



Embedded Line



# PC Terminals for industrial IT + Outdoor

Embedded Line for Linux based applications  
in industrial and extremely use

Rev. N / 20130409hgw

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www.terminal-systems.de



# TRM/416

## Open Frame Version



### System Information:

- Text display 4 lines a 20 characters
- Display with back-lighted LED, for extended temperature range -20...+70°C (option)
- Panel keyboard for text and numeric char
- Front Panel keyboard IP65 dust / water protected
- Integrated clock (RTC), optionally battery backup
- For 12-24VDC power, LOW Power, fanless
- Dimensions: from 158 x 100 x 40 mm
- With SSV DIL/NetPC
- Temperature range -20...+60/70°C
- [www.terminal-systems.de/english/hardware-trm-en.htm](http://www.terminal-systems.de/english/hardware-trm-en.htm)

### Operating Systems & Software:

- Embedded Linux, DOS → refer software catalogue

### Single Board Computer – SSV DIL/NetPC:

- ADNP/1520, 100/133MHz, 64MB RAM, 16MB Flash, 10/100Mbit LAN

### Interfaces:

- CAN (Philips CAN SJA1000 controller)
- Digital I/O (2bit In/2bit Out)
- 10/100BASE-T Ethernet LAN
- COM1 RS232/422/485
- COM2 RS232
- Compact Flash Adapter for memory cards

Model-Number	Description
TRM/416 + ADNP1520	TRM/416 + DIL/NetPC ADNP/1520



# TRM/816

## Open Frame Version



### System Information:

- Graphic display 128x64 dots, 8 lines á 21 characters text
- Backlighted display for extended temperature range -20...+60°C (Option)
- Panel keyboard for numeric + alphanumeric input, 2 softkeys and 4 F-keys, IP65 dust / water protected
- Integrated clock (RTC), optionally battery backup
- for 12-24VDC power, LOW Power, fanless
- Dimensions: from 100 x 158 x 40 mm
- with SSV DIL/NetPC
- [www.terminal-systems.de/english/hardware-trm816-en.htm](http://www.terminal-systems.de/english/hardware-trm816-en.htm)

### Operating Systems & Software:

- Embedded Linux, DOS → refer software catalogue

### Single Board Computer / CPU module:

- DNP/1486, 33MHz, 8/2MB RAM/Flash, 10Mbit LAN\*1
- ADNP/1486, 100MHz, 16/4MB RAM/Flash, 10Mbit LAN\*1
- ADNP/1520, 133MHz, 64MB RAM, 16MB Flash, 10/100Mbit LAN

### Interfaces:

- CAN (Philips CAN SJA1000 controller)
- Digital I/O (2bit In/2bit Out)
- Ethernet LAN Interface
- COM1 RS232/422/485
- COM2 RS232
- Compact Flash Adapter (with ADNP/xx only)

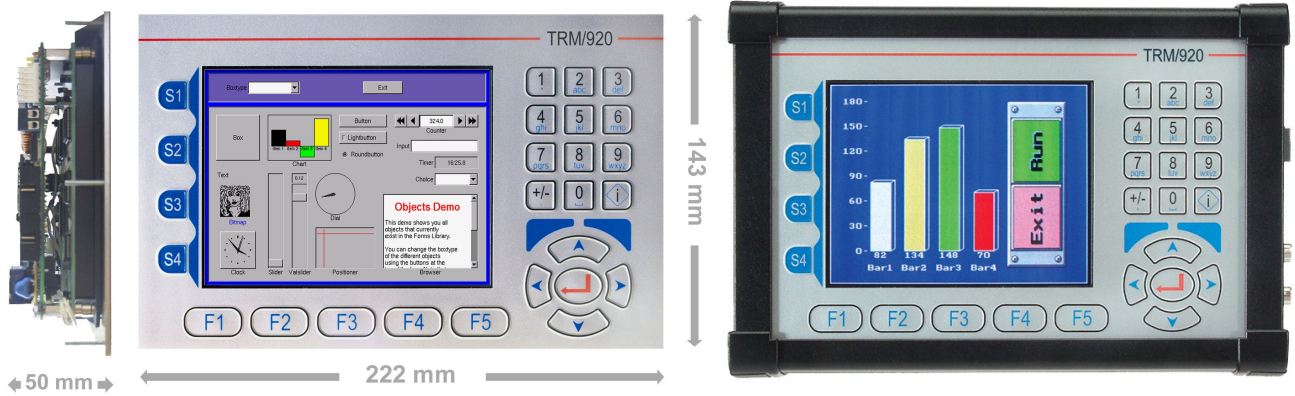
\*1 End of life. Use newest CPU instead!

