



Welcome

Panorama y selección de PPC's

Panel PC's

Webinars

Agenda

- Panorama de Paneles PC's
 - Tecnologías Touch
 - Aplicaciones
-



Webinar IMA Enero 2021

Panorama y selección de PPC Panel PC's



Fecha	11 Enero 2021
Hora	9:00
Hora	
Duración	1 hora
Costo	gratuito

Conozca las nuevas PPCs compactas que formarán parte de la gama de Computadoras Industriales PPCs.

Durante la sesión, se revisará el panorama y selección de la oferta actual de Computadoras Industriales denominadas Panel PC's así como explorar las nuevas computadoras compactas y sus aplicaciones en el ambiente Industrial. Nuevas alternativas de montajes, más opciones de conectividad requeridas y una amplia gama de posibilidades de desempeño serán comentadas durante la sesión.

HMI & Industrial PCs - Overview


HMI




Visu+ Touch Panel 



HTML5 Web Panel 



Specialty & Industry Ready 



Industrial PC



Box PCs 



Panel PCs 



Stand-alone Panel PCs 



HMI and Industrial PCs – Overview

HMI

Runtime based HMI 

HTML5 Web HMI 



Ultra-compact PCs 



Basic Box PCs 



Standard Box PCs 

Box PC



Basic Panel PCs 




Standard Panel PCs 



Standalone Panel PCs 



Specialty & Industry ready IPC 

Panel PC

Quiz

What makes an industrial PC *industrial*?

- ✓ Passive cooling
- ✓ 24V DC powered
- ✓ Metal construction
- ✓ Single board computer
- ✓ Embedded system
- ✓ High shock & vibration
- ✓ Wide temperature range
- ✓ Industry relevant approvals / certifications
- ✓ Maintenance friendliness
- ✓ Long product life cycle
- ✓ Mounting options

QUIZ
TIME!



Best Practice Industrial PC Design



Best Practice Industrial PC Design

Flush display front
(easy to keep clean)

10 finger multi touch
interface for gesture
operation

LED backlight for long
product life



Glass front surface to
reduce scratches

Rugged metal design
increases EMC
immunity

PCAP touch
technology

Best Practice Industrial PC Design



All interfaces one side
Easy installation

24 VDC Power
No internal power supply



Best Practice Industrial PC Design

Single Form Factor
One size across
performance classes

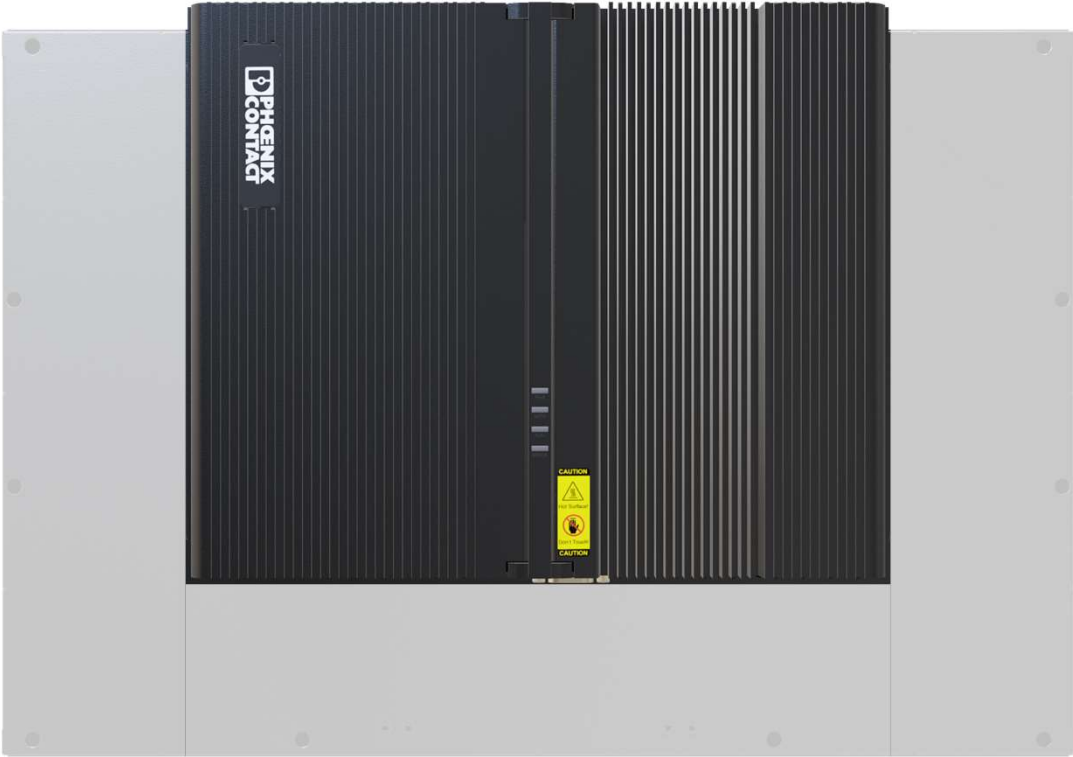


Rugged Aluminium
housing for mechanical
protection

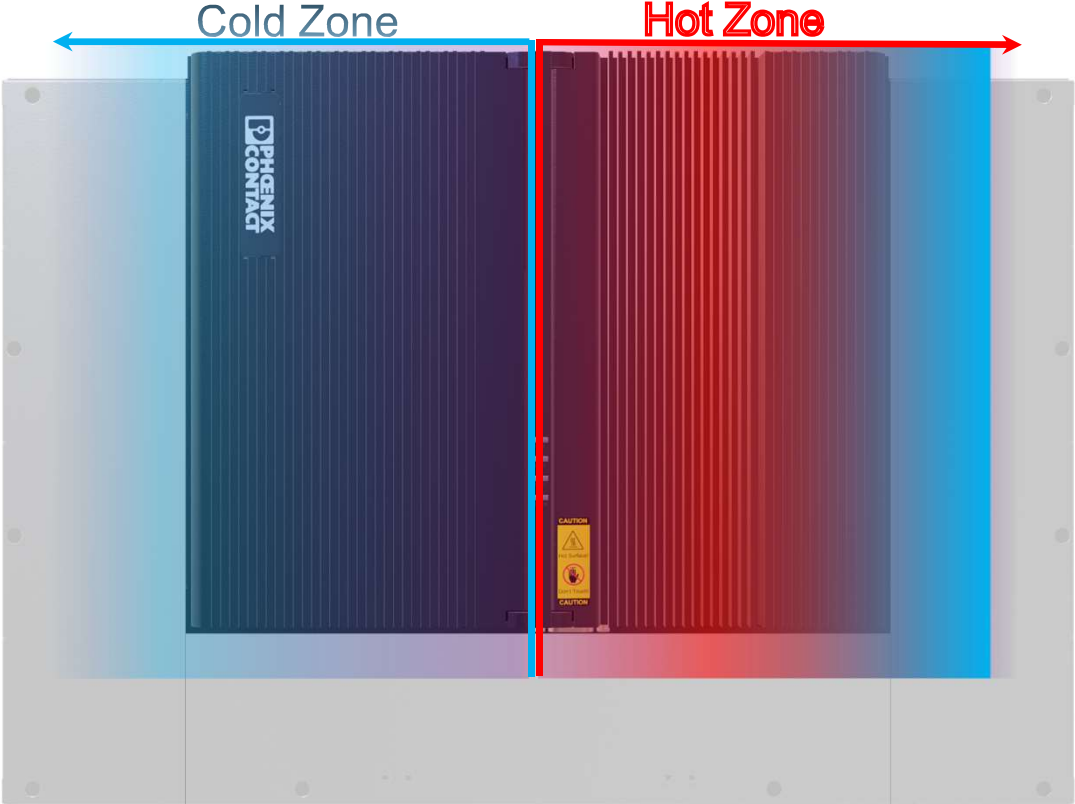
Aluminium housing for
excellent EMC
protection



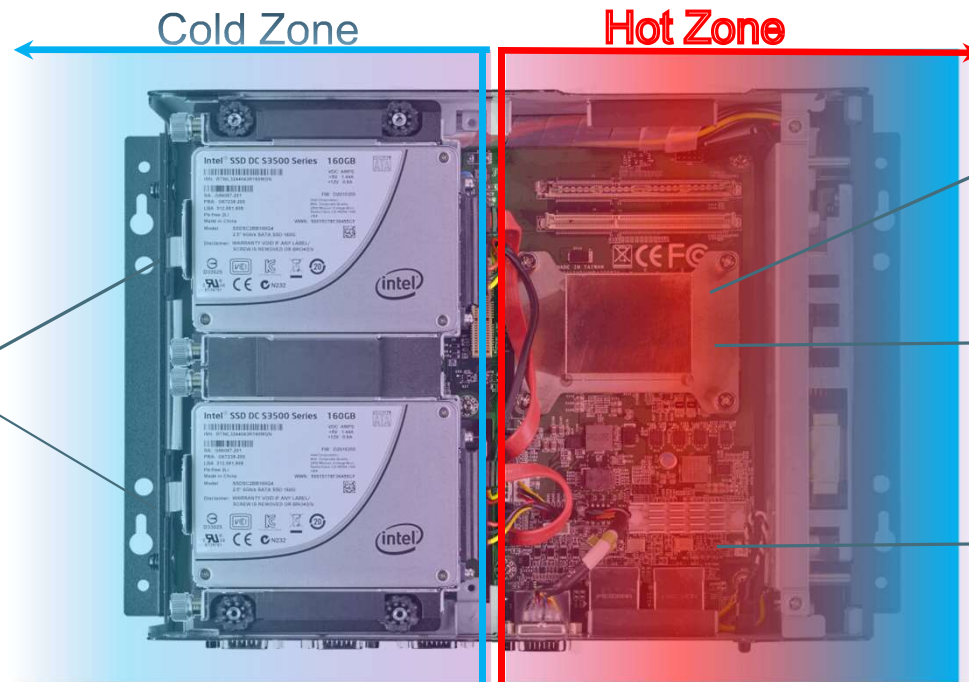
Best Practice Industrial PC Design



Best Practice Industrial PC Design



Best Practices in industrial PC design



Industrial storage devices and RAID support
Wide operating temperature, long life and high data availability

