isel®

From Components to Systems

iPC25

Operating instructions

The information, technical specifications and dimensions contained in this booklet represent the latest available data at the time of going to print. The occurrence of misprints and other errors cannot, however, be completely ruled out. We thank you in advance for bringing such errors to our notice and we welcome any improvement suggestions you may have.

We are obliged to draw your attention to the fact that the software and hardware brand names and trade marks appearing in this booklet are protected under patent.

No liability can be accepted for the accuracy of any of the data appearing in this handbook. Amendments and alterations may be made to the content of this handbook without prior notice.

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1 General

Please read these operating instructions through to the end and carefully follow the instructions given. Failure to comply with these operating instructions can result in damage to property, personal injury or death.

1.1 Safety symbols

Attention!
This symbol warns of potential danger to health, life and limb.

Danger!
This symbol warns of potential damage to materials, machinery and the environment.

Information
This symbol means important information is being given.

1.2 Safety note

- The iOP-19-TFT CNC control panel is designed in accordance with state of the art technology and in full compliance with recognised safety standards.

- This equipment must only be used for the purposes for which it was designed.

- This equipment must only be operated in a fault-free condition. Any observed defect must be removed before the equipment is used. This equipment must only be operated by trained personnel. Children should not be allowed in the vicinity of the equipment.

- Equipment operations must only be carried out by authorised, qualified personnel and in full compliance with electrical industry regulations and safety standards.

- Equipment assembly and operation must be undertaken in compliance with all relevant conformity declaration standards. The guidelines and threshold values issued by the manufacturer do not provide protection in the event of improper use of the equipment.

- The equipment must not be exposed to excessive levels of humidity or vibration.

- Ensure that all operators are familiar with the content of these operating instructions and that such content is strictly adhered to at all times!

2 Product description

2.1 Technical specifications

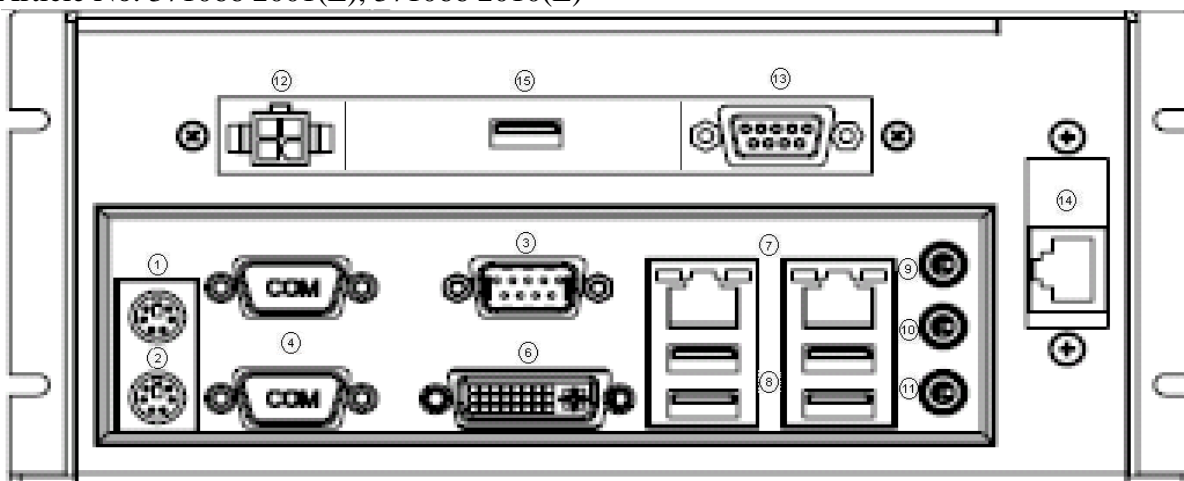| Article No. 371066 xxxxxx	**0010V01**	**2001 / 2001E**	**2010 / 2010E**
Dimensions (W x H x D):	210 x 90 x 190 mm		
Weight:	1.2 kg		
Ambient temperature:	0°C to 35°C		
Humidity:	max. 90% not condensing		
Protection type:	IP20		
Power supply:	12V DC/min., 100W (external 12V / 100W power supply required)		
Applications:	in the home, office or in industrial locations		
Form factor:	Mini ITX		
CPU:	Intel® dual-core® 1037U processor 1.8GHz	Intel® quad-core® J1900 processor 2.0GHz	
Random Access Memory	2 x 1.5V DDR3 DIMM support to 16GB	2 x 1.5V DDR3 SO-DIMM support to 8GB	
Hard drive:	2.5" SSD ≥ 120GB	2.5" HDD ≥ 250GB	2.5" SSD ≥ 120GB
Operating system:	Windows Embedded Standard 7 (64Bit)	Windows Embedded Standard 7 (64Bit) (supported Windows 8.0/8.1 64Bit)	

