

CRYSTAL DISPLAY SYSTEMS LTD

Industrial FANLESS Panel PCs



EmbeddedVUE

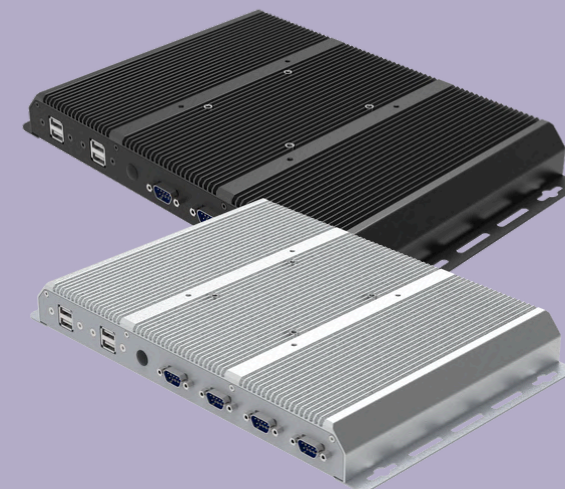


INDUSTRIAL PPC's

HI-REL PPC's

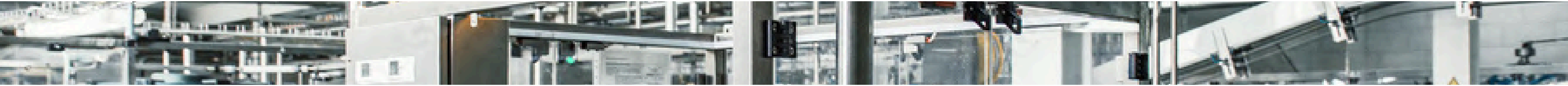
BOXED PC's

BESPOKE PPC's



What is an INDUSTRIAL PC?

An industrial panel PC (Personal Computer) is a specialized type of computer designed for use in industrial environments. It typically consists of a ruggedized, all-in-one computer system integrated into a flat-panel display. These devices are used in a wide range of industrial applications where traditional desktop computers would be unsuitable due to harsh conditions, such as dust, moisture, temperature extremes, and vibration.



- **Rugged Design:** Industrial panel PCs are built to withstand harsh conditions. They are often constructed with durable materials and designed to resist damage from dust, water, chemicals, and physical impacts.
- **Wide Temperature Range:** They can operate reliably across a wide temperature range, making them suitable for environments with extreme heat or cold.
- **Touchscreen Interface:** Most industrial panel PCs have touchscreen displays, which allow users to interact with the computer without the need for external input devices like a keyboard or mouse.
- **Mounting Options:** They are designed for easy integration into industrial machinery or control systems. They can be wall-mounted, panel-mounted, or rack-mounted, depending on the specific application.
- **Customisation:** Industrial panel PCs are often customizable to meet the unique requirements of different industries. This includes options for screen size, processing power, connectivity, and more.

- **Ports and Connectivity:** They typically include a variety of ports and connectivity options, such as USB, Ethernet, serial ports, and expansion slots, to connect to other industrial equipment and networks.
- **Fan-less Cooling:** Many industrial panel PCs use passive cooling techniques, such as heat sinks and heat pipes, rather than fans. This helps reduce the risk of dust and debris entering the system and minimizes maintenance requirements.
- **Operating System:** They can run various operating systems, including Windows, Linux, or specialized real-time operating systems (RTOS), depending on the application's needs.



FANLESS



W-LAN



COM



VGA



HDMI



ubuntu

INDUSTRIAL Panel PC's



Crystal Display Systems have developed a range of panel PC's for the harshest environment

The CDS standard range of panel PC's are designed for their quality of design, each of integration, competitive pricing and fast turn around.

With no MOQ and short lead times they are quickly becoming he first choice for the industrial client.

From an entry level J1900 'workhorse' Embedded industrial PC, the solutions have options up to i7 7th Gen.

