EXPLORER
Panel PC
For modern Operation and Visualisation on-site in hazardous areas Zone 1 / 2 (Ex Gas) and Zone 21 / 22 (Ex Dust)

A member of the MTL Instruments group
# EXPLORER 15i Panel PC
# EXPLORER 18i Panel PC

## TECHNICAL DATA

<table>
<thead>
<tr>
<th>TYPE</th>
<th>EXPLORER 15i/18i</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIVERSAL</td>
<td>Processor</td>
</tr>
<tr>
<td></td>
<td>• Intel® Pentium® M Technology 1.6 GHz</td>
</tr>
<tr>
<td>RAM</td>
<td>1024 MB</td>
</tr>
<tr>
<td>Power supply</td>
<td>100 V - 240 V AC (wide range), 50 / 60 Hz, Typ. 120 W (optionally 24 V DC)</td>
</tr>
<tr>
<td>MTBF backlights</td>
<td>Typ. 50,000 h (Temperature dependent)</td>
</tr>
</tbody>
</table>

| HARD DISC       | Hard disc / Compact Flash |
|                 | • HDD 60 GB |
|                 | • Compact Flash, up to 4 x 16 GB (other sizes on request) |

| Software transfer | Via USB stick / USB CD-ROM / NETWORK ETHERNET |
|                  | (Note: For software transfer in hazardous areas only certified equipment for hazardous areas is allowed) |

| INTERFACES       | Profibus (optional) |
|                 | • Via USB Interface |
|                 | Ethernet           |
|                 | • On board, 10/100 Mbit, EEx e |
|                 | USB (Universal Serial Bus) |
|                 | • 4x USB EEx i |
|                 | • 1x USB EEx e |
|                 | Serial Interface   |
|                 | • 2x RS 232 EEx i |
|                 | • 1x RS 232 EEx e oder RS 485 Ex e oder RS 422 Ex e |
|                 | Keyboard / Mouse   |
|                 | • 2x PS/2 EEx i |
|                 | Multimedia (optional) |
|                 | • Line In/Out EEx i |

| OPTIONS & ACCESSORIES | As Touch screen design (foil) |
|                      | • HIGH BRIGHTNESS-Display (650 cd/m²) |
|                      | • EPU Converter - Data transmission Ethernet / Fiber optic / USB |
|                      | • USB Bluetooth |
|                      | • USB WLAN |
|                      | • USB Memory Stick |
|                      | • USB Key |
|                      | • USB Docking Station |
|                      | • Brightness control via sensor automatically or manually |
|                      | • Emergency off switch (to build in enclosure) |
|                      | • Key-Switch SW 1 |

| ENVIRONMENTAL CONDITIONS | Protection class |
|                         | • IP 66 (at the front) |
|                         | Environmental temperature |
|                         | • -20°C up to +40/50°C depending on ambient parameters e.g. airflow, type of enclosure etc. |
|                         | Relative humidity |
|                         | • 10 % up to 95 % (non-condensing) |

<table>
<thead>
<tr>
<th>LICENSING</th>
<th>Protection method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• GAS: Ex II 2G EEx e mb [ia] IIC T4</td>
</tr>
<tr>
<td></td>
<td>• DUST: Ex II 2D Ex tD A21 IP 6X T 120 °C. Relevant to the FHP IP66 - Enclosure</td>
</tr>
</tbody>
</table>

| Certificates | • CE, ATEX, TIS, Belarus |

### CERTIFICATES

![ATEX](https://example.com/ATEX.png)

![TIS](https://example.com/TIS.png)

![Belarus](https://example.com/Belarus.png)
Explorer
Operating Principles

Data transmission: Standard

**EXPLORER Ex** Operating principle

<table>
<thead>
<tr>
<th>Safe Area</th>
<th>Ex Zone 1/2/21/22 hazardous areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHERNET</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>INDUSTRIAL ETHERNET</td>
<td></td>
</tr>
<tr>
<td>2x PS2 Ex i</td>
<td></td>
</tr>
<tr>
<td>4x USB Ex</td>
<td></td>
</tr>
<tr>
<td>3x RS232 Ex i</td>
<td></td>
</tr>
<tr>
<td>100 - 240 V AC</td>
<td>24 V DC</td>
</tr>
<tr>
<td>5 V / 12 V Ex i output</td>
<td></td>
</tr>
</tbody>
</table>