Article No. 371066 xxxxxx	0010V01	2001 / 2001E	2010 / 2010E
Connections: external	1 x VGA, 1 x HDMI	1 x VGA, 1 x DVI-D	
	4 x USB 2.0	4 x USB 3.0/2.0	
	1 x eSATA 3Gb/s	-/-	
	1 x serial Port RS 232	2 x serial Port RS 232	
	1 x D-sub 9-pin connection for iBP10 / iBP17	1 x D-sub 9-pin connection for iBP10 / iBP17 / iOP-19-TFT	
	-/-	1 x DVD-D connection for iOP-19-TFT	
	2 x LAN 1GBit		
	Audio line in, line out, microphone		
	1 x PS/2 keyboard, 1 x PS/2 mouse		
	12V DC power supply		
internal	1 x IDE interface	-/-	
	1 x SATA 6Gb/s interface 2 x SATA 3Gb/s interfaces	2 x SATA 3Gb/s interfaces	
	2 x USB 2.0/1.1 headers	1 x USB 2.0/1.1 headers	
	-/-	1 x mini PCI Express x1	
	1 x serial interface	-/-	
	-/-	1 x S/PDF out header	
	1 x chassis intrusion header, 1 x system ventilator header, 1 x front panel header, 1 x front panel audio header		
	1 x parallel interface		
	1 x PCI slot		
Optional connections:	D-sub 25-pin, LTP USB …		

2.2 Interfaces iPC25

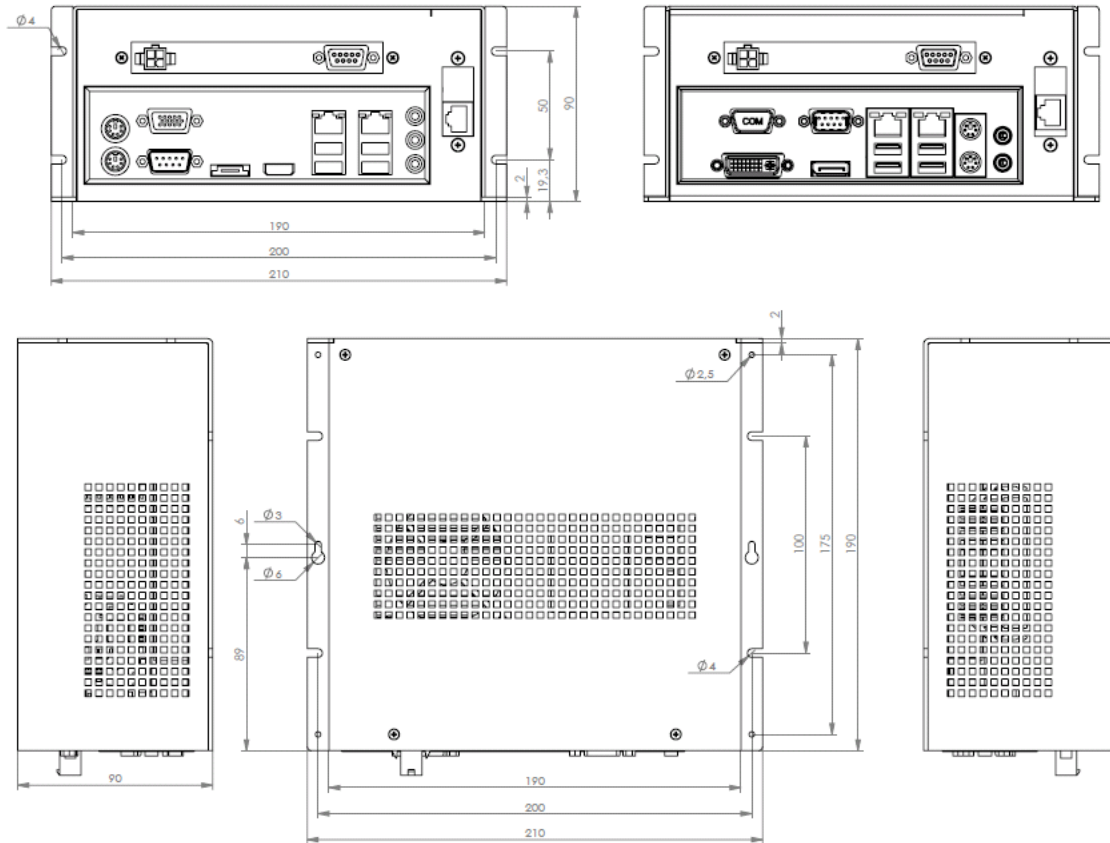Article No. 371066 0010V01
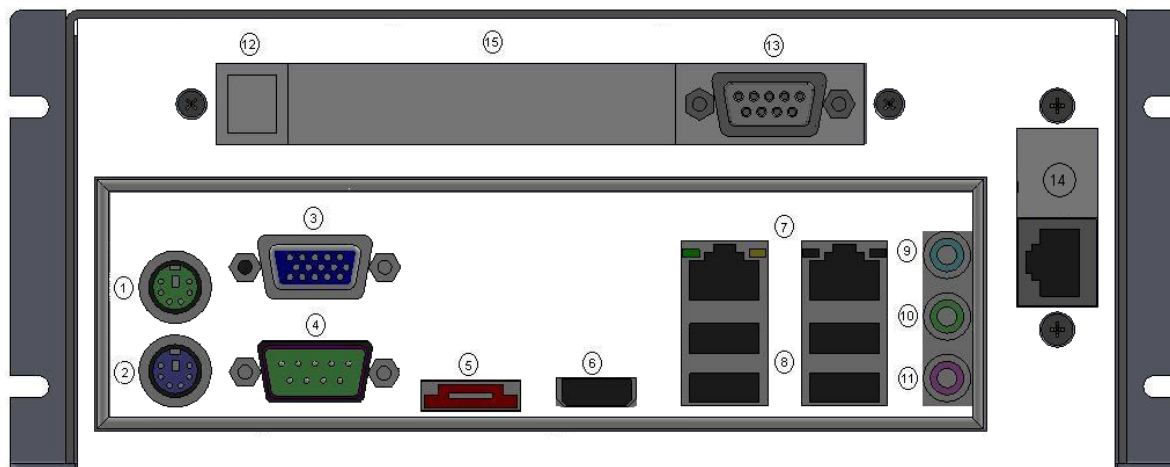
Article No. 371066 2001(E), 371066 2010(E)