- FANLESS DESIGN
- SHORT LEADTIMES
- COMPETITIVE PRICING
- BESPOKE OPTIONS
- NO MOQ

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FANLESS



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Industrial Panel PC – Standard size options

SIZE	10.4"	12.1"	15.0"	17.0"	18.5"	19.0"	21.5"
Aspect Ratio	4 : 3	4 : 3	4 : 3	5 : 4	16 : 9	5 : 4	16 : 9
Resolution px	800 x 600	1024 x 768	1024 x 768	1280 x 1024	1366 x 768	1280 x 1024	1920 x 1080
Viewing Area mm	160 x 140	160 x 140	160 x 140	160 x 150	160 x 160	160 x 160	160 x 140
Brightness	400nits	500nits	300nits	250nits	250nits	250nits	250nits
Contrast Ratio	700:1	700:1	1500:1	1000:1	1000:1	1000:1	3000:1
Viewing Angle H / V	160 / 140	160 / 140	160 x 150	160 x 140	160 x 160	160 x 160	160 x 160
PCAP Touchscreen	standard	standard	standard	standard	standard	standard	standard
Resistive Touchscreen	optional	optional	optional	optional	optional	optional	optional
Dimesions mm	320 x 254 x 64	320 x 254 x 64	376 x 300 x 64	413 x 350 x 64	480 x 301 x 64	445 x 370 x 64	548 x 346 x 64
Net weight	3.5Kg	3.5Kg	4.5Kg	5.1Kg	5.3Kg	5.8Kg	6.1Kg
Operating Temp degC	-10 ~ +50	-10 ~ +50	-10 ~ +50	-10 ~ +50	-10 ~ +50	-10 ~ +50	-10 ~ +50
Storage Temp degC	-20 ~ +60	-20 ~ +60	-20 ~ +60	-20 ~ +60	-20 ~ +60	-20 ~ +60	-20 ~ +60

Size or configuration not listed? No problem, give CDS a call

CPU Options

Intel Celeron
Dual Core
J1800
2.4 Ghz

Intel Celeron
QuadCore
J1900
2.0 Ghz

Intel Celeron
Dual Core
3855U 1.6 Ghz
(Gen 6)

Intel Core
i3-6006U/i3-7020u
Dual Core 2.0/2.3 Ghz
(Gen 6th/7th)

Intel Core
i5-6200U/i3-7200U
Dual Core 2.3/2.5 Ghz
(Gen 6th/7th)

Intel Core
i7-6500U/i7-7500U
Dual Core 2.5/2.7 Ghz
(Gen 6th/7th)

HI-REL Industrial Panel PC's



Crystal Display Systems have developed a range of panel PC's for the harshest of environment

The CDS HI-REL PPC range has been developed to give the maximum flexibility in design, with the highest performance.

From 10" upwards the solutions are able to have either front or rear IP66 sealing via a one piece gasket.

From an entry level J1900 'workhorse' Embedded industrial PC, the solutions have options up to i7 7th Gen.

