Fully customisable 12.1″ Industrial Panel PC / Thin Client / Monitor

- IP69K SEALED FRONT PANEL
- UP TO 10 POINT MULTI TOUCH
- GLOVED TOUCH OPERATION
- WIDE RANGE TEMPERATURE
- WIRELESS LAN OPTIONAL (WiFi)
- intel APOLLO LAKE PROCESSOR
- FULLY CUSTOMISABLE

Overview

A high performing and low power 12.1" Industrial Computer Product. Boasting a wide range of configurations from a Panel PC to an Industrial Monitor, our S12 Product Range will suit any requirement you may have. The IP69K front seal provides protection against ingress of dust and high temperature, high pressure water – making this product ideal for use in conditions where equipment must be carefully sanitized, such as in the Food Industry. See all of the specifications below, and if something isn't listed that you may require, contact us and let us know as we may already have the solution you need!

General Specifications

DISPLAY		
LCD Size	12.1″ (4:3)	
Max Resolution	1024 x 768	
Brightness (cd/m²)	500	
Contrast Ratio	700 : 1	
Viewing Angle (H/V)	160 / 140	
Colour Depth	16.2M	
TOUCHSCREENS		
Technology	PCAP	None
Cover Lens	4mm flush Polycarbonate filter UV stabilised	4mm flush Polycarbonate filter UV stabilised
Surface Hardness	5H	5H
Connectivity	USB or RS232	-
Multi-Touch	Up to 10 points	-
POWER		
Supply Voltage	12VDC, 9-36VDC (AL), or 90-264VAC	
Power Consumption	PC – 35W typ.	Monitor – 20W typ.
MECHANICAL		
Material	Stainless Steel (304) front face / Anodised Aluminium rear face	
Mounting	Cased (VESA 75 mount) or Bezel	
Dimensions (mm)	330 (W) x 294.5 (H) x 84 (D) cased	
Weight (g)	7Kg	
ENVIRONMENTAL		
Operating Temperature	Cased: -5°C to +45°C	Bezel: -5°C to +50°C
Storage Temperature	-20°C to +70°C	
Relative Humidity	95% non-condensing	
IP Seal Level	IP66 / IP67 / IP69K	
WARRANTY		
Warranty Period	3 Years standard return to base. Extendable to 5 Years if required	

Side tabs: COMPUTERS | WORK STATIONS | MONITORS | KEYBOARDS | TRACKERBALLS

COMPUTERS | WORK STATIONS | MONITORS | KEYBOARDS | TRACKERBALLS

Main System Options

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

APPENDIX A	
MOTHERBOARD	AL
Form Factor	Mini-ITX
CPU	Intel® Celeron® J3455 1.50Ghz
Core Number	4
Chipset	-
BIOS	AMI UEFI
Graphics	Intel® HD Graphics
HDMI	1 x Supports HDMI 1.4, max resolution 3840 x 2160 @ 30Hz
VGA	1, max resolution 1920 x 1080 @ 60Hz
RAM	Up to 8GB (DDR3L-1866)
SATA	1 x SATA3 (6.0Gb/s)
Mini-PCIe	1 x Half-Sized
m-SATA	N/A
M.2	1 (M-key, 2242/2280)
PCI / PCIe	N/A
Serial Ports	1 x RS232/RS422/485, 2 x RS232
USB Ports	4 x USB3 // 3 x USB2, 4 x USB3
Keyboard	1 (shared) – Optional
Mouse	1 (shared) – Optional
Ethernet	2 x 10/100/1000 Mbps
Parallel Port	N/A
Audio	HD Audio with 3W Amplifier
Power	40W
Storage Media	128GB – 480GB SSD (SLC/MLC) or 500GB HDD
Operating System	Windows 10 IoT Enterprise LTSC 64-bit

| APPENDIX B	
AXEL THIN CLIENT	
Description	S12 monitor with Axel M80 built in
USB	4
Ethernet	1 x TCP/IP 10/100BaseT LAN
Serial	By USB
Parallel Port	By USB
Graphical Sessions	Microsoft TSE (from NT4 to 2008R2) / RemoteApp / Multipoint 2011, Citrix XenApp & Metaframe / XenDesktop, VMware View, Linux (VNC Client)
Text Sessions	AS/400 iSeries: 5250, S/390 zSeries: 3270, Unix/Linux: Telnet, SSH & TTY (ANSI, SCO OPENSERVER, UNIX SCO 3.2.2, UNIX SCO 3.2.4, XENIX SCO, ANSI INTERACTIVE, UNIX SVR4, ANSI , RS6000, ANSI DATA GENERAL, UNIXWAR E 7, LINUX, VT100/VT220, VT52, WYSE 50/60/120, DS VP-A2, ADDS VP-60, IBM 3151, ATO300, PRISM, REAL/32, THEOS, OS2 POLYMOD2, SM9400, SM9412, TWINSERVER, PROLOGUE 3, TVI 950, QVT119+, C332
Administration	Remote interactive set-up / Text sessions remote control / VNC remote control / Downloadable firmware / AXRM compliant

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The information provided herein is believed to be reliable. No responsibility for any loss as a result of reliance on any material contained herein will be accepted.

