DLoG ITC 7

User's Manual 1.00

This manual contains a detailed description of the product and we have made every effort to make it as accurate as possible. However, this is not a guarantee of the features or the functionality of the product.

We reserve the right to modify the contents of this document at any time and without prior notice.

Because we at DLoG are constantly striving to improve this product, we cannot guarantee that previous or subsequent releases of the product will correspond in every respect with the product description given in this manual.

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Technical customer support

If you experience technical difficulties, please consult your distributor or contact the technical services department at DLoG's headquarters:

(+49) 89 / 41 11 91 0

www.dlog.com

Konformitätserklärung/ Declaration of Conformity

... gemäß den Bestimmungen der EG-Richtlinie über elektromagnetische Verträglichkeit 89/336/EWG, geändert mit 91/263/EWG, 92/31/EWG, 93/68/EWG und der EG-Richtlinie über Niederspannung 73/23/EWG, geändert mit 93/68/EWG

... in accordance with the EU-Directive of Electromagnetic-Compatibility 89/336/EEC changed by directive 91/263/EEC, 92/31/EEC, 93/68/EEC of the council and the EU-Directive for Low Voltage 73/23/EEC changed by directive 93/68/EEC of the council

Die Firma / The Manufacturer
DLoG Gesellschaft für elektronische Datentechnik mbH, Industriestr. 15, D-82110 Germering, Germany
erklärt hiermit, dass das Produkt / declares, that the product described in the following ...

Geräteart/Designation of device:	Gerätetyp/Type of device:
Industrie-PC/Industrial PC	**ITC 7**

... mit den oben genannten / folgenden Normen oder normativen Dokumenten übereinstimmt / is conform to the aforementioned / following standards or normative documents.

EMC-Störaussendung (EMC-Emission) / EMC-Störfestigkeit (EMC-Immunity):

EN 55022:2006 Class A	Information technology equipment – radio disturbance characteristics – limits and methods of measurement
EN 55024:1998 + A1:2001 + A2:2003	Information technology equipment – immunity characteristics – limits and methods of measurement
EN 61000-3-2:2006	Electromagnetic compatibility (EMC) – limits for harmonic current emissions (equipment input current <= 16 A per phase) – For AC only
EN 61000-3-3:1995, + A1:2001 + A2:2005	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection For AC only
EN 61000-6-2:2005	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

Sicherheit (Safety):

EN 60950-1:2006	Information technology equipment - Safety - Part 1: General requirements

Gesmering, 26.2.09
Ort, Datum/Place, Date

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Unterschrift/Signature

DofC

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1. About this manual

This manual has been designed to make using the DLoG ITC 7 as simple as possible and provide expert assistance if problems should occur. It contains important information on using the device safely, properly and efficiently.

Adhering to the manual helps by avoiding dangers, reducing repair costs and breakdown times and increasing the reliability and lifespan of the DLoG ITC 7.

DLoG GmbH will not assume responsibility for any damage caused by the improper use of the DLoG ITC 7 and/or in disregard of the instructions in this manual.

WARNING

Before transporting, assembling, and starting the DLoG ITC 7, please read this manual carefully and follow all the safety notices listed.
Follow all basic safety guidelines and the safety notices in the individual chapters.

Within this manual, DLoG GmbH strives to provide all the information required for using your DLoG ITC 7. However, because this is a versatile product that can be used in many different scenarios, we cannot guarantee that the information contained in this manual will cover every single aspect. Should you require further information or if you have questions or issues needing clarification, please contact your nearest DLoG agent or representative.

1.1. For qualified personnel

This manual was written for qualified personnel. The information is intended exclusively to complement the expertise of qualified personnel , not to replace it.

1.2. Keep this manual

Please keep this manual in a safe place. It should always be at hand near the described device.

1.3. Design method

1.3.1. Risk of injury or death

This symbol indicates hazards that pose a risk to life and limb (such as contacting the power supply):

The following levels apply, denoted by the keywords DANGER, WARNING, and CAUTION:

DANGER

There is an immediate risk of death / serious injury.

WARNING

There is a possible risk of death / serious injury.

CAUTION

Mild injury is possible.

1.3.2. Danger of property damage

These tips warn you of possible property damage:

Caution: Property damage	This symbol warns you of any dangers or hazards that could potentially cause damage to the terminal or system (such as malfunctions, data loss, equipment damage, etc.).

1.3.3. Hints

	This symbol indicates hints that help you to understand how to use the product or the manual.

1.3.4. Additional design elements

Lists are indicated with bullet points, for example:

- Cable cover
- Power pack

Instructions are numbered, for example:

1. Connect the DLoG ITC 7.
2. Press <POWER> key.

Parameter descriptions (e.g., of a dialog)

Ignition off	This parameter is used to set,…
Delay time	This indicates the delay time.
Switch-off time	The switch-off time should be at least…

Key display

Key names are shown in angle brackets: <F1>, <Ctrl>, <Insert>, <Home>, etc.

Menu options, commands, dialog fields

Examples: In the **Edit** menu you will find the command **Paste | Values**.

Click **OK** to finish.

Entries

Any text that needs to be entered is shown in `Courier` font, for example:

1. Enter the text `abcdefg`.

Other methods for emphasis

Any other emphasized text elements are highlighted in **bold** or underlined.

References to other chapters in the manual are printed in *italics*.

2. Basic safety guidelines

The DLoG ITC 7 was designed and built according to modern technology and accepted safety regulations. However, the operation of the DLoG ITC 7 can endanger personnel or third parties and cause damage to the device and other material assets when for example the device is

- operated by untrained or uninformed personnel.
- not operated correctly.
- operated and maintained incorrectly.

WARNING

Improper use of the unit can lead endanger the user.
Failure to comply with the safety guidelines can lead to damage to the equipment or even to dangerous injury to personnel.
The operator commitments in regards to safety (accident prevention regulations, work protection) are to be followed.

2.1. Area of application

The device is not designed for use in life-support systems or critical safety systems where system malfunction can lead to the direct or indirect endangerment of human life. The operator shall take full responsibility for using the device in these situations.

2.2. Initial operation of the device

Choice of location

The ambient conditions at the point of installation must comply with the device's protection class.

Installation/initial operation

The device is not supplied with a disconnector (switch) that can be accessed externally. The power supply connector is therefore used as a disconnector. Therefore it needs to be easily accessible. If it is necessary to establish a fixed connection, an easily accessible disconnecting device (e.g. a switch such as a circuit breaker) should be installed close to the device. Ensure that the power cable is laid so that it is mechanically protected.

The power supply cables must be laid in accordance with the applicable local installation regulations.

Risk of injury during transit or installation

The unit could fall during transit or installation and cause injury. Always ensure that there are two persons available when installing or removing the device.

Supply of fresh air

The DLoG ITC 7 is based on a passive cooling concept. During passive cooling, the waste heat generated inside the device is emitted from the surface of the housing.

For this system to function properly, sufficient fresh air circulation is required. Never install the system in a closed environment where the cooling air is unable to dissipate accumulated heat to the outside.

If the DLoG ITC 7 is not able to draw in fresh cooling air, this may cause overheating and severe damage to the unit.

The maximum allowed ambient temperature for the system needs to be taken into account for the concrete application area.

2.3. Power supply, External peripheral devices

Low voltage networks

DLoG ITC 7 devices with AC power pack should only be connected to TN and TT networks. IT networks are not permitted as dangerous electric shocks cannot be ruled out here.

Operation in an emergency

In case of emergency (such as damage to the power cable , or housing, or ingress of liquid or other foreign bodies), the device must be disconnected immediately from the power supply. Contact technical support staff at once.

Danger of electrocution when cleaning/servicing the device

In order to avoid electrocution always disconnect the DLoG ITC 7 from the power supply before cleaning or servicing the device.

Wiring

Do not use the DLoG ITC 7 when a cable or plug is damaged. Have the damaged parts replaced immediately!

Do not connect or disconnect any cables during storms

Data cables must never be connected or disconnected during an electrical storm.

External peripheral devices

The use of additional wiring and other peripheral devices, which are not recommended or sold by the manufacturer can result in fire, electrocution or personal injury.

If a power supply is used, only use the power supply recommended by the manufacturer.

Before connecting or disconnecting peripheral devices (exception: USB devices), the DLoG ITC 7 must be disconnected from the power supply! Otherwise, this could seriously damage both the DLoG ITC 7 nd the connected devices!

Make sure that external peripheral devices with their own power supply are switched on at the same time or after you start the DLoG ITC 7.
If this is not possible, please ensure that the DLoG ITC 7 is adequately protected from power leakage caused by an external device.

2.4. Repairs only through DLoG

As a rule, never carry out repairs on the device yourself. Always contact DLoG's technical support and send in your unit for repair if necessary.

On the back of the DLoG ITC 7 you will find the device's type plate which has important information about the device which you must quote for technical service. It provides important information about the configuration and manufacture of the device in abbreviated form.

Always provide technicians with the full model name and serial number.

2.5. Exchanging and extending modules

Replacement and extension by qualified personnel

Only personnel trained by DLoG or skilled personnel qualified in the electronic or electrical engineering areas are authorized to carry out module extensions or module replacements on the DLoG ITC 7.

No battery changes

Some functional groups of the DLoG ITC 7 motherboard are powered by a lithium ion battery which is fixed to the motherboard.

This battery should not be replaced under any circumstances, as this requires soldering! Should a battery replacement be necessary, the device must be sent to DLoG. Changing the battery yourself will instantly void all present and future guarantee and liability claims.

WARNING

Using an unsuitable battery type or incorrectly installing it may cause the battery to explode.

Extending modules

When extending or replacing modules, only use components approved by DLoG for use in the DLoG ITC 7. Each time before installing a component, please contact DLoG to ensure that the desired module can be replaced or installed.

When extending modules, proceed with utmost caution.
Any damage caused while installing or replacing modules will instantly void all present and future guarantee and liability claims.

Damage to the computer system

To avoid damage to the motherboard and/or other computer components, only install modules in the designated slots.

Never physically touch the motherboard or any electrical components in a non-ESD-protected area, as this may cause damage to the motherboard.

Before physically touching motherboards or electrical components, make sure that you are working within an ESD-protected area.

Avoid system overloads

To avoid system overloads, check the sum load of all components installed.

Make sure that the input current for each consumer falls within the appropriate boundaries (see: the technical data for each corresponding consumer).

2.6. CE Marking

Warning! This is a class A device. This equipment may cause interference in a residential installation. In this case the user is encouraged to perform appropriate measures to correct the interference.

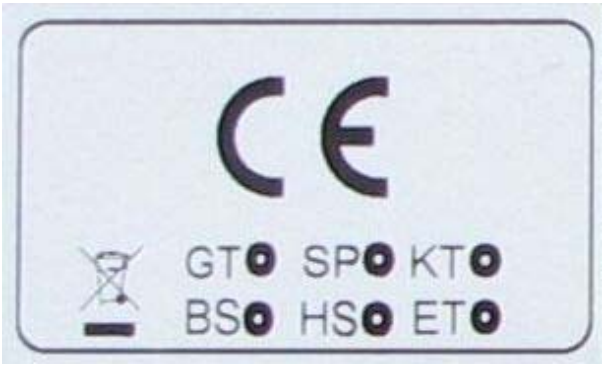


Figure 2.1: CE Marking

Use care in airplanes or in clinical/medical areas

Some devices in hospitals and airplanes are not protected from radio frequency energy. Consequently, do not use the DLoG ITC 7 in airplanes or hospitals without prior authorization. Here use of the DLoG ITC 7 is only permitted if authorization is obtained.

Caution with pacemakers

Do not use the DLoG ITC 7 near pacemakers. The DLoG ITC 7 can affect the function of medically implanted devices such as pacemakers and create interference. Do not place the DLoG ITC 7 near such devices.
Keep a minimum distance of 20 cm between such a device and the DLoG ITC 7 in order to reduce the risk of interference.
If you have reason to assume that interference has occurred, then turn the DLoG ITC 7 off and consult a heart expert.

3. Device description

3.1. General

Thank you for choosing the DLoG ITC 7.

The DLoG ITC 7 is an industrial PC guaranteeing the lowest possible Total Cost of Ownership – for the most reliable possible use in production, for visualization, and in any other applications where it is important to ensure long-term, reliable operation in harsh conditions. With its 15" touch screen, the DLoG ITC 7 is the ideal product for efficient, simple work.

Figure 3.1: DLoG ITC 7

3.2. Intended usage

The DLoG ITC 7 is an industrial PC for stationary use in industrial areas, for example in production (for usage classes, see section *7.2 Stationary use only*). A different or extraordinary usage is not permitted. For resulting damage the user/operator of the DLoG ITC 7 is solely responsible. This also applies to any changes you make to the device. Compliance with the contents of the safety guidelines is particularly important for the proper use of this device.