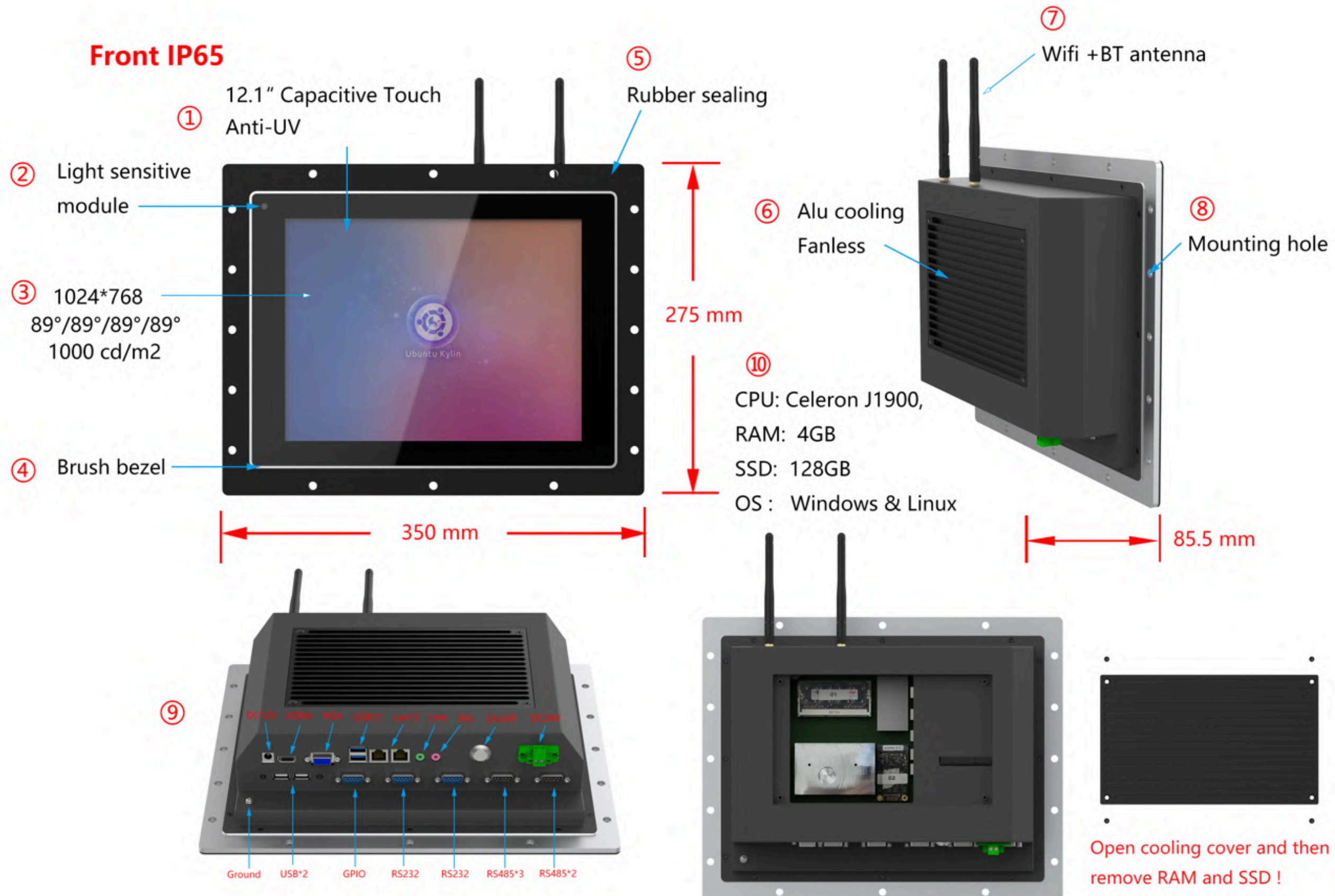
- **HIGH BRIGHTNESS**
- **COMPETITIVE PRICING**
- **BESPOKE OPTIONS**
- **WIDE TEMPERATURE**
- **IP66 FRONT BEZEL**
- **FRONT OR REAR MOUNT**

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The CDS most popular HI-REL PPC design



Key design factors

- Rear mounted in IP rated enclosure for increased strength
- Single piece moulded gasket to ensure front bezel IP65 rating.
- High bright display and UV protection for use in high ambient light conditions (optional optical bonding)
- I/O heavy with additional RS232 and RS485 serial ports
- Field swappable SSD for preservation of application data should the PPC be damaged
- Bespoke software Windows image pre-installed

INDUSTRIAL boxed PC's



Crystal Display Systems have developed a range of panel PC's for the harshest environment

The CDS Industrial BOX PC's are designed for the most rugged of environments with advanced aluminium design for fast cooling.

As standard they are supplied with 4GB RAM, but this is expandible up to 8GB/16GB.

The Box PC's are fitted with 32GB SSD, but this is upgradable to up to 256GB as SSD, or 2TB as HDD

From an entry level J1900 'workhorse' Embedded industrial PC, the solutions have options up to i7 7th Gen.

- **FANLESS DESIGN**
- **SHORT LEADTIMES**
- **COMPETITIVE PRICING**
- **BESPOKE OPTIONS**
- **NO MOQ**
- **I/O RICH OPTIONS**
- **DUAL HDMI OPTION**