Model-Number	Description
TRM/816B + ADNP/1520	TRM/816B + DIL/NetPC ADNP/1520



# TRM/926 TFT

## Open Frame Version



### System Information:

- Graphic display VGA resolution 640x480, 5.7"
- TFT Color >262k colors
- Long Life LED back-lighted controlled display
- Front panel keyboard for numeric + alphanumeric input, 4 softkeys and 5 F-keys
- Front panel keyboard IP65 dust / water protected
- Integrated clock (RTC), optionally battery backup for 12-24VDC power
- Dimensions: from 222 x 143
- extremely slim / flat design
- [www.terminal-systems.de/english/hardware-trm926-en.htm](http://www.terminal-systems.de/english/hardware-trm926-en.htm)

### Operating System & Software:

- Linux preinstalled
- Python GTK preinstalled

### Single Board Computer:

- eSOM2586, embedded CPU Vortex86DX 32bit x86 SOC @600Mhz, LOW Power, 10/100Mbit LAN

### Interfaces:

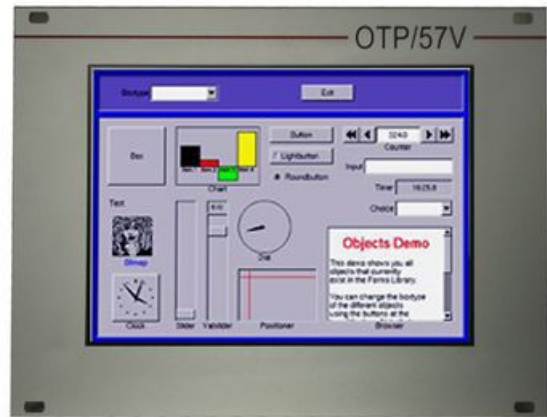
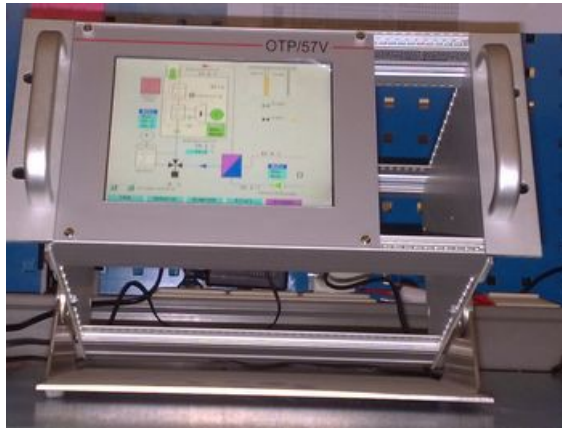
- CAN (Philips CAN SJA1000 controller)
- Ethernet LAN Interface
- COM1 RS232/422/485
- COM2 RS232
- PC/104 connector
- USB HOST adapter

Model-Number	Description
TRM/926 + eSOM2586	TRM/926 with CPU Module eSOM2586



# Touch Panel OTP57V TFT

## Open Frame Version



### System Information:

- Graphic display VGA resolution 640x480, 5.7"
- TFT Color >262k colors
- Long Life LED back-lighted controlled display
- Touch Panel System for manual input
- Front panel keyboard IP65 dust / water protected
- Integrated clock (RTC), optionally battery backup
- for 12-24VDC power
- Dimensions: 19" 3HE 162,2 x 128x8 mm
- extremely slim / flat design
- [www.terminal-systems.de/english/hardware-otp57v-en.htm](http://www.terminal-systems.de/english/hardware-otp57v-en.htm)