Data transmission: Standard Ex i Interfaces

**EXPLORER Ex** Operating principle

<table>
<thead>
<tr>
<th>Safe Area</th>
<th>Ex Zone 1/2/21/22 hazardous areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHERNET</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>INDUSTRIAL ETHERNET</td>
<td></td>
</tr>
<tr>
<td>2x PS2 Ex i</td>
<td></td>
</tr>
<tr>
<td>4x USB Ex</td>
<td></td>
</tr>
<tr>
<td>3x RS232 Ex i</td>
<td></td>
</tr>
<tr>
<td>5 V / 12 V Ex i output</td>
<td></td>
</tr>
</tbody>
</table>

Data transmission: Standard Ex e Interfaces

**EXPLORER Ex** Operating principle

<table>
<thead>
<tr>
<th>Safe Area</th>
<th>Ex Zone 1/2/21/22 hazardous areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHERNET</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>INDUSTRIAL ETHERNET</td>
<td></td>
</tr>
<tr>
<td>2x PS2 Ex i</td>
<td></td>
</tr>
<tr>
<td>4x USB Ex</td>
<td></td>
</tr>
<tr>
<td>3x RS232 Ex i</td>
<td></td>
</tr>
<tr>
<td>100 - 240 V AC</td>
<td>24 V DC</td>
</tr>
<tr>
<td>5 V / 12 V Ex i output</td>
<td></td>
</tr>
</tbody>
</table>
Flexible Modular Design

Visualisation/Identification

TFT Display / Panel PC
- Panel-mount design
- Ingress protection IP 66 / NEMA 4X from front
- 15" screen diagonal (up to XGA)
- 19" screen diagonal (up to SXGA)
- Capable of displaying more than 16 million colors
- Glass front with an anti-reflective chemical coating
- Protection class GAS: Ex II 2G Ex e mb [ia] IIC T4
- Protection class DUST: Ex 2D EEx A21 IP 6X T 120 °C
- ATEX/ITIS/Belarus

High Brightness Display
as an Option for TFT Display
- High Brightness 650 cd/m²
- Brightness control via automatic sensor or manually
- Protection class GAS: Ex II 2G Ex e mb [ia] IIC T4
- Protection class DUST: Ex 2D EEx A21 IP 6X T 120 °C
- ATEX/ITIS/Belarus

Touch Screen
as an Option for TFT Display
- Touch Screen as foil or glass version
- Resistive touch technology
- 5-wire technology
- Can be operated with gloves, pen and fingers
- Protection class GAS: Ex II 2G Ex e mb [ia] IIC T4
- Protection class DUST: Ex 2D EEx A21 IP 6X T 120°C
- ATEX/ITIS/Belarus

Card Reader
- Intrinsically safe panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- Non-contact identification
- Mifare protocol as standard (others on request)
- Suitable for the majority of company IDs
- Connection: RS 232 serial interface
- Protection class GAS: II 2G EEx ib IIC T4
- ATEX/ITIS/Belarus

Trackball
- Intrinsically safe panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- High-precision mouse guidance
- Wearless up to 15 million actuations
- Extremely low-maintenance
- 2 pushbuttons, optionally 3 pushbuttons
- Button-in-joystick function optionally
- Protection class GAS: II 2G EEx ia IIC T4
- Protection class Dust: II 3D T6°C IP6x
- ATEX/ITIS/Belarus

Joystick
- Intrinsically safe panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- High-precision mouse guidance
- Wearless up to 15 million actuations
- Extremely low-maintenance
- Special resistive foil
- High-definition resolution - up to 2000dpi
- 2 pushbuttons
- Can be operated with gloves, pen and fingers
- Protection class Gas: II 2G EEx ia IIC T4
- Protection class Dust: II 3D T6°C IP6x
- ATEX/ITIS/Belarus

Mouse
- Intrinsically safe panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- 4-step pressure-sensitive mouse guidance
- 2 pushbuttons
- Protection class GAS: II 2G EEx ib IIC T4
- ATEX/ITIS/Belarus

Touch Pad
- Intrinsically safe panel-mount module
- Ingress protection IP 66 / NEMA 4X from front
- Special resistive foil
- High-definition resolution - up to 2000dpi
- 2 pushbuttons
- Can be operated with gloves, pen and fingers
- Protection class Gas: II 2G EEx ia IIC T4
- Protection class Dust: II 3D T6°C IP6x
- ATEX/ITIS/Belarus

Key-Switch SW1
- Key-Switch for locking the Keyboard / Mouse / Trackball on the EXPLORER
- Integrated in the EXPLORER enclosure
- Ingress protection IP 67 from front / NEMA 4X

BS Sensor
- Sensor mounted externally on the case for optimum adjustment of the display brightness
- Automatically regulated to the light conditions of the surroundings (e.g. direct solar radiation - high display brightness)

Emergency-Stop-Button
- Emergency-Stop-Button to turn off individual connections (local connection)
- Ingress protection IP65 from front
- Protection class II 2G EEx de IIC T6