Passive Cooling
Intelligent Thermal Design instead of fans

Long term availability
Same form factor, same performance

Industrial components
Intel Ethernet chipset for real-time tasks

Thermal Separation
To keep temperature sensitive components cool

RAID Explained

RAID 0 - Striping

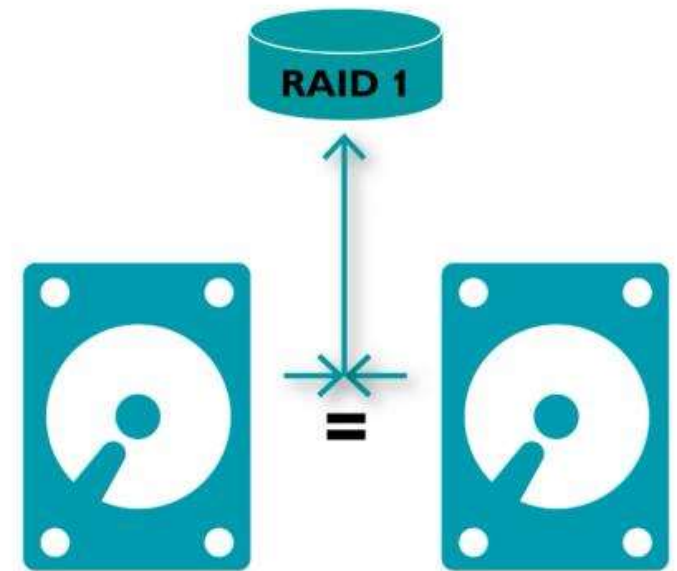
Made for speed/performance improvement
Not recommended in industrial environment
Reliability is more important than speed

RAID 1 - Mirroring

Made for reliability with 2 or more drives
BIOS selectable
Configuration option

RAID 5 – Parity

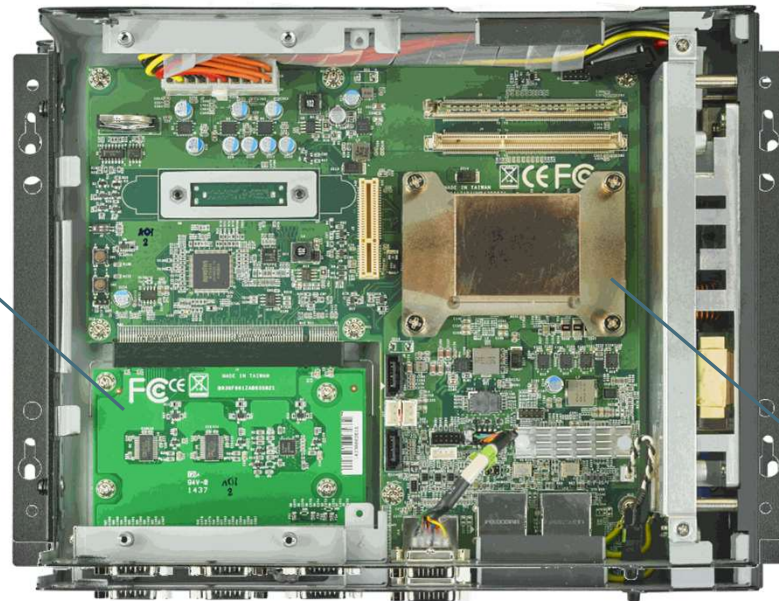
Made for speed and reliability
Minimum 3 drives needed



Made for redundancy

Best Practice Industrial PC Design

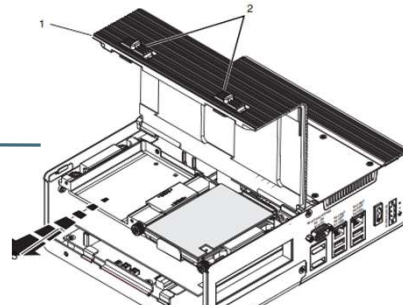
Accessory Cards
Easy installation of PCI /
PCIe card to meet application
needs



Wiring
• Minimized wiring
• Intelligent routed

Industrial Technology
• Powerful
• Energy efficient CPUs

Service Door
Fast & Easy access to
change drives and battery



Manufacturing Excellence



IPC Production network



Industrial PC Products



Box PC, Panel PC and Monitor



Box PC

- Intelligent component in Automation without a display to run any application like control system, MES, data acquisition tasks, etc.



Flat Panel Monitor

- Display unit to connect to
 - Box PC
 - Panel PC as additional (secondary) display



Panel PC

- Intelligent component in Automation with a display to run any application like control system, MES, data acquisition tasks, etc.
- Allows connection to additional displays (FPM)

Panel PCs

Technologies

Single Touch

BL2 PPC 1000
BL2 PPC 2000
BL2 PPC 7000



VL PPC 2000
VL PPC 3000



Multi Touch

BL2 PPC 2100
BL2 PPC 3100
BL2 PPC 7100
BL2 PPC 9100



BL2 PPC15.6 2101
BL2 PPC15.6 3101
BL2 PPC15.6 7101
BL2 PPC15.6 9101



BL2 PPC18.5 2101



BL2 PPC21.5 2101
BL2 PPC21.5 7101

Multi Touch

VL2 PPC 1000
VL2 PPC 2000
VL2 PPC 3000
VL2 PPC 7000
VL2 PPC 9000



VL2 PPC7 1000
VL2 PPC9 1000
VL2 PPC12 1000



Panel PCs IP 65

Technologies

Single Touch

VMT 9000



Multi Touch

BL2 PPC AIO65 2000
BL2 PPC AIO65 7000



DL PPC15M 2000
DL PPC15M 7000

DL PPC18.5M 7000

DL PPC21.5M 7000



Panel PCs Ex

Technologies

Multi Touch

VL2 PPC 1000 EX

VL2 PPC 2000 EX

VL2 PPC 3000 EX

VL2 PPC 7000 EX

VL2 PPC 9000 EX

Ask availability and Certificates before Purchasing

Panel PCs Mobile

Technologies

Single Touch

HTP10 1000



Multi Touch

ITC 8113



Ask availability and Certificates before Purchasing

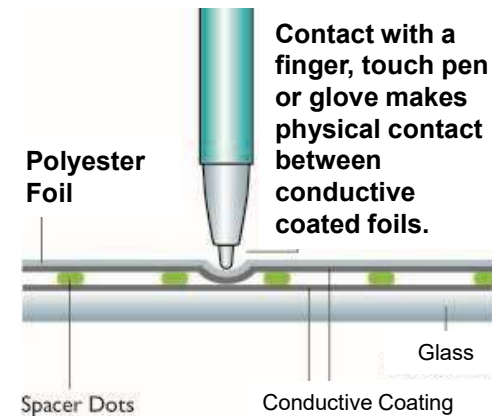
Touch Technologies – (analog) Resistive Touch

Advantages

- ✓ Inexpensive
- ✓ Pressure point sensor (operation with finger, touch pen, glove, etc.)
- ✓ High resolution
- ✓ Energy efficient

Limitations

- ✓ Reduced image transparency (Polyester type)
- ✓ Polyester touch foil is prone to physical damage



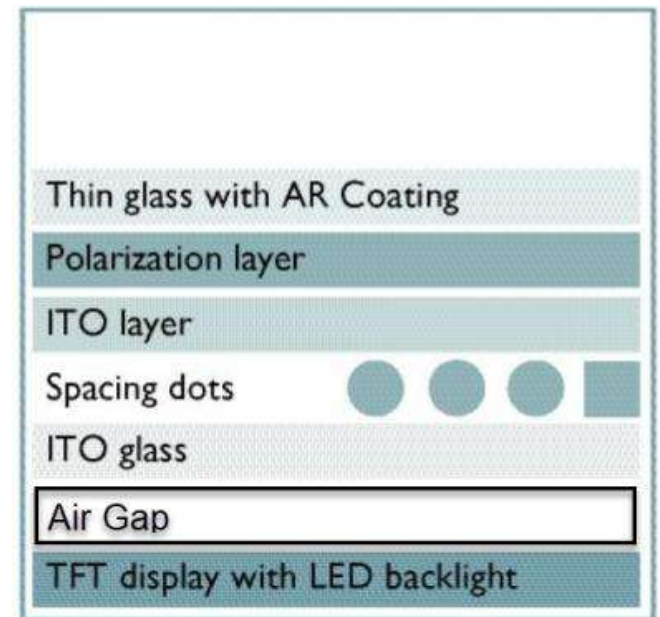
GFG (Glass Film Glass) Touch

Advantages

- ✓ Proven resistive touch technology
- ✓ Pressure point sensor (operation with finger, stencil, glove, etc.)
- ✓ High resolution
- ✓ High chemical resistance
- ✓ Scratch resistant Glass Front Surface
- ✓ Daylight readability

