | 1 x RS232/485, 1 x RS232 |
| USB Ports | 4 x USB3 | 2 x USB3.2, 2 x USB2 | 4 x USB3.2 |
| Ethernet | 2 x 10/100/1000 Mbps | 2 x 10/100/1000/2500 Mbps | 1 x 10/100/1000 Mbps 1 x 10/100/1000/2500 Mbps |
| Audio | HD Audio (Realtek ALC897) | HD Audio (Realtek ALC897) | HD Audio (Realtek ALC897) |
| TPM | Infineon SLB9760 T2.0 TPM 2.0 compliant | Intel® PTT TPM 2.0 compliant | Intel® PTT TPM 2.0 compliant |
| Power | 40W (Standard Op. Temp.) 160W (Extended Op. Temp.) | 40W (Standard Op. Temp.) 40W (Extended Op. Temp.) | 45W (Standard Op. Temp.) 45W (Extended Op. Temp.) |
| Storage Media | 128GB – 512GB SSD | 128GB – 512GB SSD | 128GB – 512GB SSD |
| Operating System | Windows 10 IoT Enterprise LTSC 64-bit Windows 11 IoT Enterprise LTSC 64-bit | Windows 10 IoT Enterprise LTSC 64-bit Windows 11 IoT Enterprise LTSC 64-bit | Windows 10 IoT Enterprise LTSC 64-bit Windows 11 IoT Enterprise LTSC 64-bit |

Appendix B – Thin Client

The Intel® Celeron® J6412 platform is engineered for industrial environments where extended product lifecycles are mandatory. As a key component of Intel’s Elkhart Lake embedded family, the J6412 is guaranteed through Intel’s roadmap, ensuring availability that extends well into the next decade. This unparalleled hardware longevity effectively mitigates the costly necessity of forced redesigns, significantly streamlining long-term support and maintenance strategies.

Its low-power, quad-core architecture performs optimally when integrated with **HP ThinPro OS**. HP ThinPro is a highly efficient, Linux-based operating system designed for thin client deployment, providing essential advantages such as rapid deployment and centralised security management.

The combination of the J6412 processor and HP ThinPro OS delivers a dependable, professionally viable solution for industrial applications, coupling assured long-term hardware support with an operating system optimised for secure, manageable, and continuous operation throughout the product’s full-service life.

Appendix C – Raspberry Pi Client



Raspberry Pi 4 B Features:

- Broadcom BCM2711, Quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
- 4GB LPDDR4-2400 SDRAM
- 2.4GHz and 5GHz IEEE 802.11ac wireless LAN, Bluetooth 5.0, BLE
- Gigabit Ethernet
- 3 USB 3.0 ports, 2 USB 2.0 ports (1 x reserved to Touchscreen)

Various Operating Systems



Remote Desktop Connection

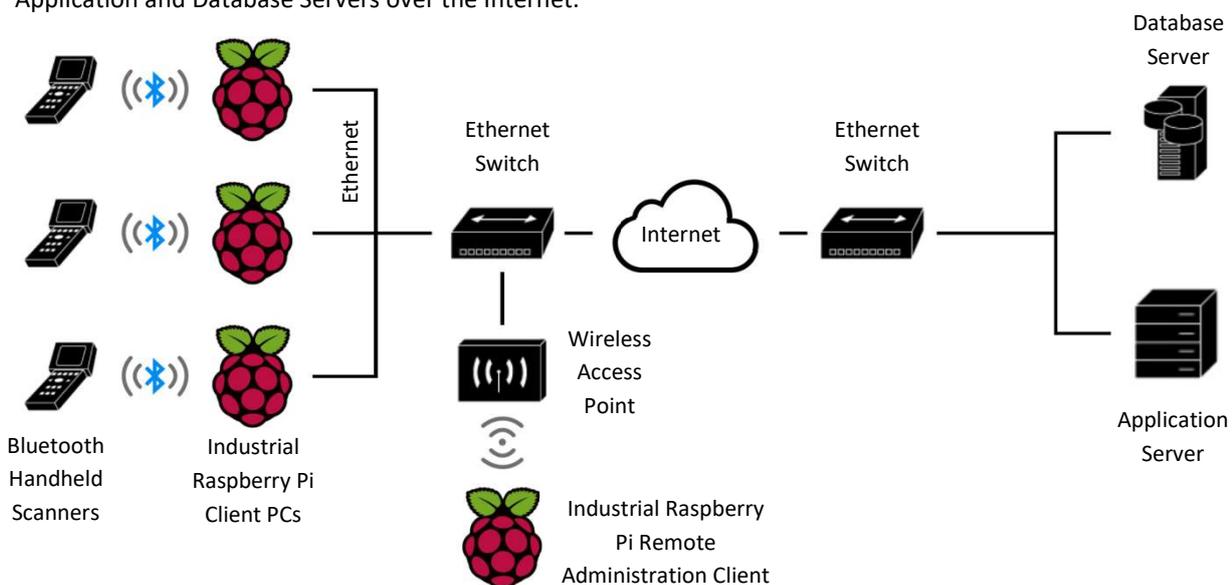
A low-cost Thin Client for Remote Desktop Connections. Customers wanting to use a remote desktop connection to control an application installed on hardware elsewhere in the building, or anywhere in the world for that matter, can easily do so using the Raspberry Pi.

