Industrial PC

Catalogue

TRsystems

Individual solutions based on standard platforms

TRsystems was founded in 1992 in Trossingen and is a part of the TRgroup operating worldwide. TRsystems develops and produces:

- **Industrial PCs**
- **Fieldbus I/O**
- **Condition Monitoring**
- **PLC**
- **Cam controller**
- **Servo controller for hydraulic**
- **Data logger**
- **Data communication gateways**

TRsystems is your partner for individual system solutions based on standard platforms. From the idea conception and project planning to the implementation, training and maintenance, TRsystems has you covered.

At TRsystems we understand in order to meet our customers unique needs, custom solutions may be required. Therefore, our team of professional experts will work with you to understand your technical requirements and evaluate both the technical and economical feasibility in order to deliver a custom solution for your application.

Your In Control:

Should your application require custom solutions, our team of experts will provide you with a complete project plan to keep you informed and up-to-date with the status of your project. In addition, should your application requirements change our team will be able to respond to your issues promptly.

We‘re Here to Help:

Committed to delivering superior customer service and support our team of engineers and factory-trained technicians will provide training and assistance to always ensure seamless integration.

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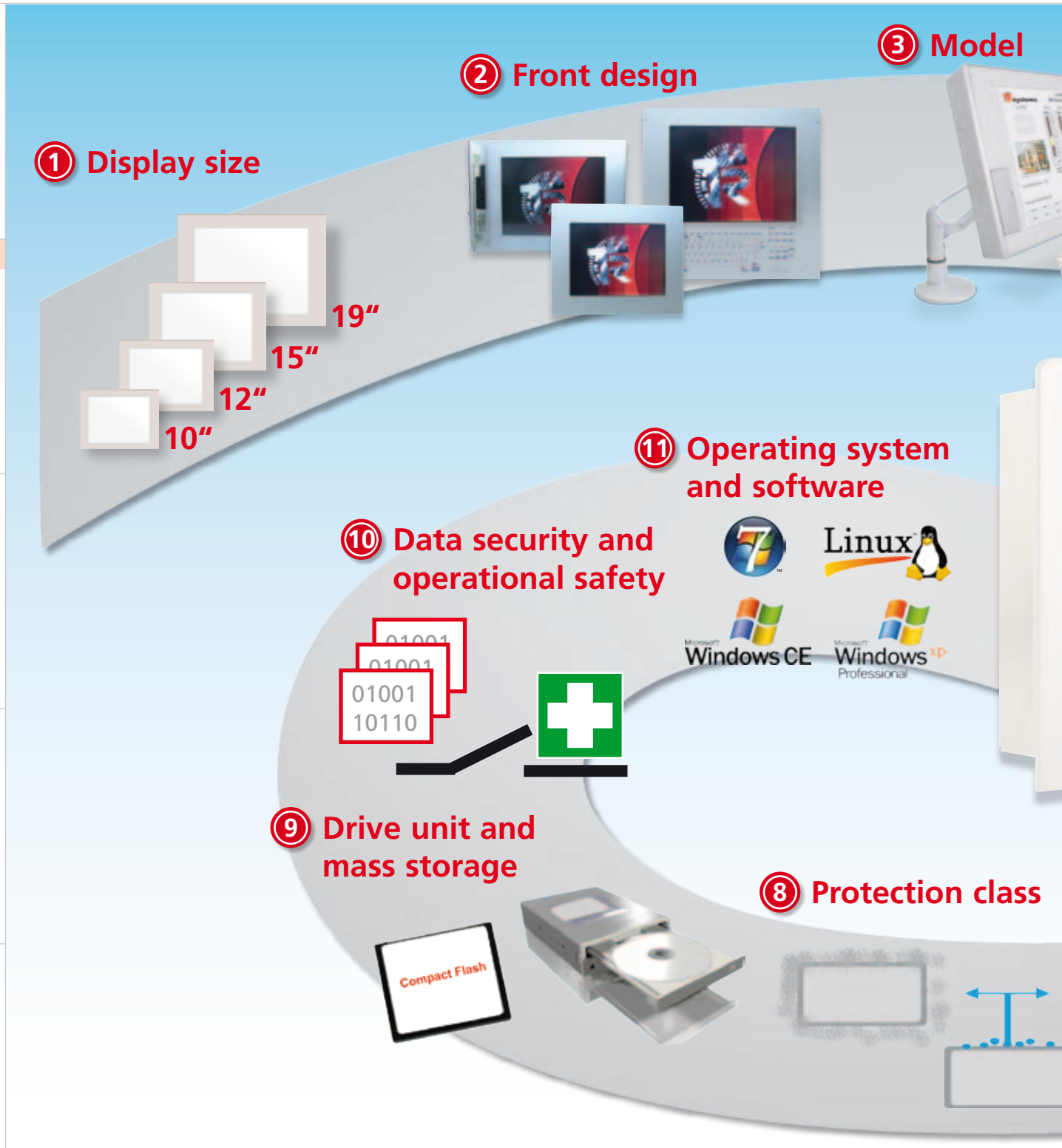
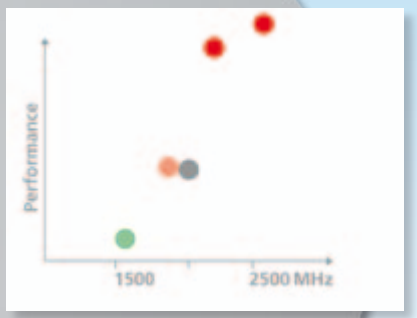
Numerous Variations