Limitations

- ✓ Higher cost
- ✓ Single-Touch interface
- ✓ Calibration necessary



Touch Technologies – (Projected) Capacitive Touch

Advantages

- ✓ High chemical resistance
- ✓ Scratch resistance (sharp objects)
- ✓ Multiple Touch points at the same time possible
- ✓ Modern All Glass Front designs
- ✓ Cleaner design with less pollution surfaces
- ✓ No calibration necessary

Limitations

- ✓ Works only when touched with conductive materials
- ✓ Possible false operation in wet applications
- ✓ Application software needs to be developed for this technology
- ✓ Higher cost



Electrical field

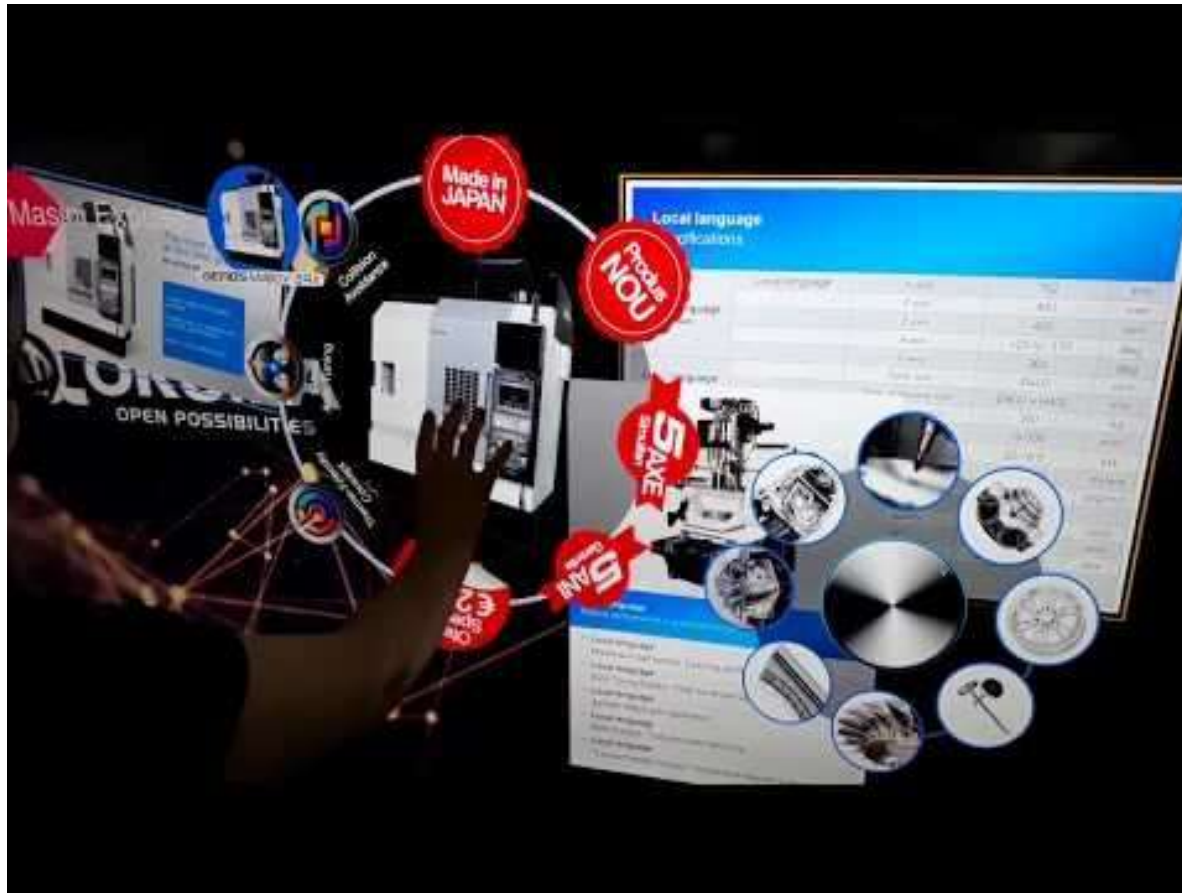


Robust glass surface with AR coating

Touch sensor with electrodes

Optical Bonding

TFT display with LED backlight



Demo multitouch presentation

Touch Technologies

Table

Technology	Analog-resistive touch technology		Capacitive touch technology		Optical touch technology	Acoustic touch technology
Design	Polyester touch structure	Glass-film-glass	Surface-capacitive	Projective-capacitive	Infrared	Surface acoustic wave
Abbreviation	AR touch	GFG	S-CAP	P-CAP	IR touch	SAW
Method of operation	Upon touching the surface, two conductive ITO layers meet, causing a voltage drop (voltage divider).	Polyester film laminated in between two sheets of glass. Same functional principle, but with robust and scratch-proof surface	Touching causes changes in an electric field.	P-CAP uses a sensor pattern. Changes in the electric field are detected individually in each part of the pattern.	Touching interrupts the light beams.	Touching causes partial absorption of the wave energy.
Control mode						
• Finger	Yes	Yes	Yes	Yes	Yes	Yes
• Glove	Yes	Yes	No	Yes (with restrictions)	Yes	Yes
• Touch pen	Yes	Yes	No	No	Yes	No

Touch Technologies

Table

Technology	Analog-resistive touch technology		Capacitive touch technology		Optical touch technology	Acoustic touch technology
Surface material	Polyester	Glass	Glass	Glass	Glass	Glass
Touch operation mode	Single-touch control	Single-touch control	Single-touch control	Multi-touch control	Multi-touch control	Two-touch control
Typing frequency	+	+	+	+++	+	+
Positioning accuracy	++	++	0	+++	0	0
Light permeability	0	0	+	+++	+++	+++

Touch Technologies

Table

Technology	Analog-resistive touch technology		Capacitive touch technology		Optical touch technology	Acoustic touch technology
Surface hardness (mech. sensitivity)	-	+	---	+++	+	0
Vibration resistance (mech. sensitivity)	+++	+++	+	+++	0	---
Chemical resistance	-	+++	--	+++	+++	+++
EMC sensitivity	+++	+++	---	---	-	+++

Touch Technologies

Table

Technology	Analog-resistive touch technology		Capacitive touch technology		Optical touch technology	Acoustic touch technology
Sunlight resistance (UV sensitivity)	---	+++	-	+++	+	+++
Outdoor suitability (temperature sensitivity)	0	+++	0	+++	0	0
Dust/water tightness	+++	+++	0	+++	+	-
Gas tightness	+++	+++	-	+++	-	++
Cost efficiency	+++	0	0	++	--	--