3.3. Device type plate

The device type plate on the DLoG ITC 7 contains the device description and type identification:

DLoG ITC 7/015	Describes the device DLoG ITC 7.
XGA	Display resolution
e.g. 12 V with 3 A	Input voltage of the power supply with nominal current
e.g. 1 GHz	Clock rate of the CPU
S/N	12 digit serial number composed of: DLoG specific device code (37 stands for the DLoG ITC 7 model range) Indication of week and year of manufacture Six digits for internal DLoG identification

Example of a device type plate:

Figure 3.2: Device type plate (example)

3.4. Abbreviations used for devices and accessories

Please note that to save space on the DLoG ITC 7 and supplied accessories, the following abbreviations have been used:

Abbreviation	Explanation
+	DC+
-	DC-

3.5. Technical specifications

3.5.1. Mechanical	
Housing	Rugged aluminum-cast housing with integrated heat sink Protection class IP 54 ESD safe Weight: 6,2 kg Dimensions: read section *3.6 Dimensions DLoG ITC 7*
Display panel	15" Color TFT XGA 1024 x 768 250 cd/m^2 DLoG specific resistive Touch-Screen Manual brightness adjustment
Top	Service lid
Bottom	Cable cover

3.5.2. Motherboard	
CPU	Intel® Celeron® M, 1 GHz, ULV, 0 KByte cache, FSB 400 MHz
Chipset	Intel® 82910 GML Northbridge and Grafikchip Intel® 82801 FBM (ICH6-M) Southbridge
Cache	64 kB Level 1 Cache, 0 kB Level 2 Cache
RAM	512 up to 1024 MBytes in one SO-DIMM-Slot DDR2-Technology
BIOS	AMIBIOS8® -1 MByte Flash BIOS with ACPI, PnP Programmable in the system, BIOS POST Selftest
Real-time clock	Real-time clock with a power reserve of up to 10 yearse
IDE Interface	Supports one IDE device from PIO-Mode 3/4 to UDMA/33. Connection via a 44-pin connector (2 mm grid). Connectable devices: - 2.5" hard drives - CompactFlash type I/II Note for Hard Drives and CompactFlash Cards: Only use models approved and released by DLoG to ensure the device functionality. Otherwise data loss could increase. Enquire which capacities are currently available.
Floppy disk drive	Supports an external 3.5” USB floppy disk drive Protected to ESD level 4 (according to EN 61000-4-2)
External (accessible) Serial ports	1st serial port: 115200 Baud max (16550A compatible, 16 bytes FIFO), supports RS-232 on an external 9-pin D-Sub connection ESD level 4 protected (acc. to EN 61000-4-2) 2nd serial port: 115200 Baud max (16550A compatible, 16 bytes FIFO), supports RS-232 on an external 9-pin D-Sub connection ESD level 4 protected (acc. to EN 61000-4-2)

Keyboard/Mouse connection	Keyboard/mouse: 6-pin mini DIN connector, combination connector Y cable for PS/2 keyboard and mouse required Internally-protected power supply for keyboard and mouse ESD level 4 protected (acc. to EN 61000-4-2)
USB-connection	2 stacked USB connections (USB 2.0 High Speed) with 0.5 A per port protected by fuse ESD level 4 protected (acc. to EN 61000-4-2) 1 USB connector (USB 2.0 High Speed) with 0.5 A per port protected by fuse ESD level 4 protected (acc. to EN 61000-4-2) Under the service lid
Software compatibility	MS-DOS 6.x MS Windows XP Professional MS Windows XP Embedded

3.5.3. LCD/CRT interface

VGA controller	Integrated Intel® Graphics Media Accelerator 900 with up to 224 MByte Dynamic Video Memory Technology (DVMT 3.0) Shared memory architecture

3.5.4. Touch screen (optional)

Analog touch controller resistive	12bit touch controller for 4-/5-/8-wire resistive touch screens with RS232 and PS/2 interface. Drivers available for MS-DOS 6.2x, MS Windows XP Professional, MS Windows XP Embedded
Analog touch connection	Internal plug-in connector Interface is ESD level 4 protected (acc. to EN 61000-4-2)

3.5.5. Network interface	
Network controller	Intel® ICH6M with PHY Intel® 82562 controller: 10/100 MB/s Drivers available for MS-DOS 6.2x, MS Windows XP Professional, MS Windows XP Embedded
Network connection	RJ45 plug-in connector Integrated transmitter Two integrated status LEDs

3.5.6. Environmental conditions	
Operating temperature	Specifications in accordance with EN 60068-2-1/2 0 °C to +50 °C
Storage temperature	Specifications in accordance with EN 60068-2-1/2 0 °C to +50 °C
Relative humidity	10% to 90% @ 40 °C, non-condensating
Mechanical vibration and shock-resistance	Class 5M1 according to DIN-EN 60721-3-5: 1997, 5 hrs with 3.6 g effective noise and 36 vibrations with 30 g peaks. Or MIL-STD 810F: 2000 (Department of Defense), 3 hrs with 1 g effective noise and 600 vibrations with 20 g peaks in operation

3.5.7. Test marks	
CE	EN 55022 Class A EN 55024, EN 61000-3-2, EN61000-3-3, EN 61000-6-2 IEC 60950-1, EN 60950-1, UL 60950-1
IP protection	IP 54

3.5.8. AC power pack

The DLoG ITC 7 has an external AC power supply with the following technical data:

- 100 - 240 VAC
- 1,5 A
- 50 up to 60 Hz
- Maximum output 66 W

WARNING

DLoG ITC 7 devices with AC power pack should only be connected to TN and TT networks. IT networks are not permitted as dangerous electric shocks cannot be ruled out here.

Caution: Property damage	The DLoG ITC 7 may only be operated with the AC power supply provided by DLoG! Operating the DLoG ITC 7 without the AC power supply provided can irreparably damage the DLoG ITC 7.

3.5.9. Maximum power available for peripheral devices

The following maximum power may be drawn from the external interfaces of the DLoG ITC 7:

- USB: 2.5 W per interface
- COM1 and PS/2: a total of 5 W
- In all, the total power drawn may not exceed 10 W.

3.5.10. Power supply fuses

The DLoG ITC 7 is equipped with a reversible fuse which resets itself after a short circuit once the electrical current is no longer flowing through it. It can thus be used more than once.

3.6. Dimensions DLoG ITC 7

Front view, dimensions without add-ons (in mm):

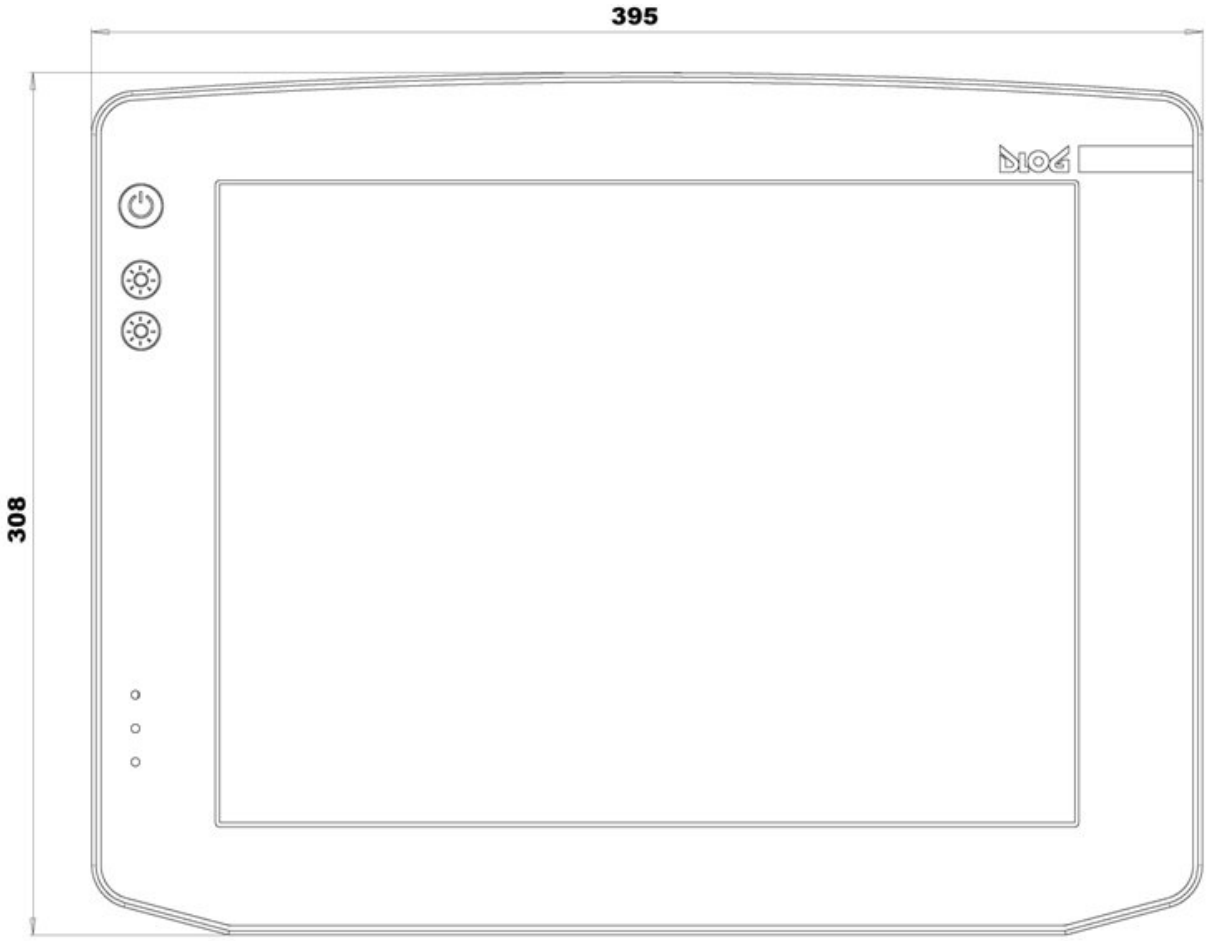


Figure 3.3: Dimensions DLoG ITC 7 front view

Top view, dimensions without add-ons (in mm):

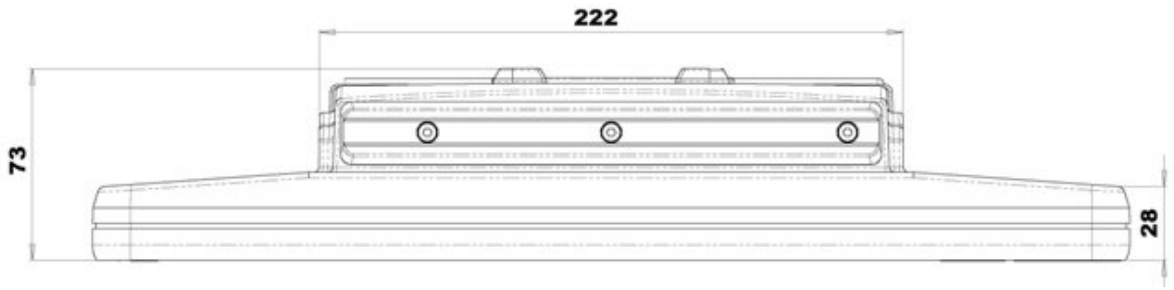


Figure 3.4: Dimensions DLoG ITC 7 top view

Side view, dimensions without add-ons (in mm):

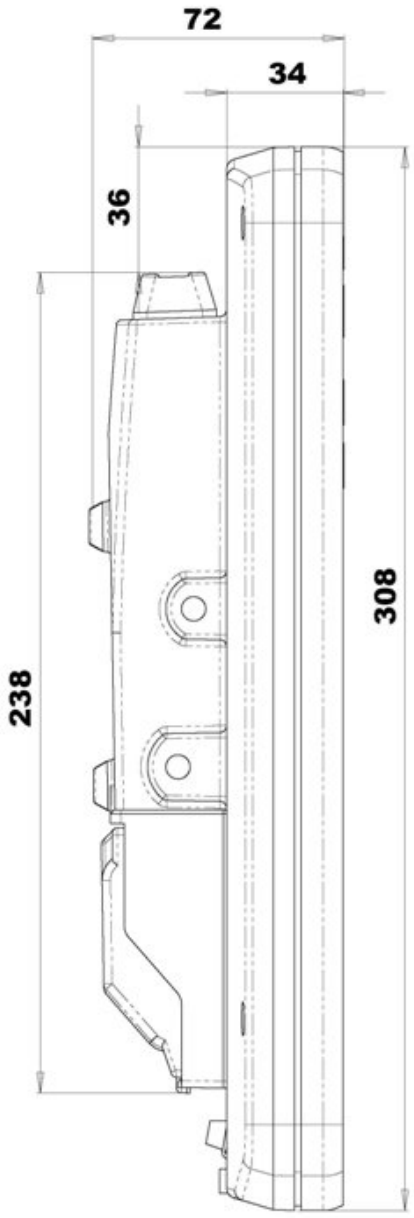


Figure 3.5: Dimensions DLoG ITC 7 side view

3.7. VESA drill holes

The VESA drill holes on the DLoG ITC 7 are visible on this diagram.

