Product catalog

Operating & Monitoring
Embedded- & Industrial-PCs

///LAUER

Ein Unternehmen der ACKSYS Technologie AG

Intelligent interface communication

Increase in value begins where man and machine work together synergetically.

For more than 25 years Elektronik-Systeme LAUER has been developing innovative system solutions for the interface between man and machine. Our aim is to provide the user with efficient structural models. Perfected, tested and always tailored to the particular individual requirements of an application. Our responsibility covers: design and installation up to and including the comprehensive support of an application. This is how we generate the added value which our customers expect of us.

Foreword

Integration with AUGUSTA Technologie AG enables Elektronik-Systeme LAUER to access the global structures of the parent company. The worldwide Lauer network ensures that the customer has comprehensive quality criteria:

- In the development of new designs and products which are geared to internationally competitive standards.

- On the selection of components which streamline the cost structures.

- By an international technology transfer which ensures that hardware and software are developed acoording to the latest methods and with particular emphasis on their performance.

We think globally and operate on a worldwide basis in all markets. However, we concentrate on the most important activities of our company at the head office in Unterensingen. Finish, quality control and final performance test are still carried out in the place where the company Elektronik-Systeme LAUER was founded in 1971. Development, design, logistics, administration and production are also implemented here. This guarantees short cuts and rapid delivery scenarios for our customers. And if speed is of the essence, our support will assist you free of charge in both word and deed. For even at the interface between man and machine, everything is based on the machine running time.

Therefore, we also offer our customers training courses and technical training. Therefore, we provide continuously updated drivers, software and handbooks in the download forum. Therefore, one of our most important tasks is talking to and understanding our customers. Therefore, we are selling you not only a product, but also the know-how of our specialists. Which brings us back to people again. Our greatest capital.

We look forward to working with you.

Product overview

Web Operating Panels combines Hard- and Software in perfection. They are available in the design of Touch, Alphanumeric keyboard or in combination. Among other things the integrated Software allows a Client-/Server-functionality.

Embedded PC systems are compact, mechanical rugged and fanless industrial PCs. The attractive design, and the use of the most recent, low-loss electronic components, open a wide range of automation applications. The gamut of applications runs from the display of simple controls to complex machine control tasks with process visualization.

The modular hardware concept of the take off line industrial PC consists of front unit and PC unit. The different front units of the take off line can be combined with the different PC units (economy, business). The ergonomic Design the front unit take off line summarizes the components TFT display, keys and/or Touch.

Text display LCA and Operating Panel PCS - they do a precise ad or news from all: simply over contacts, PLC exits, a serial or field-bus-interfaces. Small and compact, but enormously efficiently, LCA & PCS fits to your individual wishes and of course too almost each PLC.

Multi WOP-iT Panel		Multi WOP-iT G Panel		Mega WOP-iT Panel	Mobile WOP-iT Panel
WOP-iT 640tc	WOP-iT 640ktc	WOP-iT G 1000tc	WOP-iT G 1000ktc	WOP-iT PM-S 1000tc	WOP-iT 840tc Mobile
WOP-iT 1000tc	WOP-iT 1000ktc	WOP-iT G 1200tc	WOP-iT G 1200ktc	WOP-iT PM-S 1200tc	
WOP-iT 1200tc	WOP-iT 1200ktc	WOP-iT G 1500tc		WOP-iT PM-S 1500tc	

6,4"; 10,4"; 12,1" TFT-Display	6,4"; 10,4"; 12,1" TFT-Display	10,4"; 12,1"; 15" TFT-Display	10,4"; 12,1" TFT-Display	10,4"; 12,1"; 15" TFT-Display	8,4" TFT-Display
Page 16	**Page 17**	**Page 18**	**Page 19**	**Page 20**	**Page 21**

	Magellan PM-S	Magellan PM		Magellan Nautic	Magellan Mobile
EPC G 1000ktc	EPC PM-S 1000tc	EPC PM 1200tc	EPC PM 1500ktc	EPC PM 1700 Nautic	EPC 840tc Mobile
EPC G 1200ktc	EPC PM-S 1200tc	EPC PM 1500tc		EPC PM 1900 Nautic	
	EPC PM-S 1500tc	EPC PM 1700tc		EPC PM 2100 Nautic	
		EPC PM 2100tc			

10,4"; 12,1" TFT-Display	10,4"; 12,1"; 15" TFT-Display	12,1"; 15"; 17; 21" TFT-Display	15" TFT-Display	10,4"; 12,1" TFT-Display	8,4" TFT-Display
Page 37	**Page 39**	**Page 41**	**Page 42**	**Page 45**	**Page 48**

VPC take off - Key	VPC take off - Key&Touch	VPC take off - Front drives	VPC take off - Monitor	VPC take off - Monitor
VK 212b	VKT 212b	VTF 212b	MT 212	MK 212
VK 215b	VKT 215b	VTF 215b	MT 215	MK 215
		VKF 215b	MT 217	
			MT 221	

12,1"; 15" TFT-Display	10,4"; 12,1" TFT-Display	12,1"; 15" TFT-Display	12,1"; 15"; 17; 21" TFT-Display	12,1"; 15" TFT-Display
Page 56	**Page 57**	**Page 58/59**	**Page 60**	**Page 60**

PCS 900 WIN	PCS 950 WIN
	PCS 950q WIN

2 line Vakuum-fluoreszenz-Display	CFL-LCD-Display (320 x 240 Pixel)
Page 67	**Page 68**

Additions

Web Operating Panel
WOP-iT®

WOP-iT – Synergetic relationship

WOP-iT stands for a new class of device. With WOP-iT Elektronik-Systeme LAUER is expanding the classic Human Machine Interface (HMI) to an intelligent Management Execution Interface (MEI). With WOP-iT Elektronik-Systeme LAUER is offering the user a new performance class for the automation of machines and equipment.

If the principle of differentiation in the B&B world and SCADA world has set the standard up to now, WOP-iT now combines the complex requirement profiles of both worlds into a standardised system. The new generation of devices is supported by the consistent use of internationally valid Internet standards. This can be regarded as a direct advantage. For interface solutions with WOP-iT are inexpensive. Investments in special hardware and software components, previously indispensable as access tools for terminals and peripherals, can be dispensed with completely. WOP-iT requires only a standard modem or LAN connection.

WOP-iT is also economically viable with a view to the engineering and life cycle costs of an automation solution, as a standardised continuity in project planning/programming, data management and communication can be guaranteed. Suitable drivers are available for the integration of proprietary PLC systems at the WOP-iT project planning level.

Operation, monitoring, visualisation and control – the performance range of WOP-iT in different device configurations offers technically and economically optimised solutions for each application profile.

The whole WOP-iT world can be found on the following pages. Our field service is always available to provide you with comprehensive advice.

In a paint mixing plant the levels of the three paint feed vats and of the mixing vat are to be monitored and displayed. The states of the seven inlet and outlet valves are also to be visualized. The temperature of the mixing vat is also to be represented as a trend. An alarm is to be triggered if the level of the feeding vat falls below 20 %. The display needs to be clearly laid-out and be immediately understandable to the unpractised observer. The alarm acknowledgement, management and documentation process is to be accessible only to authorized users, as is switching from automatic to manual mode. An e-mail alarm is to be sent if necessary.

The complete process control is to be handled by a standard PLC.
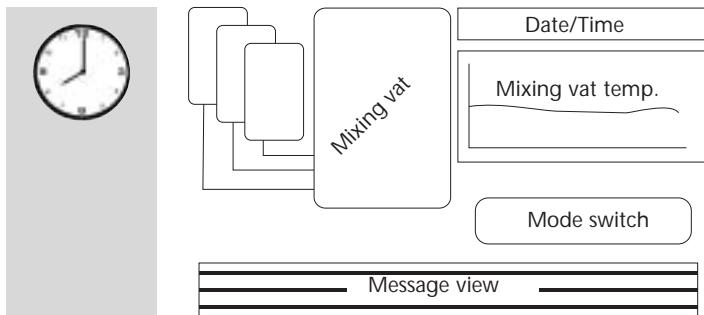
Sketch of the system

The selected system was in line with the task at hand. The PLC used was a SIMATIC S7-315 2DP; the display and operating unit a WOP-iT 640tc (with a 6.4" color display); and the interfacing was executed via MPI. The WOP-iT gateway functionality, in conjunction with the MPI interface, perwiths Ethernet access not only to the panel, but also to the PLC!

To enable sending of e-mails and external access (to the panel and the PLC), a Bintec X1200 router was selected.

WOP-iT 640tc

Ethernet (LAN)

MPI

SPS

Router
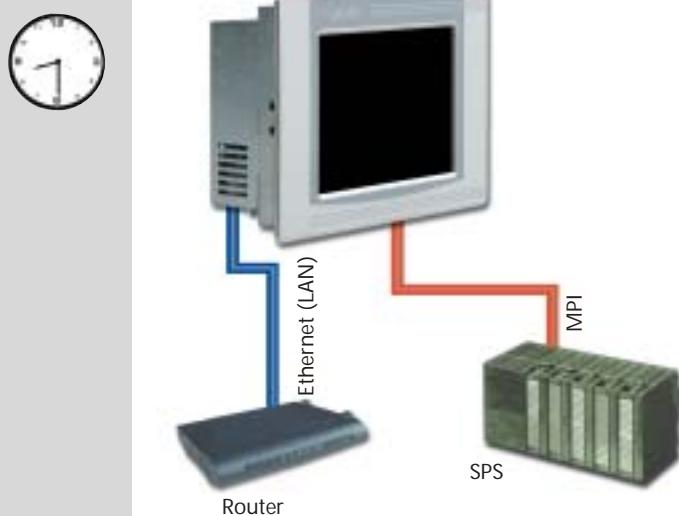
To access connected devices WOP-iT works with variables. This has the advantage for users that they only need to worry about the link to the hardware once, during setup. They then work only with informative variables. Variables can of course be defined at any time, including later. And they can of course also be grouped for block-by-block transfer.

It is also possible to import variables from existing PLC projects for a wide variety of PLCs !
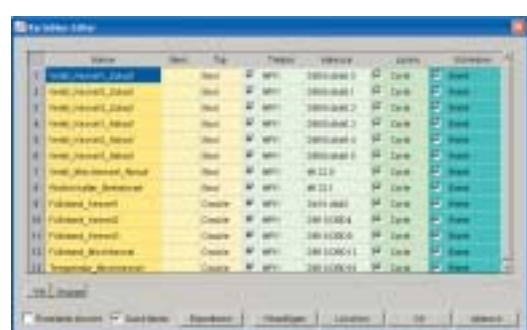
WOP-iT perwiths the integration of background images, logos or other objects in JPG or GIF format. The backgroand image in this fictitious example was created in Paint-Shop and saved as a JPG.

The finished WOP-iT elements, such as switches, input and display fields, Analog instrument, Message view, Recipe view, Scope etc. are simply overlaid on the background, and configured in the relevant setup dialog and linked to the variables at the click of a mouse.

The warnings and alarms to be displayed and/or archived during runtime are configured in the message manager. To that end, the message text - which may also include variable values - is configured when programming a message. The trigger condition specifies when the message in question is to be triggered. The acknowledgement and reset response defines whether and, if so when, a message is confirmed, and whether and when a message is to be cleared from the message view.

By creating or editing message categories, features such as the appearance of various messages can be configured (e.g. alarms red in larger type, operating messages blue in small type...). Message groups are used to filter the message view and for message archiving.

The application can be simulated at any time directly from the development environment in order to test its look and feel and functionality. The application is transferred very quickly and easily to the destination device as a complete project via Ethernet.

The project can be retrieved at any time, and can of course also be password-protected.

...the machine is now running with a visual display for the operator and continuous monitoring of the levels, valve settings and temperatures mentioned. Those data items can of course also be saved and archived. This means the production-related data is seamlessly available for quality verification ...

This short example presents just a small fraction of the WOP-iT software functionality. As well as standard functions such as language switching, user management (including online) and recipe management, WOP-iT also offers a wide range of functions in the fields of arithmetic, Boolean algebra, trigonometry, string functions, e-mail, FDA logging, file operations, etc.

These functions can relieve the workload on the PLC, for example, by handling tasks more usefully - and mostly also more easily – implemented on the WOP-iT panel.

WOP-iT Introduction

WOP-iT® – Your Benefit

Cost Curve of WOP-iT®Solutions - A Comparison ...

Software & Hardware

Costs

Solution with Visual Basic

Commissioning

Solution with SW Licence costs

WOP-iT® (Software incl.)

Application   Support   Extensions   Time
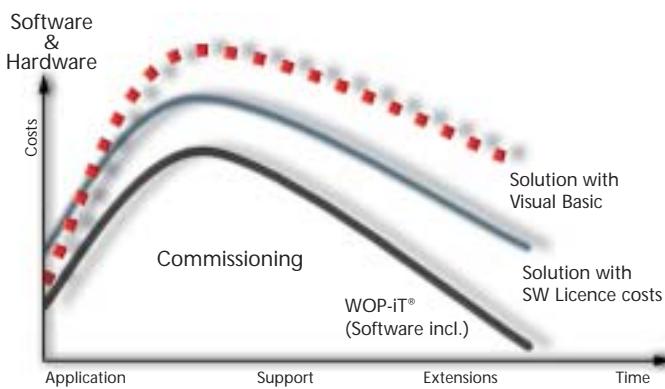
... as seen over the system life cycle.

WOP-iT® – An Economical Solution

Our concept can save you a lot - especially when additional visualization functions are needed. The cost/benefit ratio of WOP-iT® is simply unbeatable. Firstly, because you do not need any more expensive SCADA solutions, secondly because with our license model the price does not increase with the number of variables used – here, too, your are on the safe side with WOP-iT®. And last but not least: Our intelligent WOP software turns each PC in the network (including the Office network) into a full-fledged client; this means that you do not need to purchase special hardware for many of your visualization tasks.

Consistent Configuration for all Terminal Classes

from 5.7" to 15"

Safe Investments - For a Long Time to Come

WOP-iT® Designer allows consistent configuration through-out the entire WOP-iT® family, from the smallest panel to the PC – tailored to different classes of control panels. Once crea-ted, configurations can be re-used within the WOP-iT® product family. Without converting, projects can be scaled and transferred to different WOP-iT® panels.

Notebook wireless via WLAN

Internet

Firewall

Ethernet, TCP/IP

PC as WOP-iT® Client

Fieldbus e. g. MPI®, Profibus, ...

PLC   PLC

Simple and flexible networking by Ethernet across TCP/IP from the PLC via WOP-iT® to the central controller is possible by Internet or Intranet without special hardware. Each WOP-iT® terminal can be accessed via network from the PC.

WOP-iT® in the Network –Always up to Date

A LAN connection is all you need to access the panel. Com-munication is TCP/IP-based and bidirectional. This means that all changes and settings -whether they are made on the panel of in the WOP-iT® client software on the PC – are imme-diately synchronized with one another. Your data is always up to date.

Benefit: The data of each user, no matter if it is a client or a server, is automatically synchronized.

Micro WOP-iT Panels

For efficient machine operation and monitoring in various performance classes – either with a touch-sensitive display or membrane keyboard.

Multi WOP-iT Panels

Offers both touch-sensitive display and membrane keyboard models. Multi-WOP-iT panels are expandable and have high performance, which perwiths the integration of multiple automation tasks on one platform.
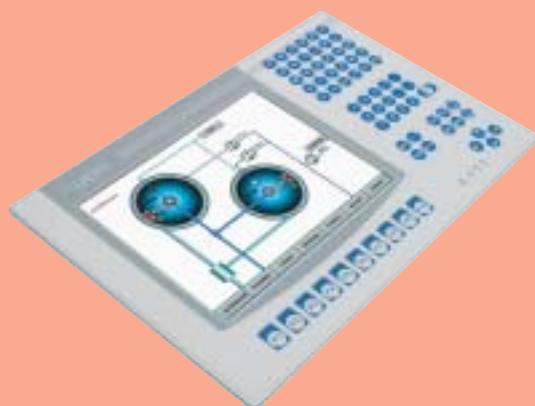
Mega WOP-iT Panels

These Operator panel Generation with Resitive-Touch operating and Compact-Flash memory appeals with the High-Performance Celeron M 1,3 GHz Processor and the small power dissipation of Pentium-M-Technology. The minimal installation depth finds place also in the narrowest space.

Mobile WLAN-Panels

The portable control panels facilitate operation and monitoring on site with direct access to and visibility of the process. They offer simple and safe communication via WLAN and can thus be used flexibly at machines or plants.

Micro WOP-iT Panel

WOP-iT X 550tm/tc

Operating panel WOP-iT X 550 with STN-Color- or Mono-
chrome-Display and Resistive Touch

WOP-iT X 550tm

WOP-iT X 550tc

Back side WOP-iT X 550tm/tc

Technical datas

Frontpanel

STN-Display	5,7", 320 x 240 Pixel Color (65536 Colors) or Monochrome (256 Grayscales)
Input	Resistive Touch
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 0,5 A

System

Processor	Intel PXA255 (ARM), 400 MHz
internal main memory	64 MB SDRAM
external memory medium	64 MB Compact Flash Card (maximum 1 GB)
Operating system	VxWorks

Interfaces

Serial 1	RS232 free for disposal
Ethernet	10/100 Mbps
USB	not supported under WOP-iT
Module	for Bus systems and PLC coupling (e. g. MPI, Profibus, CAN, ...)