### Operating System & Software:

- Linux preinstalled
- Java Swing preinstalled

### Single Board Computer:

- eSOM2586, embedded CPU Vortex86DX 32bit x86 SOC @600Mhz, LOW Power, 10/100Mbit LAN

### Interfaces:

- CAN (Philips CAN SJA1000 controller)
- Ethernet LAN Interface
- COM1 RS232/422/485
- COM2 RS232
- 2x USB HOST adapter

### Model-Number

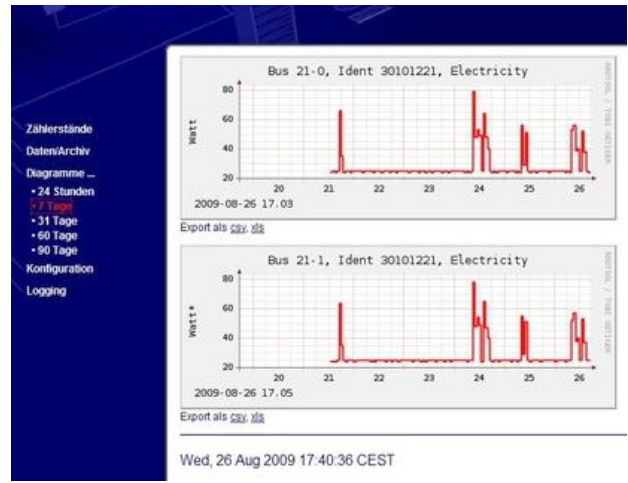
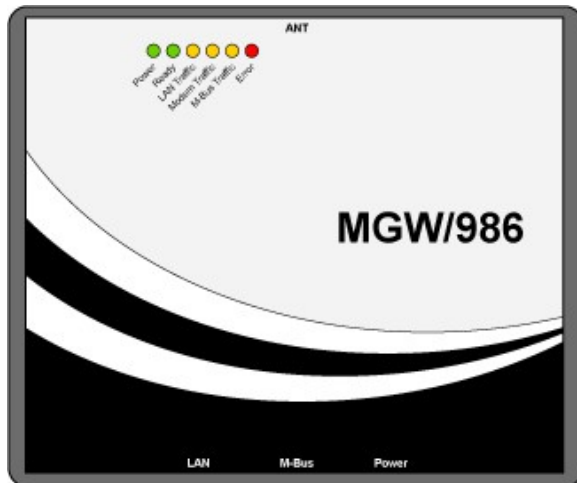
OTP57V + eSOM2586

OTP57V with CPU Module eSOM2586



# MGW986 ECM

## Smart Metering Box



### For visualisation of measurement, energy and power counter:

- MGW986 Smart Metering Box with Smart Metering Software preinstalled
- Supports M-Bus connections to various meters with M-Bus Interface
- Collects metering data into internal database
- User connectino with IP network interface
- User Access via Web Interface
- Presents data as chart or as download in XLS / CSV dataformat
- User configurable for various meters, collection intervals and moer
- Supports 1...10 meters or 255-1 meters without graphics
- Optionally PHP / SQL based
- [www.terminal-systems.de/english/mgw986-en.htm](http://www.terminal-systems.de/english/mgw986-en.htm)

### Technical data:

- Vortex 868SX 32bit SOC, 300Mhz
- 64MB DDR2 SRAM, 1GB NAND Flash
- 10/100 Mbit LAN, RJ45 Connector
- 6 Status LED
- M-BUS Master Interface, RJ12 Connector
- Linux Kernel 2.4/2.6, ECM Software preinstalled
- For wall mounting or DIN / RAIL system
- 152,4 x 127 x 31,1 mm
- 12VDC Power, LOW Power, fanless
- Operating temperature 0...+60°C
- Optionally: power supply or DIN / RAIL holder
- Integrated Webserver für web based access
- Integrated Telnet / FTP server für remote access and file transfer



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## TRM/418/816-RFID

with RFID / proximity reader



- System with RFID / proximity reader EM1402 or MiFare
- Including Reading / Decoding Software
- Heavy Duty Industrial Version
- [www.terminal-systems.de/english/s-kit-rfid1-en.htm](http://www.terminal-systems.de/english/s-kit-rfid1-en.htm)