White paper

User study on multitouch in the industrial environment



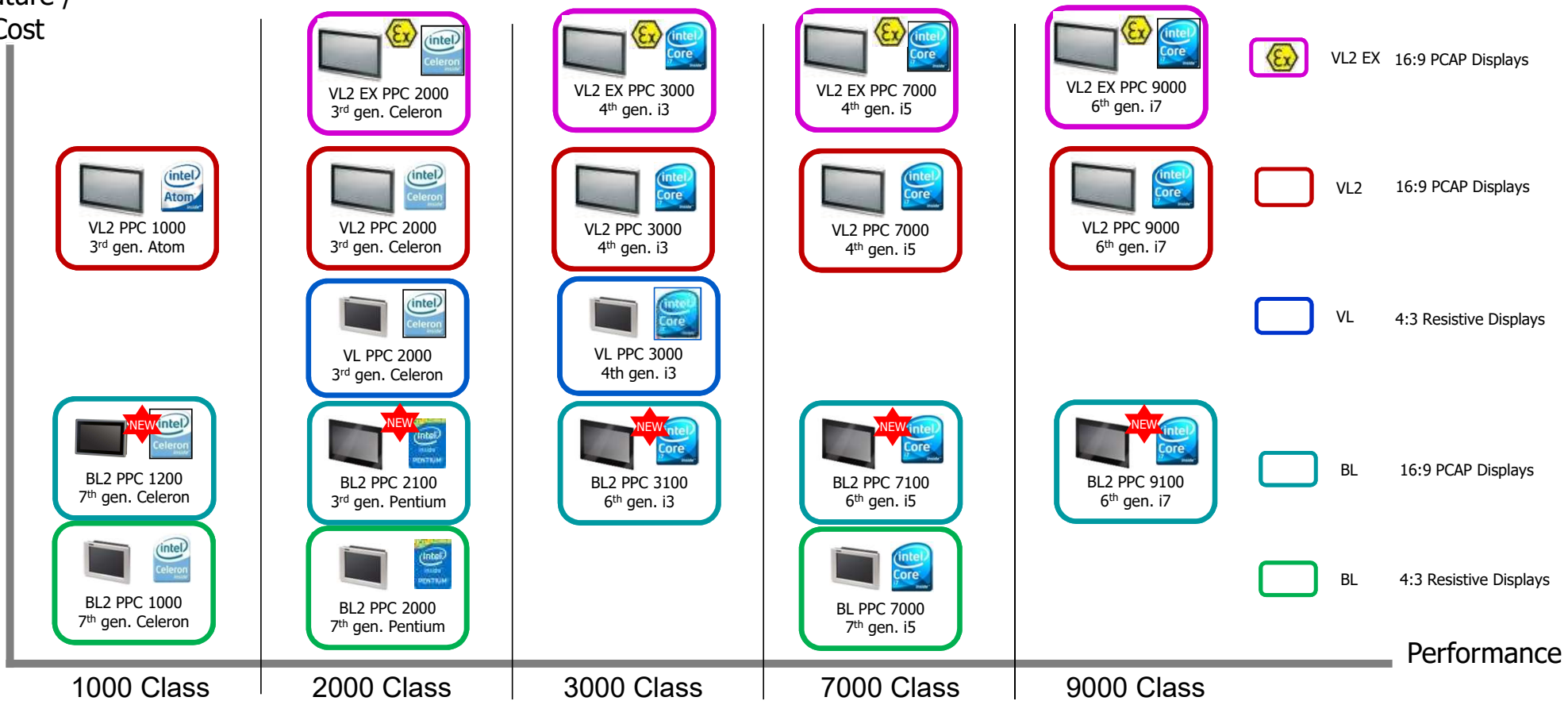
HMI and IPCs: The perfect blend for your application

Panel IPCs & Monitor Solutions



Panel PC Lineup

Feature / Cost



Performance



Touch Monitors & Display Solutions

- ✓ Industrial design
- ✓ True flat glass front
- ✓ Robust metal base construction
- ✓ Multiple display connectivity options
- ✓ 10 pt. PCAP Multi-Touch



BL FPM - Flat Panel Monitors

BL FPM 15.6

- 16:9 aspect ratio with 1366 x 768 resolution
- 1x VGA, 1x DVI-I, 1x DP++, 1x USB 1.1\2.0 Type A

BL FPM 18.5

- 16:9 aspect ratio with 1366 x 768 resolution
- 1x VGA, 1x DVI-I, 1x DP++, 1x USB 1.1\2.0 Type A

BL FPM 21.5

- 16:9 aspect ratio with 1920 x 1080 resolution
- 1x VGA, 1x DVI-I, 1x DP++, 1x USB 1.1\2.0 Type A



Box & Panel PC

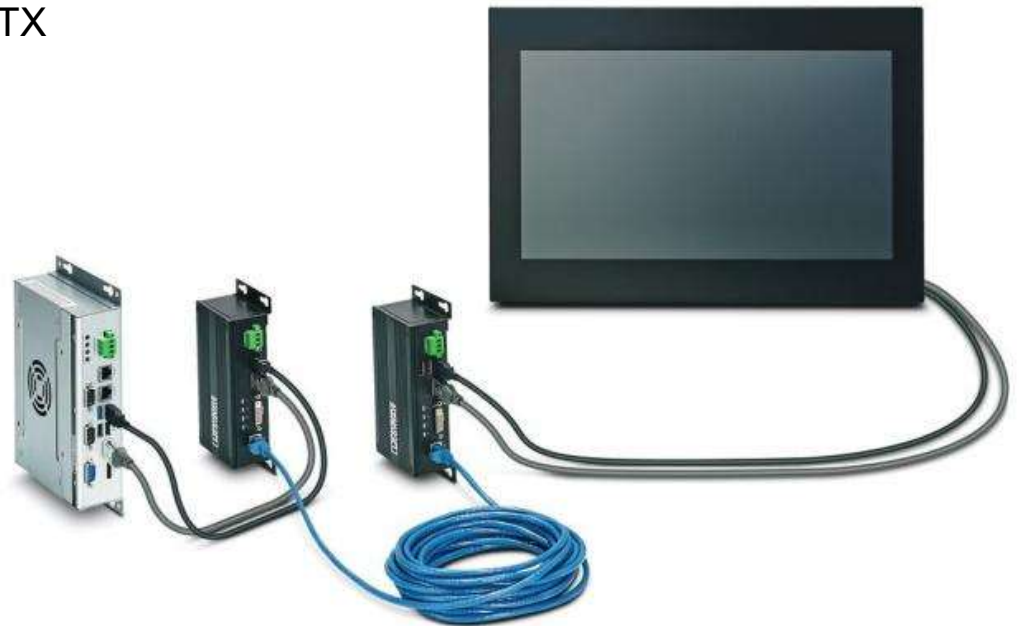


LIMITATIONS (max. cable length standards):

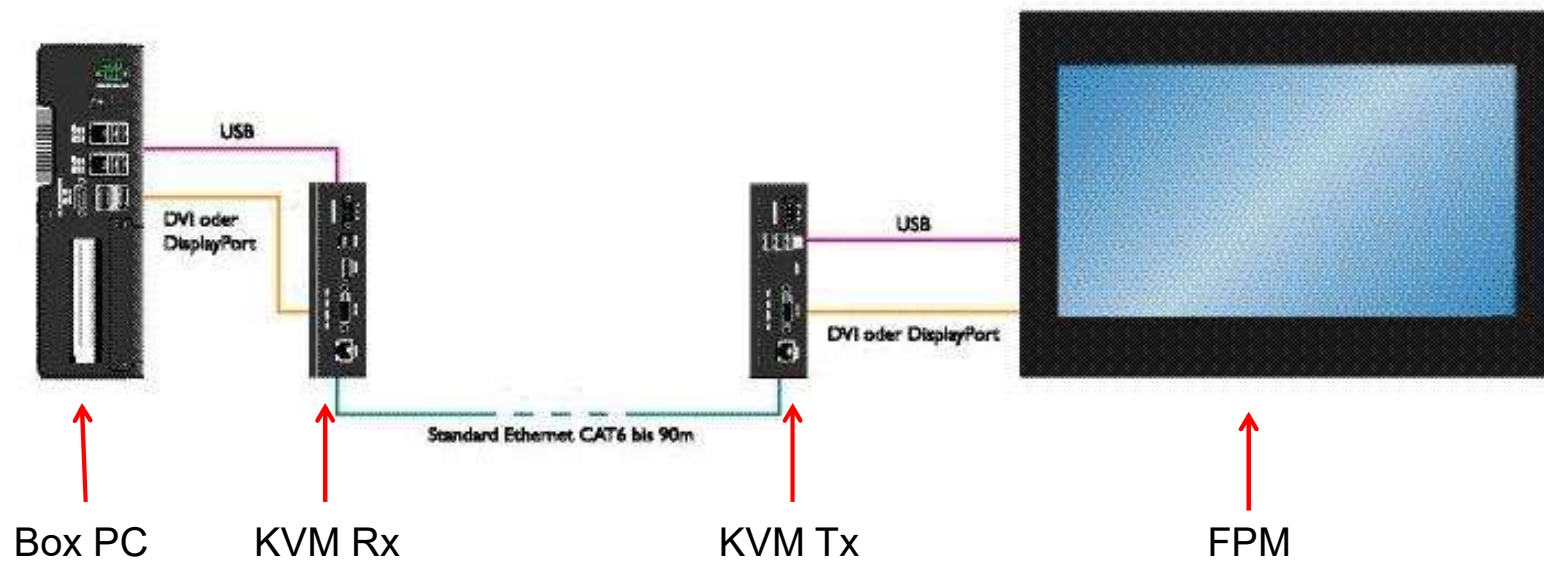
- USB cable: 5m
- VGA cable: 5m - 10m, resolution dependent
- DVI cable: 5m - 15m, resolution dependent
- Display Port cable: 5m

Keyboard Video Mouse Extender

- ✓ Flexible use of displays, up to 90 m away from PC
- ✓ Cost efficient wiring with single cable between TX and RX
- ✓ Increased application reliability with PC in safe location
- ✓ Industrial wide temperature design
- ✓ Fast setup with plug and play technology



BL KVM Extender 90 m solution



Remote Monitoring using Portico



BPC



Standard CAT 5 Ethernet

- ✓ Software based solution using standard ethernet cable
- ✓ Unlimited distance, bandwidth dependent
- ✓ Up to 16 simultaneously connected clients
- ✓ Client control arbitration, USB redirection features
- ✓ Portico can be used with all PxC IPC products



Basic Panel PCs

BL2 PPC



BL2 PPC xx00 Series

- ✓ Suitable for every system with display sizes from 12" to 17" (4:3) and 15.6" to 21.5" (16:9)
- ✓ Analog Resistive Single-Touch and Projective-Capacitive Multi-Touch available – the right touch for every application
- ✓ The right processor performance for each application
- ✓ Long-term available and energy-efficient Intel® Atom™, Celeron®, Pentium® or Core™ i processors
- ✓ Passive cooling for long product life