Dimensions without add-ons (in mm):

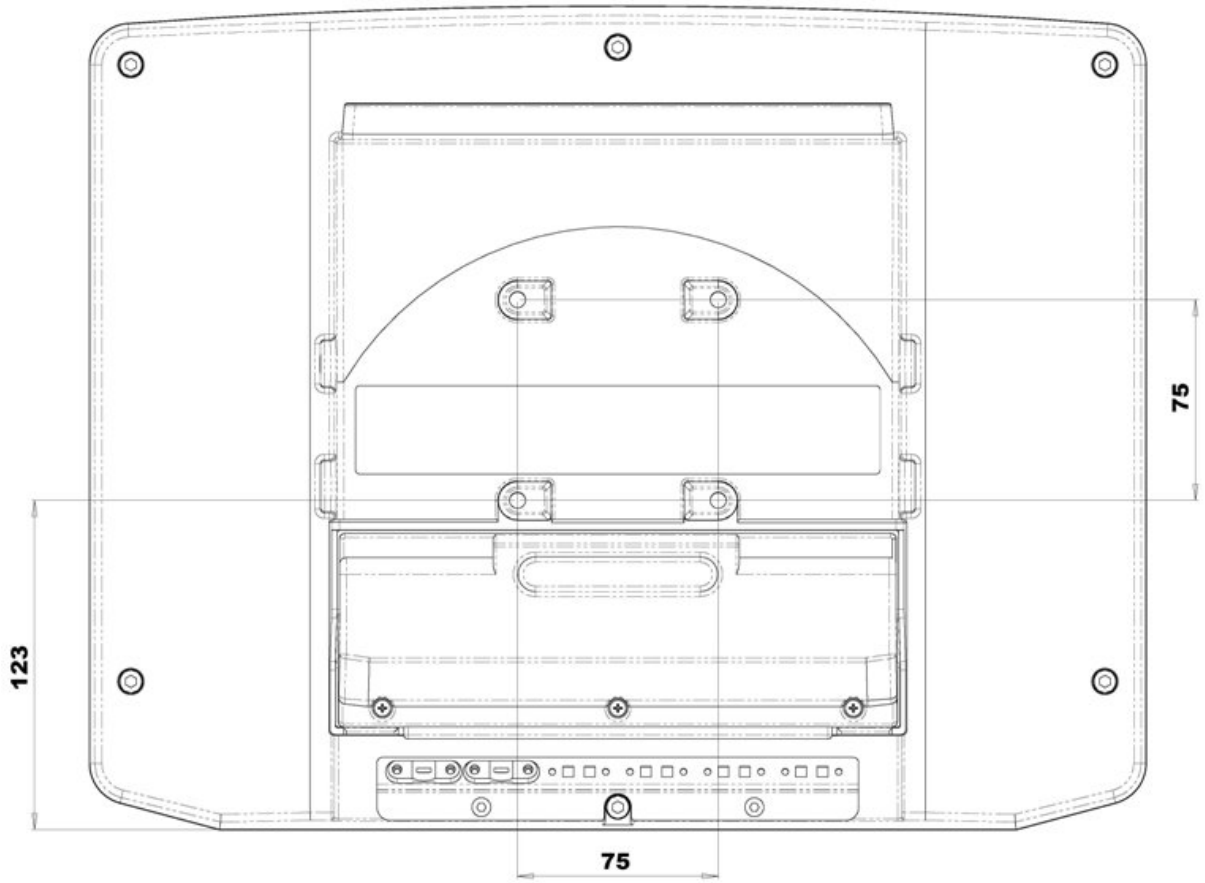


Figure 3.6: VESA drill holes DLoG ITC 7

4. Unpacking the device

4.1. Scope of delivery

The delivery includes at least the following:

- DLoG ITC 7 with strain relief rail and service lid
- Ordered assembly set
- Cable cover
- External DC power supply
- One DC connecting cable
- One ITC/IPC/MPC driver CD per delivery
- One printed manual per delivery

Please verify the delivery contents immediately on receipt!

4.2. Packaging

The packaging material has been selected to optimally protect your device while simultaneously offering the best possible ecological compatibility. We therefore kindly request that you store the original packaging material or ensure it is used for another suitable purpose such as transporting the unit or returning shipment.

If you repack the device, please ensure that the cling wrap in the cardboard frame is positioned towards the front of the device so that it can provide the proper protection.

4.3. Returning your device

Due care was exercised when putting together the contents of your delivery and dispatching your device. Nevertheless, if you still have cause for complaint, please complete the form included in the appendix. Should you need to return the device, please use the original packaging.

5. Initial operation

Before operating the unit for the first time, carefully read the Basic safety guidelines at the start of this manual.

5.1. Cooling through the supply of fresh air

The DLoG ITC 7 is cooled using a so-called passive cooling system. During passive cooling, the waste heat generated inside the device is emitted from the surface of the housing.

For this system to function properly, sufficient fresh air circulation is required.

Never install the system in a closed environment where the cooling air is unable to dissipate accumulated heat to the outside.

Caution: Property damage	If the DLoG ITC 7 does not have access to fresh cooling air, it may result in overheating and severe damage to the unit. The maximum permissible ambient temperature for the entire system needs to be taken into account for the concrete application area.

5.1.1. Temperature behavior on the back of the device

CAUTION

The housing temperatures on the back of the DLoG ITC 7 can be up to 20 °C warmer than ambient temperature. Danger of burns on the skin!

5.2. Connections in the service lid

On the upper back of the DLoG ITC 7 there is a service lid:

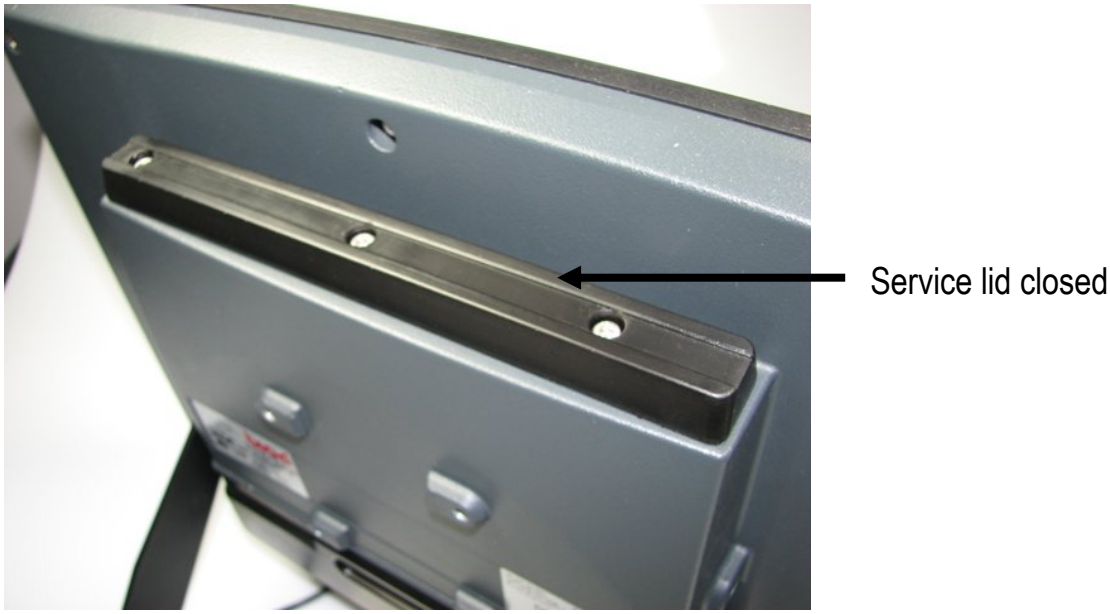


Figure 5.1: Service lid closed

Inside the service lid there are a service USB interface and a CompactFlash slot.

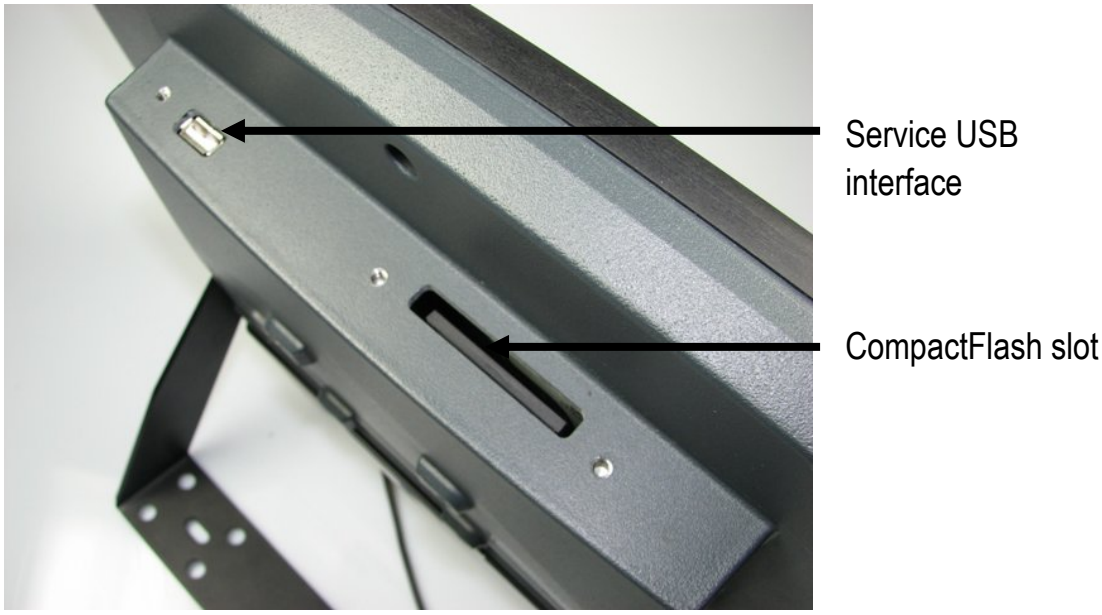


Figure 5.2: Service lid open

Caution: Property damage	The service lid may only be opened for maintenance purposes, e.g. to load software updates. The service lid may only be opened and closed by qualified technical personnel. The service lid may only remain open for the duration of the service work. No objects or fluids may be introduced into the service lid. Only when the service lid is properly closed again may operation be resumed; protection class IP 54 is then ensured again. If the DLoG ITC 7 is operated with the service lid for a longer period of time than required for service tasks, any warranty claim against DLoG GmbH for the device will be void.

5.3. Connections under the cable cover

On the back of the DLoG ITC 7 there is a cable cover:

Figure 5.3: Closed cable cover

The connections described below are available here:

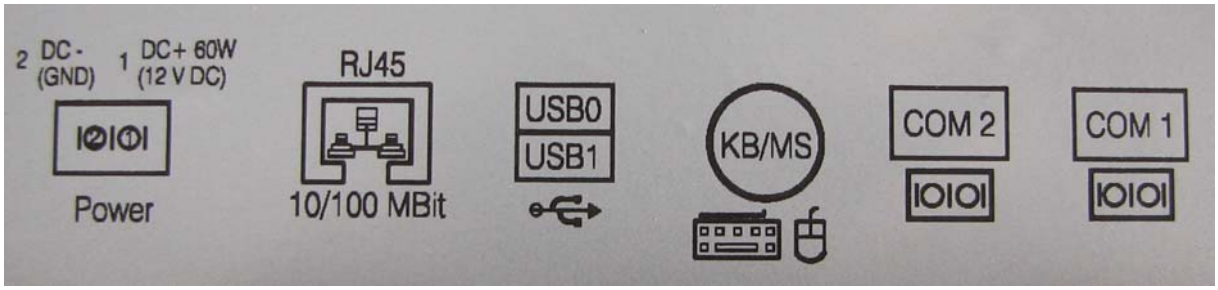


Figure 5.4: External connections under the cable cover

5.3.1. DC power supply connections

Layout: Weidmüller SL3,5/2/90F3.2SN, 2pol.

Figure 5.5: Outside view of DC connection plug

5.3.1.1. Power supply cable of the DLoG ITC 7

Power supply connection cable with external power supply:

Figure 5.6: Power supply connection with external power supply

5.4. Connecting external devices

The DLoG ITC 7 must be disconnected from the power supply:

- before external devices (e.g., scanner, keyboard) can be connected or disconnected
- before the DLoG ITC 7 can be connected to a network.

Caution: Property damage	Before connecting or disconnecting peripheral devices (exception: USB devices), the DLoG ITC 7 must be disconnected from the power supply. Otherwise, this could seriously damage both the DLoG ITC 7 and the connected devices! Make sure that external peripheral devices with their own power supply are switched on at the same time as the DLoG ITC 7 or after you start the DLoG ITC 7. If this is not possible, please ensure that the DLoG ITC 7 is adequately protected from power leakage caused by an external device.