BS Regulator
- Regulator mounted externally on the case
- For manual adjustment of the display brightness according to the light conditions of the surroundings

A member of the MTL Instruments group
Mobile Solutions

OPTION: WLAN

EXPLORER Ex  
Operating principle

Safe Area

Ex Zone 1/2/21/22

hazardous areas

Option: WLAN

ETHERNET

INDUSTRIAL ETHERNET

Access Point

SPS

Switch

100 - 240 V AC

/ 24 V DC

OPTION: MOBILE

EXPLORER Ex  
Operating principle

Safe Area

Ex Zone 1/2/21/22

hazardous areas

Option: Mobile

ETHERNET

INDUSTRIAL ETHERNET

Access Point

SPS

Switch

100 - 240 V AC

/ 24 V DC

Joystick

• Intrinsically safe panel-mount module
• Ingress protection IP 66 / NEMA 4X from front
• High-precision mouse guidance
• Wearless up to 15 million actuations
• Extremely low-maintenance
• 2 pushbuttons, optionally 3 pushbuttons
• Button-in-joystick function optionally
• Protection class GAS: II 2G EEx ia IIC T4
• Protection class Dust: II 3D T60°C IP6x
• ATEX/TIIS/Belarus

www.gecma.com   e-mail: info@gecma.com
EXPLORER Panel PC

EXPLORER 15i Panel PC
EXPLORER 18i Panel PC

Designed as a PANEL PC, the EXPLORER is based on a modular concept - in line with our world-wide established CHALLENGER remote PC terminals.

Whether for local display or operation of software in Ex Zone 1 / 2 / 21 / 22, for client server applications, such as a web terminal or for control of PLC, balances etc - the EXPLORER Panel PC offers maximum adjustability to individual requirements.

All operating and visualization components (display, touch screen, trackball, joystick, keyboard...) can be configured according to the requirements of the plant. Constructed as intrinsically safe panel mounting modules and certified for Ex Zone 1 / 2 (Gas), Zone 21/22 (Dusts) the EXPLORER Panel PC can easily be integrated into our FHP standard enclosure, as well as existing enclosures, walls and cabinets.

In addition to the Ethernet interface the EXPLORER offers USB, RS232, RS485 and RS422 interfaces to integrate further electrical equipment or for the functionality of WLAN or BLUETOOTH.

With our EFU converter we have created the possibility to realize various ways of data transmission. The most important ways are: Ethernet via fibre optic / Redundant Ethernet / Redundant Ethernet via fibre optic... further options on request.

When an Explorer is installed in an enclosure that is IP 6x compliant (FHP), the complete assembly can be labelled as follows:
Ex II 2D Ex tD A21 IP6X T120°C
Enclosures

ENCLOSURES / MOUNTINGS

- Hygienic, ergonomic Field Desk Enclosure
- To accommodate the Display, Keyboard, Mouse or Trackball, Card Reader
- Keyboard inclined by 30°
- Protection system IP 66 / NEMA 4X
- Stainless Steel 1.4301 (1.4404/316L opt.)
- Polished to 240 granulation

Special Enclosures

FHP Standard Enclosure

Wall Mounting

Floor Mounting

Ceiling Mounting

Data Communication Ethernet / Fibre optic / USB:

**EFU Converter**
- Ethernet - Fibre Optic
- USB - Ethernet
- USB/Ethernet - Fibre Optic
- Ethernet/Fibre Optic - for non Ex area converter
  - Safety Code - Transmit: Ex II 2G Ex ia IIC
  - Safety Code - Receive: Ex II 2G Ex ia IIC

**USB Key**
- For connection to intrinsically safe USB interfaces
- Dongle/license key for connection of manufacturer specific software in hazardous areas
  - Ex II 2D Ex ia IIC T4 / Ex II 2D Ex ID A21 IP 6X T 135°C

Data Storage and Transmission:

**USB Memory Stick**
- For connection to intrinsically safe USB interfaces
  - 2 GB / 4 GB / 8 GB
  - Ex II 2G Ex ia IIC T4 / Ex II 2D Ex ID A21 IP 6X T 135°C

**USB Docking Station**
- Docking station as barrier for intrinsically safe USB devices
  - For connection of intrinsically safe USB devices to a normal PC (for example)
  - For use in safe areas only
  - Ex II (2)GD [Ex ia] IIC

**USB Bluetooth**
- For connection to intrinsically safe USB interfaces
- Antenna integrated
- Class I, USB V 1.1
- Range up to 100m
- Ingress protection IP66
  - Ex II 2G Ex ia IIC T4 / Ex II 2D Ex ID A21 IP 6X T 135°C