Compose your individual industrial PC according to your needs

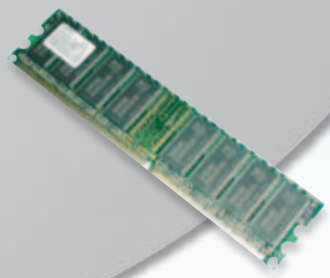


4 Cooling system

5 CPU performance



6 Working storage



7 Interfaces

PROFINET
PROFIBUS
EtherCAT
CANopen
ETHERNET POWERLINK
INTERBUS
EtherNet/IP

1. Display Size and Resolution

Built strong for tough industrial environments

254 mm up to 482,6 mm

Industrial PC's that have been designed to be built into an equipment cabinet or bar-storage arm and durable enough to withstand harsh industrial environments.

482,6 mm (19") SXGA 1280 x 1024

381 mm (15") XGA 1024 x 768

304,8 mm (12") SVGA 800 x 600, XGA 1024 x 768

254 mm (10") VGA 640 x 480, SVGA 800 x 600

Further options on request.

2. Front Variations

For user-friendly operation

Durable 8-Wire Touch System

All displays can be equipped with a durable touch screen that will only react to pressure on the display surface, rather than movements. Designed to withstand water, dirt and light.

Front Keyboard

Should your display front require a keyboard function, we will create a custom solution to meet your unique requirements.

Interfaces via Front Access

Easily integrate drives and/or interfaces that are accessible from the front providing you with quick access to your data without opening the equipment or control cabinet.

Custom Design

Should you require further customization with your display, our team will work with you to custom-fit a solution to your unique requirements.

You can arbitrarily combine the shown display features. For example, you choose the keybord and access from the front, you would have to enter the following order code - 0110.

Further options on request.

3. Model

Panel PC / with support arm or PC with a distributed display

Panel PC

To obtain such a compact model, we combined display and control element as well as PC in one housing. Therefore, there won't be any cable tangle between the individual elements and you can intigrate a front access for CD/DVD.

Panel PC with support arm

Through the support arm Vesa 75, the Panel PC can be installed without any problems for optimal handling and ease of use.

PC with a distributed display

This option separates the display and control element from the PC unit. The advantage of this option is that you can store the PC unit in a safe environment like an equipment cabinet where it is protected from environmental infulences. The display unit can be installed in the field. Due to its flat size the display is ideal for the use in a control panel or a storage-arm.
With the "TRS-extended" technology you are able to seperate the access of the interface and the DVI up to 40m.

Further options on request.

4. Cooling Systems

With cooling element or fan

Cooling element

The fanless cooling system is maintanance free. You can use this fanless PC in a temperature upto 45°C. The rejected heat is directly transfered via heat conductor to the cooling element.

Controlled fan

The VPC alternative with fan can be used in environments with temperatures up to 50°C. The optimal air flow makes sure that no heat pockets occur. This model features a passive backplane with up to two PCI and ISA slots.

Further options on request.

