DLoG MTC 6

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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Konformitätserklärung/ Declaration of Conformity

... gemäß den Bestimmungen der EG-Richtlinie über elektromagnetische Verträglichkeit 2004/108/EG und der EG-Richtlinie über Niederspannung 2006/95/EG, sowie der RTTE EG-Richtlinie 1999/5/EG, falls Datenübertragungsgeräte, die im 2,4GHz / 5GHz Band arbeiten, von DLoG installiert wurden.

... in accordance with the EU-Directive of Electromagnetic-Compatibility 2004/108/EC of the council and the EU-Directive for Low Voltage 2006/95/EC of the council, as well as the EU-Directive for radio equipment 1999/5/EC in case of data transmission equipment operating in the 2,4GHz / 5GHz band is assembled by DLoG.

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	**MTC 6**

... 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 + A1:2007	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
EN 300 328 V1.7.1	Data transmission equipment operating in the 2,4GHz ISM band and using wide band modulation techniques
EN 301 489-17 V1.3.2	Specific conditions for 2,4GHz wideband transmission systems and 5GHz high performance RLAN equipment
EN 301 489-1 V1.8.1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

Sicherheit (Safety):

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

Germering, 16.3.2010
Ort, Datum/Place, Date

Unterschrift/Signature

DofC

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1. About this manual

This manual has been designed to make using the DLoG MTC 6 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 MTC 6.

DLoG GmbH will not assume responsibility for any damage caused by the improper use of the DLoG MTC 6 and/or in disregard of the instructions in this manual.

WARNING

Before transporting, assembling, and starting the DLoG MTC 6, please read this manual carefully and follow all the safety guidelines listed.

Follow all *Basic safety guidelines* and the safety guidelines in the individual chapters.

Within this manual, DLoG GmbH strives to provide all the information required for using your DLoG MTC 6. 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. 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:

- Power pack
- Cable

Instructions are numbered, for example:

1. Activate the DLoG Config icon.
2. Press <A>.

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**.

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

2.1. Always install, operate, and maintain the unit properly

The DLoG MTC 6 was designed and built according to modern technology and accepted safety regulations. However, the operation of the DLoG MTC 6 can endanger personnel or third parties and cause damage to the device and other material assets when for example the device is

- installed incorrectly or improperly.
- operated by untrained or uninstructed personnel.
- improperly operated and maintained.
- not used as intended.

The operator commitments in regards to safety (accident prevention regulations, work protection) are to be followed.

2.2. Safety

In order to prevent injury and damage, please read and observe the following safety guidelines prior to assembly and commissioning. The manufacturer assumes no liability for any and all damages that can be attributed to non-compliance with these guidelines.

2.3. Intended usage

The DLoG MTC 6 is a multifunction terminal for stationary and mobile use in commercial applications (for example logistics, storage, manufacturing). A different or extraordinary usage is not permitted.

For resulting damage the user/operator of the DLoG MTC 6 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.

2.4. Initial operation of the device

Area of application: not for use in life-support systems or critical safety systems

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.

The device cannot be used in combination with safety functions for machines and equipment which have to conform to the requirements of EN 954-1.

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.

Choice of location – observe the protection class

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

Supply of fresh air – avoid overheating the unit

The DLoG MTC 6 is based on a passive cooling concept. As a result, the waste heat which is produced inside the device is emitted over 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 MTC 6 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.

Install an easily accessible disconnecting device

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.

Laying power supply cables – observe the local installation regulations

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

Ensure that no persons are injured in case the mounting bracket breaks

The DLoG MTC 6/10 may in no case be installed in such a way that persons can be injured during a breaking of the mounting bracket (e.g. fatigue break).

If the device is mounted in a place where people can be injured if the bracket should break, appropriate safety measures must be put in place (e.g. install a security cable in addition to the device bracket).

Radio performance: Do not exceed the maximum permissible transmitting power

Do not exceed the maximum permissible transmitting power which is specified by each separate country. DLoG MTC 6 users must verify this themselves.

2.5. Power supply

Operation in an emergency: immediately disconnected the device from the power supply

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.

Protection of the power supplies

If, after replacement, the fuse fed by the internal power supply blows again, the device must be sent in for servicing immediately.

Danger of electrocution when cleaning/servicing the device

In order to avoid electrocution always disconnect the DLoG MTC 6 from the power supply before cleaning or servicing the device.

When charging the vehicle battery please note

While charging the vehicle battery the DLoG MTC 6 has to be either disconnected from the battery or it has to be determined that the maximum allowed input voltage of the DLoG MTC 6 is not exceeded.