## Trm416/816 XML Config Interface

Individual applications without programming

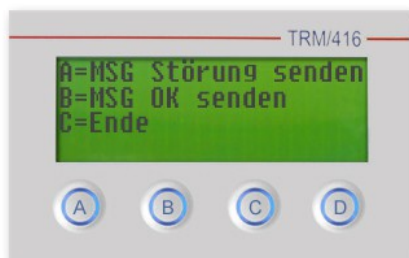


```
<?xml version="1.0" encoding="Windows-1252" ?>
- <NewDataSet>
- <datacode>
  <Nr>2</Nr>
  <Object-ID>Mitarbeiter</Object-ID>
  <CLR>1</CLR>
  <Text1-row>1</Text1-row>
  <Text1-col>1</Text1-col>
  <Text1>01.01.2007 12:00</Text1>
  <Text2-row>2</Text2-row>
  <Text2-col>1</Text2-col>
  <Text2>Mitarbeiter</Text2>
  <Text3-row>3</Text3-row>
```

- Linux XML interpreter for TRM416/816
- Allows configuraiton of individual data capturing applications without any linux programming
- Supports serial interface and SQL database with networking
- [www.terminal-systems.de/english/xml-config1-en.htm](http://www.terminal-systems.de/english/xml-config1-en.htm)

## mSVR/416

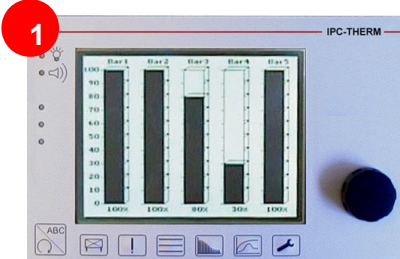
Special Version



- System similar TRM/416 – but in special version with reduced keyboard
- Connector for GSM / GPRS device - for sending / receiving short message services SMS
- Simple using with one-key function



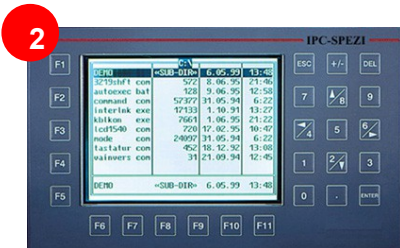
# Customized Designs



Absolutely equal if you are searching for a system with individual front panel keyboard or a system with a totally different technology – by offering Customized Designs we understand the adaptation of our technology on your demands.

If you plan your individual system, you can choose between the following architectures:

- 32bit x86 PC compatible
- 32bit with ColdFire Controller
- 32bit with ARM9 Core



Based on the available CPU platform we can develop your personally desired system – and realise your target application.

Our range of a Customized product series is attractive in it's features:

- PC compatible technology – 100% your idea and request
- Small price and price stability beyond the complete delivery period
- long-time-availability of the goods
- maximum planning reliability
- constant high DIN/ISO certified quality



Here some samples for Customized and individual systems:

- ☞ The keyboard can be limited onto some keys – other input units / control elements are possible, e.g. turn-switch for temperature
- ☞ Other colours with design and customer logo
- ☞ Integration in a suitcase system to receive a mobile measurement and data entry solution. (The pictured system is used in a vibration intensive environment on a ship to take nautical and physical data.)
- ☞ With magnetic card reader or RFID reader for customer- / visitor cards.



- ☞ PC terminals in mobile handheld case! Freely programmable with DOS / Linux or with integrated VT100 client / server emulation for data logging uses or for mobile machine control...

(Hint: The described designs are available for the respective customer only. They can not be used without the first customer permission. A new and changed version have to be manufactured. Alternatively the customer can purchase the standard versions of the article.)