5.4.1. Powering down the DLoG ITC 7

Always shut down the DLoG ITC 7 as follows:

1. Shut down the device properly.
2. Disconnect the external power supply from the power outlet (pull the plug).

5.4.2. Powering up the DLoG ITC 7

Only power up the DLoG ITC 7 when all devices have been connected and the DLoG ITC 7 has been closed correctly (remember the cable cover and the service lid). Otherwise, you may damage the DLoG ITC 7!

5.5. Removing the protective film

The front of the DLoG ITC 7 is protected during transport by a transparent film. This film should remain on the front during assembly to avoid damage to the display surface.

Only remove the film once all of the assembly work has been completed.

5.6. Powering up the DLoG ITC 7

Only power up the DLoG ITC 7 after connecting all of the devices.

The DLoG ITC 7 is powered up by connecting it to an appropriate power supply and then, depending on the version of the device, either using the Power switch.

Caution: Property damage	Make sure there is a suitable disconnecting device such as a power switch or circuit breaker in the power supply circuit.

5.6.1. Avoid contact with touch screen during booting

While booting the DLoG ITC 7 the touch screen may not be touched.

5.7. Protecting the TFT display from the memory effect

The TFT display of the DLoG ITC 7 has to be protected from the burning in of a motionless image. An image that has remained motionless for too long can cause irreversible damage to the display. With TFT displays there no cathode rays burning in an afterimage as in old TV sets or monitors, but TFT displays still have a “memory effect”. This is because with a still image the liquid crystal molecules align themselves in a certain way and become inert if they are not moved. Like burning in the effect is irreversible, but can be avoided by regularly turning off the display or by using a screensaver with changing content.

Define in the power management center of the utilized operating system that the displays of the DLoG ITC 7 should be turned off when no user input occurs.

A motionless image can stay on the display for a maximum of 12 hours. After more than 12 hours there is the risk of the memory effect.

Important for the lifespan of the backlighting:

Choose a turn off time that is definitely not too short (not less than 30 min) since frequent turning on of the backlighting will noticeably reduce its lifespan. This particularly applies at low temperatures. Here the backlighting of the display should never be switched off but instead a screensaver should be used which displays a changing or completely black screen in order to achieve the maximum lifespan of the backlighting.

6. Accessories

6.1. Keyboard

On the DLoG ITC 7 any keyboard with a 6-pin Mini-DIN plug can be connected (PS/2). Resources for the keyboard controller are pre-defined in the system architecture and automatically managed by the BIOS.

All keyboards can be used with all operating systems. No additional drivers are required.

6.2. Mouse

Any PS/2-compatible mouse with a standard Mini-DIN plug, USB connector or RS-232 port can be connected to the DLoG ITC 7. If the mouse has a PS/2 connection, a Y cable is also required.

6.2.1. Touch operation and mouse

It is not possible to use a PS/2 mouse during Touch operations, if you use the touch controller in PS/2 mode. By default, however, the touch controller is operated via COM4.

Of course a USB mouse or a RS-232-mouse can always be used in combination with touch mode.

Resources

Resources for the PS/2 mouse controller are pre-defined in the system architecture and automatically managed by the BIOS. This is also the case for RS-232 and USB mouse devices.

Drivers for MS-DOS operation need to be supplied by the control device manufacturer (order if necessary).

Support for the USB mouse under MS-DOS can be provided with a PS/2 driver, since here it is managed by the BIOS.

Special functions, such as those provided by wheel mouse devices, frequently require additional drivers, which are to be supplied by the manufacturer.

6.3. External DVD-ROM drive

An external DVD-ROM drive is available for the DLoG ITC 7. This is connected via the USB port.

	When connecting an external USB-DVD-ROM drive which has its own external power supply the DLoG ITC 7 must be disconnected from the power supply.
Caution: Property damage	The DVD-ROM must be powered up simultaneously or after the DLoG ITC 7 as otherwise this can cause start-up problems, malfunctions, or even the destruction of the device.
	Please note: Not every device classified as a USB-DVD-ROM is a proper USB-DVD-ROM drive. Only use devices approved by DLoG to ensure the device is fully compatible.

The DVD-ROM drive port is provided via USB. The drive, which is supplied in a separate housing, is connected to one of the sockets on the back of the DLoG ITC 7.

Depending on the model, the external drive is powered either via the DLoG ITC 7 connecting cable or via a separate external power supply.

If USB has been activated in the BIOS, the DVD-ROM drive is automatically recognized and made available by the BIOS.

The DVD-ROM drive is bootable once it has been properly installed. To boot from a DVD-ROM, insert a bootable CD and start the system.

In the BIOS USB CDROM must be entered as a boot device!

Resources and drivers

Resources for the USB port are pre-defined in the system architecture and automatically managed by the BIOS.

Drivers for the various operating systems need to be supplied by the drive manufacturer (order if necessary).

6.4. USB Stick

You can connect a USB stick to the DLoG ITC 7 with a USB-A connector.

6.5. Scanners

Scanners can be connected either via USB, PS/2, or a serial interface. When connected to COM1, the scanner can be supplied with 5 VDC power through the interface (optional).

Be sure to only use scanners that have been approved by DLoG.

7. Mounting

Carefully read the Basic safety guidelines at the start of this manual!

7.1. Options for mounting the device

The DLoG ITC 7 can be mounted in a variety of ways:

- It can be positioned horizontally on a desk.
- Wall mounts are also available for mounting the unit on machines and operating panels.

Depending on requirements, mounting brackets, clamp bases, or RAM mount elements can be used for fastening. Please contact your DLoG sales office to find out more about the whole range of installation options on offer.

WARNING

The unit could fall during transit or installation/mounting and cause injury. Always ensure that there are two persons available when installing or removing the device.

7.2. Stationary use only

The DLoG ITC 7 is only suitable for stationary use.

(5)M1 stationary use is defined as follows:

Operational environments with low energy vibrations and medium energy shocks as well as very careful handling/transport compliant with:

- Operation class 5M1 according to DIN EN 60721-3-5.
- Examples: Stationary mounting surfaces: Work table or wall, production machine.

7.3. Follow and retain the installation instructions

Please follow the installation/mounting instructions included with assembly kit when installing your DLoG ITC 7. Please make sure that you retain the instructions. Pay careful attention to the basic safety guidelines included in the beginning of this manual.

7.4. Power supply

The DLoG ITC 7 is only available with the external power supply for AC power provided.

This power supply automatically adapts to the nominal voltage range from 115 VAC or 230 VAC in a range from 50 to 60 Hz.

DC power supply is not supported.

Caution: Property damage	The DLoG ITC 7 may under no circumstances be operated with a power supply not approved by DLoG. This can irreparably damage the DLoG ITC 7.

The power from the power supply units is designed for operation of a DLoG ITC 7 with "normal" extension units over the entire operating temperature range.

There is no switch for the power supply. To disconnect the DLoG ITC 7 completely from the power supply network, for example, pull the power cord out of the AC power supply.

7.4.1. Installing connecting cables

To connect the DLoG ITC 7, always use the connecting cables provided.

- Make sure that the connecting cables are laid without kinks and are protected.
- The cables must be fixed with the included strain reliefs after the mounting is finished.
- If you want to connect devices fed by other power sources to the DLoG ITC 7, such as certain PS/2-Wedges, printers and so on, be sure to power up the peripheral devices at the same time or after the DLoG ITC 7. Otherwise, you may encounter start-up problems, malfunctions or even irreparable damage to the device.

7.5. Cable cover (splash guard)

WARNING

For safety reasons, the supplied cable cover for the external ports must be installed prior to using the DLoG ITC 7.
Please follow the assembly instructions provided with the cable cover.

Before assembly work, ensure appropriate and safe working conditions!

Assembly may only be carried out with the DLoG ITC 7 turned off. Before connecting the device cable, be sure that no voltage is applied to the cable.

Please retain these assembly instructions. For the cable connection of e.g. accessories, the cable cover must be removed and reattached. Be sure to attach the cable cover according to these instructions, since the protection class cannot be guaranteed in the case of improper mounting.

Figure 7.1: DLoG ITC 7 with cable cover mounted

Information about satisfying the protection class

The DLoG ITC7 is dust-tight (protection class IP54) when the following conditions are satisfied during assembly:

- the sealing sleeves provided (1 and 2, figure below) are used when installing the cables
- the unused cable penetrations are closed with dummy sleeves (3, figure below)
- the cable cover is mounted

7.5.1. Preparations

Sealing sleeves

Figure 7.2: Sealing sleeves

1 = size 1 sleeve (thin cable)
2 = size 2 sleeve (thick cable)
3 = dummy sleeve

Visual inspection of the cable cover

Be sure that the seal (the area shown with dotted lines) is present and intact in the cable cover.

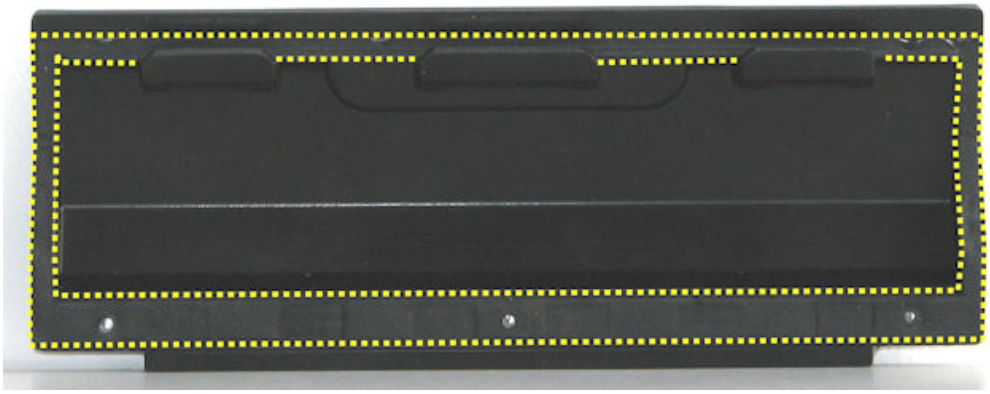


Figure 7.3: Cable cover seals

7.5.2. Cable layout and assembly

- Pull the plug (middle) out of the sealing sleeve (1, 2, figure below).
- Then separate the sealing sleeve from the outside to the middle (3, figure below).

Figure 7.4: Separate the sealing sleeves

- Put the sleeve around the appropriate cable.

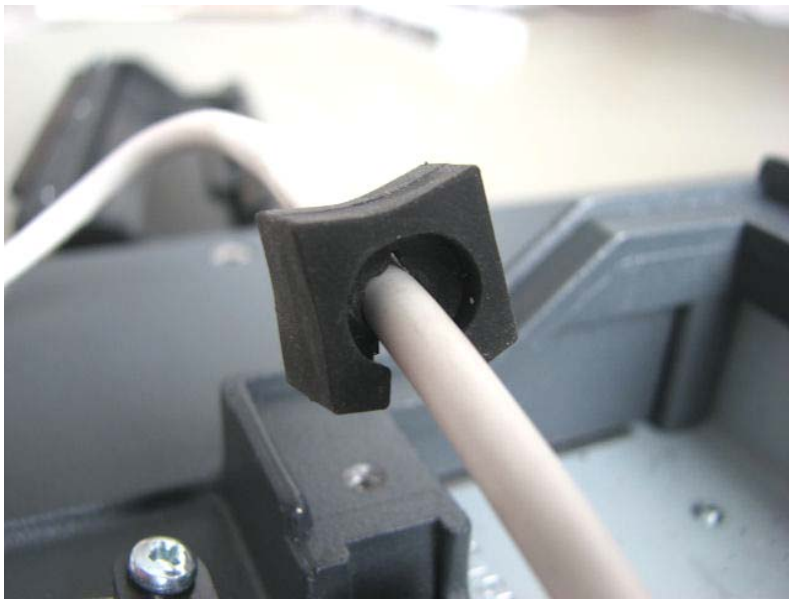


Figure 7.5: Sleeve around a cable

Instructions for strain relief clamps

The figure below show the arrangement for strain relief clamps on the left for a cable diameter (CD Ø) of 4 mm and up, or on the right for a cable diameter Ø of up to 4 mm.