General

Front material	Aluminium
Foil	acid-resistant polyester foil
Outer dimensions (B x H x T)	215 x 160 x 53 mm
Mounting dimensions (B x H)	197 x 143 mm
Weight	approx. 1 kg
Temperature	Operation: 0 ... 50° C
	Storage: -20 ... 60° C

Ordering information

Article	Description	Order number
WOP-iT X 550 tm	Operating panel with 5,7" STN-Monochrome-Display, Resistive Touch	960.120.0080
WOP-iT X 550 tc	Operating panel with 5,7" STN-Color-Display, Resistive Touch	960.120.0090

Operating panel with Resistive Touch

WOP-iT X 640tc

WOP-iT X 840tc

WOP-iT X 1000tc

Back side WOP-iT X ... tc

Ordering information

Article	Description	Order number
WOP-iT X 640 tc	Operating panel with 6,4" TFT-Color-Display, Resistive Touch	960.115.0020
WOP-iT X 840tc	Operating panel with 8,4" TFT-Color-Display, Resistive Touch	960.115.0040
WOP-iT X 1000tc	Operating panel with 10,4" TFT-Color-Display, Resistive Touch	960.205.0020

Technical datas

Frontpanel

TFT-Display	6,4":	640 x 480 Pixel
	8,4":	640 x 480 Pixel
	10,4":	640 x 480 Pixel
Color	65536 Colors	
Input	Resistive Touch	
Protection type	IP 65 front side by DIN EN60529	

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 0,5 - 1,0 A (depends on display)

System

Processor	Intel PXA255 (ARM), 400 MHz
internal main memory	128 MB SDRAM
external memory medium	64 MB Compact Flash Card (maximum 1 GB)
Operating system	VxWorks

Interfaces

Serial 1	RS232 free for disposal
Ethernet	10/100 Mbps
USB	not supported under WOP-iT
Module	for Bus systems and PLC coupling (e. g. MPI, Profibus, CAN, ...)

General

Front material	Aluminium	
Foil	acid-resistant polyester foil	
Outer dimensions (B x H x T)	6,4":	211 x 156 x 57 mm
	8,4":	252 x 190 x 61 mm
	10,4":	318 x 244 x 63 mm
Mounting dimensions (B x H)	6,4":	197 x 142 mm
	8,4":	232 x 170 mm
	10,4":	303 x 229 mm
Weight	6,4":	approx. 1,2 kg
	8,4":	approx. 1,9 kg
	10,4":	approx. 2,3 kg
Temperature	Operation:	0 ... 50° C
	Storage:	-20 ... 60° C

Micro WOP-iT Panel

WOP-iT X 550 km/kc

Operating panel with alphanumeric keyboard
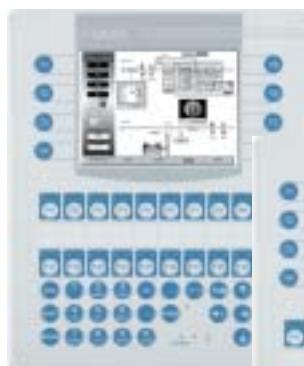
WOP-iT X 550km

WOP-iT X 550kc

Back side WOP-iT X 550k

Technical datas

Frontpanel

STN-Display	5,7", 320 x 240 Pixel; Color (65536 Colors) or Monochrome (256 Grayscales)
Input	Alphanumeric keyboard
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 0,5 - 1,0 A (depends on display)

System

Processor	Intel PXA255 (ARM), 400 MHz
internal main memory	64 MB SDRAM
external memory medium	64 MB Compact Flash Card (maximum 1 GB)
Operating system	VxWorks

Interfaces

Serial 1	RS232 free for disposal
Ethernet	10/100 Mbps
USB	not supported under WOP-iT
Module	for Bus systems and PLC coupling (e. g. MPI, Profibus, CAN, ...)

General

Front material	Aluminium
Foil	acid-resistant polyester foil
Outer dimensions (B x H x T)	224 x 280 x 60 mm
Mounting dimensions (B x H)	204 x 260 mm
Weight	approx. 1,2 kg
Temperature	Operation: 0 ... 50° C
	Storage: -20 ... 60° C

Ordering information

Article	Description	Order number
WOP-iT X 550km	Operating panel with 5,7" STN-Monochrome-Display, front side keyboard	960.120.0110
WOP-iT X 550kc	Operating panel with 5,7" STN-Color-Display, front side keyboard	960.120.0100

Operating panel system with alphanumeric keyboard and geprüft nach BVS 06 ATEX E 031

S-WOP/485 Cable
max. 300 m
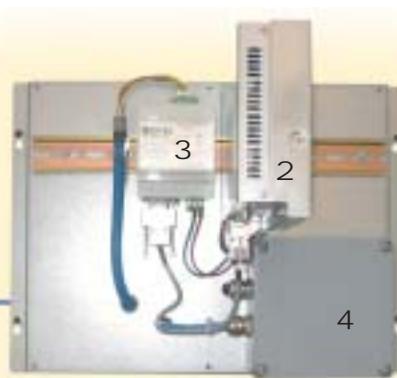
1 WOP-iT Exi (Frontend) - for Ex area
2 WOP-iT Box Exi (Backend) - for NOT-Ex area (with top hat rail installation)
3 WOP-iT RS485 Exi - Konverter RS232/485 for NOT-Ex area (with top hat rail installation)
4 Exi Power - Power supply for EX area 24 VDC - 12 VDC (optional)

Ordering information

Article	Description	Order number
WOP-iT X 550km Exi	WOP-iT 550 Exi (Frontend) WOP-iT 550 Exi Box (Backend) RS 485 Exi Converter	960.125.0010
S-WOP/485.03	Cable for connection RS485 to RS485 - 3 m	310.200.2230
DATL-A-4-0.20	Cable for Power supply for EX area - 20 m	310.220.2241
Exi Power	Power supply for EXi area 24 VDC - 12 VDC	960.300.0110

WOP-iT 550 Exi Box (Backend)

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 0,4 A

System

Processor	Intel PXA255 (ARM), 400 MHz
internal main memory	64 MB SDRAM
external memory medium	64 MB Compact Flash Card (maximum 1 GB)
Operating system	VxWorks

Interfaces

Serial 1	RS232, for connection with the RS 485 Exi Converter
Ethernet	10/100 Mbps
USB	not supported under WOP-iT
Module	for Bus systems and PLC coupling (e. g. MPI, Profibus, CAN, ...)

### General

Outer dimensions (B x H x T)	approx. 53 x 140 x 195 mm
Weight	approx. 1,0 kg
Temperature	Operation: 0 ... 50° C
	Storage: -20 ... 60° C

Technical datas

WOP-iT 550 Exi (Frontend)

STN-Display	5,7", 320 x 240 Pixel Monochrome (16 Grayscales)
Input	Alphanumeric keyboard
Protection type	IP 65 front side by DIN EN60529

Electricity supply

2 electric circuit with each:

Operation value	12,5 V ± 20%, polarised
Current consumption	approx. 0,5 A

For secure operation in the field are inherently safe electric circuit under the terms of operating manual necessary.

General

Front material	Aluminium
Foil	acid-resistant polyester foil
Outer dimensions (B x H x T)	224 x 280 x 60 mm
Mounting dimensions (B x H)	204 x 260 mm
Weight	approx. 6,7 kg
Temperature	Operation: 0 ... 60° C
	Storage: -20 ... 60° C

RS 485 Exi Converter (RS232 to RS485)

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 0,2 A

General

Outer dimensions (B x H x T)	70 x 95 x 58 mm
Weight	approx. 0,11 kg
Temperature	Operation: 0 ... 50° C
	Storage: -20 ... 60° C

Multi WOP-iT Panel

WOP-iT 640tc / 1000tc / 1200tc

Operating panel with Resistive Touch
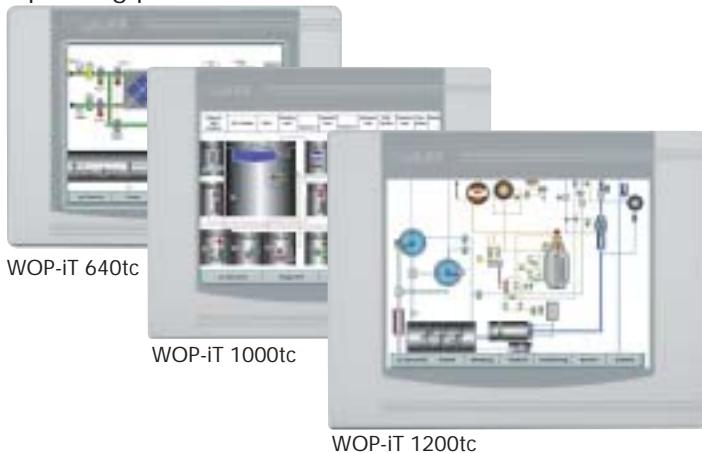
WOP-iT 640tc

WOP-iT 1000tc

WOP-iT 1200tc

Back side WOP-iT ... tc

Technical datas

Frontpanel

TFT-Display	6,4": 640 x 480 Pixel 10,4", 12,1": 800 x 600 Pixel
Input	Resistive Touch
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 0,7 - 1,0 A (depends on display)

System

Processor	NS-Geode (x86), 300 MHz
internal main memory	128 MB SDRAM
external memory medium	64 MB Compact Flash Card (maximum 2 GB)
Operating system	VxWorks

Interfaces

Serial	1 x RS232
Ethernet	2 x 10/100 Mbps
Keyboard/Mouse	1 x PS/2 (combined)
USB	not supported under WOP-iT
Interfaces	PC/104
Module	for Bus systems and PLC coupling (e. g. MPI, Profibus, CAN, ...)

General

Front material	Aluminium	
Foil	acid-resistant polyester foil	
Outer dimensions (B x H x T)	6,4":	211 x 156 x 68 mm
	10,4":	318 x 244 x 68 mm
	12,1":	364 x 296 x 68 mm
Mounting dimensions (B x H)	6,4":	197 x 142 mm
	10,4":	303 x 228 mm
	12,1":	345 x 277 mm
Weight	6,4":	approx. 1,0 kg
	10,4"	approx. 2,5 kg
	12,1":	approx. 2,8 kg
Temperature	Operation:	0 ... 50° C
	Storage:	-20 ... 60° C

Ordering information

Article	Description	Order number
WOP-iT 640 tc	Operating panel with 6,4" TFT-Color-Display, Resistive Touch	960.115.0010
WOP-iT 1000 tc	Operating panel with 10,4" TFT-Color-Display, Resistive Touch	960.205.0010
WOP-iT 1200 tc	Operating panel with 12,1" TFT-Color-Display, Resistive Touch	960.215.0010

Back side WOP-iT ... ktc

Operating panel with Resistive Touch and alphanumeric keyboard

WOP-iT 1200ktc

WOP-iT 1000ktc
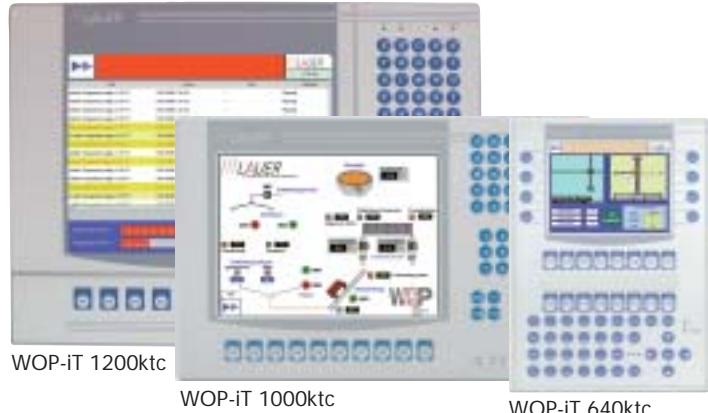
WOP-iT 640ktc

Ordering information

Article	Description	Order number
WOP-iT 640ktc	Operating panel with 6,4" TFT-Color-Display, front-side keyboard and Resistive Touch	960.115.0050
WOP-iT 1000ktc	Operating panel with 10,4" TFT-Color-Display, front-side keyboard and Resistive Touch	960.225.0010
WOP-iT 1200ktc	Operating panel with 12,1" TFT-Color-Display, front-side keyboard and Resistive Touch	960.235.0010

Technical datas

Frontpanel

TFT-Display	6,4": 640 x 480 Pixel 10,4", 12,1": 800 x 600 Pixel
Input	Resistive Touch + Alphanumeric keyboard
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 0,7 - 1,0 A (depends on display)

System

Processor	NS-Geode (x86), 300 MHz
internal main memory	128 MB SDRAM
external memory medium	64 MB Compact Flash Card (maximum 2 GB)
Operating system	VxWorks

Interfaces

Serial	1 x RS 232
Ethernet	2 x 10/100 Mbps
Keyboard/Mouse	1 x PS/2 (combined)
USB	not supported under WOP-iT
Interfaces	1 x PC 104
Module	for Bus systems and PLC coupling (e. g. MPI, Profibus, CAN, ...)

General

Front material	Aluminium	
Foil	acid-resistant polyester foil	
Outer dimensions (B x H x T)	6,4":	234 x 314 x 60 mm
	10,4":	410 x 266 x 70 mm
	12,1":	483 x 310 x 64 mm
Mounting dimensions (B x H)	6,4":	218 x 298 mm
	10,4":	388 x 244 mm
	12,1":	452 x 292 mm
Weight	6,4":	approx. 1,2 kg
	10,4"	approx. 3,4 kg
	12,1":	approx. 4,4 kg
Temperature	Operation:	0 ... 50° C
	Storage:	-20 ... 60° C

Multi G WOP-iT Panel

WOP-iT G 1000tc / 1200tc / 1500tc

Operating panel with Resistive Touch

WOP-iT G 1200tc

WOP-iT G 1500tc

WOP-iT G 1000tc
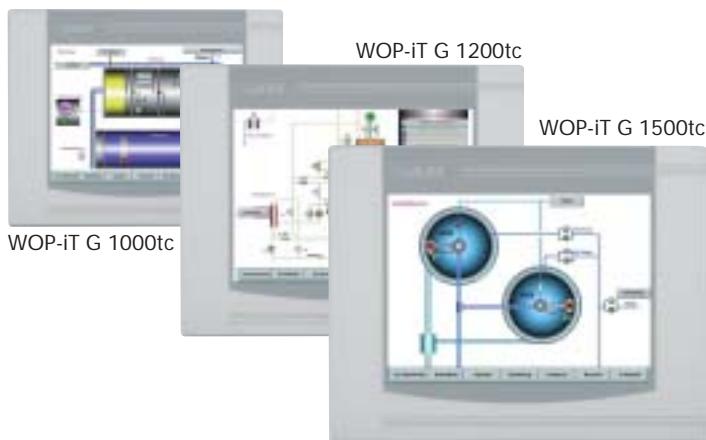
Back side WOP-iT G ... tc

Technical datas

Frontpanel

TFT-Display	10,4", 12,1": 800 x 600 Pixel 15": 1024 x 768 Pixel
Input	Resistive Touch
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 1,0 - 2,0 A (depends on display)

System

Processor	VIA C3 (x86), 1 GHz
internal main memory	256 MB SDRAM
external memory medium	1 GB Compact Flash Card
Operating system	Embedded XP

Interfaces

Serial	2 x RS 232
Ethernet	2 x 10/100 Mbps
Keyboard/Mouse	each 1 x PS/2
VGA	for external Monitor
USB	2x USB 1.1 (max. 0,5 A pro Port)
Interfaces	PC/104
Module	for Bus systems and PLC coupling (e. g. MPI, Profibus, CAN, ...)

General

Front material	Aluminium	
Foil	acid-resistant polyester foil	
Outer dimensions (B x H x T)	10,4":	318 x 244 x 68 mm
	12,1":	364 x 296 x 68 mm
	15":	452 x 357 x 88 mm
Mounting dimensions (B x H)	10,4":	303 x 228 mm
	12,1":	345 x 277 mm
	15":	429 x 334 mm
Weight	10,4":	approx. 2,3 kg
	12,1":	approx. 2,8 kg
	15":	approx. 5,0 kg
Temperature	Operation:	0 ... 50° C
	Storage:	-20 ... 60° C

Ordering information

Article	Description	Order number
WOP-iT G 1000 tc	Operating panel with 10,4" TFT-Color-Display, Resistive Touch	960.240.0010
WOP-iT G 1200 tc	Operating panel with 12,1" TFT-Color-Display, Resistive Touch	960.240.0040
WOP-iT G 1500 tc	Operating panel with 15" TFT-Color-Display, Resistive Touch	960.240.0050

Back side WOP-iT G ... ktc

Operating panel with Resistive Touch and alphanumeric keyboard
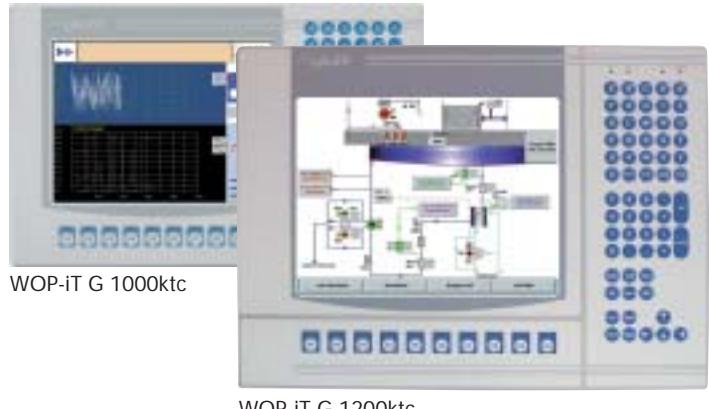
WOP-iT G 1000ktc

WOP-iT G 1200ktc

Ordering information

Article	Description	Order number
WOP-iT G 1000ktc	Operating panel with 10,4" TFT-Color-Display, front-side keyboard and Resistive Touch	960.240.0020
WOP-iT G 1200ktc	Operating panel with 12,1" TFT-Color-Display, front-side keyboard and Resistive Touch	960.240.0030

Technical datas

Frontpanel

TFT-Display	10,4", 12,1": 800 x 600 Pixel
Input	Resistive Touch + Alphanumeric keyboard
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 1,0 - 2,0 A (depends on display)

System

Processor	VIA C3 (x86), 1 GHz
internal main memory	256 MB SDRAM
external memory medium	1 GB Compact Flash Card
Operating system	Embedded XP

Interfaces

Serial	2 x RS 232
Ethernet	2 x 10/100 Mbps
Keyboard/Mouse	each 1 x PS/2
VGA	for external Monitor
USB	2x USB 1.1 (max. 0,5 A pro Port)
Interfaces	PC/104
Module	for Bus systems and PLC coupling (e. g. MPI, Profibus, CAN, ...)