## Accessories / Options

Ordercode	Startup Package / For your Startup
Easy-to-Use Startup-Package for TRM/xx open frame version (without case)	Startup Package for TRM open frame systems. Cable Set with Adapter (1*COMPORT, 1*Reset, Ethernet LAN), Null modem Cable for serial File Transfer, Power Supply (not suitable for case versions), CD-ROM with documentation and manuals, LCD/keyboard driver, sample software for using the TRM system, SDL embedded GUI software support and samples. TRM/92x only: incl. preinstalled sample software.
Easy-to-Use Startup-Package for TRM/xx case version and mSVR/816	Startup Package for TRM case systems. Null modem Cable for serial File Transfer, Power Supply (PWR4-TRM-Screw, suitable for case versions), CD-ROM with documentation and manuals, LCD/keyboard driver, sample software for using the TRM system, SDL embedded GUI software support and samples. TRM/92x only: incl. preinstalled sample software.
Operating Systems RFID Reader + Software SQL / MySQL WAGO IO Barcode Software Development Tools Software Applications	





Ordercode	Power Supply
PWR3-TRM	TRM/416, TRM/816: External Power Supply for systems without case, 100-240 VAC, Output 3-12V, 0.65A  <i>ⓘ</i> <b>Note:</b> Included in startup package open frame versions.
PWR4-TRM	TRM/916, TRM/920: External Power Supply for systems without case, 100-240 VAC, Output 12V, 1.7A  <i>ⓘ</i> <b>Note:</b> Included in startup package open frame versions.
PWR4-TRM-Screw	External Power Supply for case versions, 100-240 VAC, Output 12V, 1.7A .  <i>ⓘ</i> <b>Note:</b> Included in startup package case versions.





Ordercode	Cables
KK1-TRM	Single Cable Set with Adapter (1*COMPORT, 1*Reset, Ethernet LAN). [* For Open Frame Systems only.  <b>Note:</b> Included in startup package open frame versions.
KK2-TRM	Additional Cable: 1*COMPORT (SUB-D9) e.g. for serial, DIO, CAN Interface. [* For Open Frame Systems only.
KK-LAN-TRM	Ethernet LAN Adapter for TRM/xx.  <b>Note:</b> Included in startup package open frame versions.
Ordercode	Further Accessories
BAT-TRM	RTC Backup Battery – for backup power of the internal real time clock of the TRM  <b>Note:</b> Recommended part if you use the internal real time clock inside TRM/xx system!
Screw-TRM/816 Screw-TRM/916 Screw-TRM/920	Screw Set: Screws, M2.5 for fixing and mounting – only together with a TRM order [* For Open Frame Systems only. Included in Case Systems.
PC104-Spacer-TRM	PC/104 Spacer UNC-4/40 for TRM Systems. Packing unit 20 pieces. Schraube UNC-4/40 für PC/104 Spacer (Abstandsbolzen).
Screws-UNC-TRM	Screws UNC-4/40 for TRM Systems. Packing unit 20 pieces.
Laser Scanner  	External handheld laser scanner. Incl. RS232 cable for TRM/xx and Power Supply.



## Cases

Ordercode	Case Options
<p>TRM/416-IP65-WM-Case TRM/816-IP65-WM-Case</p> 	<p>Slime line metal case for wall mounting (IP65 protection front/side) with connectors for power, LAN and <b>3x SUB D9 connector</b> for COM1, COM2 and optionally CAN or DIO interface. Note: No IP protection with standard connectors. IP protected special connectors available on request.</p>
<p>TRM/926-IP65-WM Case</p> 	<p>Metal case for wall mounting (IP65 protection front/side) with connectors for power, LAN, serial, CAN. Price incl. Cable Kit. Note: No IP protection with standard connectors. IP protected special connectors available on request. [Not for TRM/9xx with PC/104 Extension boards]</p>
<p>TRM/926-IP54-WM Case</p> 	<p>IP54 plastic case for wall mounting with connectors power, serial and CAN. Including LAN cable adapter. Additional charge for case. Case available for two PC/104 extension boards. Note: No IP protection with standard connectors. IP protected special connectors available on request.</p>
<p>Belt for TRM/816 in IP Case</p> 	<p>Carrying belt, black, for TRM/816 in IP metal case. Incl. mounting (lateral) at the case. Additional charge for the belt.</p>