5. CPU Performance

Performance classes for each demand

The heart of the industrial PC – the CPU board with a performance class from Intel® Atom™ to Intel® Celeron® up to Intel® Core™2 Duo multi core processor – brings high performance to your controlling task. The selection of the CPU performance depends on the system (basis slot CPU or ETX). We gladly consult you with your decision to the right performance class for your application. In combination with the suitable working storage, your industrial PC is perfectly equipped for your application.

For PCs with cooling elements

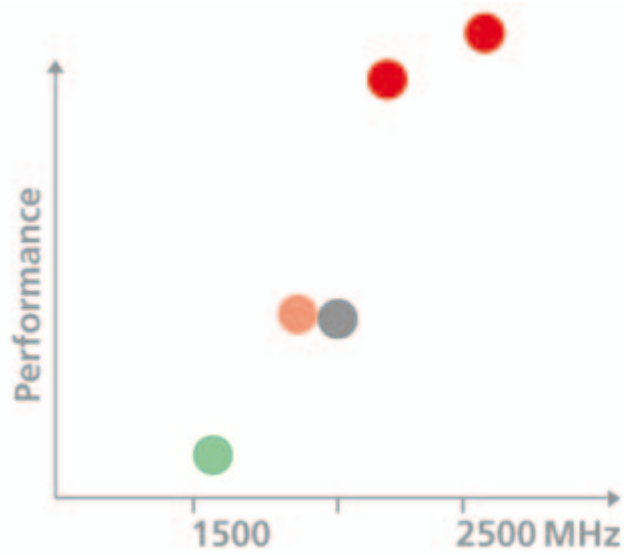
ETX-Module (CPU Onboard)	
Intel® Atom™ N270	1.6 GHz
Intel® Dual Core™ Atom D510	1.8 GHz
Intel® Core™2 Duo L2400	2x 1.66 GHz

For PCs with monitored fans

SLOT CPU	
Intel® Atom™ N270	1.5 GHz
Intel® Atom™ Dual Core™ D525	1.8 GHz
Intel® Celeron® C550	2.0 GHz
Intel® Core™2 Duo	2x 2.2 GHz
Mini ITX Module (CPU Onboard)	
Intel® Atom™ N270	1.6 GHz
Intel® Dual Core™ Atom D510	1.8 GHz
Intel® Core™2 Duo T9400	2x 2.53 GHz

Further options on request.

Diagram of the CPU Performance



Intel® Core2™ Duo
Intel® Celeron® M
Intel® Atom™ Dual Core
Intel® Atom™

6. Working memory

To complete - the central core - the CPU , select the according memory to your application.
512 MByte up to 4 GByte

Further options on request.

7. Interfaces

Wide selection of standard interfaces

Each VPC combination provides you with a wide selection of options. The ETX module is independent from the standard fieldbus interfaces. Should you require a CPU performance not show below, please contact us for further assistance.

For PCs with cooling element

Standard (always included in delivery)		
LAN	x	2x onboard
USB 2.0	x	2x onboard
RS232	x	
VGA	x	
Advance options / Fieldbusses (optional)		
CAN	☐	up to 2
Profibus	☐	
RS232	☐	

For PCs with monitored fans

Standard (always included in delivery)	
LAN	x
USB 2.0	x
RS232	x
VGA	x
PS/2 (Maus / Tastatur)	x
Advance options / Fieldbusses (optional)	
CAN	☐
Profibus	☐
RS232	☐
CF II Adapter	☐
Audio	☐
LPT1	☐
USB 2.0	☐
LAN	☐

Further options on request.

Ethernet

Fieldbus

Protection Class

All our display fronts are splash water and dust proofed and therefore, completely industrial functional. IP65 is a front side standard and if needed, the back side can be provided with a higher protection class as well.

Standard	IP65 front side IP20 back side
Enhanced	IP65 front side IP54 back side

Further options on request.

9. Drive Unit and Mass Storage

Hard drive and reading/writing device

You have control when it comes to building your drive. You can select a high storage performance hard drive and/or up to two compact flash storage drives without using rotating parts. Additionally you can add read/write devices such as CD/DVD and/or a disk drive. Storage cards and disk drives are found under accessories on page 15. Our know-how allows us to integrate the components you need to custom fit your Industrial PC.