Web Browser Applications

If your business application is controlled via a web browser, then the Raspberry Pi is more than up to the task! Raspbian OS itself comes preinstalled with Chromium, an open-source browser project aimed at building a “safer, faster, and more stable way for all users to experience the web”.

Example Scenario:

In the following example, we have multiple Raspberry Pi Client PCs connected to the network via wired Ethernet, running a Web Browser to load an application hosted on a different site, across the internet. Connected to these Raspberry Pi Client PCs are wireless Bluetooth Handheld Scanners, used for scanning bar codes of items going through a line. The Raspberry Pi Client PCs can send and receive the required data to the Application Server via the Internet. A separate Raspberry Pi has been set up as a Remote Administration Client, connected to the network wirelessly. This Remote Administration Client can use a Remote Desktop Client to control and administer the Application and Database Servers over the Internet.



Raspberry Pi is a trademark of the Raspberry Pi Foundation.

Other System Options

| EXTENDED FUNCTIONALITY AVAILABILITY | | | | |
|-------------------------------------|------------------------------------|------------------------------------|--|----------------|
| PRODUCT TYPE | PANEL PC | THIN CLIENT | RASPBERRY PI CLIENT | MONITOR |
| Wi-Fi | 802.11ac, 802.11a/b/g/n (optional) | 802.11ac, 802.11a/b/g/n (optional) | 802.11ac, 802.11a/b/g/n (included onboard) | N/A |
| Bluetooth | 5.0 BLE (optional) | 5.0 BLE (optional) | 5.0 BLE (included onboard) | N/A |
| Thermal Control | Yes (optional) | Yes (optional) | Yes (optional) | Yes (optional) |

Thermal Control

In the case where the motherboard power rating stays the same for both standard operating temperature and extended, this means that the motherboard is capable of the extended operating temperature detailed, and no thermal control is required. Otherwise, an internal controller with a temperature sensor continuously monitors the internal ambient temperature and regulates this by use of a heater PTC F-Plate (2 x 60W). This allows the lower operating temperature of the product to be extended to -25°C (external).

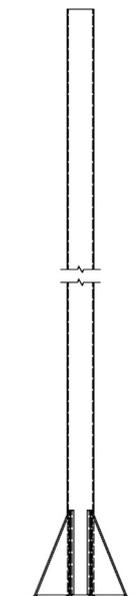
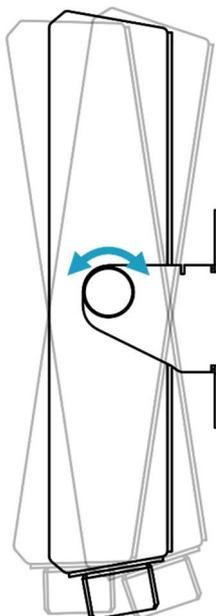
The controller can hold off power from the main electrical components of the product, ensuring that a safe internal ambient temperature is reached before they are powered, prolonging the life of the product.

Customisation

| | |
|----------------|---|
| Colour | Full customisation of case colour and logos available |
| OS / Software | Contact us for further details |
| I/O Connectors | See Appendix D for details |

Accessories

| | |
|----------|--|
| Mounting | Mounting kits include pedestal and wall mount brackets. Pedestals are available in brushed Stainless Steel and in various sizes from 1m to 3m. |
|----------|--|



Appendix D – I/O Connectors

There are various options for the input and output connectors in the X17 product range. Each option offers a different level of sealing and protection and is dependent on the configuration of the product.

The table below shows the different connector options and their IP rated sealing levels.

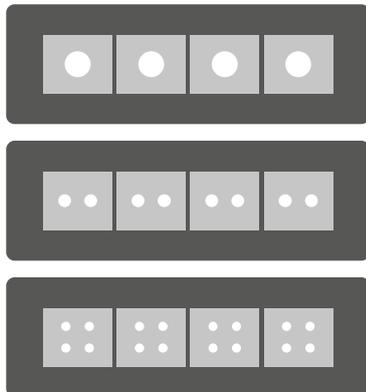
| CONNECTOR SEALING OPTIONS | | |
|---------------------------|-----------|---------------------------------------|
| OPTION | IP RATING | DESCRIPTION |
| K | IP66 | Cased – Bottom Outlet - EPG Kit |
| T | IP67 | Cased – Bottom Outlet - Metal Locking |
| Z | IP22 | Bezel – Bottom Outlet Connections |

Option K – Bottom Outlet - EPG Kit

The EPG (Entry Plate Grommet) Kit is rated at IP66, achieving complete protection against dust ingress, and water projected in powerful jets (12.5 mm (0.49 in)) against the installed EPG kit from any direction shall have no harmful effects.