Compact Basic Panel PC – BL2 PPC 1000

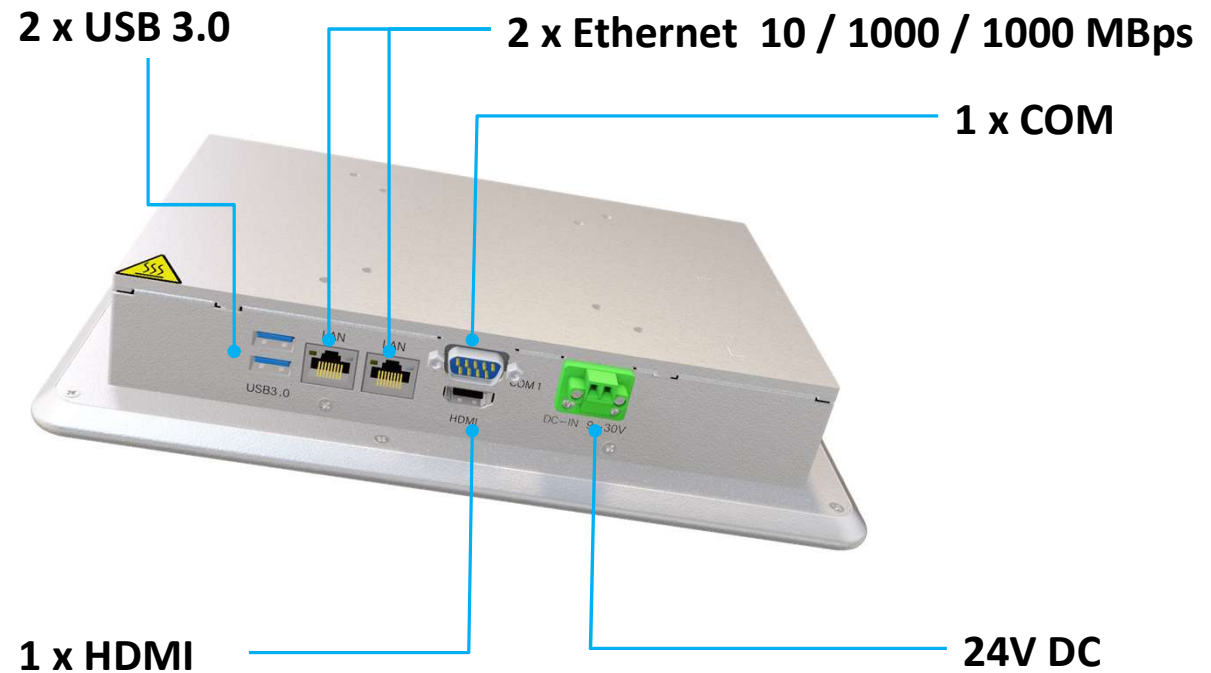
- 10 pt. PCAP (Multi-Touch) Panel PCs in 16:9 display aspect ratio
 - ✓ Display sizes 7" and 10"
 - ✓ Expansion option (USB / COM)
 - ✓ Windows 10 IoT
 - ✓ Passive cooled
 - ✓ mSATA mass storage
 - ✓ Panel- and VESA mount
- 7th gen. Intel (Apollo Lake) CPU technology
 - ✓ BL2 PPC 1000 – Intel Celeron N3350 1.1/2.4 GHz (2 core)



BL2 PPC 1200 – Compact basic panel PC

General technical data

- 7" and 10" PCAP multi touch (10 finger)
- Intel Celeron N3350 CPU
- mSATA storage options
- Windows 10 IoT & Linux support
- I/O expansion options
- VESA 75 and panel mount



BL2 PPC 1200 – Compact basic panel PC

General technical data

- 7" and 10" PCAP multi touch (10 finger)
- Intel Celeron N3350 CPU
- mSATA storage options
- Windows 10 IoT & Linux support
- I/O expansion options
- VESA 75 and panel mount



BL2 PPC 1200 – Compact basic panel PC

Value statements

- Compact, elegant all metal design
- Flush IP65 front with 10 pt. PCAP multi touch interface
- Efficient performance with Intel Celeron N3350 CPU
- Interface - rich with additional slot for I/O expansion



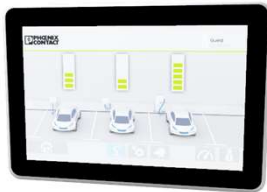

BL2 PPC 1200 – Compact basic panel PC

Target applications



- High-end industrial HMI
- Smart home control panel
- IIoT applications
- Operator panel for smart city applications
- Distributed data collector & processing
- Edge and data driven services
- Machine building operator panel
- Kiosks



BL2 PPC 1200 – Compact basic panel PC (7”)

	Phoenix Contact BL2 PPC7 1201	Phoenix Contact VL2 PPC 1000		
				
CPU	N3350	E3845	N4200	N2600
Screen	7" – 16:9 – 2 pt. PCAP	7" – 16:9 – 10 pt. PCAP	7" PCAP	7" PCAP
List price				
Interfaces	2 x ETH; 2 x USB 2.0; 2x USB 3.0; 2 x COM	2 x ETH; 2 x USB 2.0; 1.x USB 3.0; 1 x COM	2 x ETH; 2 x USB 3.0; 2 x COM	2 x ETH; 2 x USB; 2 x COM, 1 x AUX
Options / Expansions	2 x COM; 2 x USB 2.0; WIFI	2 x COM + 2 x CAN OR 2 x COM	POE; camera; RFID, barcode scanner; LED bar	--
Operating system	Windows 10 IoT	Win 7; Win 10 IoT	Win 10 IoT	Win 7
Operating temp.	0 .. 50C	0 .. 50C	0 .. 40C	0 .. 50C
Power consumption	14.9 W	26.4 W	25W	n/a

BL2 PPC 1200 – Compact basic panel PC (10”)

	Phoenix Contact BL2 PPC10 1201	Phoenix Contact VL2 PPC9 1000			
					
CPU	N3350	E3845	N2930	N4200	N2930
Screen	10" PCAP – 2 pt.	9" PCAP – 10 pt.	10" PCAP	10" PCAP – 10pt	10.4" PCAP
List price (standard model)					
Interfaces	2 x ETH; 2 x USB 2.0; 2x USB 3.0; 2 x COM	2 x ETH; 2 x USB 2.0; 1.x USB 3.0; 1 x COM	2 x ETH; 1 x AUX; 1 x USB 2.0; 1 x USB 3.0; 2 x COM	2 x ETH; 4 x USB 3.0; 1 x HDMI,; 1 x VGA; 2 x COM, 8 x DIO	2 x ETH; 2 x USB 2.0; 1 x USB 3.0; 2 x COM
Options / Expansions	2 x COM; 2 x USB 2.0; WIFI	2 x COM + 2 x CAN OR 2 x COM	--	WIFI & Bluetooth	--
Operating system	Windows 10 IoT	Win 7; Win 10 IoT	n/a	Win 10 IoT; Ubuntu	Win 7, Win 10 IoT
Operating temp.	0 .. 50C	0 .. 50C	0 .. 50C	0 .. 50C	0...50C
Power consumption	14.9 W	33.6 W	n/a	40W	16 W

Future 2021 BL2 PPC 1200 – Compact basic panel PC

1139136 BL2 PPC 1200 configuration dependent

1274012 BL2 PPC7 1201-4/64/W10
(4 GB RAM, 64 GB SSD, Windows 10 IoT)

1274014 BL2 PPC10 1201-4/128-W10
(4 GB RAM, 128 GB SSD, Windows 10 IoT)



BL2 PPC 1200 – Compact basic panel PC

Key Take Aways

- Compact form factor to fit into compact cabinets and spaces
- Clean, flush design
- Embedded CPU technology
- Configurable options
- Expandable
- Robust full metal housing for impact protection and EMI
- Competitively priced!