Appendix C

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
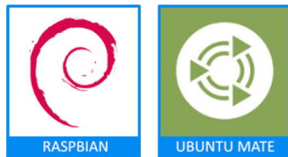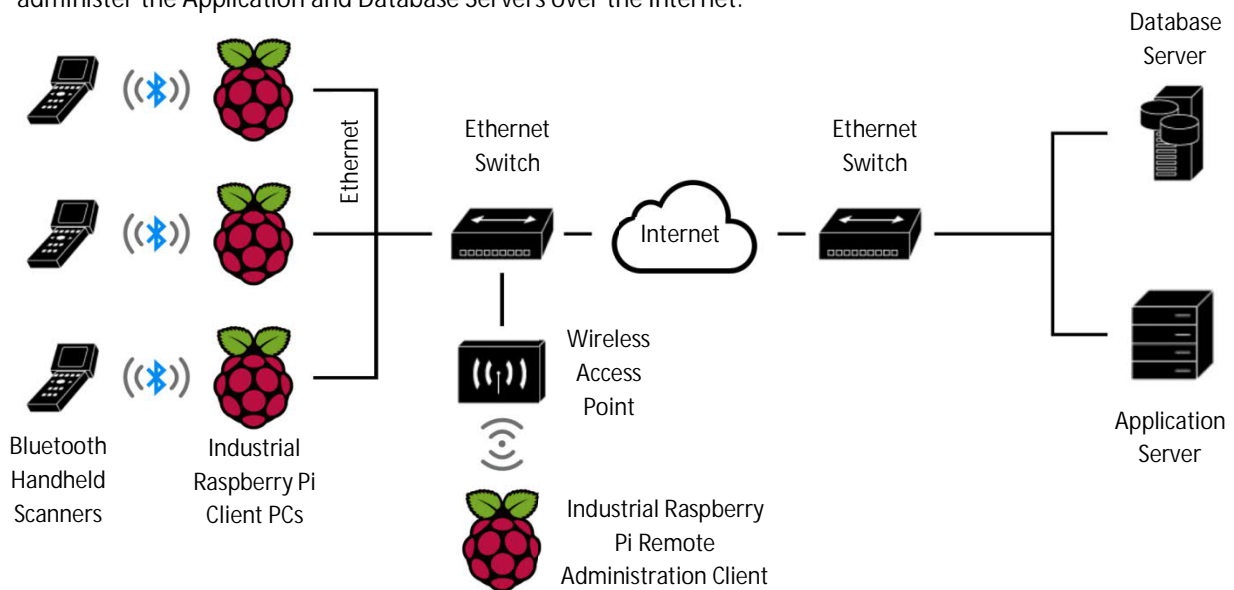
Remote Desktop Connection

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 are able to 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 is able to 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.

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Other System Options

Wi-Fi   WLAN communication is available via a USB Dongle. Fully compliant with IEEE's security 802.11b or 802.11g (2.4 GHz) standards with WPA/WEP support.
Bluetooth   Bluetooth communication available via a USB Dongle. Compliant with Bluetooth 4.0 Low Energy specification.
High Bright Display   For sunlight readable display.

Customisation

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

Accessories

Mounting   Mounting kits include pedestal and wall mount brackets

Appendix D

The connector plate is 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.
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.

The table below shows the maximum quantity of each port per motherboard which is available to bring out to the connector plate.

| MAX QTYS OF EACH PORT*	
MOTHERBOARD	AL
AC/DC POWER IN	1
LAN	2
USB3	4
USB2	3
COM	2

* MAX QTYs may have the potential to be increased for custom projects and requirements.