The grommets are available for cables from 2 to 17 mm diameter. The 2X and 4X versions allow multiple cables in the same grommet. There is also a “blind” version available.

Some possible configurations are shown below:



Option T – Bottom Outlet - Metal Locking

The Metal Locking connectors are rated at IP67, achieving complete protection against dust ingress, and effective protection against water ingress in harmful quantities when immersed in water for up to 1m of submersion and for a duration of up to 30 minutes.

A simple quarter turn is all that is required to lock your connector in place, making sure that you lose no connectivity to the PC due to dust or water ingress, or from being disconnected accidentally.

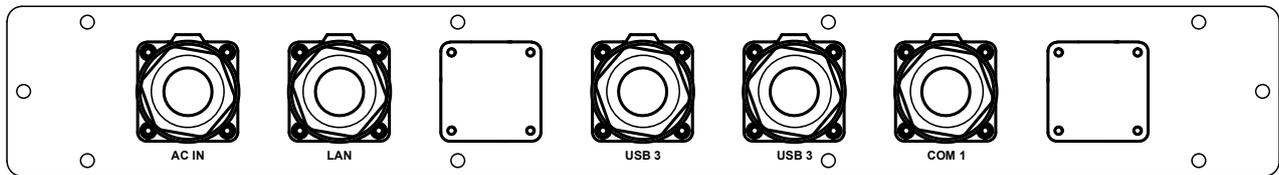


Using our standard 7-hole connector plate, the desired connector area configuration may only be reserved to 7 connections. One port must be reserved to AC/DC POWER IN, unless a different method of powering is used such as PoE (Power over Ethernet).

EXAMPLE 7-HOLE LAYOUT PANEL PC CONFIGURATION

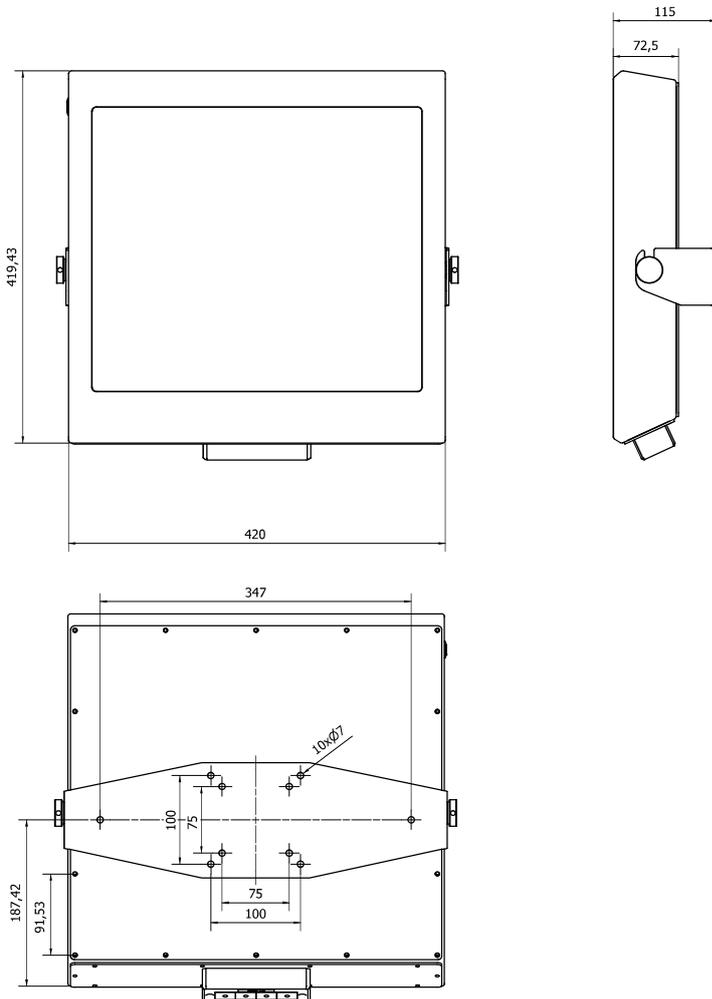
| MOTHERBOARD | EL | N100 | I3 / I5 | STANDARD |
|----------------|----|------|---------|----------|
| AC/DC POWER IN | 1 | 1 | 1 | 1 |
| LAN | 1 | 1 | 2 | 1 |
| USB3 | 2 | 2 | 2 | 2 |
| USB2 | 0 | 2 | 0 | 0 |
| COM | 3 | 1 | 2 | 1 |

The below diagram is an illustration of the standard configuration in the table above.