Do not switch on devices with damaged cables or plugs

Do not use the DLoG MTC 6 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.

2.6. External 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 MTC 6 must be disconnected from the power supply! Otherwise, this could seriously damage both the DLoG MTC 6 and 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 MTC 6.
If this is not possible, please ensure that the DLoG MTC 6 is adequately protected from power leakage caused by an external device.

2.7. 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 MTC 6 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.

2.8. CE Marking

Remark for CE class A products: Class A products may be used in residential environment but with the condition that the end user is informed about the possible consequence with a warning information in the user manual:

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.

2.9. RTTE Directive 1999/5/EC

With regard to the RTTE Directive 1999/5/EC the statements in the declaration of conformity for the DLoG MTC 6 (see page 2 of this handbook) apply.

Česky [Czech]:	Toto zařízení je v souladu se základními požadavky a ostatními odpovídajícími ustanoveními Směrnice 1999/5/EC.
Dansk [Danish]:	Dette udstyr er i overensstemmelse med de væsentlige krav og andre relevante bestemmelser i Direktiv 1999/5/EF.
Deutsch [German]:	Dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 1999/5/EU.
Eesti [Estonian]:	See seade vastab direktiivi 1999/5/EÜ olulistele nõuetele ja teistele asjakohastele sätetele.
English:	This equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]:	Este equipo cumple con los requisitos esenciales asi como con otras disposiciones de la Directiva 1999/5/CE.
Ελληνική [Greek]:	Αυτός ο εξοπλισμός είναι σε συμμόρφωση με τις ουσιώδεις απαιτήσεις και άλλες σχετικές διατάξεις της Οδηγίας 1999/5/EC.
Français [French]:	Cet appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la Directive 1999/5/EC.
Íslenska [Icelandic]:	Þetta tæki er samkvæmt grunnkröfum og öðrum viðeigandi ákvæðum Tilskipunar 1999/5/EC.
Italiano [Italian]:	Questo apparato é conforme ai requisiti essenziali ed agli altri principi sanciti dalla Direttiva 1999/5/CE.
Latviski [Latvian]:	Šī iekārta atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]:	Šis įrenginys tenkina 1999/5/EB Direktyvos esminius reikalavimus ir kitas šios direktyvos nuostatas.
Nederlands [Dutch]:	Dit apparaat voldoet aan de essentiele eisen en andere van toepassing zijnde bepalingen van de Richtlijn 1999/5/EC.

Malti [Maltese]:	Dan l-apparat huwa konformi mal-ħtiġiet essenzjali u l-provedimenti l-oħra rilevanti tad-Direttiva 1999/5/EC.
Magyar [Hungarian]:	Ez a készülék teljesíti az alapvető követelményeket és más 1999/5/EK irányelvben meghatározott vonatkozó rendelkezéseket.
Norsk Norwegian]:	Dette utstyret er i samsvar med de grunnleggende krav og andre relevante bestemmelser i EU-direktiv 1999/5/EF.
Polski [Polish]:	Urządzenie jest zgodne z ogólnymi wymaganiami oraz szczególnymi warunkami określonymi Dyrektywą UE: 1999/5/EC.
Português [Portuguese]:	Este equipamento está em conformidade com os requisitos essenciais e outras provisões relevantes da Directiva 1999/5/EC.
Slovensko [Slovenian]:	Ta naprava je skladna z bistvenimi zahtevami in ostalimi relevantnimi pogoji Direktive 1999/5/EC.
Slovensky [Slovak]:	Toto zariadenie je v zhode so základnými požiadavkami a inými príslušnými nariadeniami direktív: 1999/5/EC.
Suomi [Finnish]:	Tämä laite täyttää direktiivin 1999/5/EY olennaiset vaatimukset ja on siinä asetettujen muiden laitetta koskevien määräysten mukainen.
Svenska [Swedish]:	Denna utrustning är i överensstämmelse med de väsentliga kraven och andra relevanta bestämmelser i Direktiv 1999/5/EC.

2.9.1. Special rule/restriction

For the DLoG MTC 6 with WLAN 802.11a/b/g/n, the following restrictions apply:

- WLAN 5 GHz band: 5.15 GHz – 5.35 GHz may only be used indoors.
- WLAN operation outdoors in France is only permitted in the 2454 – 2483.5 MHz range at max. 10 mW EIRP.

2.10. FCC user information

2.10.1. Declaration of the Federal Communications Commission

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and meets all requirements of the Canadian Interference-Causing Equipment Standard ICES-003 for digital apparatus. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/T.V. technician for help.