Basic Panel PC – BL2 PPC x100

- Projected Capacitive (PCAP Multi-Touch) Panel PCs in 16:9 display aspect ratio
 - ✓ Display sizes 15.6”, 18.5” and 21.5”
 - ✓ Expansion option
 - ✓ Windows 7 & Windows 10 IoT
 - ✓ Passive cooled
 - ✓ VESA or panel mount
 - ✓ M.2 and 2.5” SATA mass storage
- 6th gen. Intel (Apollo Lake) CPU technology
 - ✓ BL2 PPC 2100 – Intel Pentium N4200 1.1/2.5 GHz (4 core)
 - ✓ BL2 PPC 3100 – Intel Core i3-6100U 2.3 GHz (2 core)
 - ✓ BL2 PPC 7100 – Intel Core i5-6300U 2.4 GHz (2 core)
 - ✓ BL2 PPC 9100 – Intel Core i7-6600U 2.6 GHz (2 core)



Basic Panel PC – BL2 PPC x000

- Analog resistive (Single-Touch) Panel PCs in 4:3 display aspect ratio
 - ✓ Display sizes 12”, 15” and 17”
 - ✓ Expansion option (WIFI)
 - ✓ Windows 10 IoT
 - ✓ Passive cooled
 - ✓ VESA or panel mount
 - ✓ M.2 SATA mass storage
- 7th gen. Intel (Apollo Lake) CPU technology
 - ✓ BL2 PPC 1000 – Intel Celeron N3350 1.1/2.4 GHz (2 core)
 - ✓ BL2 PPC 2000 – Intel Pentium N4200 1.1/2.5 GHz (4 core)
 - ✓ BL2 PPC 7000 – Intel Core i5-7442EQ 2.1/2.9 GHz (4 core)



Standard Panel PCs

VL2 PPC



Standard resistive panel PCs – VL PPC Series

- ✓ Suitable for every application with display sizes from 12" to 18.5" in 4:3 (non-widescreen) and 16:9 (widescreen) format
- ✓ Analog Resistive Single-Touch
- ✓ Scalable processor performance for each application
- ✓ Passive cooling for long product life
- ✓ Easy serviceability with easily accessible components



Standard Capacitive Touch Panel PCs – VL2 PPC Series

Display variety
7" to 21.5" screen sizes

Modern Design

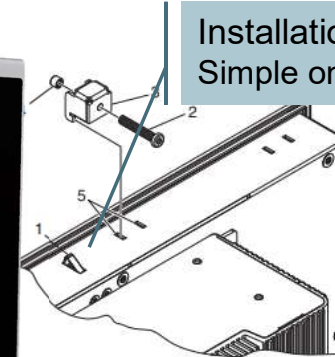
- Small bezel frame
- No logo
- Anti-glare

User-Interface

- PCAP Multi-Touch interface
- Glass front



Installation
Simple one-man installation



Higher Protection Class
IP66

Wide Operating Temperature
-20°C ... up to 65°C (SSD media)



Standard Capacitive Touch Panel PCs – VL2 PPC Series

- Projected Capacitive (PCAP Multi-Touch) Panel PCs in 16:9 display aspect ratio
 - ✓ Display sizes 7" to 21.5"
 - ✓ Expansion options (PCI & Option card)
 - ✓ Windows 7 & Windows 10 IoT
 - ✓ Passive cooled & Thermal barrier
 - ✓ 2.5" HDD & SSD SATA mass storage
 - ✓ VESA or panel mount
- Intel CPU technology
 - ✓ VL2 BPC 1000 – 3rd gen. (Bay Trail) E3845 1.91 GHz (4 core)
 - ✓ VL2 BPC 2000 – 3rd gen. (Bay Trail) N2930 1.6 GHz (4 core)
 - ✓ VL2 BPC 3000 – 4th gen. (Haswell) Core i3-4010U 1.7 GHz (2 core)
 - ✓ VL2 BPC 7000 – 4th gen. (Haswell) Core i5-4300U 2.4 GHz (2 core)
 - ✓ VL2 BPC 9000 – 6th gen. (Sky Lake) Core i7-6822 EQ 2 GHz (4 core)



Standard Capacitive Touch Panel PCs – VL2 PPC Series

7" Wide Screen 10 pt. PCAP Touch, 800 x 480 resolution

9" Wide Screen 10 pt. PCAP Touch, 800 x 480 resolution

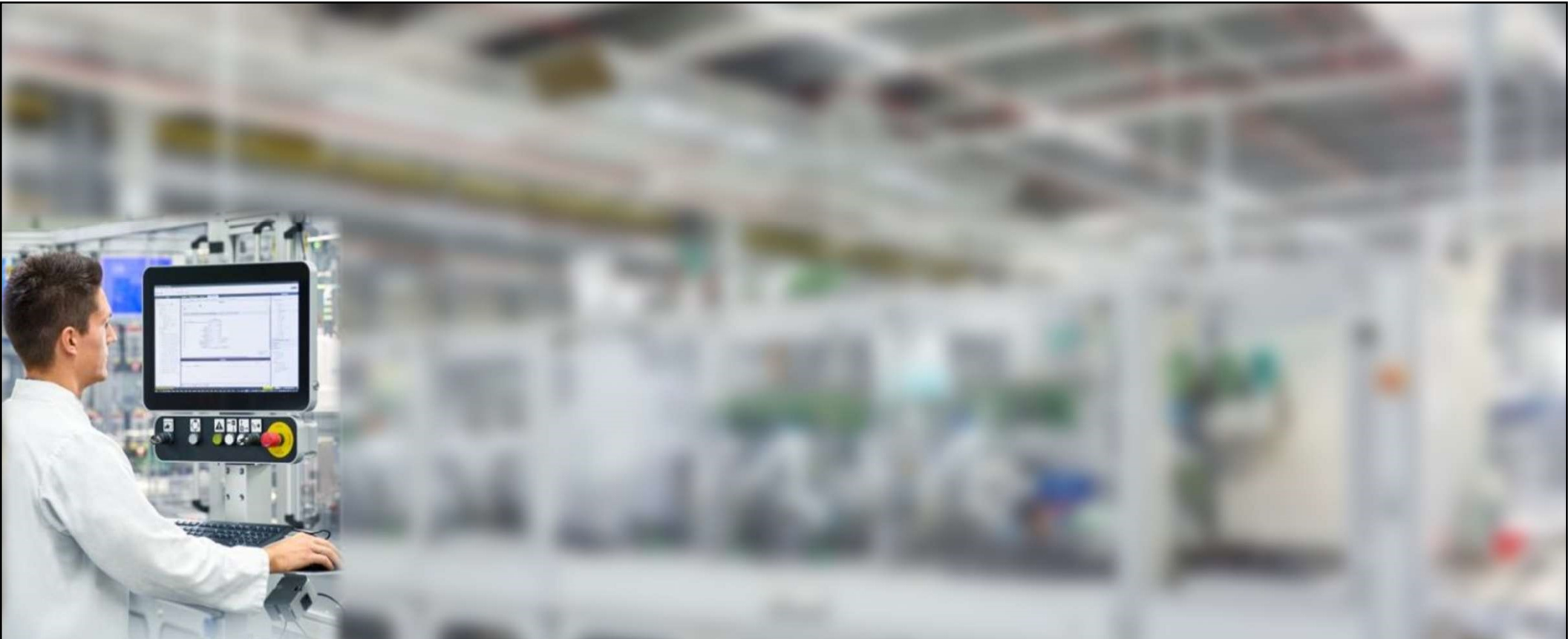
12.1" Wide Screen 10 pt. PCAP Touch, 1366 x 768 resolution

15.6" Wide Screen 10 pt. PCAP Touch, 1366 x 768 or Full HD resolution

18.5" Wide Screen 10 pt. PCAP Touch, 1366 x 768 or Full HD resolution

21.5" Wide Screen 10 pt. PCAP Touch, 1920 x 1080 (Full HD) resolution





All-in-one and all-round IP65 protected panel PCs



All-in-one and all-round IP65 protected Panel PCs

Feature

Performance

1000 Class

2000 Class

3000 Class

7000 Class

9000 Class



DL PPC 2000
Celeron



DL PPC 7000
4th gen. i7



BL2 PPC AIO65 2000



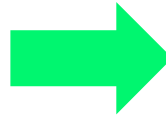
BL2 PPC AIO65 7000

DL PPC

BL2 PPC AIO65



Evolution in Cabinet Design



All-in-one panel PC - DL PPC Series

- ✓ Attractive, modern industrial design
- ✓ PCAP Multi-Touch allows intuitive gesture control
- ✓ Wide operating temperature range
- ✓ High Performance, passive cooled Intel® Core™ i7 processor
- ✓ Space saving on factory floor without need for cabinet and just 60 mm system depth
- ✓ Easy maintenance with easily accessible parts



All-in-one panel PC - DL PPC Series

- All-round IP65 protected Projected Capacitive (PCAP Multi-Touch) Panel PCs in
 - ✓ Display sizes 15", 18.5" and 21.5"
 - ✓ Expansion options (mPCIe)
 - ✓ Windows 7 & Windows 10 IoT
 - ✓ Passive cooled
 - ✓ VESA mount or arm adapter
 - ✓ 2.5" HDD & SSD SATA mass storage
- Intel CPU technology
 - ✓ DL PPC 2000 – 3rd gen. Celeron 2980U (2 core)
 - ✓ DL PPC 7000 – 4th gen. Core i7-4650 1.71 GHz (4 core)



All-in-one panel PC - DL PPC Series



Easy maintenance
Service door (HDD/CMOS)

Intuitive gesture control
Projected Capacitive Touch



Easy setup and service
External IP65-rated USB port



Easily accessible
IP65 protected interfaces



Convenient operation
integrated function key



Attractive design
60 mm panel depth



Basic all-in-one and all-round IP65 protected panel PC BL2 PPC



Basic all-in-one and all-round IP65 protected panel PC BL2 PPC

Benefits

- ✓ All-around IP65 protection without the need for a cabinet
- ✓ Attractive, modern industrial design
- ✓ Scalable processor performance
- ✓ Easy installation and various mounting options
- ✓ Push button box and stack light accessories



Basic all-in-one panel PC – BL2 PPC AIO65 Series

- Two performance level options
 - 2000 class (Pentium N4200)
 - 7000 class (Core i5-7442EQ)
- Three display size options
 - 15.6", 18.5" or 21.5" (Full HD)
 - 10-point PCAP touch
 - Glove operation
- Windows 10 IoT support

Configuration options

- AIO65 – VESA
- AIO65 – Pole mount



BL2 PPC AIO65 2000

The BL2 PPC AIO65 IPC is fully enclosed IP65 IPC with display that utilizes the Intel® processors chosen for their balance of processing power, graphic performance, and energy efficiency.