General

Front material	Aluminium	
Foil	acid-resistant polyester foil	
Outer dimensions (B x H x T)	10,4":	410 x 266 x 70 mm
	12,1":	483 x 310 x 64 mm
Mounting dimensions (B x H)	10,4":	388 x 244 mm
	12,1":	452 x 292 mm
Weight	10,4"	approx. 3,4 kg
	12,1":	approx. 4,4 kg
Temperature	Operation:	0 ... 50° C
	Storage:	-20 ... 60° C

Mega WOP-iT Panel

WOP-iT PM-S 1000tc / 1200tc / 1500tc

Operating panel with Resistive Touch

WOP-iT PM-S 1200tc

WOP-iT PM-S 1000tc

WOP-iT PM-S 1500tc
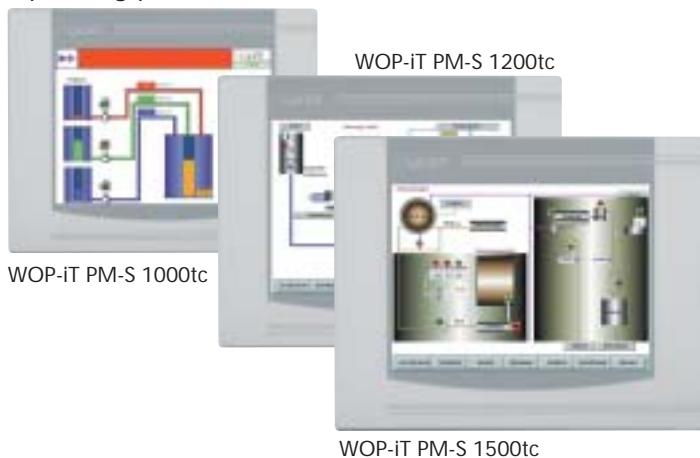
Back side WOP-iT PM-S ...tc

Technical datas

Frontpanel

TFT-Display	10,4", 12,1": 800 x 600 Pixel
	15": 1024 x 768 Pixel
Input	Resistive Touch
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 1,0 - 2,0 A (depends on display)

System

Processor	Intel Celeron-M (x86), 1,3 GHz
internal main memory	256 MB SDRAM
external memory medium	1 GB Compact Flash Card
Operating system	Embedded XP

Interfaces

Serial	2 x RS 232; 1 x RS 232/485
Ethernet	2 x 10/100 Mbps
Keyboard/Mouse	each 1 x PS/2
USB	4x USB 2.0
VGA	for external Monitor

General

Front material	Aluminium	
Foil	acid-resistant polyester foil	
Outer dimensions (B x H x T)	10,4":	318 x 244 x 68 mm
	12,1":	364 x 296 x 68 mm
	15":	452 x 357 x 88 mm
Mounting dimensions (B x H)	10,4":	303 x 228 mm
	12,1":	345 x 277 mm
	15":	429 x 334 mm
Weight	10,4":	approx. 6,0 kg
	12,1":	approx. 6,5 kg
	15":	approx. 7,0 kg
Temperature	Operation:	0 ... 50° C
	Storage:	-20 ... 60° C
Fieldbus connection	Profibus-DP across PCS 807.PM-S	
	MPI across PCS 812.PM-S	

Ordering information

| Article	Description	Order number
WOP-iT PM-S 1000tc	Operating panel with 10,4" TFT-Color-Display, Resistive Touch	960.245.0010
WOP-iT PM-S 1200tc	Operating panel with 12,1" TFT-Color-Display, Resistive Touch	960.245.0020
WOP-iT PM-S 1500tc	Operating panel with 15" TFT-Color-Display, Resistive Touch	960.245.0030

Mobile Panel with Resistive Touch

Ordering information

Article	Description	Order number
WOP-iT 840gtc-m	Mobile Panel with 8,4" TFT-Color-Display, Resistive Touch	960.130.0040

Technical datas

Frontpanel

TFT-Display	8,4": 800 x 600 Pixel
Input	Resistive Touch

CPU

Processor	LX800 (x86), 800 MHz
internal main memory	512 MB RAM
external memory medium	512 MB Flash (maximum 4 GB)

Interfaces

PCMCIA-Slot for Wireless LAN card (802.11 b) and/or GSM/GPRS card

CF-Slot e. g. for CompactFlash Cards, Barcode-Scanner, GPS, ...

1 x USB 2.0

Others

Bluetooth integrated
4 free usable Buttons
Four-Way-Bob up key
16-Bit-Audio
Stereo loudspeaker and jack
Integrated Microphone and jack
Instant-On
Lithium Accu
Power connector

General

Housing material	Mg-Al alloy
Dimension (B x H x T)	200 x 240 x 18 mm
Weight	approx. 800 g without Huckepack-Accu

WOP-iT Software

WOP-iT Designer

Select one element from a wide choice of GUI elements (for example: a bar graph) and per Drag´n Drop onto your display screen.

Configuring instead of programming Our WOP-iT® Designer configuration software is a state-of-the-art tool: Its modular structure, and the clear, intuitive linking of GUI (Graphic User Interface) elements, allow you to set up your projects in less time than ever before. Drawing elements, assigning the required functions, and the subsequent simulation, are all integrated in one common user interface.

WOP-iT® Designer is an RAD (Rapid Application Development) tool that supports the entire development cycle from prototyping to the finished solution. And if your projects are to be used abroad: WOP-iT® lets you use as many languages as you need – without any liwiths. With WOP-iT® you can also create complex SCADA functions in your customary software environment. For experienced project engineers, WOP-iT® provides a powerful, object-oriented script language (Release 2.4) – you will find this only with LAUER.

Double-click or right-click the Property dialogs of the element.
In these dialogs you can link the element directly with a variable, and adapt its look and scaling.

- S7 variable , ARTI , CSV , ADS import
- Visual application development
- RAD (Rapid Application Development) supports the complete development cycle
- Function block library
- Data collection
- Logic and comparison
- Arithmetic and trigonometry
- String processing
- Data conversion
- Trending & decision-making
- Automatic generation of documentation in HTML format by pushing one button
- Archiving into files
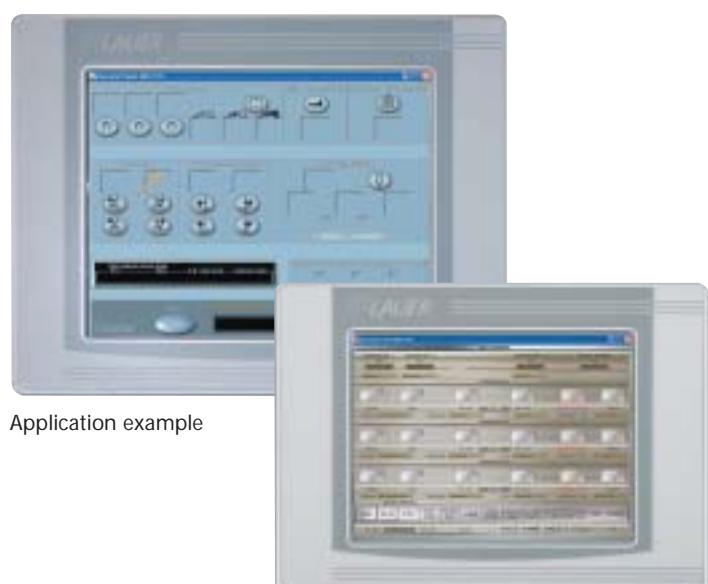
Application example

WOP-iT Designer-Licence

The WOP-iT Designer is a development tool for programming, simulation, Im-/Export, remote maintenance and action at a distance.

Ordering information

Order description	Order number
WOP-iT Designer	980.600.xxxx*

*depends on version
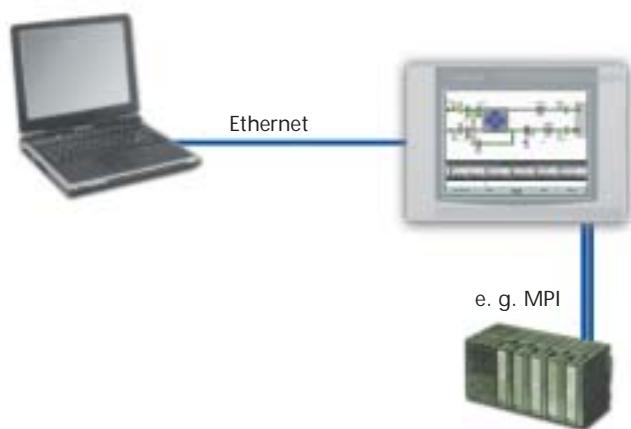
WOP-iT Runtime-Client

The WOP-iT Client software, makes the direct contact for you possible to a WOP-iT server and opens to you thus the complete application (plant) from your PC to observe, serves and to supervise. By TCP/IP do not naturally only cable-bind. Changes of prescription, new forms, UP/DOWN load, message monitoring as soon as the complete registration over user administration language attitudes and graphics are available. The server application can be protected against in/export as well as for changes of project with a password. For changes at the project a time-liwithed free designer is available.
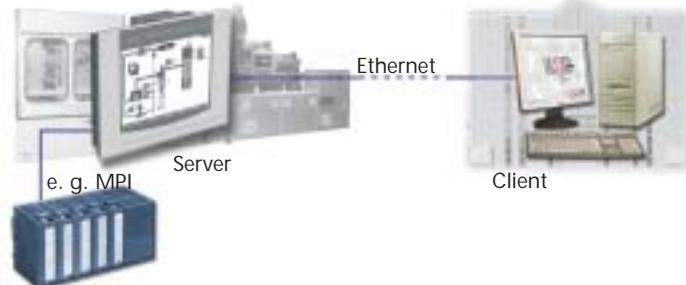
Ordering information

Order description	Order number
WOP-iT Runtime-Client	980.600.0250

WOP-iT Runtime-Server

The WOP-iT Runtime server software enables to start your application on your PC as WOP-iT servers and connect your PC directly with your PLC*. The software is offered in three different variants: liwithed on 500 or 1500 variables or without liwith of variables

* Over Com interfaces and/or additional modules for field bus systems.
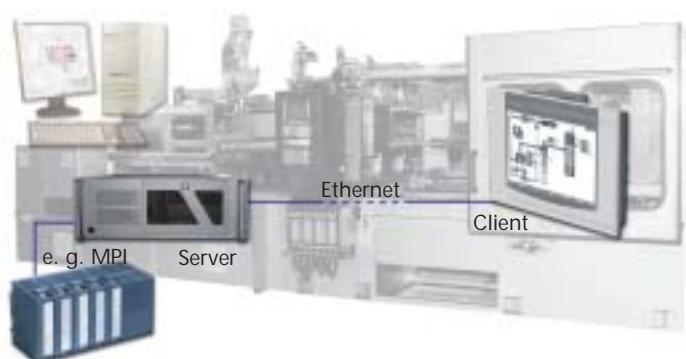
Ordering information

Order description	Order number
WOP-iT Runtime-Server 500	980.600.0260
WOP-iT Runtime-Server 1500	980.600.0270
WOP-iT Runtime-Server unliwithed	980.600.0280

WOP-iT Software

WOP-iT Realization

WOP-iT-Server
with Application A

WOP-iT-Client
with Application A

e. g. Ethernet

e. g. Ethernet

PC-Client
with Application A

Client/Server means:

A **Client**, (WOP-iT / PC) **connects** to a WOP-iT **Server** (over **Ethernet**, Modem). The **Server puts** the **Clients** the **complete Server-Project** to disposal.

On the Client the Server-Application can be served **completely self-sufficient** by the **Server**.

The **Client** can move on **all sides**, **independently** on **which side** itself the **Server** decides.

WOP-iT-Server Leitstand
with Application A

WOP-iT-Server 1
with Application B

Ethernet
via
WOPCLI

WOP-iT-Server 2
with Application C
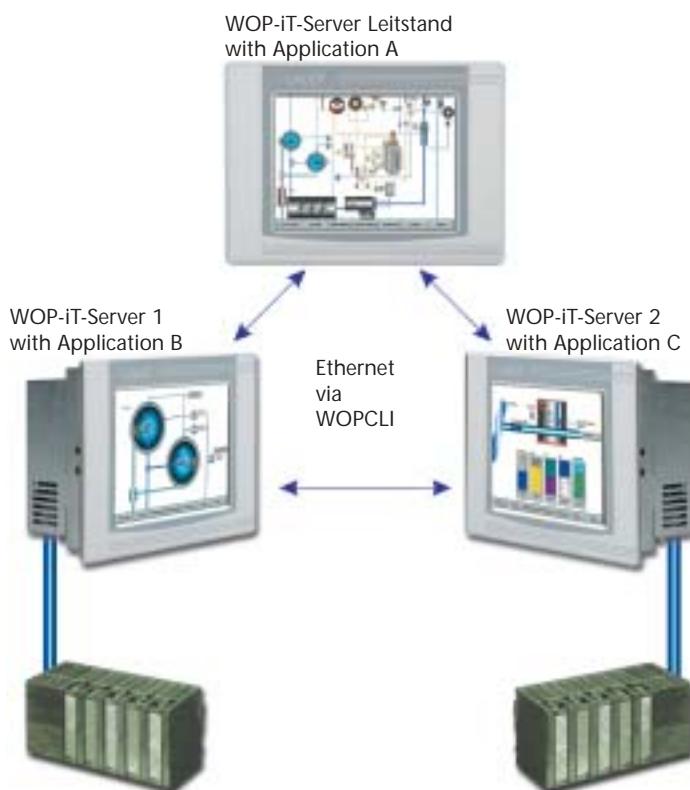
Server/Server means:

Completely self-sufficient working WOP-iT Panels (PCs with WOP-iT-Visualization) data can exchange over the particular **WOPCLI driver** among each other.

With this funktionality e. g. a autonomous **"Control station application"** can be realized.

PPP Functionality offers the possibility:

a) to build up a **serial direkt connection** between **2 WOP-iT**.

b) to realize a **remote maintenance** over Hayes compatible **Modems (e. g. GSM, ISDN, Analogue, GPRS)**.

Modem coupling to WOP-iT happens **serial**.

PC

Modem

e. g. USB

Telephone line

Modem

serial

WOP-iT Server
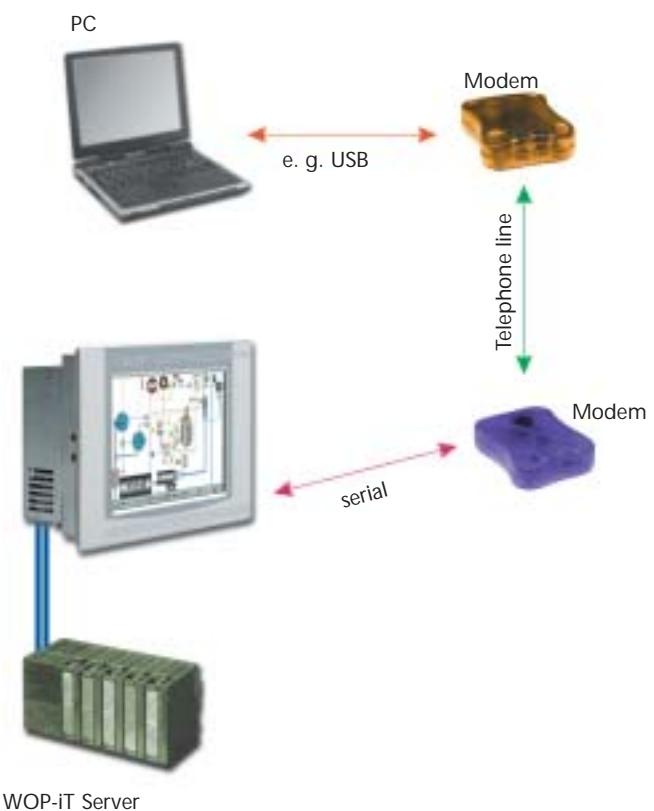
S7-Gateway means:

Access across a **MPI-Module** of a WOP-iT to a **Siemens S7** 3xx/4xx **PLC**.

The WOP-iT acts as **Gateway** (= programming adapter) **between PC** (with Step 7) and **PLC**.