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

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EXAMPLE 7-HOLE LAYOUT CONFIGURATION
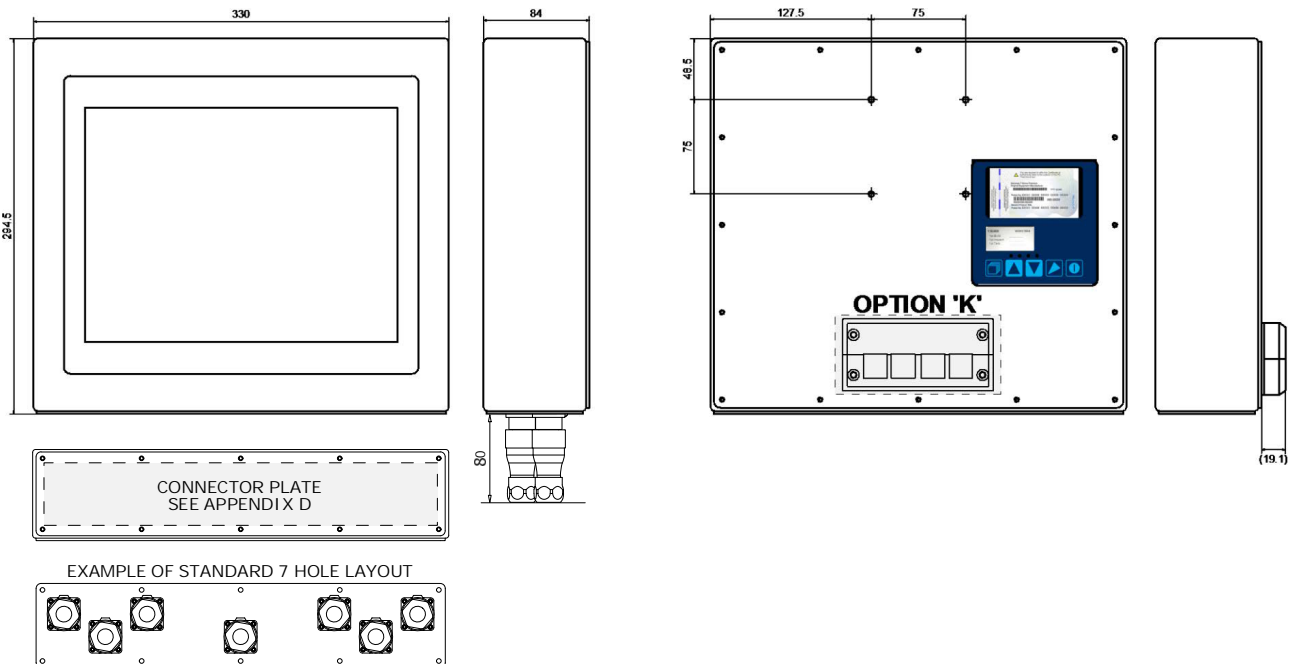
MOTHERBOARD	AL
AC/DC POWER IN	1
LAN	1
USB3	3
USB2	0
COM	2

The below diagram is an illustration of the example configuration for the AL motherboard in the table above.
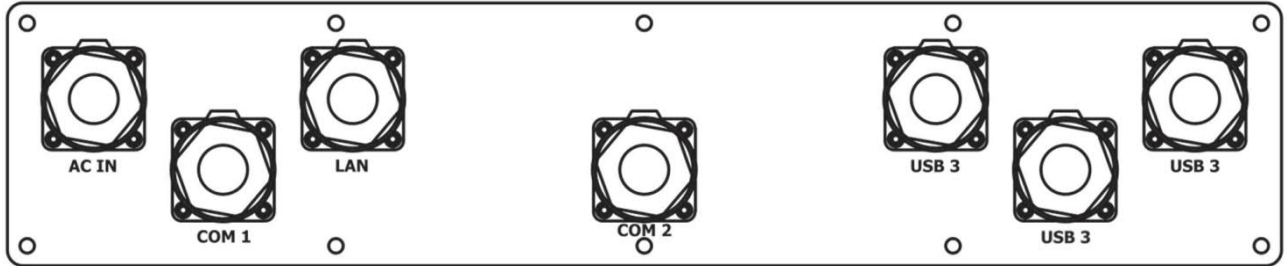
Cables are available in 2 or 5 metres length.

Dimensions Cased

CONNECTOR PLATE
SEE APPENDIX D

EXAMPLE OF STANDARD 7 HOLE LAYOUT

OPTION 'K'

CONNECTOR SEALING OPTIONS

MECHANICAL	REAR / BOTTOM SEAL	DESCRIPTION
T	IP67	Cased – Bottom Outlet – 7 Connections
K	IP66	Cased – Rear Outlet EPG – Universal
L	IP66	Cased – Rear Outlet EPG – Reduced
Z	IP22	Bezel – Bottom Outlet Connections

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Dimensions Bezel

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295

332

81

12xM3x16 STUDS

12,5

307 (PANEL CUTOUT)

100

100

47,5

6

6

46

120

120

262 (PANEL CUTOUT)

16,5