The robust design with arm or pole mounting options and I/O capability make the BL2 PPC AIO65 a product that can be used in a wide variety of applications.

IP65
Multitouch
Widescreen display
15.6" 18.5"

VESA, pole or arm
Rugged
Configurable



1138366 BL2 PPC AIO65 2000

Intel® Pentium® N4200 processor 1.10/2.50 GHz
Up to 8 GB RAM Up to 960 GB mSATA



BL2 PPC AIO65 7000

The BL2 PPC AIO65 IPC is fully enclosed IP65 IPC with display that utilizes the Intel® processors chosen for their balance of processing power, graphic performance, and energy efficiency.

The robust design with arm or pole mounting options and I/O capability make the BL2 PPC AIO65 a product that can be used in a wide variety of applications.

IP65
Multitouch
Widescreen display
15.6" 18.5"

VESA, pole or arm
Rugged
Configurable









1138367 BL2 PPC AIO65 7000

Intel® Core™ i5-7442EQ processor 2.10/2.90 GHz
Up to 16 GB RAM Up to 960 GB mSATA



Flexible installation

VESA configuration	Pole mount configuration	Support arm configuration
		
<ul style="list-style-type: none">▪ VESA 100 mounting pattern▪ 3 dual cable entry▪ Rubber grommets▪ External cable routing 	<ul style="list-style-type: none">▪ For 48mm standard, Bernstein- Pole or Rittal-Pole▪ Cable entry through pole▪ Internal cable routing 	<ul style="list-style-type: none">▪ For 48mm standard, Bernstein-Pole or Rittal-Pole▪ Cable entry through pole▪ Internal cable routing 

Comparison DL PPC & BL2 PPC AIO65

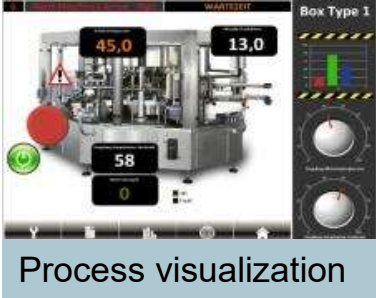
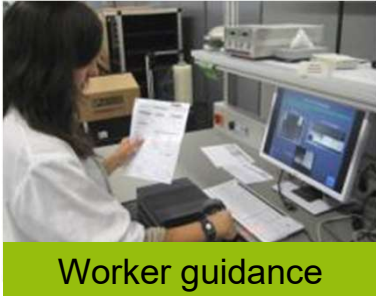
DL PPC

1. 3 screen sizes 15", 18.5", 21.5" PCAP
2. 2 performance classes
 - a) Intel Celeron 2980U (Passmark 1593)
 - b) Intel Core i7 4650U (Passmark 3963)
3. 2.5" SSD / HDD mass storage
4. Configuration up to 12 GB DDR3 RAM
5. mPCIe slot
6. Windows 7 & Windows 10
7. Monolithic design
8. Configurable front button
9. External USB
10. VESA and Arm mount
11. Temp range 0...45°C
12. Approvals CE, UL

BL2 PPC AIO65

1. 3 screen sizes 15.6", 18.5", 21.5" PCAP
2. 2 performance classes
 - a) Intel Pentium N4200 (Passmark 2026)
 - b) Intel Core i5 7442EQ (Passmark 6262)
3. M.2 SSD mass storage
4. AIO65 2000 class: 8 GB DDR3 RAM
AIO65 7000 class: 8 to 16 GB DDR4 RAM
5. Windows 10
6. Modular design
7. Push button box accessory (pole mount version)
8. Stack light accessory (pole mount version)
9. VESA and pole /swing arm mount
10. Temp range 0...45°C
11. Approvals CE, UL

All-in-one panel PC applications



Specialty and Industry Ready Panel PCs

- ✓ Suitable for outdoor applications with sunlight readable display option
- ✓ UV and IR resistance
- ✓ Corrosion resistant materials (i.e. salt spray test)
- ✓ Rugged, passive cooled design with wide operating temperature components
- ✓ Usable with work gloves



Box and panel PCs for hazardous locations - VL2 EX Series

■ Complete range of fully configurable Box PCs

- ✓ Passive cooled
- ✓ Designed for Oil & Gas
- ✓ Windows 7 & Windows 10 IoT
- ✓ Unique part numbers
- ✓ Expansion options
- ✓ Thicker front glass
- ✓ Box PC and PCAP panel PCs
- ✓ Triple HAZLOC

■ Performance Classes

- ✓ VL2 BPC 1000 – Intel Atom E3845 1.91 GHz (4 core)
- ✓ VL2 BPC 2000 – Intel Celeron N2930 1.6 GHz (4 core)
- ✓ VL2 BPC 3000 – Intel Core i3-4010U 1.7 GHz (2 core)
- ✓ VL2 BPC 7000 – Intel Core i5-4300U 1.9 GHz (2 core)
- ✓ VL2 BPC 9000 – Intel Core i7-6822 EQ 2 GHz (4 core)



Box and panel PCs for hazardous locations - VL2 EX Series

- Enhanced approvals
 - ✓ BPC: Class I Div 2, ATEX Zone 2 and IECex Zone 2
 - ✓ PPC: Class I Div 2, ATEX Zone2/22 and IECex Zone2/22
 - ✓ NOTE: Not approved for C2D2 combustible dust!
- Changes from standard “VL2”
 - ✓ Unique “EX” part numbers
 - ✓ Component based system enhancements
 - ✓ Thicker front glass with higher impact resistance
 - ✓ Does not replace the “standard” VL2



Panel PCs for harsh environments – VL2 PPC 1000

Corrosion resistant design

- Housing, surfaces and components.

Outdoor installation possible

- Wide operating temperature (-20°C to +70°C)
- UV and IR protection



Sunlight readable displays

- GFG (Glass-Film-Glass), low reflective
- PCAP low reflective

Glass front surface

- Scratch resistant
- Higher impact resistance



Panel PCs for mobile applications – VMT 9000

- Fully enclosed, fanless IP66 outdoor rated Panel PCs

- ✓ 4:3 Display sizes 10", 12" and 15"
- ✓ 16:9 Display size 12.1"
- ✓ Sunlight readable
- ✓ 4 configurable front buttons
- ✓ Optional WIFI and LTE/GPS
- ✓ Passive cooled
- ✓ Impact resistant screen
- ✓ -30°C to +60°C
- ✓ 9V to 30VDC operation
- ✓ UL ord. loc.

- Performance class

- ✓ VMT 9000 – Atom x7-E3950 2.0 GHz



Rugged HMI & IPC – Applications



Tethered robot & machine teach-panels – HTP10 1000

- ✓ Hand-held operator panel with software for on-site visualization, or multi-user operation
- ✓ Rugged design for high shock resistance
- ✓ All-round protection (IP65)
- ✓ Ergonomic design
- ✓ Simple and intuitive operation
- ✓ Integrated safety function



Tethered robot & machine teach-panels – HTP10 1000

- Hand-held operator panel with software for on-site visualization or multi-user operation
- 16:9 display aspect ratio
 - ✓ 10.1" Wide Screen Display
 - ✓ Mobile (tethered) panel operation
 - ✓ Ergonomic design
 - ✓ Windows 10 IoT
 - ✓ Passive cooled
 - ✓ Multiple accessories available
 - ✓ Integrated safety
 - ✓ Software flexibility
- Intel CPU technology
 - ✓ HTP10-1000 – 3rd gen. (Bay Trail) E3815 1.46 GHz (1 core)