No.	Interface
1	**Mouse connection** Mouse connecting socket
2	**Keyboard connection** Keyboard connecting socket
3	**VGA connection** VGA connecting socket for display device (screen)
4	**RS 232 connection** Serial interface RS232
5	**eSATA connection, only 371066 0010V01** Connecting socket for external eSATA hard drives
6	**HDMI connection, only 371066 0010V01** HDMI connecting socket for display device (screen) **DVI-D connection, only 371066 2001(E), 371066 2010(E)** DVI-D connecting socket for display device (screen)

7	**LAN connection** 2x RJ45 network socket
8	**USB interfaces** 4 x USB 2.0 interfaces, **only 371066 0010V01** 4 x USB 3.0 interfaces, **only 371066 2001(E), 371066 2010(E)**
9	**Line in** Line in connecting socket, jack plug
10	**Sound on board** Line out connecting socket, jack plug
11	**Microphone connection** Microphone connecting socket, jack plug
12	**2-pin plug connector for use with external power supply** 12V DC/100W power supply **Power connection for switching cabinet assembly** **with 2-wire connecting cable (+12V DC white / GND brown)** 12V DC/150W power supply
13	**D-sub 9-pin socket for iBP10 / iBP17/ iOP-19-TFT connector** **(only for switching cabinet assembly)** <table><tr><td>*Pin*</td><td>*Labelling*</td><td>*Description*</td></tr><tr><td>1</td><td>PWR BTN +</td><td>Power switch connection +</td></tr><tr><td>2</td><td>PWR BTN GND</td><td>Power switch connection GND</td></tr><tr><td>3</td><td>PWR LED +5V DC</td><td>LED indicator lamp connection +</td></tr><tr><td>4</td><td>PWR LED GND</td><td>LED GND indicator lamp connection</td></tr><tr><td>5</td><td>HDD LED +5V DC</td><td>HDD LED indicator lamp connection +</td></tr><tr><td>6</td><td>+12V DC</td><td>Power supply for the TFT +12V</td></tr><tr><td>7</td><td>GND</td><td>Power supply for the TFT GND</td></tr><tr><td>8</td><td>not available</td><td></td></tr><tr><td>9</td><td>HDD LED GND</td><td>HDD LED indicator lamp connection GND</td></tr></table>⚠ **A sufficiently large power supply unit must be provided for the computer and monitor; for iBP10 / iBP17 / iOP-19-TFT the power unit must be capable of supplying at least 150W.**
14	**CAN connection** CAN bus connection RJ45
15	**Multi-function panel** with additional optional connections