DLoG GmbH is not responsible for any radio television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by DLoG GmbH. The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user. The use of shielded I/O cables is required when connecting this equipment to any and all optional peripheral or host devices. Failure to do so may violate FCC and ICES rules.

FCC warning: Any change or modification which is not expressly approved in the corresponding pages can lead to the withdrawal of the operating license for this device.

In order to comply with the FCC requirements regarding radio frequency exposure from vehicle-mounted transmission devices the antenna has to be kept at least 20 cm away from people.

2.10.2. Transmission of radio frequencies

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 MTC 6 in airplanes or hospitals without prior authorization. Here use of the DLoG MTC 6 is only permitted if authorization is obtained.

Caution with pacemakers

Do not use the DLoG MTC 6 near pacemakers.

The DLoG MTC 6 can affect the function of medically implanted devices such as pacemakers and create interference. Do not place the DLoG MTC 6 near such devices.

Keep a minimum distance of 20 cm between such a device and the DLoG MTC 6 in order to reduce the risk of interference.

If you have reason to assume that interference has occurred, then turn the DLoG MTC 6 off and consult a heart expert.

3. Device description and Technical specifications

3.1. General

Thank you for choosing the DLoG MTC 6.

The DLoG MTC 6 is a multi-function industry computer designed for stationary and mobile use.

Thanks to its rugged design (aluminum housing) the device provides effective protection against mechanical, electrical and chemical influences and extreme ambient temperatures.

Figure 3.1: DLoG MTC 6 device

3.2. Device models

This manual applies to the following models of the DLoG MTC 6:

- for the DLoG MTC 6/10 with 10.4“ display
- and for the DLoG MTC 6/12 with 12.1“ display

Any differences between the devices will be clearly noted in this manual.

3.3. Abbreviations used for devices and accessories

Please note that to save space on the DLoG MTC 6 and supplied accessories, the following abbreviations have been used:

Abbreviation	Explanation
+	DC+
-	DC-
Ign	Ignition

3.4. Device/type identification

3.4.1. Device type plate

The device type plate on the DLoG MTC 6 contains the following information:

DLoG MTC 6/10 or DLoG MTC 6/12	Describes the device DLoG MTC 6 with a 10” or 12” display
SVGA or XGA	Display resolution
DC	Type of power supply, the following number indicate the exact type of power supply with input voltage

e.g. 24/48V with 2.5 A / 1.2 A	Input voltage of the DC power supply with nominal current
1.1 GHz	Clock rate of the CPU
S/N	12 digit serial number composed of: • DLoG specific device code (41 stands for the DLoG MTC 6 model range) • Week of manufacture • Year of manufacture • Six digits for internal DLoG identification

Example of a device type plate:

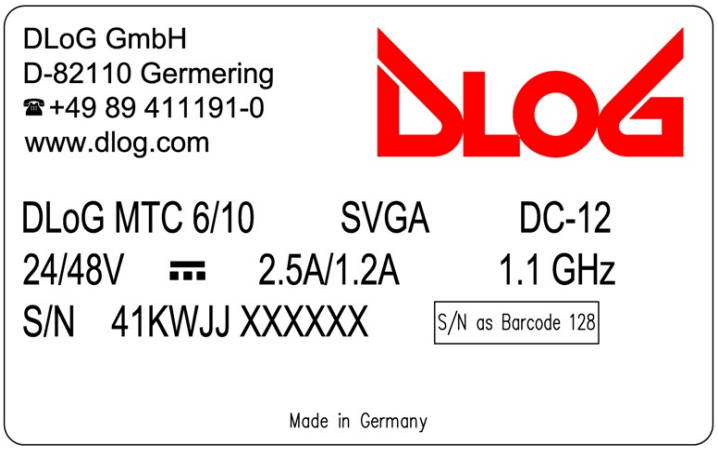


Figure 3.2: Example of a device type plate

3.5. Technical specifications

3.5.1. Mechanical

Housing	Rugged aluminum-cast housing with integrated heat sink Protection class IP 65, IP 66 und IP 67 ESD safe Dimensions/Weight: 10.4“ : 285 x 230 x 79.5 mm, approx. 2.8 kg 12.1“ : 325 x 258.5 x 79.5 mm, approx. 3.5 kg
Display	10.4“ SVGA, 400 cd/m^2, resistive 5-wire touch screen, with brightness adjustment 12.1” XGA , 500 cd/m^2, resistive 5-wire touch screen, with brightness adjustment
Bottom	Cable cover (splash guard)
Top	Antenna for WLAN