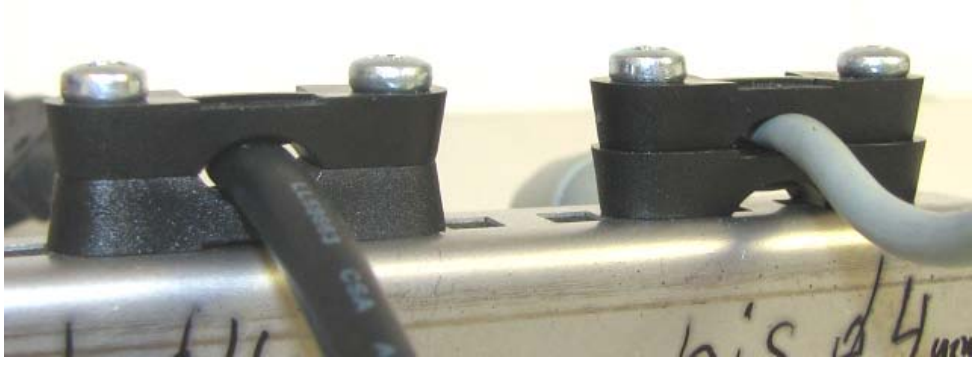


Figure 7.6: Strain relief clamps

Instructions for cable layout (strain relief)

- Be sure that the cables are not guided straight out of the device.

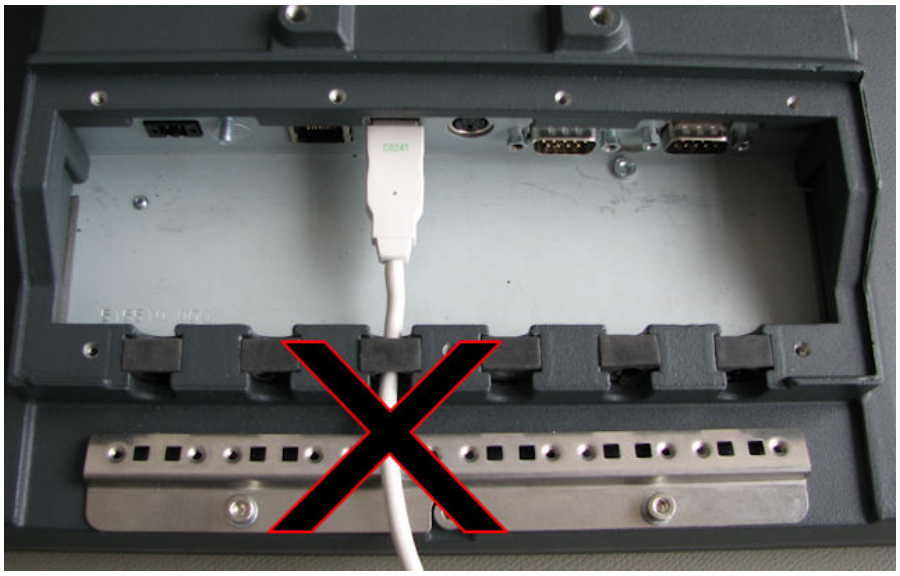


Figure 7.7: Wrong cable layout

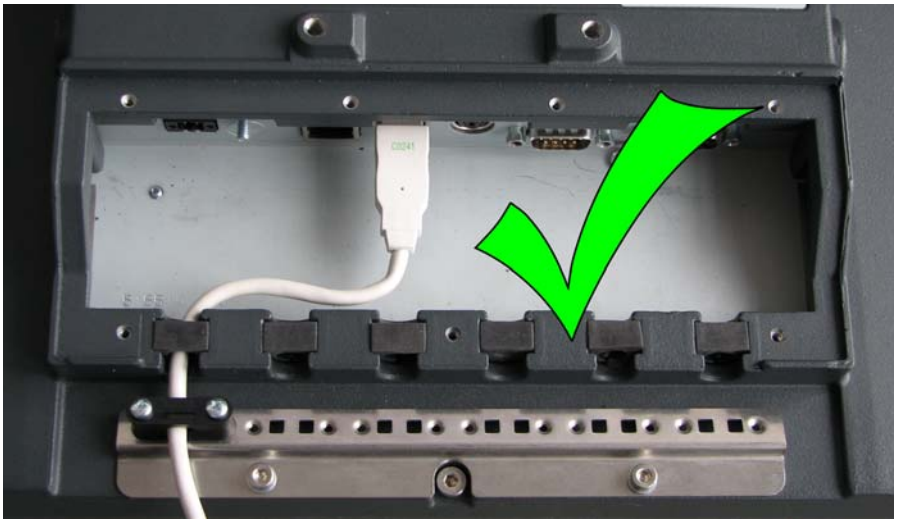


Figure 7.8: Correct cable layout

- Now place the sleeve (and cable) into the holder, and fasten the outgoing cable with the strain relief clamps.

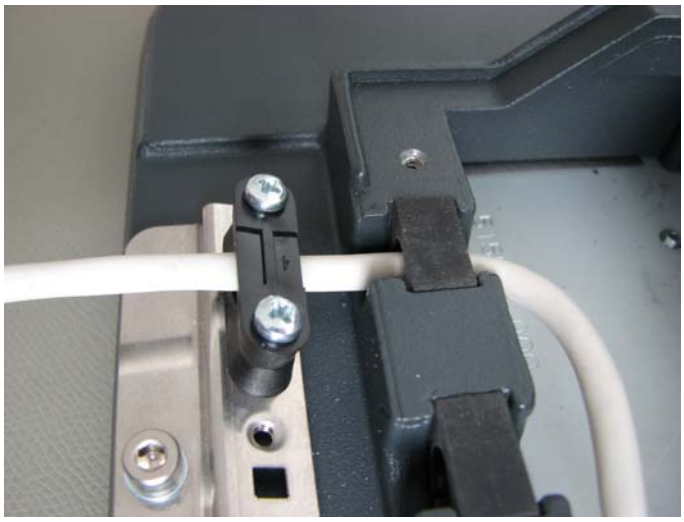


Figure 7.9: Cable with the strain relief clamp

After the needed cables have been mounted, the cable cover must be fastened.

- To do this, the cable cover must be pressed onto the DLoG ITC 7 housing with the three hooks (1) and then folded downwards (2).
- Then tighten the three screws on the cable cover with a maximum torque of 0.4 Nm.

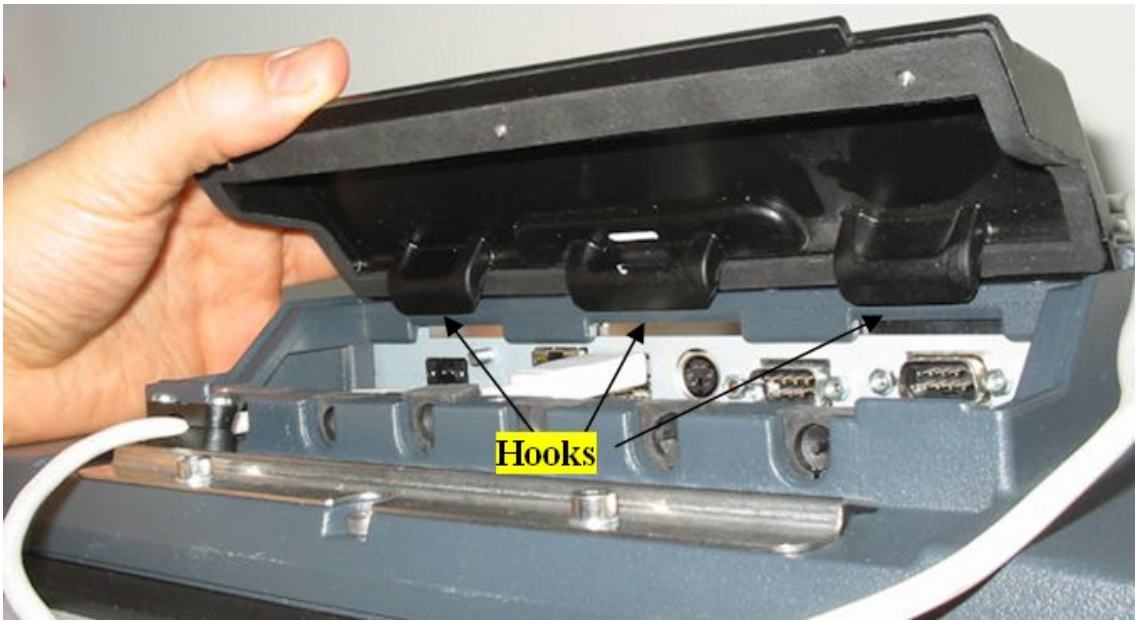


Figure 7.10: Cable cover with three hooks

Completely mounted cable cover:

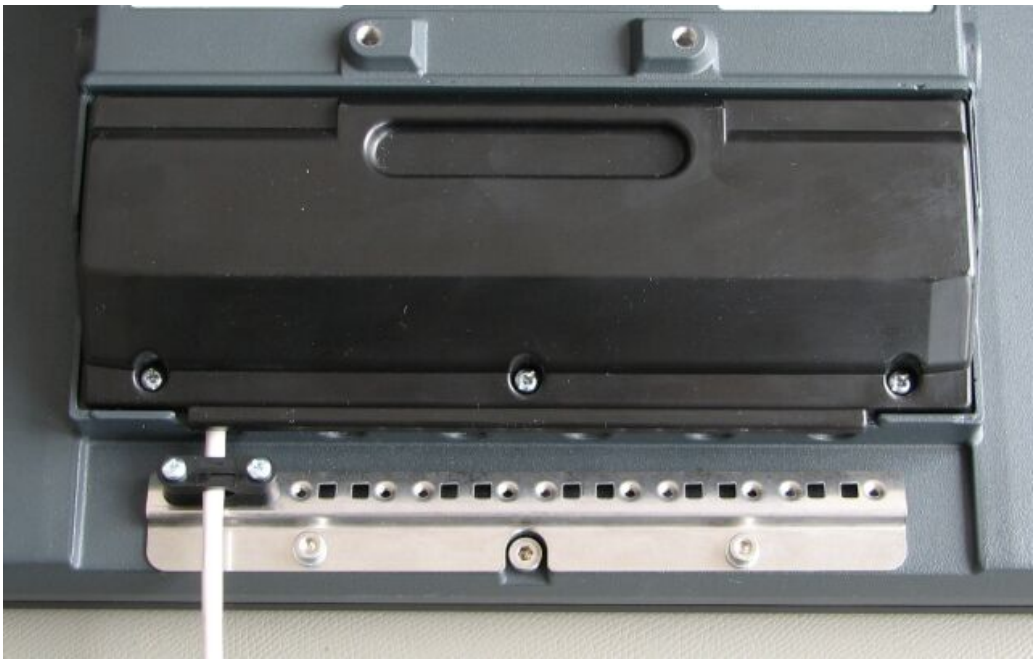


Figure 7.11: Cable cover mounted

7.6. Mounting the service lid

Caution: Property damage	The service lid may only be opened for maintenance purposes, e.g. to load software updates. The service lid may only be opened and closed by qualified technical personnel. The service lid may only remain open for the duration of the service work. No objects or fluids may be introduced into the service lid. Only when the service lid is properly closed again may operation be resumed; protection class IP 54 is then ensured again. If the DLoG ITC 7 is operated with the service lid for a longer period of time than required for service tasks, any warranty claim against DLoG GmbH for the device will be void.

Figure 7.6: DLoG ITC 7 with mounted service lid

- Take care not to damage the opening seal of the service lid.
- It should be possible to attach the service lid without using force.
- The neck collar screws should be screwed firmly, preferably diagonally and always using 5 rotations.
- The screws need to be retightened after 2 days
- The screws must be tightened to a torque of 1 Nm.

8. Operation

8.1. Touch screen

The DLoG ITC 7 devices are available with the option of a resistive touch screen. Recommended operation of the resistive touch screen:

- Clean, dry fingers
- Clean, dry, soft gloves
- Suitable touch screen pencils (plastic or wood, rounded tip, maximum 4 H hardness)

Caution: Property damage	Inappropriate operation of the screen, for example by using sharp objects such as screwdrivers, will irreparably damage the resistive touch screen.

Resistive touch screens may NOT be operated with:

- Ball point pens, pencils, or other inappropriate writing implements
- Unsuitable touch-screen pencils (harder than 4 H)
- Hand tools of any kind (such as a screwdriver)
- Sharp objects (knives, scalpels, etc.) that could damage the touch surface.

8.1.1. Dirty touch screen surface

The surface of the touch screen should be kept free of contamination, sand, etc. to prevent damage to the touch screen. If the touch surface is dirty, it must be cleaned before operation. Clean the touch screen according to the instructions in Chapter *16.2 Touch screen cleaning*.

8.2. Operation controls

8.2.1. Keys on the front of the device

The DLoG ITC 7 has the following controls:

- POWER ON/OFF
- Manual brightness control with + or -
- LEDs

Figure 8.1: DLoG ITC 7 front panel

8.2.2. Power key

Switching on the computer

The DLoG ITC 7 is switched on using the <POWER> button.

Switching off the computer

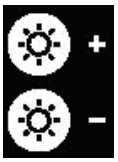
To switch off the DLoG ITC 7, please use the function **Shut down** in the **Windows Start menu**. This allows a controlled shutdown of the DLoG ITC 7.

The <POWER> button is generally not used to turn the device off (DLoG delivery standard).