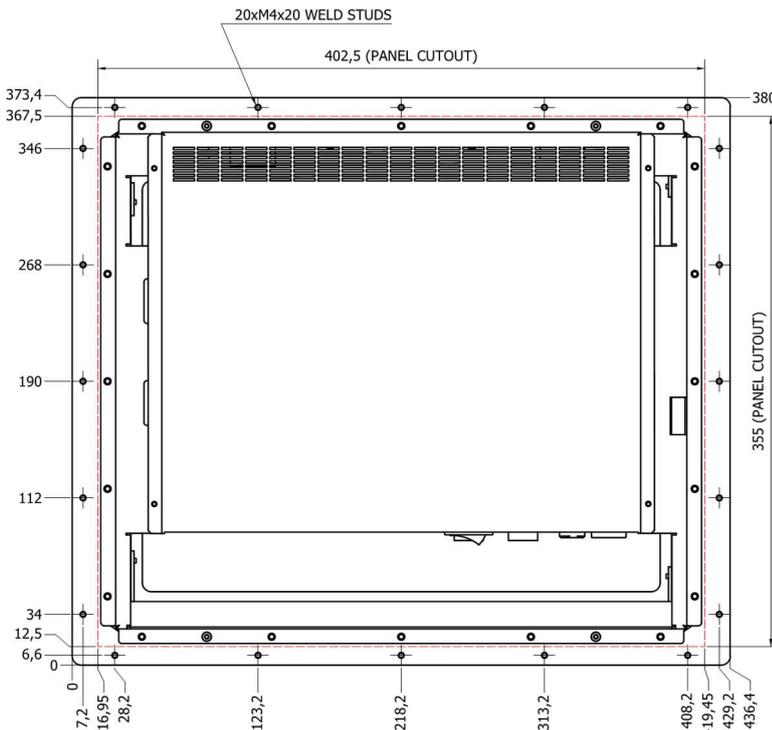
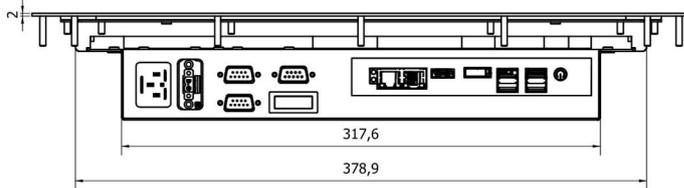
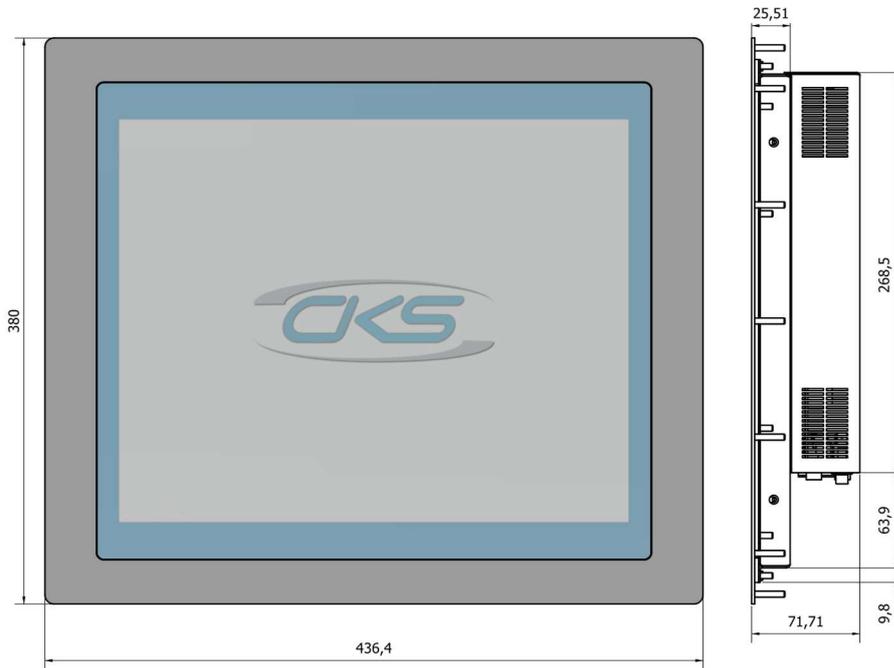


Cables are available in 2 or 5 metres length.

Dimensions Cased – With Bracket, ‘K’ Bottom Seal



Dimensions Bezel



Dimensions Uncased