3.5.2. Motherboard

CPU Chipset Cache	CPU and Chipset combinations: Intel® Atom™ processor Z510 1.1 GHz, 400 MHz FSB and 400 MHz memory bus speed, 512 k L2 cache, 45 nm Chipset Intel® SCH US15W
RAM	1 GB RAM DDR2-Technology
BIOS	AMIBIOS8® - Flash BIOS with ACPI, PnP Programmable in the system BIOS POST self test
Real-time clock	Real-time clock with a power reserve of up to 5 years
Mass storage	2 GB Flash media, based on SLC technology (single level cell). Advantages: Longer retention time for the data, longer lifetime (by a factor of 1) and a broader temperature range in comparison with MLC technology (multi-level cell).
Audio	1 combined speaker output and microphone input
DLoG Voice Kit (push to talk)	Microphone/speaker over handset, optional

3.5.3. Operating system software

Software compatibility	MS® Windows® XP Embedded MS® Windows® XP Professional

3.5.4. Serial port

Serial port	COM1 Max. 115.200 Baud (16550A compatible, 16 byte FIFO), supports RS-232 on an external 9pin D-Sub connection ESD level 4 protected (acc. to EN 61000-4-2) COM1 optionally 5 V

3.5.5. USB-connection, Service USB

USB-connection	1 USB 2.0 service (protected under antenna cap) 2 x USB 2.0 host Properties: USB 2.0 HiSpeed Fused at 0.5 A per channel Fused for ESD level 4 (compliant with EN 61000-4-2) For example for mouse, keyboard, USB stick

3.5.6. LCD interface

VGA controller	Intel® Graphics Media Accelerator 500 (Intel® GMA 500), up to 256 MByte frame buffer supporting Direct X 9.0E and Open GL 2.0 Shared Memory architecture Resolution up to 1366 x 768 pixels Up to 24 bit color depth, depending on which LCD is used Multiple LCDs are supported Drivers available for: MS® Windows® XP Professional, MS® Windows® XP Embedded

3.5.7. Touch screen interface

Analog touch controller	12bit touch controller for 4/5/8-wire resistive touch screens with RS232 interface. Drivers available for: MS® Windows® XP Professional, MS® Windows® XP Embedded

3.5.8. Network interface

Network controller	Ethernet Realtek RTL8111 10/100/1000 MB/s Drivers available for: MS-DOS 6.2x, MS® Windows® XP Professional, MS® Windows® XP Embedded and Linux
Network connection	RJ45 plug-in connector Integrated transmitter Two integrated status LEDs

3.5.9. Power supply

The device model is displayed on the device type plate!

DC power pack 12/24 VDC 30 W internal Type DC-11	12/24 VDC nominal Voltage range: 9 to 36 VDC Voltage drops of up to 5 V and up to 20 seconds can be bridged Bridging of power failures of 5 ms at 12 VDC Start voltage at least 9 VDC Galvanically isolated Maximum output: 30 W Withstands bursts up to 2 kV Nominal current of 4.2 / 1.0 A Connection to SELV circuit*) only
DC power pack 24/48 VDC 30 W internal Type DC-12	24/48 VDC nominal Voltage range: 18 to 60 VDC Voltage drops of up to 5 V and up to 20 seconds can be bridged Bridging of power failures of 5 ms Galvanically isolated Maximum output: 30 W Withstands bursts up to 2 kV Nominal current of 2.5 A / 1.2 A Connection to SELV circuit*) only
Power consumption	DLoG MTC 6/10: typically 20 W Standby typically 1 W (DLoG MTC 6/10 with DC power pack in standby mode)

*) The SELV circuit is a secondary circuit that is designed and protected so that its voltages will not exceed a safe value both when operating correctly or if a single error occurs.

3.5.10. Power supply fuses

The symbol for the fuse is FA. You will find the exact position on the sticker located on the connection plate.

Power supply	Fuse type	Examples
DC-11	5 x 20 mm T 10 A H / 250 V	Bussman S505-10A Wickmann 181-10A Littelfuse 215 10 Siba 70 007 65 10A Elu 179200 10A or similar devices produced by other manufacturers
DC-12	5 x 20 mm T 4 A H / 250 V	Bussman S505-4A Wickmann 181-4A Littelfuse 215 04 Siba 70 007 65 4A Elu 179200 4A or similar devices produced by other manufacturers

3.5.11. Test marks

See page 2 of this manual: *Declaration of Confirmity DLoG MTC* 6.