PC

e. g. Ethernet

WOP-iT Server

MPI
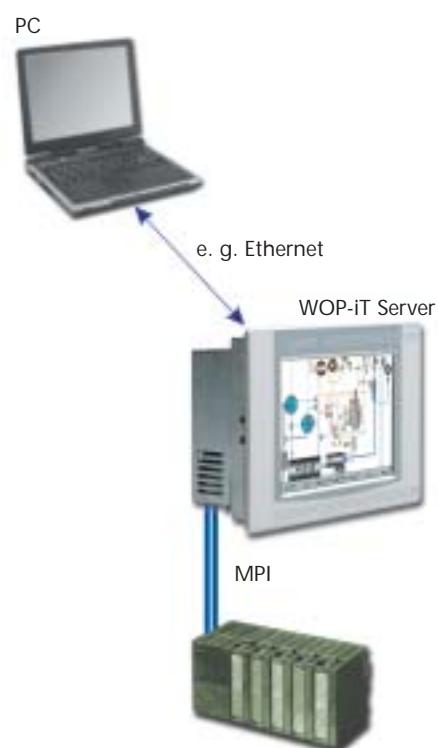
Email: WOP-iT-Support@systeme-lauer.de

Communication overview

Producer	PLC / Controller	Interface	Protocol
Lauer	CoDeSys / Hilscher Profibus DP	Profibus	Profibus
	CoDeSys / Hilscher CanOpen	Can	CanOpen
	CoDeSys / Hilscher DeviceNet	Can	DeviceNet
Allen Bradley	SLC5/04	RS232	DF1
	SLC5/03	RS232	DF1
	FlexLogix5434	RS232	DF1
	ControlLogix5555	RS232	DF1
Beckhoff	x86 PC based PLC	TCP	ADS
Elau	Max-4	TCP, RS232	ARTI
Frenzel & Berg	Easy235	RS232	ARTI
Gefanuc	SNP 9030	RS232, 422	SNPX
Jetter	Nano	RS232,TTY	Jetter
	JC24	TCP, RS422	Jetter
Lenze	DrivePLC	Can	CanOpen SDO
Mitsubishi	FX0,FX1	RS232, RS422	Programming
	FX2N	RS232, RS422	Programming
Moog	MSC D136X001-001	TCP	ARTI
Omron	C200H	RS232	HostLink
	CJ1M	RS232	HostLink
Parker	C3 powerPLmC-E20	TCP	ARTI
Saia	PCD-2	RS232	S-Bus
		TCP	S-Bus
Schneider Elektrik	TSX Micro 3710, 3721	RS 485	Uni-Telway
	TSX Premium 57	CanOpen	CanOpen PDO
Siemens	S7 3xx / 4xx	MPI	MPI
	S7 3xx / 4xx	Profibus	Profibus
	443 Ethernet Card	TCP	Iso-on-tcp
	343 Ethernet Card	TCP	Iso-on-tcp
	S5 90-115U,135U	TTY, RS232	AS511
	S5 115U with PCS810 Card	TTY, 232, 422	Lauer
	S7 226	MPI	MPI
Vipa	315	RS232	MP²I
	315	MPI	MPI
	315	Profibus	Profibus
Wago	750-842	TCP	Modbus TCP
	750-841	TCP	Modbus TCP
	750-841 + 750-650/000-011	RS232	Modbus RTU
	750-841	TCP	ARTI
General	Modbus	RS232, RS422, RS485	Modbus, ASCII / RTU
	Modbus Ethernet	TCP/IP	Modbus, ASCII / RTU
	Profibus	Profibus	Profibus
	Canopen Master Card	Can	CanOpen PDO
	DeviceNet Master Card	Can	DeviceNet
	3S RTE	TCP/IP, RS232	TCP/IP, RS232

Connection*	Master	Slave	Handling necessary	WOP-iT Driver	Cable
1:1		•	•	profibus.jar	Profibus
1:n		•	•	canbus.jar	Can
1:n		•	•	canbus.jar	Can
1:1	•			albdf1.jar	PCS 789
1:1	•			albdf1.jar	PCS 789
1:1	•			albdf1.jar	PCS 789
1:1	•			albdf1.jar	PCS 789
1:1	•			ads.jar	Ethernet
1:1	•			arti.jar	Ethernet, null modem
1:1	•			arti.jar	null modem
1:1	•			gefanuc.jar	PCS 708, null modem
1:1	•			jetter.jar	Z711, 712, 713
1:n		•		jetter.jar	Z711, 712, 713
1:n	•			lenze.jar	Can
1:1	•			mitsubishifx.jar	PCS 748, null modem
1:1	•			mitsubishifx.jar	PCS 748, null modem
1:1	•			arti.jar	Ethernet
1:1	•			omron.jar	746
1:1	•			omron.jar	746
1:1	•			arti.jar	Ethernet
1:1	•			sbus.jar	PCS 733
1:n	•			sbus.jar	Ethernet
1:1	•			telemec.jar	PCS 748
1:n	•			canbus	Can
1:5		•	•	mpi.jar	Profibus
1:1	•			profibus.jar	Profibus
1:n	•			s7tcp.jar	Ethernet
1:n	•			s7tcp.jar	Ethernet
1:1	•		•	as511.jar	PCS 716, 717
1:1	•			ltr.jar	PCS 736, null modem
1:1	•			mpi.jar	Profibus
1:1	•			vipa.jar	GreenCable
1:n		•		mpi.jar	Profibus
1:n	•			profibus.jar	Profibus
1:n	•			modbusTCP.jar	Ethernet
1:n	•			modbusTCP.jar	Ethernet
1:1	•			modbus.jar	null modem
1:1	•			arti.jar	Ethernet
1:n	•			modbus.jar	
1:n	•			modbus.jar	
1:n		•	•	profibus.jar	
1:n		•	•	canbus.jar	
1:n		•		canbus.jar	
1:n	•			arti.jar	

* 1 WOP-iT Application to n Targets (PLC, Controller)

WOP-iT Epilogue
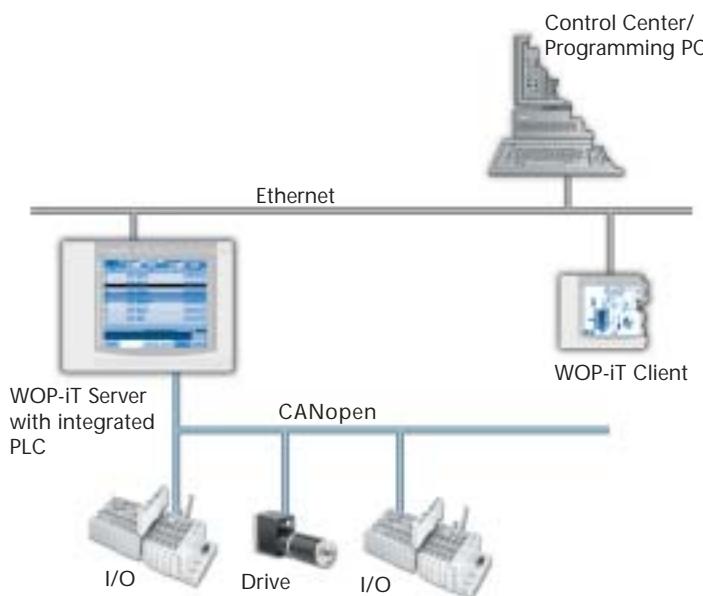
WOP-iT Control

Schematic representation of WOP-iT and WOP-iT Control with connection CANbus and CAN I/O knots.

WOP-iT control is serving, observing and taxes in equipment. The PLC in the WOP-iT control is based on IEC 61131 of the manufacturer 3S. The hardware is a self-sufficient processor, on which Soft PLC runs off independently of the control software. The binding to the I/O level takes place by means of the CANbus, with minutes CANopen.

Main application fields:

- Complete solution from HMI + SPS in the capacity range of a S7 300.

- Solutions within the preissensitiven range, since the CANbus with knots and the „easy" wiring are very economical.

- „control safety customers" – despite soft HP SPS functionality on its own processor runs – thus selfly-sufficient from WOP-iT.

- Solutions in the machine and equipment construction with small distri-buted control + HMI islands – particularly for inspection stations or special solutions.

Systemperformance Soft PLC

By an integrated compiler for 80x86 CoDeSys is extraordinarily fast: e.g. with 300 MHz CPU 1000 AWL instructions in only 20 µs are processed.

WOP-iT Control

System data for HW-CANopen PLC:

Processor	Controller SAB C 167
Ram	256 kByte - expandable up to 1 MB
Flash	128 kByte - expandable up to 512 kB
EEPROM	optional Watchdog with output monitoring
Interfaces	CANopen
Programming	IEC61131 CoDeSys
Bus connection	PC104 or WOP-iT-I/O Module
Control Performance	Comparably S7-300
Driver	Connection WOP-iT to WOP-iT-Control with ARTI driver, incl. Variable transfer
Power supply	across WOP-iT device
Outer dimensions	Comparably of the WOP-iT device
Mounting	direct integrated, e.g. PC104 Bus
Weight	approx. 0,5 kg
Operation temperature	0 … 50° C
Storage temperature	-20 … 70° C
Humidity	< 90%, non-condensing

Embedded-PC
EPC Magellan

Highest quality. Maximum operational reliability. Fair price.

Because we know what our customers expect of our embedded PC, we have designed the EPC Magellan from scratch. And we have provided it with a lot more features so that it can always perform its versatile tasks precisely and reliably. Just about everything which the latest PC technolgy has to offer today. Also the ability to function as a stand-alone PC or as a terminal client in a network. From the selection of the individual components to the configuration of the entire unit we are always geared towards the „low-maintenance" and „suitability for industrial use" criteria. Therefore, you will look in vain for moving parts such as hard drives or fans. Instead you will find a maximum flexible and low installation depth as well as optimally priced visualisation solutions. Naturally an open platform for proprietary software, different modules for fieldbus, a standard 10/100 Mbit Ethernet interface.

Incidentally, we have developed the EPC Magellan series for the especially rough workdays on ships. One particular advantage is that the user can be utilised from other industrial areas.

Embedded PC -
Highest reliability and service friendliness for your applications

Embedded Systems keep your production going

Production equipment must keep running – more and more often around the clock. All over the world. Failures mean downtimes which mean a drop of equipment profitability. Against this background, each component of the entire system must guarantee maximum fail-safety. This is especially true for the HMI, which is an essential element in visualization and control. Past experience has shown that classical PCs – even in IPC design – are often simply not up to these requirements. Hard disks and fans are based on highly stressed mechanical components which are often not suitable for permanent use, especially in rugged industrial environments. Embedded systems are increasingly used in this field, as they have no fast-wearing mechanical parts and thus provide maximum availability and fail-safety. CF (Compact Flash) memory cards are used instead of hard disks, special processors and cooling elements allow to dispense with fans altogether. The MICROSOFT operating systems used follow the same concept: XP-Embedded or CE.NET are stripped down to the functions actually needed for your application. This saves memory space and avoids configuration errors by the end user. The high stability of this platform allows the use of an integrated Soft-PLC, which is available as an EPC control. Rugged and reliable visualization and control of your systems - plus maximum economy.

The Task: Maximum Stability

Lauer take off line embedded PC systems are compact, mechanical rugged and fanless industrial PCs. The morn and attractive design, and the use of the most recent, low-loss electronic components, open a wide range of automation applications. The gamut of applications runs from the display of simple controls to complex machine control tasks with process visualization. The systems are standardly equipped with high-contrast industrial (color TFT) displays, which are available with diagonals from 6.4" to 15". The sensitive touch screen is the basis for easy interactive human-machine communication. Dust, dirt and humidity are no problem for the Lauer EPC - thanks to the high degree of protection on the front side. Another asset is the low installation depth, especially in cramped spaces. A special Lauer feature: the combination of different front units and standardized CPU units allows tailor-made solutions for your applications.

Back side EPC X ... tc

Embedded-PC with Resistive Touch

EPC X 550tc

EPC X 640tc

EPC X 840tc

EPC X 1000tc

Order information

Article	Description	Order number
EPC X 550 tm	Embedded-PC with 5,7" STN-Monochrom-Display, Resistive Touch	950.520.0080
EPC X 550 tc	Embedded-PC with 5,7" STN-Color-Display, Resistive Touch	950.520.0090
EPC X 640 tc	Embedded-PC with 6,4" TFT-Color-Display, Resistive Touch	950.520.0050
EPC X 840tc	Embedded-PC with 8,4" TFT-Color-Display, Resistive Touch	950.520.0100
EPC X 1000tc	Embedded-PC with 10,4" TFT-Color-Display, Resistive Touch	950.520.0060

Technical Datas

Frontpanel

Display	5,7"-STN: 320 x 240 Pixel 6,4"-TFT: 640 x 480 Pixel 8,4"-TFT: 640 x 480 Pixel 10,4"-TFT: 640 x 480 Pixel
Input	Resistive Touch
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 0,5 - 1,0 A (depends on display)

CPU

External memory medium	64 MB Compact Flash Card (maximum 1 GB)
RAM	64 MB SDRAM, 32 Bit
Processortype	Intel PXA255 with 400 MHz

Interfaces

Serial 1	RS232 for free disposal
Module*	for bus systems and PLC coupling (e. g. MPI*, Profibus*, CAN*, ...)
USB	2x USB 1.1 (max. 0,5 A pro Port)
Ethernet	10/100 Mbps

* in connection with zenOn

General

Front material	Aluminium
Foil	acid-resistant polyester foil
Outer dimensions (B x H x T)	5,7": 215 x 160 x 53 mm 6,4": 211 x 156 x 57 mm 8,4": 252 x 190 x 61 mm 10,4": 318 x 244 x 63 mm
Mounting dimensions (B x H)	5,7": 197 x 143 mm 6,4": 197 x 142 mm 8,4": 232 x 170 mm 10,4": 303 x 229 mm
Weight (in kg)	5,7" 6,4" 8,4" 10,4" ca. 1,0 ca. 1,2 ca. 1,9 ca. 2,3
Temperature	Operation: 0 ... 50° C Storage: -20 ... 60° C

Options

Operating system	Win CE.NET

Magellan GEODE

EPC Box

Embedded-PC Box

Technical Datas

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 0,5

CPU

Processor	NS-Geode (x86), 300 MHz
Ram	64 - 256 MB
Memory Card (internal)	64 MB - 2048 MB
Memory Card (external)	128 MB - 4096 MB
Slots	PC 104

Interfaces

Serial 1	RS232 for free disposal
Module*	for bus systems and PLC coupling (e. g. MPI*, Profibus*, CAN*, ...)
USB	2 x USB 1.0
Keyboard/Mouse	1 x PS/2 (combined)
Ethernet	2 x 10/100 Mbit

* in connection with zenOn

General

Weight	approx. 0,6 kg
Temperature	Operation: 0 ... 50° C
	Storage: -20 ... 60° C

Options

Operating system	Win CE.NET, Embedded XP

Order information

Article	Description	Order number
EPC Box	Embedded-PC Box	950.500.0010

Back side EPC ... tc

Embedded-PC with Resistive Touch

EPC 640tc

EPC 1000tc

EPC 1200tc

EPC 1500tc

Order information

Article	Description	Order number
EPC 640 tc	Embedded-PC with 6,4" TFT-Color-Display, Resistive Touch	950.500.0020
EPC 1000tc	Embedded-PC with 10,4" TFT-Color-Display, Resistive Touch	950.500.0030
EPC 1200 tc	Embedded-PC with 12,1" TFT-Color-Display, Resistive Touch	950.500.0050
EPC 1500tc	Embedded-PC with 15" TFT-Color-Display, Resistive Touch	950.500.0100

Technical Datas

Frontpanel

TFT-Display	6,4":	640 x 480 Pixel
	10,4":	800 x 600 Pixel
	12,1":	800 x 600 Pixel
	15":	1024 x 768 Pixel
Input	Resistive Touch	
Protection type	IP 65 front side by DIN EN60529	

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 0,7 - 1,0 A (depends on display)

CPU

Processor	NS-Geode (x86), 300 MHz
Ram	64 - 256 MB
Memory Card (internal)	64 MB - 2048 MB
Memory Card (external)	128 MB - 4096 MB
Slots	PC 104

Interfaces

Serial 1	RS232 for free disposal
Module*	for bus systems and PLC coupling (e. g. MPI*, Profibus*, CAN*, ...)
USB	2 x USB 1.0
Keyboard/Mouse	1 x PS/2 (combined)
Ethernet	2 x 10/100 Mbit

* in connection with zenOn

General

Outer dimensions (B x H x T)	6,4":	211 x 156 x 68 mm
	10,4":	318 x 244 x 68 mm
	12,1":	364 x 296 x 68 mm
	15":	452 x 357 x 68 mm
Mounting dimensions (B x H)	6,4":	197 x 142 mm
	10,4":	303 x 229 mm
	12,1":	344 x 276 mm
	15":	429 x 334 mm