<p>Spannfix-Holder</p> 	<p>Spannfix-Holder for car / vehicle mounting. Option for TRM/xx in an IP / metal case for easy fixing in any vehicle.</p>
<p>Mounting Frame</p> 	<p>Mounting Frame, plastic. Allows easily mounting the TRM/xx systems inside machines, case / cabinets and more.  <b>Note:</b> Recommended part for TRM/xx open frame systems.</p>
<p>Screwdriver TX20</p>	<p>Screwdriver for TORX© TX20 screws. Needed for open / close the TRM/xx IP metal case.</p>
<p>TRM-DIO-SUBD1</p>	<p>2nd SUB D Port with DIO connection. For TRM816 in the IP case only!</p>
<p>TRM-COM2-SUBD1</p>	<p>2nd SUB D Port with COM connection. For TRM/xxx with DIL/NetPC ADNP/1520 in the IP case only.</p>



## Typical Applications...

	<p>...Industrial Networking: integrate your local machines directly into your company network for fast access to manufacturing and production orders between production environment to office section. See just in time about production orders, current production status and much more information.</p>
	<p>...Smart Metering jobs: automatic data collection from various meters (typically via M-Bus Meters) and direct transfer of the consumption data into your local network, or as internet / intranet access.</p>
	<p>...Inventory control and warehouse management, via PC based solutions or as mobile data processing with mobile data terminals and barcode scanning.</p>
	<p>...Time access and attendance with RFID / proximity terminals directly into your network and with SQL database communication.</p>
	<p>...Linux Terminals as central heart of various measurement equipment</p>
	<p>...as cash and billing system, free programmable for individual requirements and for usage in extremely conditions, e.g. outdoor, hot / cold, dust / water conditions</p>
	<p>... as control panel in production vehicles</p>

And much more!

<http://www.terminal-systems.de/english/software-en.htm>



## Terms and Contact Information

**Order:**

The offer is subject to our general terms and conditions.

Please declare the following on your order: Complete system name (Article-Number), quantity, ship-to and bill-to address and your way of payment.

**Price information:**

All prices are in EURO. Federal, state or local taxes and freight costs are extra and paid by the buyer. A low quantity surcharge of EUR 13,- is made on orders placed with an order value of below EUR 50,-. Within this published price list, all other price lists lose their validity.

**Payment:**

Deliveries abroad occur only against advance payment: Via T/T payment or much easier Paypal. Also with Credit Card (VISA or Mastercard). Please do not forget to indicate the name of the card holder, exp. date and the control number (last 3 numbers on the backside of the card).

**Delivery service:**

Professional delivery with UPS (Europe) / TNT (global) / DHL (worldwide) You will receive an order confirmation with the earliest date of delivery and a proforma invoice with the complete amount.

**Please feel free to contact our Support-Center if you have any questions:**

Sales

Tel: +49-(0)5136 802421

Fax: +49-(0)5136 9776368

E-Mail: [info@terminal-systems.de](mailto:info@terminal-systems.de)

**Our address:**

AE SYSTEME [www.terminal-systems.de](http://www.terminal-systems.de)

Am Güterbahnhof 15

DE-31303 Burgdorf, Germany

Technical Details can be changed without notification..  
Pictures show samples.

INF / trm-embedded-e

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# Fax-Order: +49-(0)5136 9776368

AE SYSTEME  
Am Güterbahnhof 15  
DE 31303 Burgdorf - Germany

Internal Notes:

KDW  MJA  HJW  HNE  SMU

We order:

Ordercode	Piece	Single price in EURO	Total price in EURO
TRM_____ + ADNP1520 *1			
Startup Package TRM incl. Linux *2			
XML Code Processor Config Tool*2			
BAT-TRM *2			

\*1 Please specify TRM type!

\*2 Mark if not needed!

Federal, state or local taxes, packing/handling and freight costs are extra and paid by the buyer. Deliveries abroad occur only against advance payment (T/T payment or credit card possible).

For Open Frame Systems (Only TRM/xxx !). Please choose the favored package:

☼ Standard (antistatic film)

☼ Special antistatic box / Additional charge: 4,- EUR per System

Firm + KV Nr:

Name: \_\_\_\_\_

Street: \_\_\_\_\_

ZIP / Country: \_\_\_\_\_

Tel / Fax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Credit Card:

☼ VISA  
☼ Master

Account-No.: \_\_\_\_\_

KPN: \_\_\_\_\_

Card holder: \_\_\_\_\_

EXP: \_\_\_\_\_

City / Date

Signature / Stamp

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