Changing the shutdown behavior of your DLoG ITC 7

If the <POWER> button should be used to shut down the computer, this must be configured in the "DLoG Config Program".
Caution: data loss may result! By activating the <POWER> button while the computer is in operation, the DLoG ITC 7 executes a hard shutdown, and there is no controlled shutdown!

8.2.3. Manual brightness control, backlighting



\+ button for manual brightness control

\- button for manual brightness control

8.2.4. LEDs

Temp (red) LED indicates an excessively high or low temperature inside the unit

HD (green) LED indicates access of the hard drive, CompactFlash

Power (green) LED indicates an available internal power supply

8.2.4.1. LED states, operating states

The following temperature information refers to the temperature in the device, not to the ambient temperature.

Status of internal LEDs		DLoG ITC 7-status
Power (green)	Temp (red)	
OFF	OFF	Initial state, idle time; no power supply.
AUS	FLASHING	Temperature sensor malfunctioning
OFF	ON	The DLoG ITC 7 is switched off and the temperature in the device is outside of the allowable range. Low-temperature warning: occurs at temperatures of < 0 °C High-temperature warning: occurs at temperatures of > +70 °C The DLoG ITC 7 only starts when the temperature in the device is again within the range of 0 °C to +70 °C.
ON	OFF	The DLoG ITC 7 is either being started or is in normal operation.
ON	ON	The DLoG ITC 7 is running and the temperature in the device is < 0 °C or > +70 °C. After about three minutes, the DLoG ITC 7 switches off.
ON	FLASHING	The temperature sensor is defective. Or: DLoG ITC 7 is currently being configured, e.g. using the “DLoG Config Tool”.

9. Operating system

9.1. Pre-installed on the hard drive/CompactFlash

When a DLoG ITC 7 with a pre-installed operating system is started, this operating system is loaded following the BIOS boot messages.

System-specific device drivers – such as those for display, audio and network adapters, and touch screens – are also pre-installed.

Refer to the relevant operating system manual for specific operating instructions.

In DLoG ITC 7 units with a pre-installed operating system, the system is located on the C partition. The size of this partition will not always be the same as the size of the entire hard drive/CompactFlash. It is up to you to organize the usage of the remaining hard drive/CompactFlash capacity.

With MS Windows XP Embedded a small EWF partition (Enhanced Write Filter), which is required for the EWF functions.

9.2. Installing on the hard drive/CompactFlash

When a DLoG ITC 7 is started up for the first time without a pre-installed operating system, the user needs to carry out a number of steps that will vary depending on the system to be installed. Refer to the relevant operating system manual for specific instructions.

Caution: Property damage	The installation and configuration of the operating system should only be carried out by qualified personnel familiar with the system environment.

9.2.1. Operating systems supplied on CD-ROM

There are two ways to install operating systems which are supplied on CD-ROM:

- Using an external CD- or DVD-ROM drive connected to a USB port. This drive can be used to install, for example, MS Windows XP/SP1.
- Initialize the hard drive/CompactFlash using a bootable floppy disk. Then copy the operating system CD and driver CD contents onto the hard drive/Compact Flash using the right network or CD/DVD-ROM-drivers. The operating system can then be installed directly from the hard drive/CompactFlash.

The installation CD must include Service Pack 1 or higher if MS Windows XP Embedded is to be installed via a USB-connected CD/DVD-ROM. Service Pack 1 is included with all current installation CDs from DLoG.

9.2.2. Operating system images

If you have created an image of a master installer, there are many ways to copy it to another computer:

From CD-ROM	For installation via USB CD-ROM a bootable image CD must be available The operating system image can then simply be installed from the USB-connected CD-ROM drive.
Via Memory stick	For installation via a USB memory stick a bootable memory stick with an image must be available. The operating system can then be installed from the memory stick.
Via the network	When installing via a network, you need to have an external USB floppy disk drive and a bootable disk with the right network driver. The operating system image can then be installed from the network server.

9.3. Special features of the operating systems

Always observe the documentation provided by the operating system's manufacturer when using a custom operating system.

9.3.1. MS-DOS

MS-DOS is not a Plug and Play operating system. The system resources need to be managed by the user.

9.3.2. MS Windows XP Embedded

If the DLoG ITC 7 is running MS Windows XP Embedded, not all USB devices will be supported.

10. Software applications

10.1. Displaying the DLoG ITC 7 configuration

The program DSYSINFO, which is started from DOS shows the configuration of the DLoG ITC 7.

It was designed for use under DOS and does not work under MS Windows XP.

Launching DSYSINFO.EXE generates the following messages (example):

```
DSYSINFO V3.60 DLoG PC System Info
Copyright (C) 1992-2003 by DLoG GmbH

Date                   : 14-JAN-09 14:43:07.20
Operating System, Vers : MS-DOS, DOS 7.10
CPU, Math Coprocessor  : 486 or higher, 80387
Installed Memory       : 64MB
Size of fixed disk 0,1 : 122MB, 1MB
DLoG PC model          : ITC 7
DLoG Serial Number     : 370002200000A
DLoG BIOS Version      : T7I00C07
Chipset                : Intel 915
```

10.2. Fine tuning the operating system parameters

The free program TweakUI from Microsoft® is used to fine-tune the MS Windows user interface. Operating parameters that are otherwise inaccessible can be changed with this program.

For example, an automatic log-on can be set up with a username and password. Please refer to the help file for further details.

TweakUI has been designed exclusively to be used with MSWindows operating systems. Specific functional limitations of the program are listed in the TweakUI help file.

10.3. Environment controller settings

The program MPCCOM has been developed for use in DOS. It does not work under MS Windows XP or any other MS Windows operating system.

The MPCCOM program is started from DOS.

Using different parameters you can adjust the following settings:

- Display the current version of your environment controller software as well as statistical, configuration and control functions (temperature, ignition and so on).
- Change the shutdown and delay time.
- Change the reaction time of the power button on the unit's front panel.
- Set how the front panel power button is to be interpreted.
- Set whether the DLoG ITC 7 is to constantly monitor the ignition signal during operation.

Operation

Launching `MPPCOM.EXE -h` generates the following messages:

```
MPCCOM -d time0    set power-key time
                   (time0=time to wait before key press is
                   recognized in 100ms
                   valid values [1..255])
MPCCOM -h          show this help
MPCCOM -info, -i   readout a lot of info stored in EEPROM
MPCCOM -p value    set power-key mode
                   (0=power-key completely disabled
                   1=wait for the power-key to startup &
                   use the power-key to switch off the
                   device
                   2=ignore the power-key at startup & use
                   the power-key to switch off the device
                   3=wait for the power-key to startup &
                   ignore the power-key on the working
                   device
MPCCOM -t time1 time2 ...set timer values in sec
                         (valid values [1..65535])
                         (time1 = delay time,
                          time2 = switchoff time)
MPCCOM -kl value       ...disable "+" & "-" keys
                         (0=no, 1=yes)
MPCCOM -kp value       ...disable power key
                         (0=no, 1=yes)
```

Statistical information, for example, is generated by calling: `MPCCOM.EXE -i`

```
PIC-Version:  4.00                    MPCCOM-Version:        :       1.7
Last Update: 01.01.2003               Actual Temperature     :      26°C
Working hour backlight : 103h 30min or  4d,  7h and 30min
Working hour device    : 103h 40min or  4d,  7h and 40min
Delay time             :      900s      Switchoff time         :      180s
Brightness value       :         0      Switchoff automatic    :        no
Brightness control     :       yes      Heating automatic      :        no
BKL off while on Accu  :        no      Accu option            :        no
Use delay while on Accu:        no      Shift key state saved  :        no
Backlight key off      :        no      "+" & "-" keys off     :        no
Power key off          :        no      Shift key off          :        no
Act. brightness saved  :        no      Use switchoff auto     :        no
Wait for powerkey      :       yes      Wait for ignition      :        no
Switch-on device count :        70      Powerkey-time          :      2.0s
Switch backlight-volt  :        78      Switch-on/off bkl-sw   :         1
Powerkey sw-on count   :        26      Powerkey sw-off count  :        25
Ignition sw-on count   :         0      Switch-off auto count  :         0
PS-ON switch-off count :         0      Temp-sensor error count:         0
Overtemp sw-off count  :         0      Lowtemp sw-off count   :         0
Heating active startup :         0      Heating active working :         0
Startup temp -> min    :      23°C      Startup temp -> max    :      49°C
Working temp -> min    :      23°C      Working temp -> max    :      49°C
Actual shutdown reason :   unknown      Last shutdown reason   :   unknown
```

11. Touch screen

The DLoG ITC 7 is optionally available with a resistive touch screen.

The resistive touch screens from DLoG have a sandwich construction. The front control panel is made of polyester and is separated from the back through very small spacer dots. The rear of the front and the face of the back are covered which a conductive layer. Voltage is applied at the corners of the back. By creating the contact between the surface of the front and the conductive layer the electric circuit is closed, and the contact point can be calculated from the voltage differences.

The touch screen can be operated with or without a keyboard and is compatible with a mouse.

11.1. Operation

When used improperly, for example with sharp objects such as screwdrivers, the resistive touch screen will be irreparably damaged. Please observe chapter *8.1 Touch screen*.

11.2. Mouse compatibility

It depends on the touch controller configuration if it is possible to connect a PS/2 mouse.

If the touch controller is configured as PS/2 touch (via jumpers) a mouse cannot be connected to the external PS/2 mouse port. Of course it is always possible to use a serial or a USB mouse at the same time as the touch screen.

11.3. Explanation of functions and resources

A touch screen controller for resistive touch screens is integrated into the motherboard to analyze the sensor line state changes caused by touching. The touch screen controller calculates and formats this data and then sends it to the touch screen software driver via the COM4 port or optionally the mouse-PS/2 port (interrupt-controlled). The driver converts the data into pointer commands.

The analog touch screen controller used for analysis provides a resolution of 4096 x 4096 pixels (12-bit horizontal and vertical).

By default the resources for the touch screen controller are the same as for the COM4 port. If the appropriate configuration exists, these may also be the same as for the PS/2 mouse. With the exception of ensuring that the jumpers are set correctly J6 (open = Touch active) and J13 (closed=PS/2, open=COM4), no further configuration is required.

11.4. Driver installation and calibration

11.4.1. MS-DOS

The following description can be used for installing driver version 5.06.

11.4.1.1. Installation

The directory c:\hammouse must be used in order for the driver to be able to locate the calibration data.

Install the Hampshire touch screen driver **after** installing MS-DOS and verifying that the installed system is fully functional.

Follow the instructions below to install the Hampshire touch screen driver under MS-DOS:

1. Create the directory C:\HAMMOUSE. This directory name must **not** be modified.
2. Copy the DOS files for the touch screen into this directory. These DOS files can be found in the directory C:\Util on the hard drive/Compact Flash of the DLoG ITC 7 or on the driver CD-ROM.
3. Enter the following command line in the batch file Autoexec.bat (for example, using <EDIT>):
   Serial touch: `C:\HAMMOUSE\HMOUSE /B9600 /C4 /I11 /hY`
   PS/2 touch: `C:\HAMMOUSE\HMOUSE /p /T12 /hY`
4. Restart the computer.

Calling parameters:

You can also enter the following calling parameters:

/r	Uninstall the driver
/?	Help page

11.4.1.2. Calibration

The calibration of the touch screen is carried out with the program HDOSCAL.EXE.

Example:

1. Open the directory C:\HAMMOUSE.
2. Enter HDOSCAL.

You can also enter the following calling parameters:

/Tx Touch Mode

/TS – Stream
/TU – Pen-UP
/TD – Pen-Down

/Sx Touch Sound

/SN – Sound ON
/SF – Sound OFF

/Cxx Cal Mode

/C3 – 3 point
/C4 – 4 point
/C20 – 20 point

/V Video Mode

/VTEXT – Calibrate Text mode
/V640x200 – Calibrate 640x200 mode
/V640x350 – Calibrate 640x350 mode
/V640x480 – Calibrate 640x480 mode
/V800x600 – Calibrate 800x600 mode
/V1024x768 – Calibrate 1024x768
/Vcustom – Calibrate custom mode

11.4.2. Touch Serial for MS Windows XP

11.4.2.1. Installation

Do not execute the MS Windows installation!

The driver may only be installed according to the instructions given below. Do not execute the MS Windows installation indicated by the MS Windows system message "New hardware found."

Procedure

The touch drivers to be used can, by default, be found on the CompactFlash or hard drive under **Util / atouch / resistive / <verNR>**. In addition you will find the DLoG drivers on the included driver CD and on the DLoG internet site.