Weight (in kg)	6,4"	10,4"	12,1"	15"
	ca. 1,0	ca. 2,8	ca. 3,0	ca. 5,0

Temperature	Operation:	0 ... 50° C
	Storage:	-20 ... 60° C

Options

Operating system	Win CE.NET, Embedded XP

Magellan GEODE

EPC 640ktc / 1000ktc / 1200ktc

Embedded-PC with Resistive Touch and Alphanumeric keyboard

EPC 1200ktc

EPC 1000ktc

EPC 640ktc
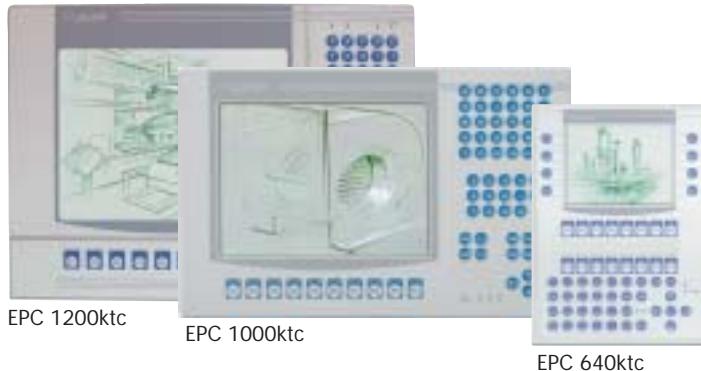
Back side EPC ... ktc

Technical Datas

Frontpanel

TFT-Display	6,4":	640 x 480 Pixel
	10,4":	800 x 600 Pixel
	12,1":	800 x 600 Pixel
Input	Resistive Touch + Alphanumeric keyboard	
Protection type	IP 65 front side by DIN EN60529	

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 0,7 - 1,0 A (depends on display)

CPU

Processor	NS-Geode (x86), 300 MHz
Ram	64 - 256 MB
Memory Card (internal)	64 MB - 2048 MB
Memory Card (external)	128 MB - 4096 MB
Slots	PC 104

Interfaces

Serial 1	RS232 for free disposal
Module*	for bus systems and PLC coupling (e. g. MPI*, Profibus*, CAN*, ...)
USB	2 x USB 1.0
Keyboard/Mouse	1 x PS/2 (combined)
Ethernet	2 x 10/100 Mbit

* in connection with zenOn

General

Outer dimensions (B x H x T)	6,4":	234 x 314 x 60 mm
	10,4":	410 x 266 x 70 mm
	12,1":	456 x 361 x 64 mm
Mounting dimensions (B x H)	6,4":	218 x 298 mm
	10,4":	387 x 243 mm
	12,1":	452 x 292 mm

Weight (in kg)	6,4"	10,4"	12,1"
	ca. 1,2	ca. 6,5	ca. 7,0

Temperature	Operation: 0 ... 50° C
	Storage: -20 ... 60° C

Options

Operating system	Win CE.NET, Embedded XP

Order information

Article	Description	Order number
EPC 640ktc	Embedded-PC with 6,4" TFT-Color-Display, front side keyboard and Resistive Touch	950.500.0090
EPC 1000ktc	Embedded-PC with 10,4" TFT-Color-Display, front side keyboard and Resistive Touch	950.500.0040
EPC 1200ktc	Embedded-PC with 12,1" TFT-Color-Display, front side keyboard and Resistive Touch	950.500.0060

Embedded-PC G Box
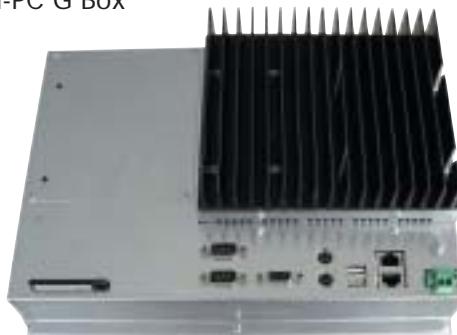
Order information

Article	Description	Order number
EPC G Box	Embedded-PC G Box	950.510.0010

Technical Datas

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 1,0 A

CPU

Processor	1 GHz VIA C3
Ram	256 MB
Memory Card (internal)	1024 MB - 2048 MB
Memory Card (external)	128 MB - 4096 MB
Slots	PC 104

Interfaces

Serial 1	2 x RS 232
Module*	for bus systems and PLC coupling (e. g. MPI*, Profibus*, CAN*, ...)
USB	2 x USB 1.1
Keyboard/Mouse	2 x PS/2
Ethernet	2 x 10/100 Mbit
VGA	for external Monitor

* in connection with zenOn

General

Weight	approx. 3,5 kg
Temperature	Operation: 0 ... 50° C
	Storage: -20 ... 60° C

Options

Operating system	Embedded XP

Magellan GEODE

EPC G 1000tc / 1200tc / 1500tc

Embedded-PC with Resistive Touch

EPC G 1000tc

EPC G 1200tc

EPC G 1500tc

Back side EPC G ... tc

Technical Datas

Frontpanel

TFT-Display	10,4": 800 x 600 Pixel
	12,1": 800 x 600 Pixel
	15": 1024 x 768 Pixel
Input	Resistive Touch
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 1,0 - 2,0 A (depends on display)

CPU

Processor	1 GHz VIA C3
Ram	256 MB
Memory Card (internal)	1024 MB - 2048 MB
Memory Card (external)	128 MB - 4096 MB
Slots	PC 104

Interfaces

Serial 1	2 x RS 232
Module*	for bus systems and PLC coupling (e. g. MPI*, Profibus*, CAN*, ...)
USB	2 x USB 1.1
Keyboard/Mouse	2 x PS/2
Ethernet	2 x 10/100 Mbit
VGA	for external Monitor

* in connection with zenOn

General

Outer dimensions (B x H x T)	10,4":	318 x 244 x 68 mm
	12,1":	364 x 296 x 68 mm
	15":	452 x 357 x 68 mm
Mounting dimensions (B x H)	10,4":	303 x 229 mm
	12,1":	344 x 276 mm
	15":	429 x 334 mm
Weight (in kg)	10,4" 12,1" 15"	
	ca. 5,5 ca. 6,0 ca. 6,5	
Temperature	Operation:	0 ... 50° C
	Storage:	-20 ... 60° C

Options

Operating system	Embedded XP

Order information

Article	Description	Order number
EPC G 1000tc	Embedded-PC with 10,4" TFT-Color-Display, Resistive Touch	950.510.0020
EPC G 1200 tc	Embedded-PC with 12,1" TFT-Color-Display, Resistive Touch	950.510.0030
EPC G 1500tc	Embedded-PC with 15" TFT-Color-Display, Resistive Touch	950.510.0040

Embedded-PC with Resistive Touch and Alphanumeric keyboard

EPC G 1000ktc

EPC G 1200tc

Back side EPC G ... ktc

Order information

Article	Description	Order number
EPC G 1000ktc	Embedded-PC with 10,4" TFT-Color-Display, front side keyboard and Resistive Touch	950.510.0050
EPC G 1200ktc	Embedded-PC with 12,1" TFT-Color-Display, front side keyboard and Resistive Touch	950.510.0060

Technical Datas

Frontpanel

TFT-Display	10,4": 800 x 600 Pixel 12,1": 800 x 600 Pixel
Input	Resistive Touch + Alphanumeric keyboard
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 1,0 - 2,0 A (depends on display)

CPU

Processor	1 GHz VIA C3
Ram	256 MB
Memory Card (internal)	1024 MB
Memory Card (external)	128 MB - 4096 MB
Slots	PC 104

Interfaces

Serial 1	2 x RS 232
Module*	for bus systems and PLC coupling (e. g. MPI*, Profibus*, CAN*, ...)
USB	2 x USB 1.1
Keyboard/Mouse	2 x PS/2
Ethernet	2 x 10/100 Mbit
VGA	for external Monitor

* in connection with zenOn

General

Outer dimensions (B x H x T)	10,4":	410 x 266 x 70 mm
	12,1":	456 x 361 x 64 mm
Mounting dimensions (B x H)	104":	387 x 243 mm
	12,1":	452 x 292 mm
Weight	10,4":	ca. 6,5 kg
	12,1":	ca. 7,5 kg
Temperature	Operation:	0 ... 50° C
	Storage:	-20 ... 60° C

Options

Operating system	Embedded XP

Magellan PM

EPC PM-S Box

Embedded-PC PM-S Box

Technical Datas

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 1,0 A

CPU

Mainboard	long life cycle embedded Board
Processor	Low Power Mobile CPU Intel Celeron-M 1,3 GHz
Chip set	Intel Mobile 855GME with integrated Graphic up to UXGA
RAM	256 MB DDR-SDRAM
Memory Card (internal)	128 MB with Windows CE 1024 MB - 4096 MB with Embedded XP
Memory Card (external)	128 MB - 4096 MB

Interfaces

Serial	2 x RS 232; 1 x RS 232/485
Ethernet	2 x 10/100 Mbps
Keyboard/Mouse	2 x PS/2
VGA	for external Monitor
USB	4 x USB 2.0

General

Weight	approx. 3,5 kg
Temperature	Operation: 0 ... 50° C
	Storage: -20 ... 60° C

Options

Fieldbus connection	only with Multibox PCS 807.PM-S*; PCS 812.PM-S*
Power supply 115/230V	Electricity supply 230 V AC
Operating system	Win CE.NET, Embedded XP

* in connection with zenOn

Order information

Article	Description	Order number
EPC PM-S Box	Embedded-PC PM-S Box	950.518.0050

Back side EPC PM-S ... tc

Embedded-PC with Resistive Touch
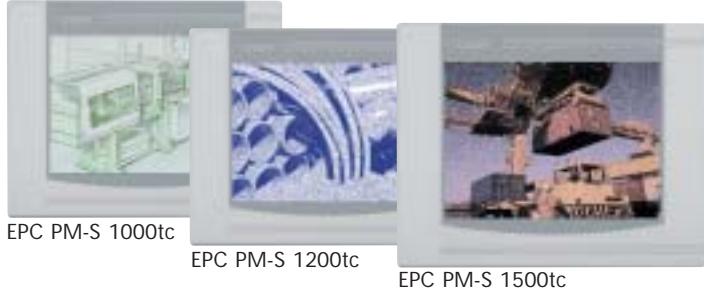
EPC PM-S 1000tc

EPC PM-S 1200tc

EPC PM-S 1500tc

Order information

Article	Description	Order number
EPC PM-S 1000tc	Embedded-PC with 10,4" TFT-Color-Display, Resistive Touch	950.518.0060
EPC PM-S 1200 tc	Embedded-PC with 12,1" TFT-Color-Display, Resistive Touch	950.518.0070
EPC PM-S 1500tc	Embedded-PC with 15" TFT-Color-Display, Resistive Touch	950.518.0080

Technical Datas

Frontpanel

TFT-Display	10,4": 800 x 600 Pixel 12,1": 800 x 600 Pixel 15": 1024 x 768 Pixel
Input	Resistive Touch
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 1,0 - 2,0 A (depends on display)

CPU

Mainboard	long life cycle embedded Board
Processor	Low Power Mobile CPU Intel Celeron-M 1,3 GHz
Chip set	Intel Mobile 855GME with integrated Graphic up to UXGA
RAM	256 MB DDR-SDRAM
Memory Card (internal)	128 MB with Windows CE 1024 - 4096 MB with Embedded XP
Memory Card (external)	128 MB - 4096 MB

Interfaces

Serial	2 x RS 232; 1 x RS 232/485
Ethernet	2 x 10/100 Mbps
Keyboard/Mouse	2 x PS/2
VGA	for external Monitor
USB	4 x USB 2.0

General

Outer dimensions (B x H x T)	10,4":	318 x 244 x 102,5 mm
	12,1":	364 x 296 x 94,5 mm
	15":	452 x 357 x 107,5 mm
Mounting dimensions (B x H x T)	10,4":	303 x 229 x 96,5 mm
	12,1":	344 x 276 x 88,5 mm
	15":	429 x 334 x 101,5 mm
Weight (in kg)	10,4" 12,1" 15" ca. 6,0 ca. 6,5 ca. 7,0	
Temperature	Operation: 0 ... 50° C Storage: -20 ... 60° C	

Options

Fieldbus connection	Profibus across PCS 807.PM-S* MPI across PCS 812.PM-S*
Power supply	230 VAC
Operating system	Win CE.NET, Embedded XP

* in connection with zenOn

EPC PM Box

Technical Datas

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 1,0 A

CPU

Processor	Intel Celeron-M 1,3 GHz
RAM	256 MB DDR-SDRAM
Mass storage	Compact Flash Disk or Hard disk

Interfaces

Serial	2x RS232; 1x RS232/RS485
Parallel	1x LPT1
Ethernet	2x 10/100 Mbps
Tastatur/Maus	2x PS/2
USB	4x USB2.0
VGA	for external Monitor
Extension slots	2x PCI up to 220 mm length
Compact-Flash	each 1x internal and external

General

Weight	approx. 3,5 kg
Temperature	Operation: 0 ... 50° C
	Storage: -20 ... 60° C

Options

Power supply Option	110-230 VAC ± 15%, 1A max.
Fieldbus connection	PCI-Module for MPI*, Profibus DP-Slave* or CANopen*
Operating system	Windows XP Embedded - **with CFC (only at 1024MB)** Windows 2000, XP - **with HDD**

* in connection with zenOn

Order information

Article	Description	Order number
EPC PM Box	Embedded-PC PM Box	950.513.0040

Back side EPC PM ... tc

Embedded-PC with Resistive Touch

EPC PM 1200tc

EPC PM 1500tc
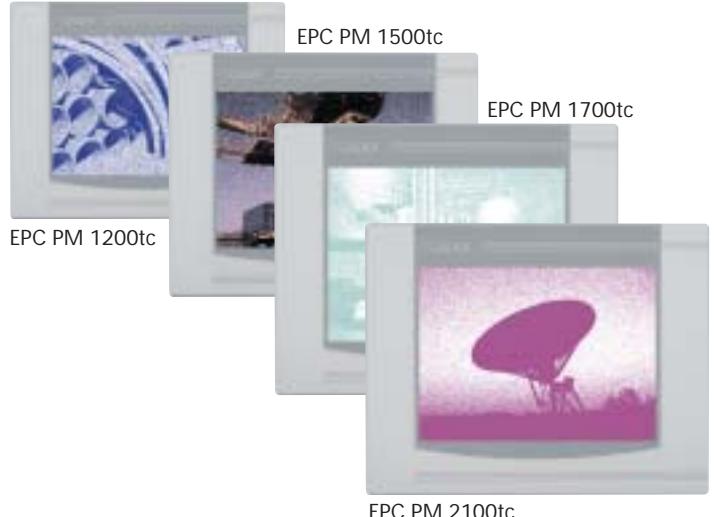
EPC PM 1700tc

EPC PM 2100tc

Order information

Article	Description	Order number
EPC PM 1200tc	Embedded-PC with 12,1" TFT-Color-Display, Resistive Touch	950.513.0010
EPC PM 1500 tc	Embedded-PC with 15" TFT-Color-Display, Resistive Touch	950.513.0100
EPC PM 1700tc	Embedded-PC with 17" TFT-Color-Display, Resistive Touch	950.513.0030
EPC PM 2100tc	Embedded-PC with 21" TFT-Color-Display, Resistive Touch	950.513.0070

Options

|	
Power supply	230 VAC
Fieldbus connection	PCI-Module for MPI*, Profibus DP-Slave* or CANopen*
Operating system	Windows XP Embedded - **with CFC (only at 1024MB)** Windows 2000, XP - **with HDD**

* in connection with zenOn

Technical Datas

Frontpanel

TFT-Display	12,1":	800 x 600 Pixel
	15":	1024 x 768 Pixel
	17":	1280 x 1024 Pixel
	21":	1600 x 1200 Pixel
Input	Resistive Touch	
Protection type	IP 65 front side by DIN EN60529	

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 1,0 - 2,0 A (depends on display)

CPU

Processor	Intel Celeron-M 1,3 GHz
RAM	256 MB DDR-SDRAM
Mass storage	Compact Flash Disk or Hard disk

Interfaces

Serial	2x RS232; 1x RS232/RS485
Parallel	1x LPT1
Ethernet	2x 10/100 Mbps
Tastatur/Maus	2x PS/2
USB	4x USB2.0
VGA	for external Monitor
Extension slots	2x PCI up to 220mm length
Compact-Flash	each 1x internal and external

General

Outer dimensions (B x H x T)	12":	364 x 296 x 133 mm
	15":	452 x 357 x 136 mm
	17":	480 x 377 x 141 mm
	21":	527 x 419 x 165,5 mm
Mounting dimensions (B x H)	12":	345 x 277 mm
	15":	429 x 334 mm
	17":	454 x 351 mm
	21":	498 x 390 mm
Weight (in kg)	12,1" 15" 17" 21"	ca. 12 ca. 16 ca. 18 ca. 20
Temperature	Operation:	0 ... 50° C
	Storage:	-20 ... 60° C

Magellan PM

EPC PM 1500ktc

Embedded-PC with Resistive Touch and Alphanumeric keyboard

Back side EPC PM ... ktc

Technical Datas

Frontpanel

TFT-Display	15": 1024 x 768 Pixel
Input	Resistive Touch + Alphanumeric keyboard
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 2,0 A

CPU

Processor	Intel Celeron-M 1,3 GHz
RAM	256 MB DDR-SDRAM
Mass storage	Compact Flash Disk or Hard disk

Interfaces

Serial	2x RS232; 1x RS232/RS485
Parallel	1x LPT1
Ethernet	2x 10/100 Mbps
Tastatur/Maus	2x PS/2
USB	4x USB2.0
VGA	for external Monitor
Extension slots	2x PCI up to 220mm length
Compact-Flash	each 1x internal and external

General

Power supply	24 VDC ± 20 % polarised
Outer dimensions (B x H x T)	501 x 387 x 136 mm
Mounting dimensions (B x H)	478 x 364 mm
Weight	approx. 17 kg
Temperature	Operation: 0 ... 50° C
	Storage: -20 ... 60° C

Options

Power supply	230 VAC
Fieldbus connection	PCI-Module for MPI*, Profibus DP-Slave* or CANopen*
Operating system	Windows XP Embedded - **with CFC (only at 1024MB)** Windows 2000, XP - **with HDD**

* in connection with zenOn

Order information

Article	Description	Order number
EPC PM 1500ktc	Embedded-PC with 15" TFT-Color-Display, front side keyboard and Resistive Touch	950.513.0060

EPC Magellan PM -
# the best of EPC and Industrial-PC

The robust PC

The challenge was to develop a robust industrial-PC, suitable for the most difficult industrial environments and also for mobile applications.