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FANLESS



W-LAN



HI-SPEED
CERTIFIED
USB



COM



VGA

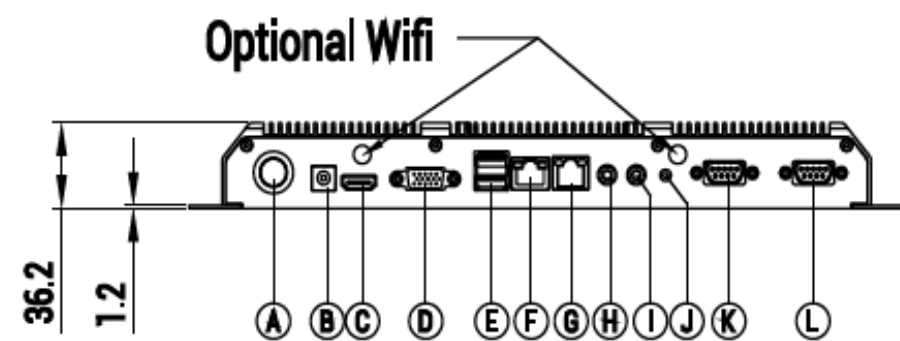
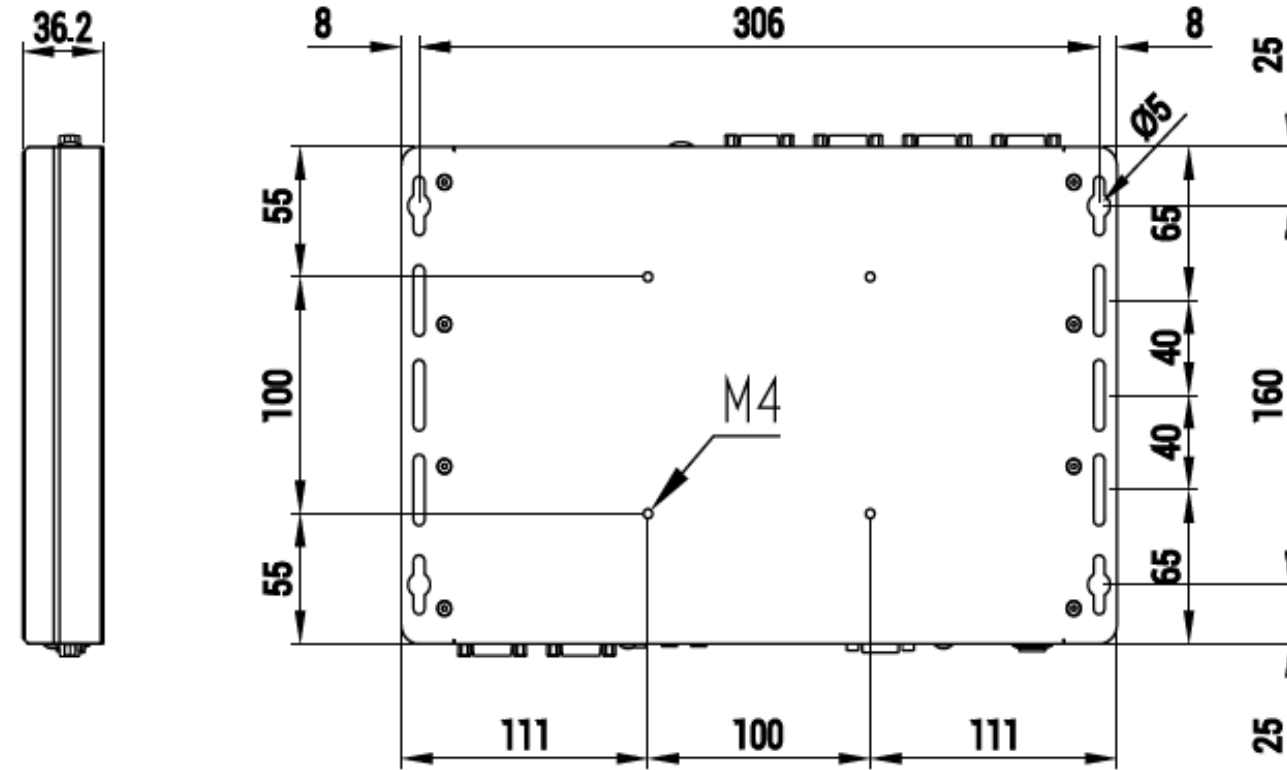
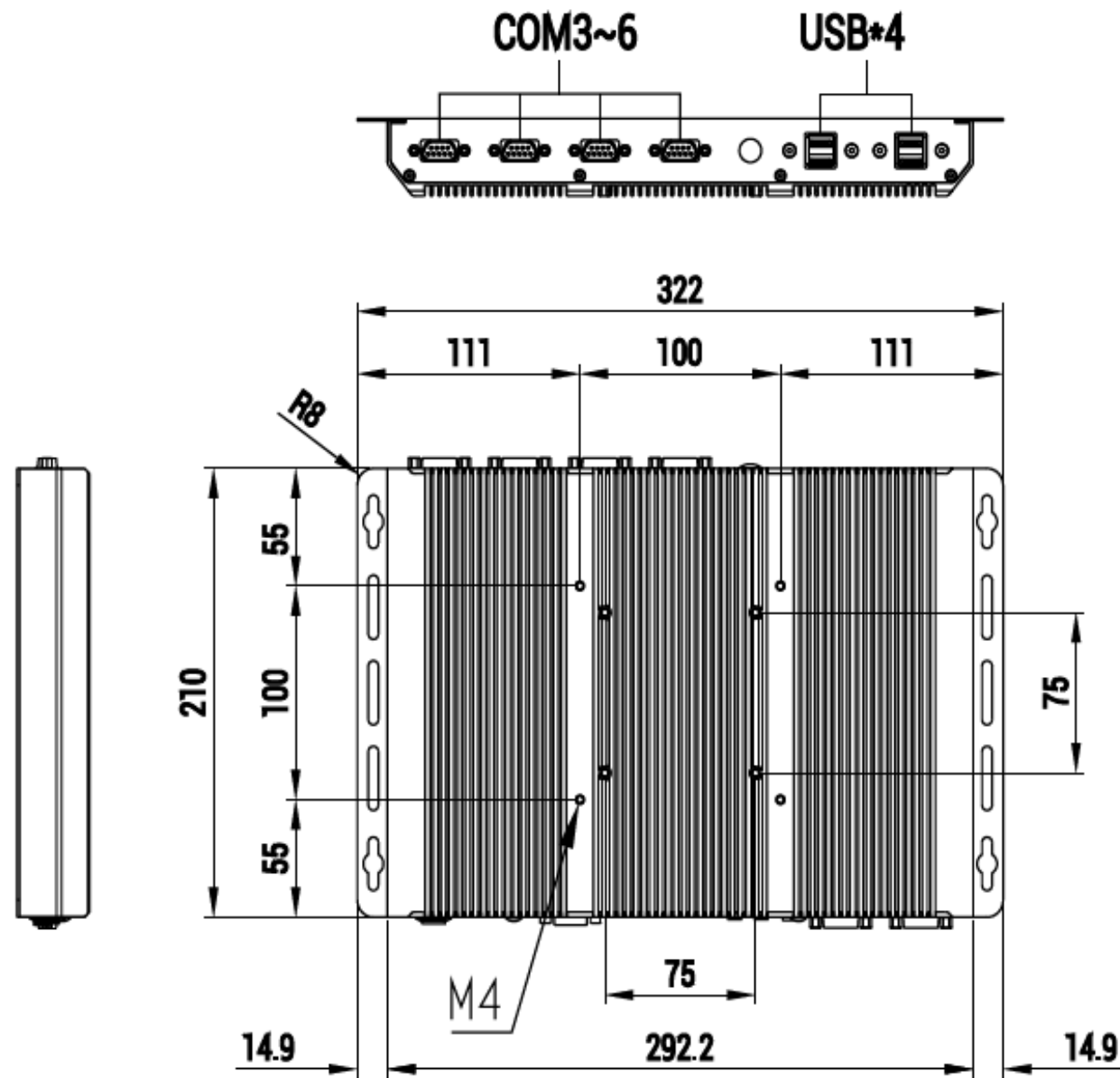