3 Installation and operation

3.1 Mounting dimensions

Dimension drawing iPC25

⚠️ Always ensure there is sufficient clearance around the iPC ventilation ports to promote the free movement of cooling air. Failure to provide sufficient clearance may lead to the control computer overheating and result in its malfunction.

⚠️ Wherever possible, ensure that the unit is not exposed to extreme environmental conditions.
Protect the PC from dust, damp and heat.
Do not cover the PC ventilation ports.

3.2 Switching on the control PC

The control computer is switched on by plugging into the D-sub 9-pin socket in the metal cover of the iPC (see Chapter 2.2).

4 Recovering the Windows® Embedded Standard 7 operating system

Important information

1.) Recover the Windows® Embedded Standard 7 operating system
of your control computer using the USB stick provided. The USB stick storage
medium contains a copy of the original as-delivered operating system of your
control computer.

2.) Your computer left the factory with
a partitioned hard drive. The main partition of this hard drive (approx. 40 GB)
contains the
Windows® Embedded Standard 7 operating system.
The secondary part of the drive is reserved for the storage of user data.

3.) Your hard drive may have been modified and may no longer be partitioned as
described above.

4.1 Preparing to recover the operating system

Protecting user data

1.) Save the user data stored in each of your hard drive partitions to an external
storage medium
(USB stick, USB HDD).

2.) If you have altered the control configuration of your software since it left the
factory,
you will need to save your current configuration
using the CNCwbBackup assistants. These can be found
in the CNCworkbench entry in the start menu. Also ensure that you save

***This is important, because all partitions will be
reformatted during operating system recovery and the
data contained therein will therefore be lost.***

USB boot preparation, only 371066 0010V01

1.) Once you have saved all your data, boot the operating system
from the USB stick provided. Plug the stick into any free USB socket of the
computer. Switch on the computer and press Function Key **<F12>** to start the
booting operation.
→ The boot menu of your computer will appear on screen.☐☐

2.) Use the up/down directional keys to find and select the USB stick in
the list shown. Confirm your selection using the **<ENTER>** key.

3.) Provided you have chosen the correct settings, the operating system on the USB
stick should now boot
in preference to the installed
operating system.

*Alternatively, you can use Function Key <F2>, which should be pressed as soon
as the system starts. This will allow you to enter the BIOS directory
of the computer. In the BIOS directory, you will need to change the booting
order to make the USB recovery stick
the preferred booting medium. After saving your settings,*

*USB boot preparation, only 371066 2001(E), 371066 2010(E)*

1.) Once you have saved all your data, boot the operating system from the USB stick provided. Plug the stick into any free USB port on the computer; **if possible, use a USB 2.0 port**. Only use the special "isel" USB recovery stick. Now switch on the computer and keep pressing the <**ENTF**> key until the BIOS directory appears.
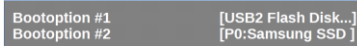
Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc.

Main   Advanced   Chipset   Security   Boot   Save & Exit

Select: **Boot** Hard Drive BBS Priorities and confirm your selection with <**ENTER**>

You will see the USB recovery stick (**USB2 flash disk…)** shown in second position.

Bootoption #1   [P0:Samsung SSD]
Bootoption #2   [USB2 Flash Disk...]
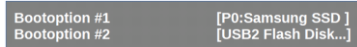
2.) Use the <+> or <-> keys to move the USB stick to the top.

Bootoption #1   [USB2 Flash Disk...]
Bootoption #2   [P0:Samsung SSD]

Use <**ESC**> to quit the Boot menu and then select "Save & Exit"

Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc.

Main   Advanced   Chipset   Security   Boot   Save & Exit

Having selected "Save & Exit" ➜ USB2 Flash Disk 5.00 , confirm your selection with <**ENTER**>
**Attention: do not select <u>UEFI: USB2 Flash Disk 5.00</u> under any circumstances!**

The computer will now boot directly from the USB stick.