Hard drives - industrial suited - long durability within rugged environmental conditions	20 GByte up to 500Gbyte (Customized configurations on request!)
	RAID 1-system
	SSD - Solid State Disk
Compact Flash-Adapter	one Compact Flash-Adapter
	two Compact Flash-Adapter
Read-/Write device	CD/DVD-ROM
	CD/DVD-RW

10. Data Security and Operational Safety

DC control or external UPS

To guarantee your PCs data security and operational safety, we offer two solutions. One is a DC control developed by TRsystems or the other one is an external UPS. Both varieties provide optimal protection during power outage.

DC control	To guarantee data security and operational safety of your PC, we offer you a integrated exchangeable UPS system with monitoring circuit. This package offers you the possibility to directly assign parameter of a monitoring circuit over an application.
External UPS	external UPS supply

Further options on request.

11. Operating Systems

And software

Operating systems	Win 7	
	WinXP	
	WinXP embedded	
	WinCE	
	Win2000 (on request)	
	DOS (on request)	
	LINUX	
Software	CoDeSys-SoftSPS	
	CoDeSys-SoftMotion	
	CoDeSys-visualization tool	HMI (WinXP)
		WebVisu (WinCE, Linux)
		TargetVisu (WinCE, Linux)
	OPC-Server	
	VT (Virtual Terminal)	
	Thin Client	
	IBH S7	
	IBH S5	

Extraction of the Accessories

PCI fieldbus card

Profibus DP-Master
Profibus DP-Slave
Interbus Master
CANopen Master

Compact flash and SD card

128 MByte
256 MByte
1 GByte
2 GByte
4 GByte

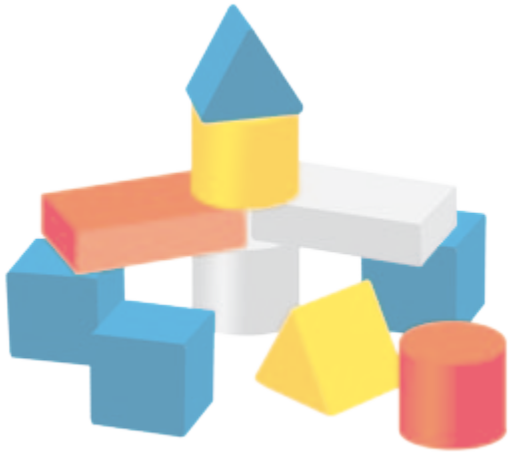
Disk drive 3.5“ (front access to the drive)

Further options on request.

Configuration

Compose your own individual VPC

Numerous variations



Configuration possibilities for Industrial PC's are endless. Like any modular system, you can custom build your own PC for your unique application requirements. Contact us for assistance with custom fitting a solution for your unique needs.

VPC	
Specification	Example
Model	VPC
Temperature range	0...40 °C
Display size	305 mm (12")
Protection type	IP 65 front side, IP20 back side
CPU performance	Intel Atom 1.6 GHz
Memory	1 GByte
Drives	CF-Card
CF-Capacity	2 GByte
Pointing device	Touch-screen
Operating system	WinCE
Software	CoDeSys Runtime
Interfaces	- 1x COM - 2x USB - 2x LAN - 1x CAN
Front basic set-up	Standard VPC (Aluminium anodized)
Installation	embedded
Supplies	-

Further options on request.

We are looking forward to hearing from you.

Compact Controller

With display (HMI Control) and without display

The compact controllers are the smallest form to enter control technology. Their delivery includes Ethernet, USB and a CAN fieldbus interface. Further fieldbus interface options (such as CAN or Profibus) are available. The VDC design, the so-called HMI control, is available in combination with CoDeSys a capable soft PLC.

Always included in delivery: Ethernet, USB, RS232, RS485/RS232, CAN, SD card adapter

VCC1 (with display)	
Display size	3,5", QVGA 320x240
	5,7", QVGA 320x240
CPU performance	ARM9 155 MHz
	ARM9 400 MHz
Enhanced interfaces	CAN
	Profibus
Operational systems	WinCE
	Linux
Software	CoDeSys SoftSPS

VCC1

VCC3	
CPU performance	ARM9 155 MHz
	ARM9 400 MHz
Enhanced interfaces	CAN
	Profibus
Operational systems	WinCE
	Linux
Software	CoDeSys SoftSPS

VCC3

Further options on request.

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