1. Open the corresponding folder and run **Setup.exe**.
2. On the **Welcome** dialog click **Next**.
3. Read the **Software License Agreement** carefully.
4. To continue the driver installation, you must accept the agreement.
5. Then click **Next**.
6. Select **Serial (RS/232)** in the **Select Controller** dialog box and click **Next**.
7. On the **Serial Configuration** dialog choose **COM4** and **9600 Baud** and click **Next**.
8. Deselect the option on the **Configuration Complete** dialog and close by clicking **Finish**.
9. Two **Files Needed** MS Windows will appear querying the path to the **tsufiltr.sys** file.

10. Select Browse to navigate to the installation folder indicated above, then choose the Serial folder and click OK.

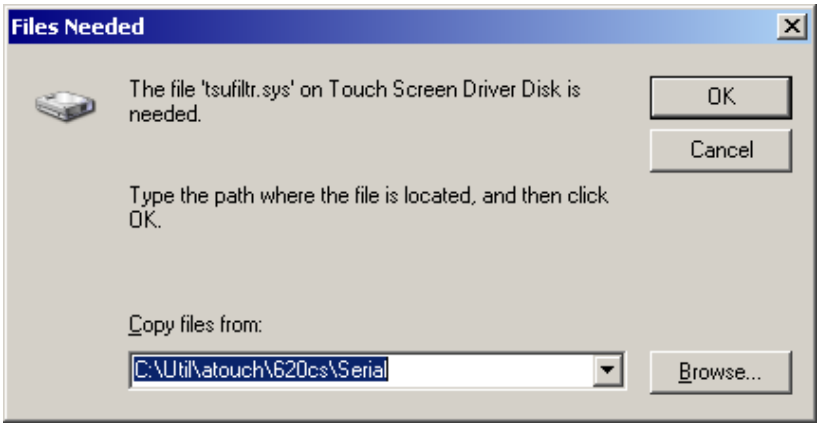


Figure 11.1: "Files Needed" touch installation dialog

11. Confirm the final message Setup is now complete by clicking OK.
    The computer does not need to be restarted.

11.4.2.2. Calibration

The touch screen must be calibrated so that it functions correctly.

1. Start the touch configuration tool under Start | Programs | Hampshire TSHARC Control Panel.
2. Select the Calibration tab and click the Touch field.
3. Once calibration is complete, finish by clicking Accept.
4. Select the Click Settings tab and select Enable right click emulation and enter the following values:
   Right-Click Area + Double-Click Area each to 13;
   Right-Click Delay + Double-Click Delay each to the third line.
5. Exit the tool with OK.

11.4.3. Touch PS/2 for MS Windows XP

11.4.3.1. Installation

Do not execute the MS Windows installation!

The driver may only be installed according to the instructions given below. Do not execute the MS Windows installation indicated by the MS Windows system message "New hardware found."

Procedure

The default location for the touch driver to be used is found on the CompactFlash or hard disk in the directory **Util / atouch / resistive / <verNR>**. Additionally, you will find the DLoG driver on the driver CD supplied with the device and on the DLoG internet site.

1. Open the corresponding folder and run **Setup.exe**.
2. On the **Welcome** dialog click **Next**.
3. Read the **Software License Agreement** carefully.
4. To continue the driver installation, you must accept the agreement.
5. Then click **Next**.
6. On the **Select Controller** dialog select **PS/2** and click **Next**.
7. Deselect the option in the **Configuration Complete** dialog and end by clicking **Finish**.
8. In the following window confirm the dialog by clicking **OK**:

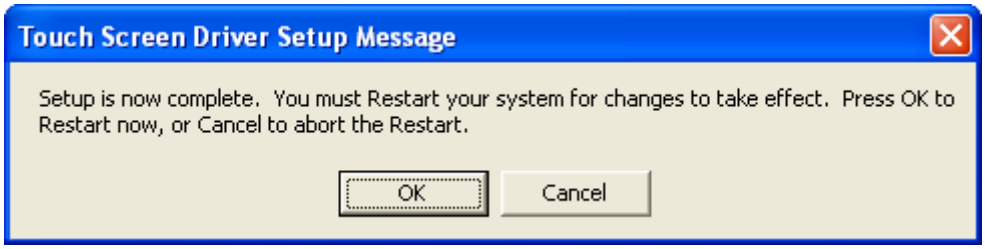


Figure 11.2: "Setup Message" touch installation dialog

9. Next, the computer needs to be restarted.

11.4.3.2. Calibration

The touch must be calibrated so that it functions correctly.

1. Start the touch configuration tool under Start Programs | Hampshire TSHARC Control Panel.
2. Select the Calibration tab and click the Touch field.
3. Once calibration is complete, finish by clicking Accept.
4. Select the Click Settings tab and select Enable right click emulation and enter the following values:
   Right-Click Area + Double-Click Area each to 13;
   Right-Click Delay + Double-Click Delay each to the third line.
5. Exit the tool with OK.

11.5. Right clicking

To perform a right click, touch the screen and maintain finger contact until the respective right-click shortcut menu appears.

11.6. Resistance

Mechanical resistance

Pencil hardness test ASTM D 3363-92a:

The resistive DLoG touch screens have a hardness ≥ 4 H.

Chemical resistance

The touch screen surface finish is unaffected by exposure to the following chemicals for a period of one hour at 22 °C, 45% relative humidity. ASTM-F-1598-95.

Food material:

Tea, Coffee, Ketchup, Mustard, Vinegar, Soy Sauce, Beer, Red Wine, Cola, Cooking Oil

Household and Industrial Chemicals:

Detergent, all-purpose cleaner, dishwashing detergent, glass cleaner, hydrogen peroxide (3%), Lysol, ethanol, isopropanol, acetone, methylethylketone, toluene, concentrated hydrochloric acid, petroleum, benzene, gasoline, motor oil, diesel, gear oil, brake fluid, antifreeze, hydraulic oil.

12. Serial ports

By default the DLoG ITC 7 is equipped with 4 serial ports. COM1 and COM2 are accessible from the outside. COM3 and COM4 are used internally for communication with the environment controller and the touch controller.

12.1. Resources

Resources for the serial ports are pre-defined in the system architecture and automatically managed by the BIOS. The resources for COM1, COM2, COM3 and COM4 can be defined via the BIOS.

The standard resources for serial ports are:

COM1	Address 0x3F8 - 0x3FF (hexadecimal), Interrupt IRQ4
COM2	Address 0x2F8 - 0x2FF (hexadecimal), Interrupt IRQ3
COM3	Address 0x3E8 - 0x3EF (hexadecimal), Interrupt IRQ10
COM4	Address 0x2E8 - 0x2EF (hexadecimal), Interrupt IRQ11

12.2. COM1 options

The following section describes what needs to be observed when using the COM1 port to supply power to external equipment.

The resources required for the COM1 controller module are automatically reserved by the BIOS.

COM1 as a power supply

The COM1 port can optionally supply externally connected equipment with +5 V of power. The voltages are protected by internal fuses which limit the total consumed current to 1.1 A at 5 V (including keyboard and mouse).

12.3. Drivers

RS-232 operation

MS-DOS only supports 4 serial ports. The application is responsible for the use of more COM ports. Other operating systems support more serial ports.

12.4. Serial port printers

Printers with a serial port can be connected to the DLoG ITC 7.

12.5. Serial port barcode scanners

Please note that you have to configure the scanner correctly to RS-232 and the above set BAUDrate following the scanner manufacturer's guidelines. Otherwise the software wedge will not function properly.

To activate the integrated scanner software wedge under MS Windows XP Embedded:

1. Open the **Start** menu and navigate to **Settings | Control Panel | Accessibility**.
2. Select the **General** tab.
3. Select **Support accessibility options.**
4. Click **Settings**.
5. Configure the desired COM port and BAUD rate.
6. Confirm the change with **OK**.
7. Click **OK** again for the changes to take effect.

12.6. Tips & tricks

Note that according to the EIA-232-E specification, the maximum cable length is 15 m at 19 200 bps.

By using a correctly terminated twisted-pair cable, however, up to 1200 m at 100 kbps can be achieved according to the EIA-422-A specification. With a data rate of 1 Mbps and a high-quality cable, it is possible to reach cable lengths of up to approximately 400 m.

Malfunctions in the RS-232 connections are frequently caused by ground loops. If both end devices establish a ground connection via RS-232 but do not share the same ground potential in their power supply circuits, then compensation currents may result. This is particularly noticeable with long cables.

These compensation currents, which are also present at the ground point of the RS-232 connection, may significantly degrade signal quality and effectively stop the data flow. In challenging environments, electrically-isolated connections (via external converters) or differential systems (RS-422/485 port) are strongly recommended.

13. Internal devices

13.1. Chipset

The DLoG ITC 7 computer is equipped with a chipset which controls the communication between all function modules.

The chipset converts the signals it receives from the CPU into memory access, hard drive access and other similar actions. Likewise, it transmits requests from peripheral devices to the CPU. Input devices such as the mouse or keyboard also communicate with the system via this chipset.

Resources

The chipset does not require any resources for its core functions – unlike the internal peripheral units, which are also described in this manual.

13.1.1. Installing chipset drivers under MS-DOS

No drivers are required for MS-DOS operation.

13.1.2. Installing chipset drivers under MS Windows XP

Install the chipset drivers **before** all other drivers, otherwise the system will not function properly!

The chipset drivers to be used can by default be found on the CompactFlash or hard drive under **Util / chipset /** <verNR>. In addition you will find the DLoG drivers on the included driver CD.

Proceed as follows to install the chipset driver:

1. Open the corresponding folder and run Setup.exe.

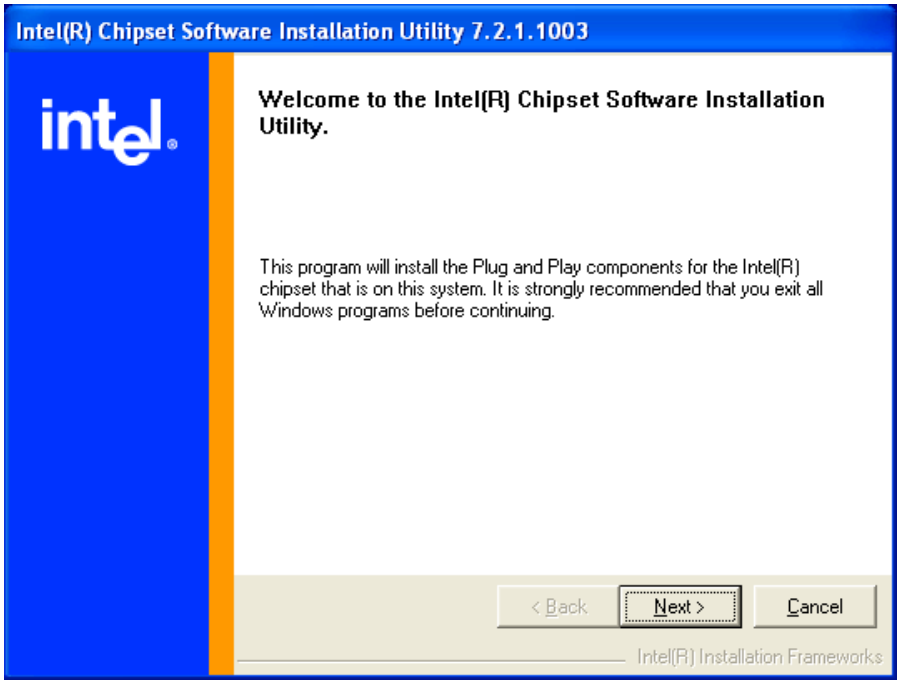


Figure 13.1: Welcome screen for chipset driver installation

2. Click Next.
3. In the following window click Yes.
4. Click Next again.
5. Then restart your computer.

13.2. VGA adapter

The DLoG ITC 7 is equipped with a VGA-compatible adapter. This adapter controls the integrated display.

The VGA adapter generates all the control signals required for the integrated displays.

The VGA adapter is a Plug and Play component for the PCI bus. All resource allocation and management is therefore performed by the BIOS.

13.2.1. VGA driver installation under MS-DOS

No drivers are required for MS-DOS operation.

13.2.2. VGA driver installation under MS Windows XP

The graphic card driver to be used can be found by default on the Compact Flash or hard drive under Util / vga / <verNR>. In addition you will find the DLoG drivers on the included driver CD.