High requirements of navigation certifying bodies, have further raised standards. The result is a revolution for the Industrial-PC domain:

High resistance against shock and vibrations, a large temperature range and an optimal EMC-performance were significant requirements. Our systems fulfill such requirements, having received certification for the ship building industry.

Vibration and Shock

Two types of systems were developed for increased vibration and shock resistance. Systems of the first type use only static components, that is, no moving parts. Hard disk drives are replaced by flash, and power supplies with fans are replaced by power supplies without fans. Systems of the second type use power supplies without fans, and special automotive hard disk drives that replace standard hard disk drives. The special automotive hard disk drives have a wide temperature range (0 up to +85 °C), and a relatively high resistance to shock and vibration that is due a special suspension. See graph below for test procedure. All tests are carried out in our own test laboratory. Certfication was carried out by an accredited test laboratory in accordance with the navigation specifications.

Mass storage models

Mass memory for the industrial envirnonment is typically implemented with hard disk drives. Unfortunately, hard disk drives contain moving parts, which are vulnerable to failure. Recently developed flash memory can compete with hard disk drives for many industrial applications. Lack of moving parts makes flash memory more reliable than hard disk drives.

Hard-Disk-Drive

Standard hard disk drives for the office envirnonment are not very suitable for rough industrial envirnonment. More robust hard disk drives are desirable.

Resistance to shock and vibration, plus high temperature operation are desirable mass memory qualities. Magellan hard disk drives, such as special automotive hard disk drives, and „notebook" hard disk drives with a shock absorbing support, have these qualities.

Flash-Memory

Flash memory has no moving parts. It is based on semiconductor memory cells and thus offers high security against environmental factors. The write frequency is critical with flash memory systems. A first geneation Compact-Flash-Card (CFC) had only 30,000 write cycles. New CFC can handle more than 2,000,000 write cycles. With the use of Flash memory an an embedded operating system, a Magellan system becomes a very efficient and robust industrial PC.

Maintenance friendly

EPC Magellan offers you numerous possibilities on service, update, backup etc. When you want to dispense with rotating media as CD- or FD-drives, you can directly connect all popular storage media, via the USB. Even with a total crash you can boot your system via the USB. In BIOS, the system can be easily set to USB boot. So that the ystem can be operated via a USB stick, USB-CD-ROM etc.

USB access is even easier with our front USB entry.

Magellan PM Nautic

EPC PM Box - Nautic

Embedded-PC PM Box - Nautic

certified by

EN 60945

Technical Datas

Electricity supply

Operation value	24 V ± 20%, polarised
Current consumption	approx. 1,0 A

CPU

Processor	Intel Celeron-M 1,3 GHz
RAM	256 MB DDR-SDRAM (maximum 2 GB)
Mass storage	Hard disk 2,5" Automotive 40 GB

Interfaces

Serial	2x RS232; 1x RS232/RS485
Parallel	1x LPT1
Ethernet	2x 10/100 Mbps
Tastatur/Maus	2x PS/2
USB	4x USB2.0
VGA	for external Monitor
Extension slots	2x PCI up to 220mm length
Compact-Flash	each 1x internal and external

General

Power supply Option	110-230 VAC ± 15%, 1A max.
Outer dimensions (B x H x T)	389 x 276 x 114 mm
Weight	5,5 kg
Certificates	GL, ABS, DNV, BV, LR, IEC 60945
Protection type	IP 20 from all sides
Temperature	Operation 0 ... 55° C
	Storage -20 ... 70° C

Order information

Article	Description	Order number
EPC PM Box Nautic	Embedded-PC Box 24 VDC	950.516.0010
EPC PM Box Nautic230	Embedded-PC Box 230 VAC	950.516.0300

certified by
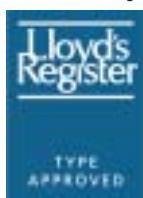
EN 60945

Back side MT ... Nautic

Seperate solution for fitting with Resistive Touch or anti-reflex glass pane. Brightness dimming on frontside down to zero.

Order information

Article	Description	Order number
MT 217 Nautic24	Monitor with 17" TFT-Color-Display, Resistive Touch, 24 VDC	950.516.0100
MT 217 Nautic24g	Monitor with 17" TFT-Color-Display, antireflex glass pane, 24 VDC	950.516.0060
MT 219 Nautic24	Monitor with 19" TFT-Color-Display, Resistive Touch, 24 VDC	950.516.0120
MT 219 Nautic24g	Monitor with 19" TFT-Color-Display, antireflex glass pane, 24 VDC	950.516.0080
MT 221 Nautic24	Monitor with 21" TFT-Color-Display, Resistive Touch, 24 VDC	950.516.0220
MT 221 Nautic24g	Monitor with 21" TFT-Color-Display, antireflex glass pane, 24 VDC	950.516.0240
MT 217 Nautic230	Monitor with 17" TFT-Color-Display, Resistive Touch, 230 VAC	950.516.0100
MT 217 Nautic230g	Monitor with 17" TFT-Color-Display, antireflex glass pane, 230 VAC	950.516.0070
MT 219 Nautic230	Monitor with 19" TFT-Color-Display, Resistive Touch, 230 VAC	950.516.0130
MT 219 Nautic230g	Monitor with 19" TFT-Color-Display, antireflex glass pane, 230 VAC	950.516.0090
MT 221 Nautic230	Monitor with 21" TFT-Color-Display, Resistive Touch, 230 VAC	950.516.0210
MT 221 Nautic230g	Monitor with 21" TFT-Color-Display, antireflex glass pane, 230 VAC	950.516.0230

Technical Datas

Frontpanel

TFT-Display	17"; 19": 1280 x 1024 Pixel 21": 1600 x 1200 Pixel
Contrast Ratio	17": 600:1 19"; 21": 1000:1
Light Intensity	17"; 19": 250cd/m² (typical) 21": 300cd/m² (typical)
View angle	± 89° (typical) (Up/Down/Left/Right)

General

Power supply	24 VDC ± 15%, 2,4A max. **or** 110-230 VAC ± 15%, 1A max.
Outer dimensions (B x H x T)	17": 430 x 390 x 81 mm 19": 483,2 x 444 x 81 mm 21": 534 x 481 x 80 mm
Mounting dimensions (B x H)	17": 395 x 363 mm 19": 434 x 412 mm 21": 498 x 441 mm
Weight (in kg)	17" 19" 21" 7,5 10,0 15,0
Certificates	GL, ABS, DNV, BV, LR, IEC 60945
Protection type	IP 54 Front side; IP 20 Back side
Temperature	Operation 0 ... 55° C Storage -20 ... 70° C

Magellan PM Nautic

EPC PM 1700 / 1900 / 2100 Nautic

Compact complete units for fitting with Resistive Touch or antireflex glass pane

Rückseite EPC PM ... Nautic

Technical Datas

Frontpanel

TFT-Display	17"; 19": 1280 x 1024 Pixel 21": 1600 x 1200 Pixel
Contrast Ratio	17": 600:1 19"; 21": 1000:1
Light Intensity	17"; 19": 250cd/m² (typical) 21": 300cd/m² (typical)
View angle	± 89° (typical) (Up/Down/Left/Right)

CPU

Processor	Intel Celeron-M 1,3 GHz
RAM	256 MB DDR-SDRAM (maximum 2 GB)
Mass storage	Hard disk 2,5" Automotive 40 GB

Interfaces

Serial	2x RS232; 1x RS232/RS485
Parallel	1x LPT1
Ethernet	2x 10/100 Mbps
Tastatur/Maus	2x PS/2
USB	4x USB2.0
VGA	for external Monitor
Extension slots	2x PCI up to 220mm length
Compact-Flash	each 1x internal and external

General

Power supply	24 VDC ± 15%, 3A max. **or** 110-230 VAC ± 15%, 1A max.
Outer dimensions (B x H x T)	17": 430 x 390 x 145 mm 19": 483,2 x 444 x 145 mm 21": 534 x 481 x 144 mm
Mounting dimensions (B x H)	17": 395 x 363 mm 19": 434 x 412 mm 21": 498 x 441 mm
Weight (in kg)	17" 19" 21" 10,7 13,0 18,5 kg
Certificates	GL, ABS, DNV, BV, LR, IEC 60945
Protection type	IP 54 Front side; IP 20 Back side
Temperature	Operation 0 ... 55° C Storage -20 ... 70° C

Order information

Article	Description	Order number
EPC PM 1700tc Nautic	Embedded-PC with 17" TFT-Color-Display, Resistive Touch, 24 VDC	950.516.0030
EPC PM 1700tc Nautic230	see above, 230 VAC	950.516.0310
EPC PM 1700 Nautic g	Embedded-PC with 17" TFT-Color-Display, antireflex glass pane, 24 VDC	950.516.0020
EPC PM 1700 Nautic g230	see above, 230 VAC	950.516.0320
EPC PM 1900tc Nautic	Embedded-PC with 19" TFT-Color-Display, Resistive Touch, 24 VDC	950.516.0050
EPC PM 1900tc Nautic230	see above, 230 VAC	950.516.0330
EPC PM 1900 Nautic g	Embedded-PC with 19" TFT-Color-Display, antireflex glass pane, 24 VDC	950.516.0040
EPC PM 1900 Nautic g230	see above, 230 VAC	950.516.0340
EPC PM 2100tc Nautic	Embedded-PC with 21" TFT-Color-Display, Resistive Touch, 24 VDC	950.516.0280
EPC PM 2100 Nautic 230	see above, 230 VAC	950.516.0250
EPC PM 2100 Nautic g	Embedded-PC with 21" TFT-Color-Display, antireflex glass pane, 24 VDC	950.516.0270
EPC PM 2100 Nautic g230	see above, 230 VAC	950.516.0260

certified by

Lloyd's Register TYPE APPROVED

DNV

EN 60945

EPC 840 Mobile
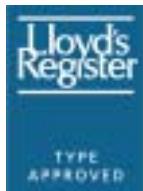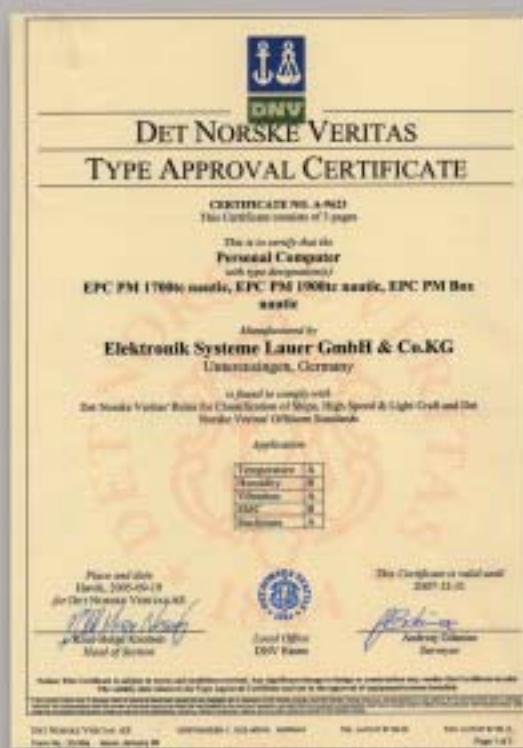
Mobile Panel with Resistive Touch

Technical Datas

Frontpanel

TFT-Display	8,4": 800 x 600 Pixel
Input	Resistive Touch

CPU

Processor	LX800 (x86), 800 MHz GX533 (x86), 533 MHz
internal main memory	512 MB RAM
External memory medium	512 MB Flash (maximum 4 GB)

Interfaces

	PCMCIA-Slot for Wireless LAN card (802.11 b) and/or GSM/GPRS card
	CF-Slot e. g. for CompactFlash Cards, Barcode-Scanner, GPS, ...
	GX533: 1 x USB 1.1 LX800: 1 x USB 2.0

Others

Bluetooth integrated
4 free usable Buttons
Four-Way-Bob up key
16-Bit-Audio
Stereo loudspeaker and jack
Integrated Microphone and jack
Instant-On
Lithium Accu
Power connector

General

Housing material	Mg-Al alloy
Dimension (B x H x T)	200 x 240 x 18 mm
Weight	approx. 800 g without Huckepack-Accu

Order information

Article	Description	Order number
EPC 840 tc-m	Mobile Panel with 8,4" TFT-Color-Display, Resistive Touch, CPU GX 533, Windows CE 5.0, no WLAN	950.530.0070
EPC 840 gtc-m	Mobile Panel with 8,4" TFT-Color-Display, Resistive Touch, CPU LX 800, Windows XP emb., no WLAN	950.530.0080
EPC 840 tc-mws	Mobile Panel with 8,4" TFT-Color-Display, Resistive Touch, CPU GX 533, Windows CE 5.0, WLAN Standard	950.530.0090
EPC 840 tc-mwc	Mobile Panel with 8,4" TFT-Color-Display, Resistive Touch, CPU GX 533, Windows CE 5.0, WLAN Cisco	950.530.0100

Industrial-PC
VPC take off

Modular. Multifunctional. Ergonomic.

By using the VPC take off series, you can configure your industrial PC individually from a range of perfected hardware modules. Application-specific systems result from a versatile range of diversified front and PC units. Each individual product is sophisticated and tested for its suitability in the system. This is how you design your industrial PC exactly according to use and task.

On the inside the overview prevails because it is here that the ease of maintenance and rapidity criteria determine the arrangement of the most important PC modules. On the outside the front units combine the functional elements of the TFT monitor, buttons and/or touch.

Tell us your requirement profile. We will show you an advantageous solution.

Industrial-PC - Overview

Industrial-PC Lite

- 15″, 17″ TFT-Display, Resistive Touch
- Processor 2,53 GHz or higher - always the current market-offer adapted
- RAM up to 4 GB
- Hard disk 3,5″ min. 80 GB

On this Touch-Panel PCs the hardware configurations are subject to alterations anytime.

Industrial-PC take off

- 12″, 15″, 17″, 21″ TFT-Display, Resistive Touch and/or Keys
- Processor P3-Architecture: 1,0 GHz Celeron Processor P4-Architecture: 2,0 GHz Celeron (changeable up to 2,8 GHz Pentium 4)
- RAM up to 2 GB
- 2,5″ Hard disk, CD-ROM front side
- Economy or Business PC-Unit

At this Industrial-PC-Panels the Hardware configurations have a long availability.