3.) Provided you have chosen the correct settings, the operating system on the USB stick should now boot

4.2 Carrying out system recovery
371066 0010V01, 371066 2001(E), 371066 2010(E)

1.) Once the system starts booting from the USB stick, the Windows® logo will appear on the screen, followed 20 seconds later by a revolving point display.
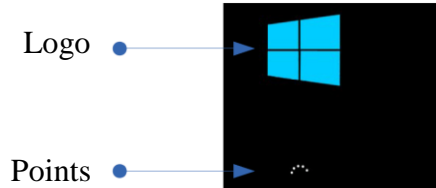
Logo

Points

Note: if the Windows® logo or the revolving point display do not appear after 40 seconds, the booting process must be repeated from the USB 2.0 port.

2.) Once the operating system has loaded, a command line will appear followed by the Windows® Embedded Standard 7 recovery assistant.
3.) Follow the instructions given by the assistant. In the final window, click on the "Install" button to start the recovery process.
Provided the recovery is successful, an "assistant window" will appear on screen. Click on "OK!" to confirm.
4.) Remove the USB recovery stick.
5.) Now enter the command<exit> in the still opened assistant window.
The window will now close and the computer will restart.

5 Maintenance and servicing

Maintenance
iPC series industrial PCs are maintenance free.

Cleaning

Switch off the control computer and any components connected to it and then disconnect the mains supply.

Clean with a soft, damp cloth. Do not use any cleaning fluids or abrasive compounds. Make sure that no liquid penetrates the ventilation ports and gets inside the equipment cover.

6 EG-Konformitätserklärung
EC - Declaration of Conformity

Der Hersteller
The manufacturer

isel Germany AG
Bürgermeister-Ebert-Str. 40
D-36124 Eichenzell

erklärt hiermit, dass folgendes Produkt
hereby declares that the following product

Geräteart:	**Industrie PC**
Device:	industrial PC
Typ:	**iPC25**
Type:	iPC25
Art.-Nr.:	371066 0010V01, 371066 2001(E), 371066 2010(E)
Product - No.:	371066 0010V01, 371066 2001(E), 371066 2010(E)

mit den Vorschriften folgender Europäischer Richtlinien übereinstimmt:
complies with the requirements of the European Directives*:*

EG-Richtlinie 2004/108/EG   EMV Richtlinie
EC-Directive 2004/108/EC   *EMC directive*
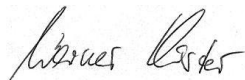
EG-Richtlinie 2006/95/EG   Niederspannungsrichtlinie
EC-Directive 2006/95/EC   *low voltage directive*

Folgende harmonisierte Normen wurden angewandt:
Following harmonized standards have been applied:

EN 61000-6-2:2006   EMV - Fachgrundnorm - Störfestigkeit für Industriebereich
                          EMC - Generic standards - Immunity for industrial environments

EN 61000-4-2:2009   EMV - Prüf- und Messverfahren - Prüfung der Störfestigkeit gegen Entladung
                          statischer Elektrizität (ESD)
                          EMC - Testing and measurement techniques; Electrostatic discharge immunity test

EN 61000-4-4:2013   EMV - Prüf- und Messverfahren - Prüfung der Störfestigkeit gegen schnelle
                          transiente elektrische Störgrößen (Burst)
                          EMC - Testing and measurement techniques - Electrical fast transient/burst immunity test

EN 61000-4-5:2013   EMV - Prüf- und Messverfahren - Prüfung der Störfestigkeit gegen energiereiche
                          Impulse (Surge)
                          EMC - Testing and measurement techniques - Surge immunity test

EN 61000-4-11:2005   EMV - Prüf- und Messverfahren - Prüfung der Störfestigkeit gegen Spannungs-
                          einbrüche / Spannungsunterbrechungen
                          *EMC - Testing and measurement techniques - Voltage dips, short interruptions and voltage
                          variations immunity tests*

EN 61000-6-4:2011   EMV - Fachgrundnorm - Störaussendung Industriebereich
                          EMC - Generic standards - Emission standard for industrial environments

DIN EN 55011:2011   Industrielle, wissenschaftliche und medizinische Hochfrequenzgeräte (ISM-Geräte) -
                          Funkstörungen - Grenzwerte und Messverfahren
                          Industrial scientific and medical (ISM) radio-frequency equipment - Electromagnetic
                          disturbance characteristics - Limits and methods of measurement

Dermbach, 03.07.2014

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Werner Kister, Vorstand / managing board