Proceed as follows to install the VGA driver:

1. Open the corresponding folder and run Setup.exe.

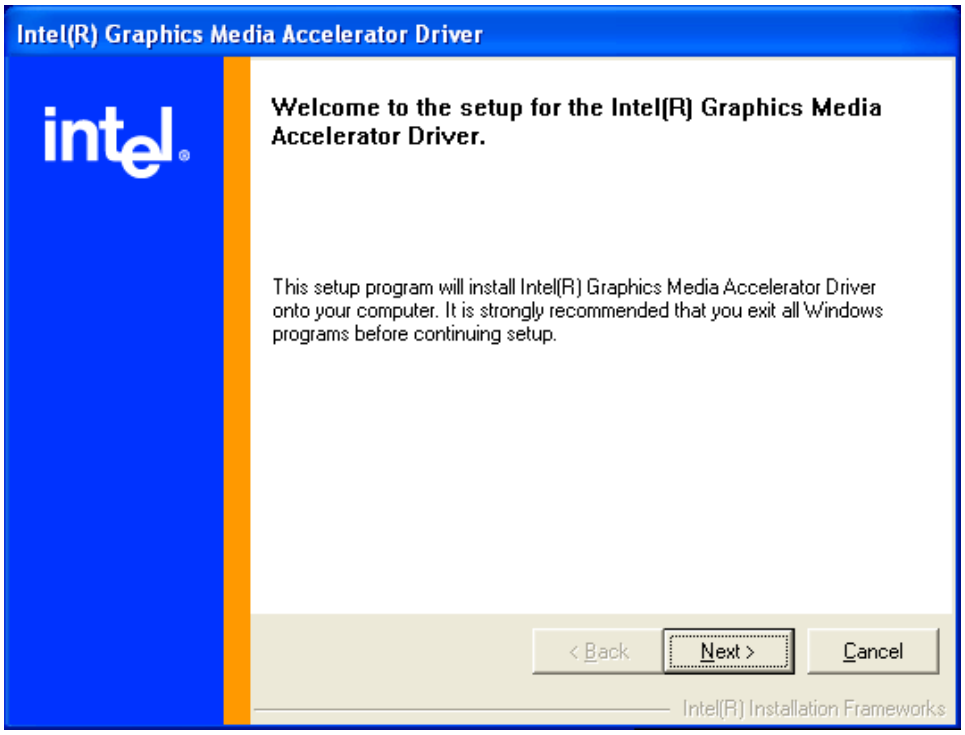


Figure 13.2: Welcome screen for the VGA driver installation

2. Click Next.
3. In the following window click Yes.
4. Now restart your computer.

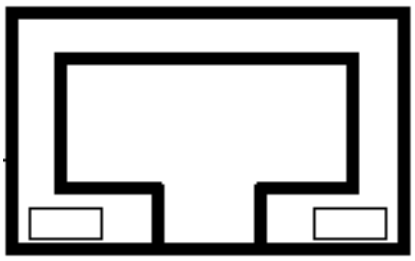
13.3. Network adapter (10/100)

The DLoG ITC 7 is equipped with a 10/100 Mbit/s network adapter. This adapter is available on the back of the device and features an RJ45 portThe network controller undertakes the entire task of connecting the hardware to the network.

The RJ45 connection port features two integrated status LEDs. They display the following messages:

Left LED (green)

LED off: not connected, no activity
LED on: connected, no activity
LED flashes: connected, activity



RJ45 network port

Right LED (orange):

LED off: 10 Mbit/s network

LED on: 100 Mbit/s network

Figure 13.3: RJ45 network port

Resources

The network adapter is a true Plug and Play component. All resource allocation and management is therefore performed by the BIOS.

13.3.1. Problems with data transmission via LAN/Ethernet

If problems occur during data transmission over LAN/Ethernet (e.g. data is lost or not detected), the cause of these problems may be a cable which is too long.

Depending on the cable layout and interference from the environment, it may be impossible to use the cable length of 100 m given in the specification (IEEE802.3 standard).

The solution here is the use of a shorter cable.

13.3.2. Network driver installation under MS-DOS

Follow the instructions provided in the ReadMe file on the master installation CD.

13.3.3. Network driver installation under MS Windows XP

The network drivers to be used can be found by default on the CompactFlash or hard drive under Util / Lan / <verNR>. In addition you will find the DLoG drivers on the included driver CD.

Proceed as follows to install the network drivers:

1. Open the corresponding folder and run Setup.exe.

Figure 13.4: Network driver installation license agreement

2. Read the Software License Agreement carefully.
3. To continue the driver installation, you must accept the agreement.

4. Then click Next.
5. Click Next again:

Figure 13.5: Start screen for network driver installation

6. Now click Install Drivers.
7. After the installation click Exit.
8. Next, the computer needs to be restarted:

13.4. Onboard sound adapter

The DLoG ITC 7 is equipped with an onboard sound adapter. Normally this adapter is **not** directed to the outside.

The onboard sound adapter is a true Plug and Play component. All resource allocation and management is therefore performed by the BIOS.

13.4.1. Installation of the onboard sound adapter drivers (Windows XP)

The sound card drivers to be used can be found by default on the CompactFlash or hard drive under **Util / Sound / <verNR>**. In addition you will find the DLoG drivers on the included driver CD.

Proceed as follows to install the onboard sound adapter drivers:

1. Open the corresponding folder and run **Setup.exe**.

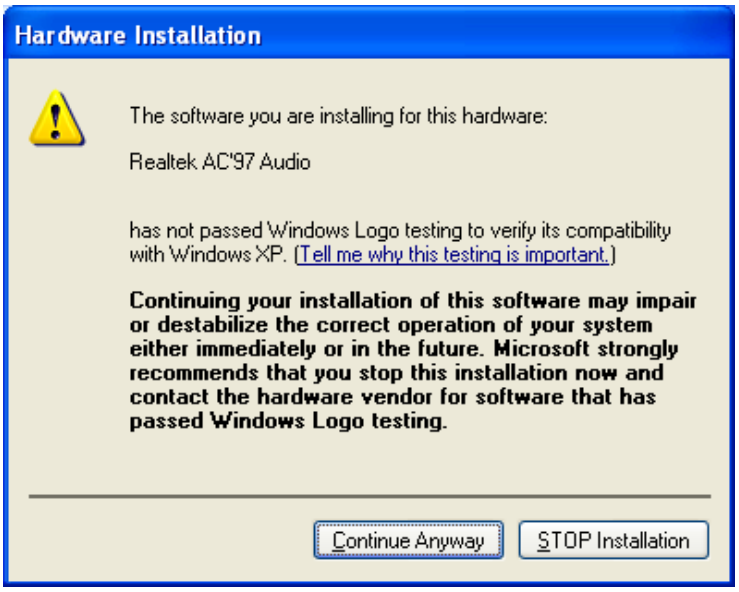


Figure 13.6: Welcome screen for the onboard sound adapter drivers

2. In the following window click **Continue Anyway**.
3. Now restart your computer.

14. Common mistakes in usage

14.1. Power supply

- Use only the AC power supply unit provided to connect the DLoG ITC 7 to the AC power supply network.

14.2. Powering up/down

- Please note that the function of the DLoG ITC 7's POWER switch varies depending on how the device is configured.
- Only disconnect the computer from the power supply after the computer has been properly shut down and switched off. Otherwise file errors may occur on the storage device (in operating systems that have no activated write protection filter).

14.3. Cable cover

- The supplied cable cover for the external ports must be installed prior to using the DLoG ITC 7.

14.4. Mounting

- Only use suitable mounting brackets and screws permitted by DLoG.
- Ensure that ball-and-socket bases and fastening arms are securely attached.
- Follow the instructions carefully when attaching all outgoing cables to the strain relief rail.
- The service lid may not be used as a handle to turn, hold, or carry the terminal.
- All fastening brackets and mounting parts supplied by DLoG are only intended for use in the mounting of terminals and peripheral devices and may not be used for other purposes n.
- However, changing conditions during installation may result in operating states where it may be necessary to optimize the mounting process.
- When mounting peripheral devices, follow the manufacturer's instructions. This is particularly important when welding or drilling supporting parts.
- To avoid any accidents, make sure your field of vision is not restricted in any way when mounting peripheral devices. Observe all accident prevention regulations.

14.5. Using the touch screen

The DLoG ITC 7 devices are available with the option of a resistive touch screen. Recommended operation of the resistive touch screen:

- Clean, dry fingers
- Clean, dry, soft gloves
- Suitable touch screen pencils (plastic or wood, rounded tip, maximum 4 H hardness)

Caution: Property damage	Inappropriate operation of the screen, for example by using sharp objects such as screwdrivers, will irreparably damage the resistive touch screen.

Resistive touch screens may NOT be operated with:

- Ball point pens, pencils, or other inappropriate writing implements
- Unsuitable touch-screen pencils (harder than 4 H)
- Hand tools of any kind (such as a screwdriver)
- Sharp objects (knives, scalpels, etc.) that could damage the touch surface.

14.6. Use/storage in extreme temperatures

Please note the maximum operating and storage temperatures of the DLoG ITC 7 (see *Technical Data*).

15. Troubleshooting

15.1. COM1 / COM2 data transmission

To avoid transmission problems in serial transmission, DLoG GmbH always recommends transmission with hardware handshake.

If problems arise when transmitting data via a serial interface COM1 or COM2 (e.g. data is lost or is not detected), please follow the steps described here.

Please note the different procedures for MS-Windows and MS-DOS operating systems!

Step 1: Change power saver BIOS settings

1. In BIOS setup, open the menu **Advanced | CPU Configuration**.
2. Go to the setting **C2 State Support**.
   Here, **Enabled** is set by default.
3. Change this setting to **Disabled**.
   The setup line **C3 State Support** is automatically also set to **Disabled**.
4. Save that BIOS setting and leave the BIOS setup.

This BIOS setting applies to all COM ports.

Technical background: The changed setting affects the computer's power saving mechanism. If the power saving mechanism **C2 State Support** is set to **Disabled**, no SMIs will be generated when switching processor states between C1=>C2=>C2 and back to C1, which may lead to "lost" bytes on the RS232 interface. The setting **C2 State Support** is also called **Stop-Clock State**; the **C3 State Support** is the so-called **Sleep State**.

Step 2 for computers with MS-Windows: Activate FIFO

If step 1 does not achieve a satisfactory solution to the transmission problem, please change the following setting in the Windows system.

1. Open the menu **Start | Control Panel | System | Hardware | Device Manager | Connections** (COM1, COM2, etc.).
2. Use the right mouse button to open the popup menu and activate **Properties**.
3. Go to **Connection settings | Advanced**.
4. Set the **Receive buffer** and the **Transmit buffer** to **Low** (1).
5. Confirm this setting with **OK**.

This Windows setting must be carried out separately for each COM port (unlike the BIOS setup setting).

Technical background: Depending on the application and settings (XON/XOFF, baud rate, etc.) it is helpful in case of transmission problems to activate FIFO and to set the receive buffer or the transmit buffer to **Low** (1). This causes the buffer to be emptied as early as possible, so that more time remains if other IRQs require time.

Step 2 for computers with MS-DOS: BIOS setup setting USB Legacy Support

If step 1 does not achieve a satisfactory solution to the transmission problem, please change the following additional setting in the BIOS setup.

1. In BIOS setup, open the menu Advanced | USB Configuration.
2. Go to the setting USB Legacy Support.
   Here, Enabled is set by default.
3. Change this setting to Disabled.
4. Save this setting and leave the BIOS setup.

Warning: When the setting USB Legacy Support: Disabled is selected, a USB keyboard and/or a USB mouse can no longer be used in the following situations:

- in the "Safe mode" of the computer
- when using a Windows start menu (e.g. selecting which operating system should be started)
- when starting the computer in MS-DOS mode (does not apply to the MS-DOS command window in Microsoft Windows)
- when a Windows "blue screen" error message appears with the request to hit a key
- when ScanDisk requires input or other messages occur while the PC is booting

Fix: Use PS/2 devices instead!

15.2. Data transmission via LAN / Ethernet

If problems occur during data transmission over LAN/Ethernet (e.g. data is lost or not detected), the cause of these problems may be a cable which is too long.

Depending on the cable layout and interference from the environment, it may be impossible to use the cable length of 100 m given in the specification (IEEE802.3 standard).

The solution here is the use of a shorter cable.

16. Maintenance

16.1. Cleaning the housing

The housing of the DLoG ITC 7 is best cleaned with a damp cloth.
Do not use compressed air, a high-pressure cleaner or vacuum cleaner, as this can damage the surface.
Using a high-pressure cleaner poses the additional risk of water entering the device and damaging the electronics or display.

16.2. Touch screen cleaning

Clean the resistive touch screen with a clean, damp, and nonscouring towel and a dishwashing detergent.
It is recommended to apply the dishwashing detergent onto the towel rather than directly onto the surface of the touch screen.
Do not use cleaning agents that contain ammonia or sulfur!
Do not use scouring substances, as these could scratch the touch screen.

17. Disposal

The DLoG GmbH general terms and conditions set out the obligations for disposal in accordance with official electronics regulations.

18. Return packing slip

Return packing slip (please fill in once per return shipment):

Company	
Street	
Zip code, town	
Contact	
Phone number	

Type(s) of unit(s) returned:

Serial number(s) of the unit(s) returned:

[ ] The units have not been returned, as they are currently being used. However, the following parts are missing:

[ ] Unit was already damaged on delivery (please enclose a copy of the delivery note)

[ ] Delivery was incomplete

Missing parts:

[ ] The following error occurs when operating the unit:

[ ] Separate error report is enclosed

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