**USB WLAN**
- For connection to intrinsically safe USB interfaces
- Wireless lan / IEE 802.11b / IEE 802.11g
- WEP / WPA
- 54/108 Mbit/s
- Antenna integrated
- Ingress protection IP66
  - Ex II 2G Ex ia IIC T4 / Ex II 2D Ex ID A21 IP 6X T 135°C

**USB Converter**
- Ethernet - Fibre Optic
- USB - Ethernet
- USB/Ethernet - Fibre Optic
- Ethernet/Fibre Optic - for non Ex area converter
  - Safety Code - Transmit: Ex II (1) GD [Ex op is T4 Ga] IIC
  - Safety Code - Receive: Ex II 2(1) G Ex e q [op is] IIC T4
  - Ex II 2(1) D Ex ID A21 IP64 T130°C

Wireless Communication:
SALES OFFICES

AUSTRALIA
MTL Instruments Pty Ltd, 9 /12 Billabong Street, Stafford, Queensland 4053
Australia
Tel: + 61 1300 308 374 Fax: + 61 1300 308 463
E-mail: enquiries@mtlaus.com.au

CHINA
Cooper Electric (Shanghai) Co. Ltd. Room 2001, China Life Tower, 16 Chao Yang Men Wai Street, Chao Yang District, Beijing, China 100020
Tel: + 86 10 5890 0288 Fax: + 86 10 8562 5725
E-mail: bjsales@mtl-inst.cn

FRANCE
MTL Instruments sarl, Les Carrés du Parc 10 rue des Roselières, 69410 Champagne au Mont d’Or France
Tel: + 33 (0) 78 64 96 32 Fax: + 33 (0) 78 35 79 41
E-mail: info@mtl.fr

GERMANY
MTL Instruments GmbH, An der Gümpgesbrücke 17 D-41564 Kaarst, Germany
Tel: + 49 (0) 2131 718930 Fax: + 49 (0) 2131 7189333
E-mail: info@mtl.de

INDIA
MTL India, No.36, Nehru Street Off Old Mahabalipuram Road Sholinganallur, Chennai - 600 119, India
Tel: + 91 (0) 44 24501660 /24501857 Fax: + 91 (0) 44 24501463
E-mail: sales@mtlindia.com

ITALY
MTL Italia srl, Via Castù 11 1 - 20022 Crussolles Balsano MI, Italy
Tel: + 39 02 81802011 Fax: + 39 (0)2 61294560
E-mail: info@mtl-inst.it

JAPAN
Cooper Crouse-Hinds Japan KK, MT Building 3F 2-7-5 Shiba Daimon, Minato-ku, Tokyo, Japan 105-0012
Tel: + 81 (0) 3 6430 3128 Fax: + 81 (0) 3 6430 3129
E-mail: info@cooperindustries.jp

KOREA
Cooper Crouse-Hinds Korea 12f, Vision Tower 707-2 Yeoksan-Dong Gangnam-Gu, Seoul 135-080, South Korea.
Tel: + 82 2 3484 6785 Fax: + 82 2 3484 6778
MTLKorea-enquiry@cooperindustries.com

NETHERLANDS
MTL Instruments BV Terheijdenseweg 465, 4825 BK Breda The Netherlands
Tel: +31 (0) 76 7505360 Fax: +31 (0) 76 7505370
E-mail: info@mtlbenedux.com

SINGAPORE
Cooper Crouse-Hinds Pte Ltd No 2 Serangoon North Avenue 5, #08-01 Fu Yu Building Singapore 554911
Tel: + 65 6 487 7887 Fax: + 65 6 487 7997
E-mail: sales@mtlsing.com.sg

UNITED ARAB EMIRATES
MTL Instruments, Villa No. 4, Sector 2-17 Street 6, PO Box 53234 Abu Dhabi, UAE
Tel: + 971 2 446 6840 Fax: + 971 2 446 6841
E-mail: mtlgulf@mtl-inst.com

UNITED KINGDOM
Measurement Technology Limited, Great Marlings, Butterfield, Luton Beds LU2 9DL
Tel: + 44 (0)1582 723633 Fax: + 44 (0)1582 422283
E-mail: enquiry@mtl-inst.com

AMERICAS
Cooper Crouse-Hinds MTL Inc. 3413 N. Sam Houston Parkway W. Suite 210, Houston TX 77086, USA
Tel: + 1 281-571-3085 Fax: + 1 281-571-8069
E-mail: csinfo@mtl-inst.com

GECMA SERVICE
All product information / technical data sheets / drawings and a configuration tool to optimize your human-machine interface can be found at: www.GECMA.com