Industrial Monitor take off

- 12″, 15″, 17″ TFT-Display, Resistive Touch or Keys
- Serial, USB or PS/2 Touch connection
- Distances possible up to 50 m

Slot side VPC 21x Lite

Touch Panel PC Lite with P4 Architecture

VT 215L

VT 218L

Order information

Article	Description	Order number
VT215L-4	Touch Panel PC Lite 15"TFT-Color-Display, Resistive Touch	940.230.0190
VT217L-4	Touch Panel PC Lite 17"TFT-Color-Display, Resistive Touch	940.230.0250

Technical Datas

Frontpanel

TFT-Display	15": 1024 x 768 Pixel 17": 1280 x 1024 Pixel
Input	Resistive Touch
Protection type	IP 65 front side by DIN EN60529

CPU

Processor	2,53 GHz
RAM	256MB – 4GB
Graphic card	shared memory max. 64 MB
Floppy-Drive	3,5" 1,44 MB
Hard-Disk-Drive	3,5" min. 80 GB
Slots	3 x PCI 1 x PCI Express x16 Slot

Interfaces

Serial	1 x RS232
Parallel	1 x LPT
Network	1 x 10/100 MBit
Keyboard/mouse	2 x PS/2
USB	4 x USB 2.0

General

Power supply	100 – 240 VAC autorange 350W with active PFC and 4KV Peak voltage firmness
Outer dimensions (BxHxT)	15": 452 x 357 x 241 mm 17": 480 x 377 x 247 mm
Mounting dimensions (BxHxT)	15": 420 x 335 x 236 mm 17": 455 x 352 x 241 mm
Temperature	Operation: 5 ... 45° C Storage: -20 ... 60° C

VPC take off

VBox economy

Industrial-PC Box with P3 or P4 Architecture - Economy

Vbox P3 economy

Vbox P4 economy

Technical Datas

CPU

Processor	P3:	1,1 GHz Celeron
	P4:	2,0 GHz Celeron,
		2,4 GHz P4
Ram	128 MB - 2 GB	
Graphic card	P3:	AGP/4 MB
	P4:	AGP/32 MB
Floppy-Drive	1 x 3,5''	1,44 MB
Hard-Disk-Drive	3,5"	80 GB
Slots	5 x PCI	

Interfaces

Video	P3:	VGA
	P4:	VGA/DVI
Serial	2 x RS 232	
	(1 x RS 232 at USV and NT)	
Parallel	1 x LPT	
Keyboard/mouse	2 x PS/2	
USB	P3:	2 x USB 1.1
	P4:	2 x USB 2.0
Network	1 x 10/100 MBit	

General

Power supply	100 - 240 VAC autorange 350W with active PFC
Outer dimensions (B x H x T)	370 x 308 x 200 mm
Weight	approx. 8 kg
Temperature	Operation: 5 ... 45° C
	Storage: -20 ... 60° C

Order information

Article	Description	Order number
Vboxe.II P3	Industrial-PC Box P3 Architecture	940.290.0020
Vboxe-4	Industrial-PC Box P4 Architecture	940.230.0080

Industrial-PC Box with P3 or P4 Architecture - Business

Vbox P3 business

Vbox P4 business

Order information

Article	Description	Order number
Vboxb.II P3	Industrial-PC Box P3 Architecture	940.290.0010
Vboxb-4	Industrial-PC Box P4 Architecture	940.230.0150

Technical Datas

CPU

Processor	P3:	1,0 GHz PIII
	P4:	2,0 GHz Celeron, 2,4 GHz P4
Ram	256 MB - 1 GB	
Graphic card	P3:	AGP/4 MB
	P4:	AGP/32 MB
Floppy-Drive	1 x 3,5''	1,44 MB
Removable Hard-Disk-Drive	2,5"	min. 40 GB
Slots	P3:	4 x PCI, 3 x ISA (1 shared)
	P4:	2 x PCI, 3 x ISA

Interfaces

Video	P3:	VGA
	P4:	VGA/DVI
Serial	2 x RS 232 (1 x RS 232 at USV and NT)	
Parallel	1 x LPT	
Keyboard/mouse	2 x PS/2	
USB	P3:	2 x USB 1.1
	P4:	2 x USB 2.0
Network	1 x 10/100 MBit	

General

Power supply	100 - 240 VAC autorange 300W with active PFC	
Outer dimensions (B x H x T)	370 x 308 x 200 mm	
Weight	approx. 8 kg	
Temperature	Operation:	5 ... 45° C
	Storage:	-20 ... 60° C

VPC take off - Touch

VT 212 / 215 / 218 / 221 Economy

Touch Panel PC "Economy" with P3/P4 Architecture

VT 212e

VT 215e

VT 218e

VT 221e

Technical Datas

Frontpanel

TFT-Display	12": 800 x 600 Pixel 15", 1024 x 768 Pixel 17", 1280 x 1024 Pixel
Input	Resistive Touch
Protection type	IP 65 front side by DIN EN60529

CPU

Processor	P3: 1,1 GHz Celeron P4: 2,0 GHz Celeron, 2,4 GHz P4
Ram	128 MB - 2 GB
Graphic card	P3: AGP/4 MB P4: AGP/32 MB
Floppy-Drive	1 x 3,5'' 1,44 MB
Hard-Disk-Drive	3,5" 80 GB
Slots	5 x PCI

Interfaces

Serial	2 x RS 232 (1 x RS 232 at USV and NT)
Parallel	1 x LPT
Keyboard/mouse	2 x PS/2
USB	P3: 2 x USB 1.1 P4: 2 x USB 2.0
Network	1 x 10/100 MBit

General

Power supply	100 - 240 VAC autorange 350W with active PFC
Outer dimensions (B x H x T)	12": 364 x 296 x 220 mm 15": 452 x 357 x 220 mm 17": 480 x 377 x 220 mm 21": 527 x 419 x 220 mm
Mounting dimensions (B x H)	12": 345 x 277 mm 15": 429 x 334 mm 17": 454 x 351 mm 21": 498 x 390 mm
Weight (in kg)	12" 15" 17" 21" ca. 12,0 ca. 16,0 ca. 18,0 ca. 20,0
Temperature	Operation: 5 ... 45° C Storage: -20 ... 60° C

Order information

Article	Description	Order number
VT212e.II P3	Touch Panel PC, 12" TFT-Color Display, P3 Architecture	940.200.0010
VT215e.II P3	Touch Panel PC, 15" TFT-Color Display, P3 Architecture	940.230.0010
VT215e-4	Touch Panel PC, 15" TFT-Color Display, P4 Architecture	940.230.0060
VT218e.II P3	Touch Panel PC, 17" TFT-Color Display, P3 Architecture	940.260.0010
VT218e-4	Touch Panel PC, 17" TFT-Color Display, P4 Architecture	940.230.0070
VT221e-4	Touch Panel PC, 21" TFT-Color Display, P4 Architecture	940.260.0030

Touch Panel PC "Business" with P3/P4 Architecture

VT 212b

VT 215b

VT 218b

VT 221b

Order information

Article	Description	Order number
VT212b.II P3	Touch Panel PC, 12" TFT-Color Display, P3 Architecture	940.200.0020
VT215b.II P3	Touch Panel PC, 15" TFT-Color Display, P3 Architecture	940.230.0020
VT215b-4	Touch Panel PC, 15" TFT-Color Display, P4 Architecture	940.230.0090
VT218b.II P3	Touch Panel PC, 17" TFT-Color Display, P3 Architecture	940.260.0020
VT218b-4	Touch Panel PC, 17" TFT-Color Display, P4 Architecture	940.230.0100
VT221b-4	Touch Panel PC, 21" TFT-Color Display, P4 Architecture	940.260.0040

Technical Datas

Frontpanel

TFT-Display	12":	800 x 600 Pixel
	15":	1024 x 768 Pixel
	17":	1280 x 1024 Pixel
Input	Resistive Touch	
Protection type	IP 65 front side by DIN EN60529	

CPU

Processor	P3:	1,1 GHz Celeron
	P4:	2,0 GHz Celeron, 2,4 GHz P4
Ram	128 MB - 2 GB	
Graphic card	P3:	AGP/4 MB
	P4:	AGP/32 MB
Floppy-Drive	1 x 3,5''	1,44 MB
Removable Hard-Disk-Drive	2,5"	min. 40 GB
Slots	P3:	4 x PCI; 3 x ISA (1 shared)
	P4:	2 x PCI; 3 x ISA

Interfaces

|		
Video	P3:	VGA
	P4:	VGA/DVI
Serial	2 x RS 232 (1 x RS 232 at USV and NT)	
Parallel	1 x LPT	
Keyboard/mouse	2 x PS/2	
USB	P3:	2 x USB 1.1
	P4:	2 x USB 2.0
Network	1 x 10/100 MBit	

General

Power supply	100 - 240 VAC autorange 350W with active PFC	
Outer dimensions (B x H x T)	12":	364 x 296 x 220 mm
	15":	452 x 357 x 220 mm
	17":	480 x 377 x 220 mm
	21":	527 x 419 x 220 mm
Mounting dimensions (B x H)	12":	345 x 277 mm
	15":	429 x 334 mm
	17":	454 x 351 mm
	21":	498 x 390 mm

Weight (in kg)	12"	15"	17"	21"
	ca. 12,0	ca. 16,0	ca. 18,0	ca. 20,0

Temperature	Operation:	5 ... 45° C
	Storage:	-20 ... 60° C

VPC take off - Key

VK 212 / 215 Business

Key Panel PC "Business" with P3/P4 Architecture

VK 212

VK 215

Technical Datas

Frontpanel

TFT-Display	12": 800 x 600 Pixel 15", 1024 x 768 Pixel
Input	alphanumeric Input/mouse; Operating keys beside Display
Protection type	IP 65 front side by DIN EN60529

CPU

Processor	P3: 1,1 GHz Celeron P4: 2,0 GHz Celeron, 2,4 GHz P4
Ram	128 MB - 2 GB
Graphic card	P3: AGP/4 MB P4: AGP/32 MB
Floppy-Drive	1 x 3,5'' 1,44 MB
Removable Hard-Disk-Drive	2,5" min. 40 GB
Slots	P3: 4 x PCI; 3 x ISA (1 shared) P4: 2 x PCI; 3 x ISA

Interfaces

Video	P3: VGA P4: VGA/DVI
Serial	2 x RS 232 (1 x RS 232 at USV and NT)
Parallel	1 x LPT
Keyboard/mouse	2 x PS/2
USB	P3: 2 x USB 1.1 P4: 2 x USB 2.0
Network	1 x 10/100 MBit

General

Power supply	100 - 240 VAC autorange 350W with active PFC
Outer dimensions (B x H x T)	12": 456 x 361 x 220 mm 15": 501 x 387 x 220 mm
Mounting dimensions (B x H)	12": 429 x 334 mm 15": 478 x 364 mm
Weight	approx. 8 kg approx. 9 kg
Temperature	Operation: 5 ... 45° C Storage: -20 ... 60° C

Order information

Article	Description	Order number
VK212b.II P3	Key Panel PC, 12" TFT-Color Display, P3 Architecture	940.220.0010
VK215b.II P3	Key Panel PC, 15" TFT-Color Display, P3 Architecture	940.250.0010
VK215b-4	Key Panel PC, 15" TFT-Color Display, P4 Architecture	940.230.0120

Key Touch Panel PC "Business" with P3/P4 Architecture
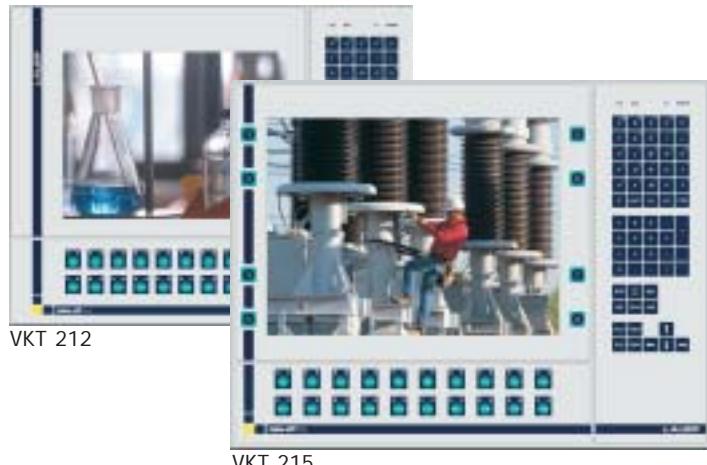
VKT 212

VKT 215

Order information

Article	Description	Order number
VKT212b.II P3	Key Touch Panel PC, 12" TFT-Color Display, P3 Architecture	940.220.0020
VKT215b.II P3	Key Touch Panel PC, 15" TFT-Color Display, P3 Architecture	940.250.0020
VKT215b-4	Key Touch Panel PC, 15" TFT-Color Display, P4 Architecture	940.230.0130

Technical Datas

Frontpanel

TFT-Display	12": 800 x 600 Pixel 15", 1024 x 768 Pixel
Input	alphanumeric Input/mouse; Operating keys beside Display + Resistive Touch
Protection type	IP 65 front side by DIN EN60529

CPU

Processor	P3:	1,1 GHz Celeron
	P4:	2,0 GHz Celeron, 2,4 GHz P4
Ram	128 MB - 2 GB	
Graphic card	P3:	AGP/4 MB
	P4:	AGP/32 MB
Floppy-Drive	1 x 3,5''	1,44 MB
Removable Hard-Disk-Drive	2,5"	min. 40 GB
Slots	P3:	4 x PCI; 3 x ISA (1 shared)
	P4:	2 x PCI; 3 x ISA

Interfaces

Video	P3:	VGA
	P4:	VGA/DVI
Serial	2 x RS 232 (1 x RS 232 at USV and NT)	
Parallel	1 x LPT	
Keyboard/mouse	2 x PS/2	
USB	P3:	2 x USB 1.1
	P4:	2 x USB 2.0
Network	1 x 10/100 MBit	

General

Power supply	100 - 240 VAC autorange 350W with active PFC	
Outer dimensions (B x H x T)	12":	456 x 361 x 220 mm
	15":	501 x 387 x 220 mm
Mounting dimensions (B x H)	12":	429 x 334 mm
	15":	478 x 364 mm
Weight	approx. 8 kg approx. 9 kg	
Temperature	Operation:	5 ... 45° C
	Storage:	-20 ... 60° C

VPC take off - Touch & Front drives

VTF 212 / 215 Business

Touch Panel PC und Frontseitige Laufwerke "Business" with P3/P4 Architecture

VTF 212b

VTF215b

Technical Datas

Frontpanel

TFT-Display	12": 800 x 600 Pixel 15", 1024 x 768 Pixel
Input	Resistive Touch + front side drives
Protection type	IP 65 front side by DIN EN60529

CPU

Processor	P3:	1,1 GHz Celeron
	P4:	2,0 GHz Celeron, 2,4 GHz P4
Ram	128 MB - 2 GB	
Graphic card	P3:	AGP/4 MB
	P4:	AGP/32 MB
Floppy-Drive	1 x 3,5''	1,44 MB
Removable Hard-Disk-Drive	2,5"	min. 40 GB
Slots	P3:	4 x PCI; 3 x ISA (1 shared)
	P4:	2 x PCI; 3 x ISA

Interfaces

|		
Video	P3:	VGA
	P4:	VGA/DVI
Serial	2 x RS 232 (1 x RS 232 at USV and NT)	
Parallel	1 x LPT	
Keyboard/mouse	2 x PS/2	
USB	P3:	2 x USB 1.1
	P4:	2 x USB 2.0
Network	1 x 10/100 MBit	

General

Power supply	100 - 240 VAC autorange 350W with active PFC	
Outer dimensions (B x H x T)	12":	420 x 276 x 200 mm
	15":	454 x 359 x 220 mm
Mounting dimensions (B x H)	12":	400 x 276 mm
	15":	429 x 334 mm
Weight	approx. 8 kg approx. 9 kg	
Temperature	Operation:	5 ... 45° C
	Storage:	-20 ... 60° C

Order information

Article	Description	Order number
VTF212b.II P3	Touch Panel PC, 12" TFT-Color Display, Front side drives, P3 Architecture	940.200.0020
VTF215b.II P3	Touch Panel PC, 15" TFT-Color Display, Front side drives, P3 Architecture	940.230.0030
VTF215b-4	Touch Panel PC, 15" TFT-Color Display, Front side drives, P4 Architecture	940.230.0110

Key Panel PC und Frontseitige Laufwerke "Business" with P3/P4 Architecture
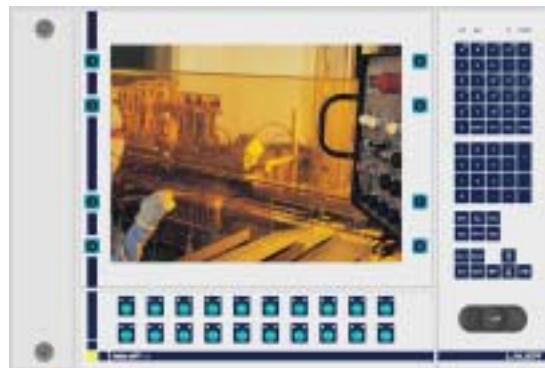
VKF 215b

Order information

Article	Description	Order number
VKF215b-4	Key Panel PC, 15" TFT-Color Display, Front side drives, P4 Architecture	940.230.0140

Technical Datas

Frontpanel

TFT-Display	15", 1024 x 768 Pixel
Input	alphanumeric Input/mouse; Operating keys beside Display + front side drives
Protection type	IP 65 front side by DIN EN60529

CPU

Processor	P3:	1,1 GHz Celeron
	P4:	2,0 GHz Celeron, 2,4 GHz P4
Ram	128 MB - 2 GB	
Graphic card	P3:	AGP/4 MB
	P4:	AGP/32 MB
Floppy-Drive	1 x 3,5'' 1,44 MB	
Removable Hard-Disk-Drive	2,5" min. 40 GB	
Slots	P3:	4 x PCI; 3 x ISA (1 shared)
	P4:	2 x PCI; 3 x ISA

Interfaces

Video	P3:	VGA
	P4:	VGA/DVI
Serial	2 x RS 232 (1 x RS 232 at USV and NT)	
Parallel	1 x LPT	
Keyboard/mouse	2 x PS/2	
USB	P3:	2 x USB 1.1
	P4:	2 x USB 2.0
Network	1 x 10/100 MBit	

General

Power supply	100 - 240 VAC autorange 350W with active PFC
Outer dimensions (B x H x T)	563 x 387 x 219 mm
Mounting dimensions (B x H)	540 x 364 mm
Weight	approx. 9 kg
Temperature	Operation: 5 ... 45° C
	Storage: -20 ... 60° C

VPC take off - Monitor

MT 212 / 215 / 218 / 221 - MK 212 / 215

VPC take off as Flat-Monitor

MT 2xx

MK 215

Technical Datas

Frontpanel

TFT-Display	12": 800 x 600 Pixel
	15": 1024 x 768 Pixel
	17": 1280 x 1024 Pixel
Input	Resistive Touch or alphanumeric Input/mouse
Protection type	IP 65 front side by DIN EN60529

Electricity supply

Connected load	24VDC ±15%
Capacity	20 - 45 W (depends on display)

Interfaces

Graphic	VGA
Input	PS/2, RS 232, USB

General

Front material	Anodized aluminium, silver
Foil	acid-resistant polyester foil
Outer dimensions (B x H)	MT212: 364 x 296 x 51 mm
	MT215: 452 x 357 x 51 mm
	MT218: 480 x 377 x 55 mm
	MT221: 527 x 419 x 58 mm
	MK212: 456 x 361 x 51 mm
	MK215: 501 x 387 x 51 mm
Mounting dimensions (B x H)	MT212: 429 x 334 mm
	MT215: 478 x 364 mm
	MT218: 454 x 351 mm
	MT221: 498 x 390 mm
	MK212: 429 x 334 mm
	MK215: 478 x 364 mm
Weight (in kg)	12" 15" 17" 21"
	ca. 4,0 ca. 6,0 ca. 8,0 ca. 10
Temperature	Operation: 5 ... 45° C
	Storage: -20 ... 60° C

Options

Extender	Extender Set for distances up to 50m

Order information

Article	Description	Order number
MT212 PS/2	Industrial-Monitor, 12" TFT-Color Display, Resistiv Touch PS/2, 24 VDC	940.600.0220
MT212 USB	Industrial-Monitor, 12" TFT-Color Display, Resistiv Touch USB, 24 VDC	940.600.0260
MT212.2 USB	Industrial-Monitor, 12" TFT-Color Display, Resistiv Touch USB, front side USB connection, 24 VDC	940.600.0240
MT212 Serial	Industrial-Monitor, 12" TFT-Color Display, Resistiv Touch Serial, 24 VDC	940.600.0320
MT215 PS/2	Industrial-Monitor, 15" TFT-Color Display, Resistiv Touch PS/2, 24 VDC	940.600.0280
MT215 USB	Industrial-Monitor, 15" TFT-Color Display, Resistiv Touch USB	940.600.0290
MT215 Serial	Industrial-Monitor, 15" TFT-Color Display, Resistiv Touch Serial, 24 VDC	940.600.0300
MT218 PS/2	Industrial-Monitor, 17" TFT-Color Display, Resistiv Touch PS/2, 24 VDC	940.600.0200
MT221 USB	Industrial-Monitor, 21" TFT-Color Display, Resistiv Touch USB, 24 VDC	940.600.0310
MK212	Industrial-Monitor, 12" TFT-Color Display, Alphanum-meric Keyboard, 24 VDC	940.600.0160
MK215	Industrial-Monitor, 15" TFT-Color Display, Alphanum-meric Keyboard, 24 VDC	940.600.0170
MT215 Lite	Industrial-Monitor, 15" TFT-Color Display, Resistiv Touch USB, 12 VDC	940.600.0270

Text displays
LCA starline

Small. Compact. Communicative.