HDMI



ubuntu

Industrial BOX PC – Mechanics



- | | | |
|------------------|---------------|------------------|
| Ⓐ Power On/Off | Ⓑ DC IN 12V5A | Ⓒ HDMI |
| Ⓓ VGA | Ⓔ 2x USB | Ⓕ Ethernet Ports |
| Ⓔ Ethernet Ports | Ⓖ Line out | Ⓗ Mic in |
| Ⓙ Ground(M3) | Ⓚ COM1 | Ⓛ COM2 |

BESPOKE Panel PC's



Crystal Display Systems semi-bespoke or full bespoke panel PC solutions to meet the clients exact requirement

More clients are now looking for PC based solutions which are non standard.

CDS have the ability to to develop solutions quickly and cost effectively.

This can be from a tweak to an existing product, a complete new design or to at as a form fit function alternative to an existing solutions.

- **LOW DEVELOPMENT COSTS**
- **RAPID DEVELOPMENT TIMLINE**
- **COMPETITIVE PRICING**
- **OPTICAL BONDING**
- **LOW MOQ**
- **FULL IP RATED SOLUTIONS**
- **IN-HOUSE DESIGNS CAPABILITY**

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CDS INDUSTRIAL Panel PCs and EMBEDDED solutions

CDS embedded solutions combine touch screen panel and all-in-one computer into a compacted and rugged enclosure. It has a fan-less design and fully integrated interface connectivity for easier operation and is low maintenance under extended working temperature in harsh working environment.

Industrial system feature with up to date computer technology and a network ready connection while providing a long and reliable life operation.

Constructed with aluminium front bezel and chassis, impressive connectivity, fast processors, fan less design, waterproof and dustproof. These ensures that our Industry PC will run reliably even in extreme situations. The embedded touch PCs do not only withstand shock and vibrations: they are also suitable for the extended temperature range environments.

Thanks to the industrial-capability concept and our long-standing experience in the field of embedded computing, our embedded touch PC is one of the most reliable industrial computers on the market. It is used in fields such as mobile automation, transport, railway, automotive, traffic engineering and power automation.



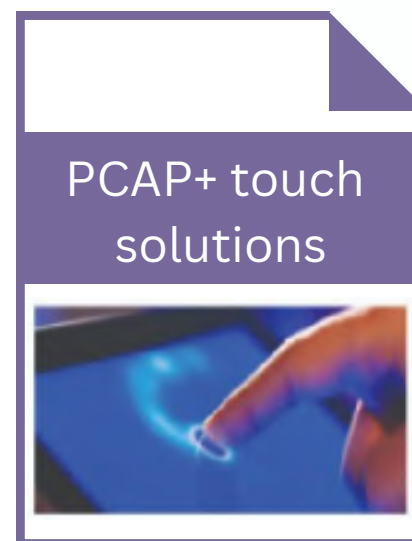
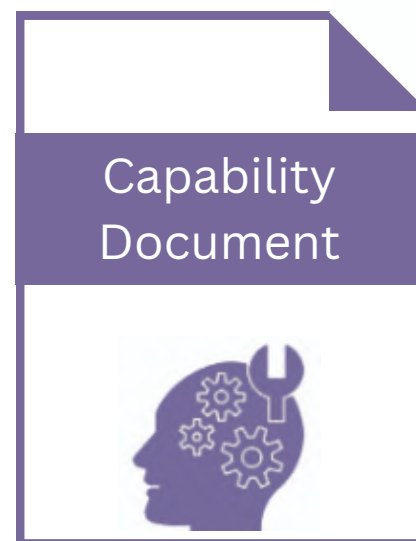
Crystal Display Systems – About us!

The CDS Philosophy of business – Industrial Displays from Crystal Display Systems the leading designer, distributor, value added reseller as well as the developer of custom monitors and customization of flat panel display solutions.

Established over 12 years ago, our expertise allows us to offer the best solutions to our clients and partners. We offer Industrial TFT LCDs, OLEDs embedded AIO, touch screens, and digital signage solutions.

With the CDS philosophy of business we combine the latest industrial and retail displays and technology, engineering and manufacturing capabilities to optimise our integrated solutions.

If you have a requirement for any digital display products then please contact our Technical sales and support team to work closely with you on your specific project and requirements.



See the CDS full range of brochures to download



Visit Crystal Display Systems “Display Corner”

What is Display Corner? During the Covid 19 period, initially no-one knew what was going to happen. However, as the time progressed it was clear that business had to continue.

The biggest change was the sensible working-from-home / social distancing strategy. At this point CDS started their Display Corner on YouTube.

The CDS Display Corner allowed new products to be shown to potential clients without a face to face meeting.

These demonstrations are as natural as possible. Although there is a small amount of editing to help the experience, the products are not enhanced, we don't use actors and the client will be seeing the actual real product, nothing superimposed and no AI. The aim is to where possible have a single shoot.

They may not be as slick as other product videos, but the intent is for the clients to have a true understanding and representation of the product as if it was a face to face meeting.

HI-REL PPC



Outdoor screens



Bespoke marine monitor



Visit the CDS YouTube channel for more industrial product videos





E&OE

Need any additional information?

Our team is always available to help you with pricing details, technical support, or any additional information you may need. Please don't hesitate to reach out.



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