IPC Applications



Basic industrial panel PC application

Printing / cutting machinery

Application

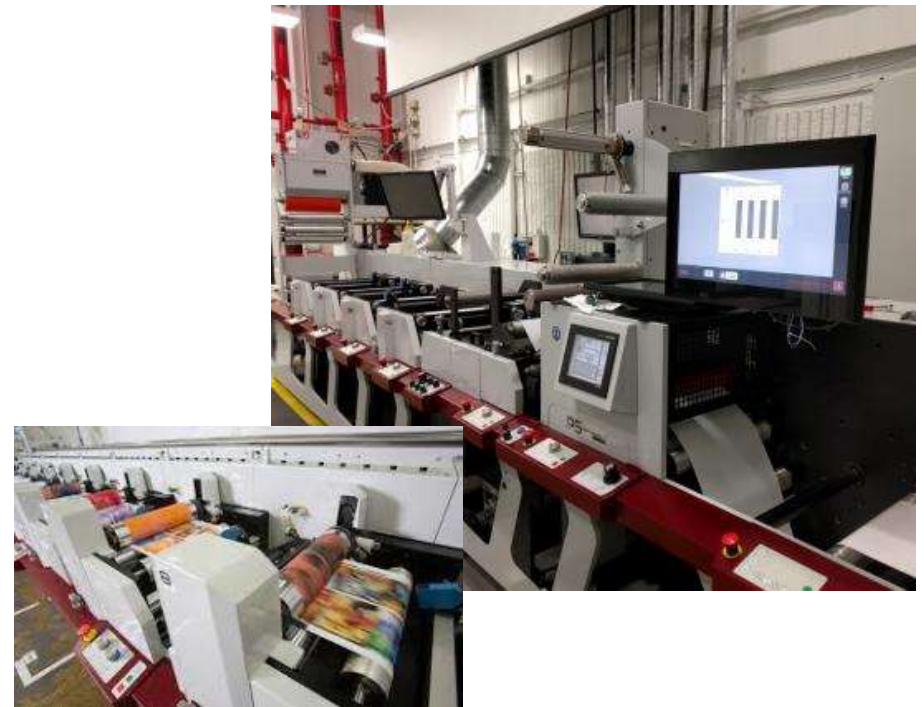
- ✓ Print & Cutting Machines

IPC Model

- ✓ BL BPC 2000
- ✓ BL FPM

Winning factors

- ✓ Esthetics of BL FPM (clean, flush design)
- ✓ Competitive combination of BL BPC & BL FPM



All-in-one panel PC application

Automotive

Application/Industry

- Welding robot control

IPC Model

- DL PPC15M 2000

Winning factors

- Custom part number
- Rugged design
- Space savings



All-in-one panel PC application

Total plant management system

IPC Model

- ✓ DL PPC21.5 7000

Competiton

- ✓ N/A

Winning factors

- ✓ Modern, ergonomic design
- ✓ All-round IP65 protection
- ✓ Robust construction needed in harsh environment
- ✓ Easily serviceable
- ✓ VESA mount

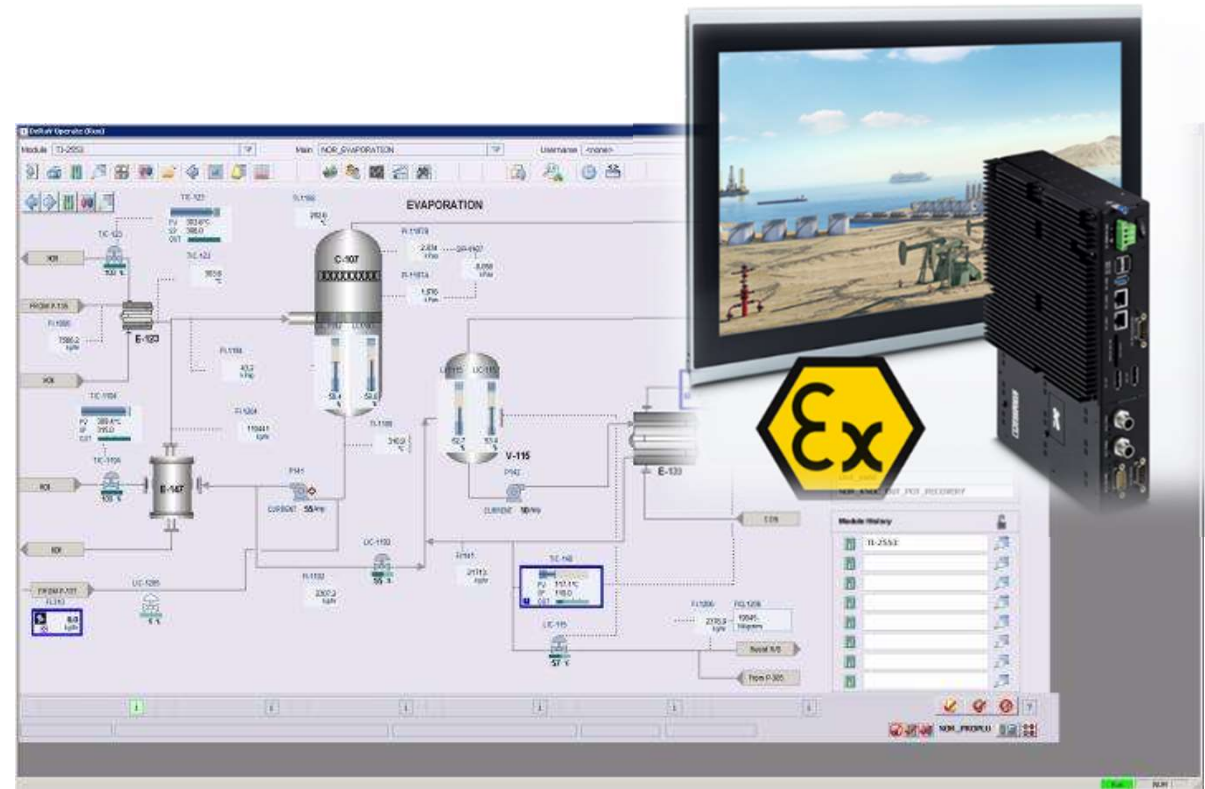


HazLoc industrial panel PC application

Process industry

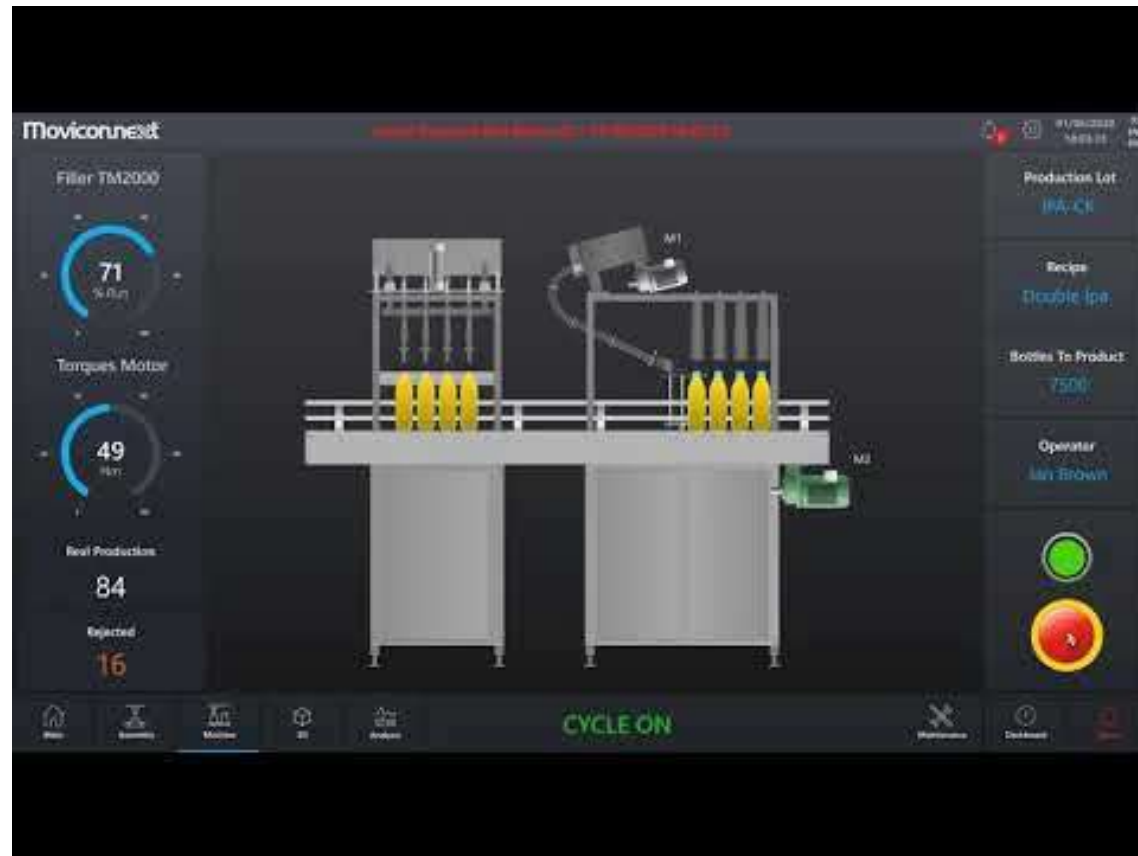
Application/Industry

- ✓ Control systems for process
- ✓ IPC Model
- ✓ VL2 PPC EX 9000
- ✓ Winning factors
 - ✓ Custom part number
 - ✓ Custom software image
 - ✓ Global support



PPC

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Demo Manufacturing - Machines Movicon.NEXt 4.0 Designline

Webinar IMA 2020

Mayor información



Phoenix Contact,S.A. de C.V.
Lago Alberto 319 Piso 9,
Locales 902 y 903-A.
Col. Granada Del. Miguel Hidalgo,
Ciudad de México. 11520
Tel.: +52 55 1101 1380 Ext. 393
Cel.: +52 55 3233 6518
agordillo@phoenixcontact.com.mx
www.phoenixcontact.com.mx



Ing. Antonio Gordillo
Infraestructure and Systems Automation
Product Marketing Manager

www.phoenixcontact.com.mx

ventas@phoenixcontact.com.mx

55 1101 1380

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