LCA text displays inform you about everything which you need to know about your machine or control unit. Precise and reliable. As a static text display or interactive message centre. Simple and reliable operation. Uncomplicated and quick connection: via contacts, PLC outputs or a serial interface. Text panels LCA Starline function in any environment, with almost any PLC and they speak different languages.

LCA starline
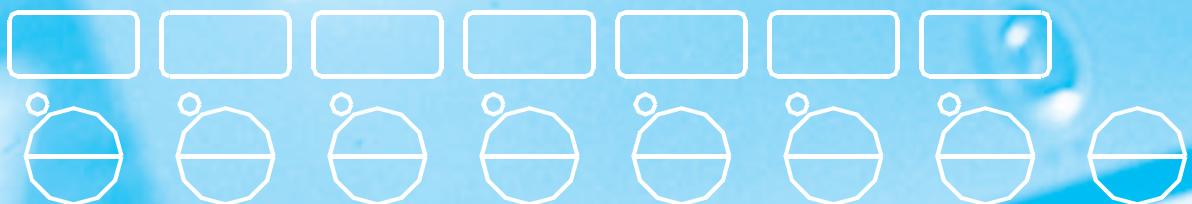
LCA 200/300/320/325

Text display with LCD-Display

LCA 200

LCA 300

LCA 320/325

Technical datas

Electricity supply

Operation voltage	24 VDC
Power consumption	6 - 8 W (depends on Display)

Display

LCD	2 x 40 characters (LCA 200/300) 4 x 40 characters (LCA 320/325) 5 x 7-Matrix, 5 mm character size

General

Outer dimensions (B x H x T)	LCA 200: 216 x 48 x 45 mm LCA 300: 216 x 84 x 57 mm LCA 320/325: 216 x 84 x 57 mm
Mounting dimensions (B x H)	LCA 200: 208 x 40 mm LCA 300: 208 x 76 mm LCA 320/325: 208 x 76 mm
Message call	direct, binary or Multiplex, serial
Message pages	maximum 1024
Memory	LCA 200: EEPROM 32 kB LCA 300/320: Flash-PROM 64 kB
Protection type	IP 65
Temperature	Operation 0 … 50° C Storage -25 … 70° C
Weight	275 g (LCA 200) 450 g (LCA 300) 600 g (LCA 320) 950 g (LCA 325)

Order information

Article	Description	Order number
LCA 200	Text display, 2 x 40 characters RS 232/TTY	900.200.0020
LCA 300.0	Text display, 2x 40 characters RS 232/TTY	900.220.0020
LCA 300.1	Text display, 2x 40 characters RS 232/TTY/485/422	900.220.0050
LCA 300.m	Text display, 2x 40 characters MPI-Interface	900.220.0080
LCA 300.p	Text display, 2x 40 characters Profibus-Interface	900.220.0070
LCA 320.0	Text display, 4x 40 characters RS 232/TTY	900.240.0040
LCA 320.1	Text display, 4x 40 characters RS 232/TTY/485/422	900.240.0050
LCA 320.i	Text display, 4x 40 characters Interbus-Interface	900.400.0080
LCA 320.p	Text display, 4x 40 characters Profibus-Interface	900.400.0100
LCA 320.m	Text display, 4x 40 characters MPI-Interface	900.400.0090
LCA 325.1	Text display, 4x 40 characters RS 232/TTY/485/422, Printer (RS232)	900.250.0040
LCA 325.p	Text display, 4x 40 characters Printer (RS232), Profibus-Interface	900.250.0060
LCA 325.m	Text display, 4x 40 characters Printer (RS232), MPI-Interface	900.250.0050

Operating Panels
PCS WIN

Functional. Flexible. Hard-working.

PCS WIN Operating panels are genuine all-rounders. As an interface between man and machine they perform a wide range of different tasks. Operation and monitoring, collecting, managing and analysing data, logging processes or preparing machine reports. PCS WIN can fulfil almost any task in the vicinity of your machine or equipment. In words and pictures. With maximum user-friendliness. Easy to understand and even easier to install with only one 4-core cable. Because clear and functional organisation belongs to the innovative design of the PCS. With a view to the technology, the design and the economic efficiency.

PCS WIN

PCS 009 WIN

Operating panel PCS 009 WIN

Technical datas

Electricity supply

Operation value	24 VDC ±10%, polarised
Current consumption	250 mA at 24 Volt
Fuse	630 mAT, microfuse, delayed action

Display

LCD-Display	4 x 20 characters 5 x 8 Matrix, 5 mm character size

General

Front material	Aluminium black anodized
Foil	Acid-resistant polyester foil
Outer dimensions (B x H x T)	147 x 215 x 52 mm
Mounting dimensions (B x H)	131 x 199 mm
Weight	approx. 1 kg
Protection type	IP 65 Front / IP 20 Housing
Temperature	Operation 0 … 50° C
	Storage -25 … 70° C

Order information

Article	Description	Order number
PCS 009.s WIN	Operating panel, 4x 20 characters Printer - Serial-Interface*	910.500.0100
PCS 009.m WIN	Operating panel, 4x 20 characters Printer - MPI-Interface	910.500.0080
PCS 009.p WIN	Operating panel, 4x 20 characters Printer - Profibus-Interface	910.500.0090
PCS 009.c WIN	Operating panel, 4x 20 characters Printer - CAN open-Interface	910.500.0060
PCS 009.i WIN	Operating panel, 4x 20 characters Printer - Interbus-S	910.500.0070

*Serial-Interface: RS 232/422/485/TTY

Operating panel PCS 090 WIN
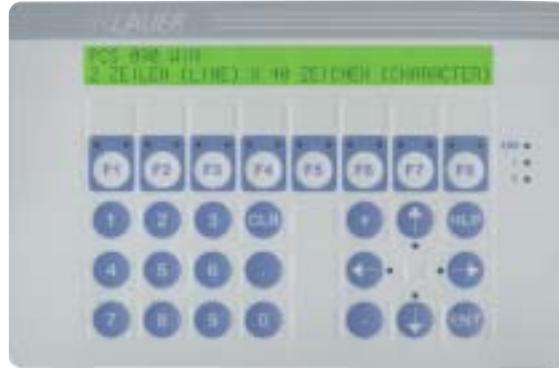
Order information

Article	Description	Order number
PCS 090.s WIN	Operating panel, 2x 40 characters Printer - Serial-Interface*	910.510.0120
PCS 090.m WIN	Operating panel, 2x 40 characters Printer - MPI-Interface	910.510.0100
PCS 090.p WIN	Operating panel, 2x 40 characters Printer - Profibus-Interface	910.510.0110
PCS 090.c WIN	Operating panel, 2x 40 characters Printer - CAN open-Interface	910.510.0080
PCS 090.i WIN	Operating panel, 2x 40 characters Printer - Interbus-S	910.510.0090

*Serial-Interface: RS 232/422/485/TTY

Technical datas

Electricity supply

Operation value	24 VDC ± 10%, polarised
Current consumption	250 mA at 24 Volt
Fuse	630 mAT, microfuse, delayed action

Display

LCD-Display	2 x 40 characters 5 x 8 Matrix, 5 mm character size

General

Front material	Aluminium black anodized
Foil	Acid-resistant polyester foil
Outer dimensions (B x H x T)	215 x 144 x 52 mm
Mounting dimensions (B x H)	194 x 128 mm
Weight	approx. 1 kg
Protection type	IP 65 Front / IP 20 Housing
Temperature	Operation 0 … 50° C
	Storage -25 … 70° C

PCS WIN

PCS 095 WIN

Operating panel PCS 095 WIN
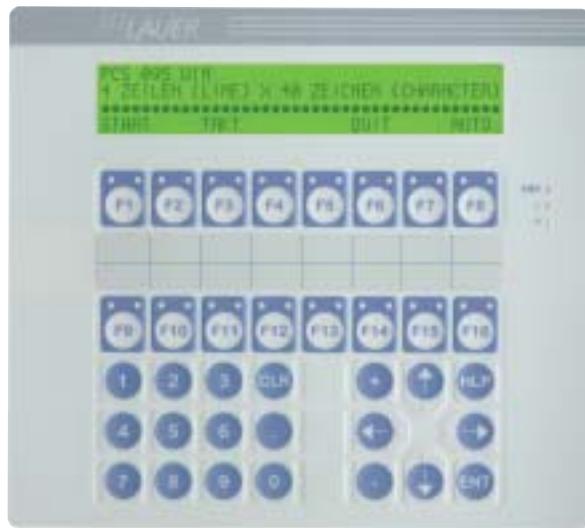
Technical datas

Electricity supply

Operation value	24 VDC ± 10%, polarised
Current consumption	250 mA at 24 Volt
Fuse	630 mAT, microfuse, delayed action

Display

LCD-Display	4 x 40 characters 5 x 8 Matrix, 5 mm character size

General

Front material	Aluminium black anodized
Foil	Acid-resistant polyester foil
Outer dimensions (B x H x T)	224 x 202 x 52 mm
Mounting dimensions (B x H)	204 x 188 mm
Weight	approx. 1 kg
Protection type	IP 65 Front / IP 20 Housing
Temperature	Operation 0 … 50° C
	Storage -25 … 70° C

Order information

Article	Description	Order number
PCS 095.s WIN	Operating panel, 4x 40 characters Printer - Serial-Interface*	910.520.0130
PCS 095.m WIN	Operating panel, 4x 40 characters Printer - MPI-Interface	910.520.0110
PCS 095.p WIN	Operating panel, 4x 40 characters Printer - Profibus-Interface	910.520.0120
PCS 095.c WIN	Operating panel, 4x 40 characters Printer - CAN open-Interface	910.520.0090
PCS 095.i WIN	Operating panel, 4x 40 characters Printer - Interbus-S	910.520.0100

*Serial-Interface: RS 232/422/485/TTY

Operating panel PCS 900 WIN
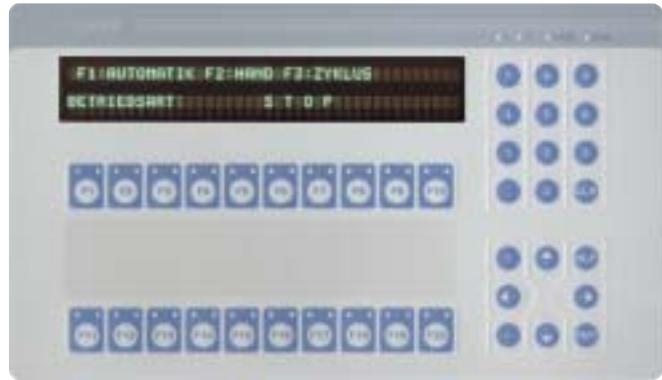
Order information

Article	Description	Order number
PCS 900 Win*	Operating panel, 2x 40 characters	910.230.0080

* Fieldbus connection optional with PCS 807 (Profibus), PCS 812 (MPI) or PCS 811 (Interbus)

Technical datas

Electricity supply

|	
Operation value	24 V DC ± 10%, polarised
Current consumption	Iav = 800 mA at 24 Volt
Fuse	1 AT, microfuse, delayed action

Display

VF-Display	2 x 40 characters, 5 x 7-Matrix, 5 mm character size

General

Front material	Aluminium black anodized
Foil	Acid-resistant polyester foil
Outer dimensions (B x H x T)	325 x 190 x 65 mm
Mounting dimensions (B x H)	304 x 169 mm
Weight	approx. 2 kg
Protection type	IP 65 Front/IP 20 Housing
Temperature	Operation 0 … 50° C
	Storage -25 … 70° C

PCS WIN

PCS 950 / 950q WIN

Operating panel PCS 950 WIN and PCS 950q WIN
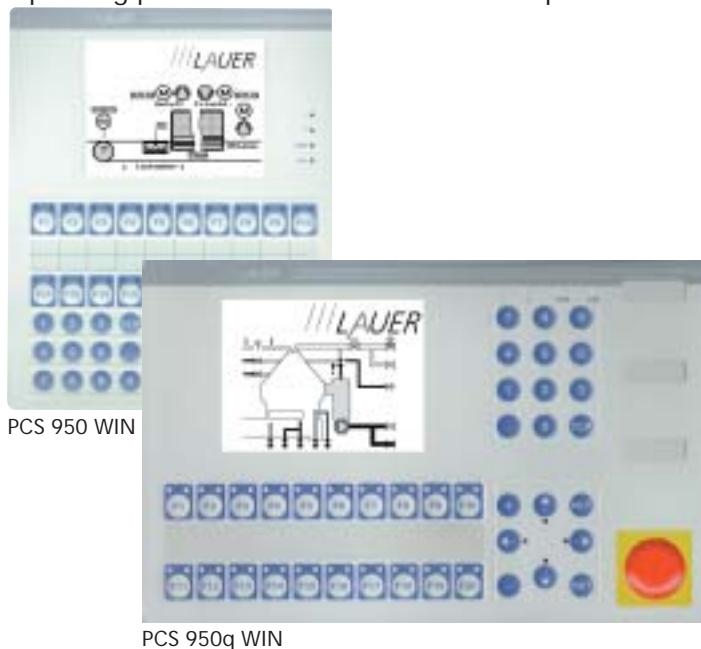
PCS 950 WIN

PCS 950q WIN

Technical datas

Electricity supply

Operation value	24 V DC ±10%, polarised
Current consumption	800 mA at 24 Volt
Fuse	1AT, microfuse, delayed action

Display

CFL-LCD-Display	320 x 240 Pixel, backlight

General

Front material	Aluminium black anodized
Foil	Acid-resistant polyester foil
Outer dimensions (B x H x T)	PCS 950: 224 x 270 x 65mm
Mounting dimensions (B x H)	204 x 259 mm
Outer dimensions (B x H x T)	PCS 950q: 339 x 219 x 65 mm
Mounting dimensions (B x H)	325 x 205 mm
Weight	approx. 2,5 kg
Protection type	IP 65 Front / IP 20 Housing
Temperature	Operation 0 … 50° C
	Storage -25 … 70° C

Order information

Article	Description	Order number
PCS 950.s WIN	Operating panel, 320 x 240 Pixel Printer - Serial-Interface*	910.530.0150
PCS 950.m WIN	Operating panel, 320 x 240 Pixel Printer - MPI-Interface	910.530.0130
PCS 950.p WIN	Operating panel, 320 x 240 Pixel Printer - Profibus-Interface	910.530.0140
PCS 950.c WIN	Operating panel, 320 x 240 Pixel Printer - CAN open-Interface	910.530.0120
PCS 950.i WIN	Operating panel, 320 x 240 Pixel Printer - Interbus-S	910.530.0110
PCS 950q.s WIN	Operating panel, 320 x 240 Pixel prepared for switch elements 4x ø22,5 - Serial-Interface*	910.540.0110
PCS 950q.m WIN	Operating panel, 320 x 240 Pixel prepared for switch elements 4x ø22,5 - MPI-Interface	910.540.0120
PCS 950q.p WIN	Operating panel, 320 x 240 Pixel prepared for switch elements 4x ø22,5 - Profibus-Interface	910.540.0130
PCS 950q.c WIN	Operating panel, 320 x 240 Pixel prepared for switch elements 4x ø22,5 - CAN open-Interface	910.540.0150
PCS 950q.i WIN	Operating panel, 320 x 240 Pixel prepared for switch elements 4x ø22,5 - Interbus-S	910.540.0140

*Serial-Interface: RS 232/422/485/TTY

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Packing technology

Textile industry

Pharmaceutical & Food

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Industrial automation

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