3.5.12. Ambient conditions

Operating temperature	-30° to +50° C In accordance with EN 60068-2-1/2
Storage temperature	-30° to +65 °C In accordance with EN 60068-2-1/2
Relative humidity	10% to 90% @ 40°C non-condensating In accordance with EN 60068-2-3
Mechanical vibration and shock-resistance	Class 5M3 according to EN 60721-3-5: 1998 (Land vehicles), 5 hrs. noise 3.6 g effektive and 36 vibrations with 30 g peaks Or: US Highway Truck according to MIL-STD 810 G: 2000 (Department of Defense), 3 hrs. noise 1 g effektive and 600 vibrations 20 g peaks in operation

3.6. Dimensions DLoG MTC 6/10

Front view

Dimensions without add-ons (in mm):

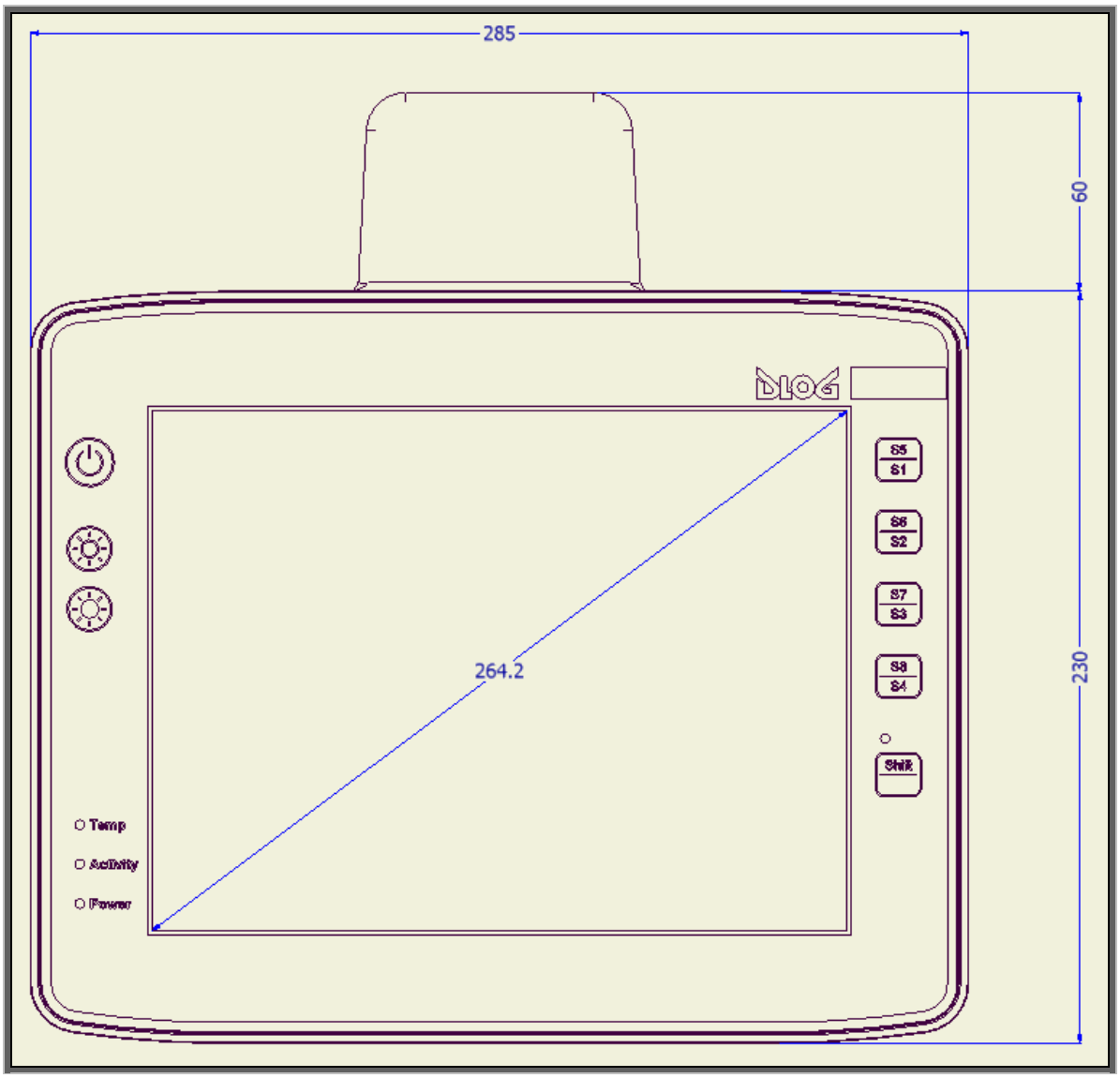


Figure 3.3: Dimensions DLoG MTC 6/10 front view

Side view

Dimensions without add-ons (in mm):

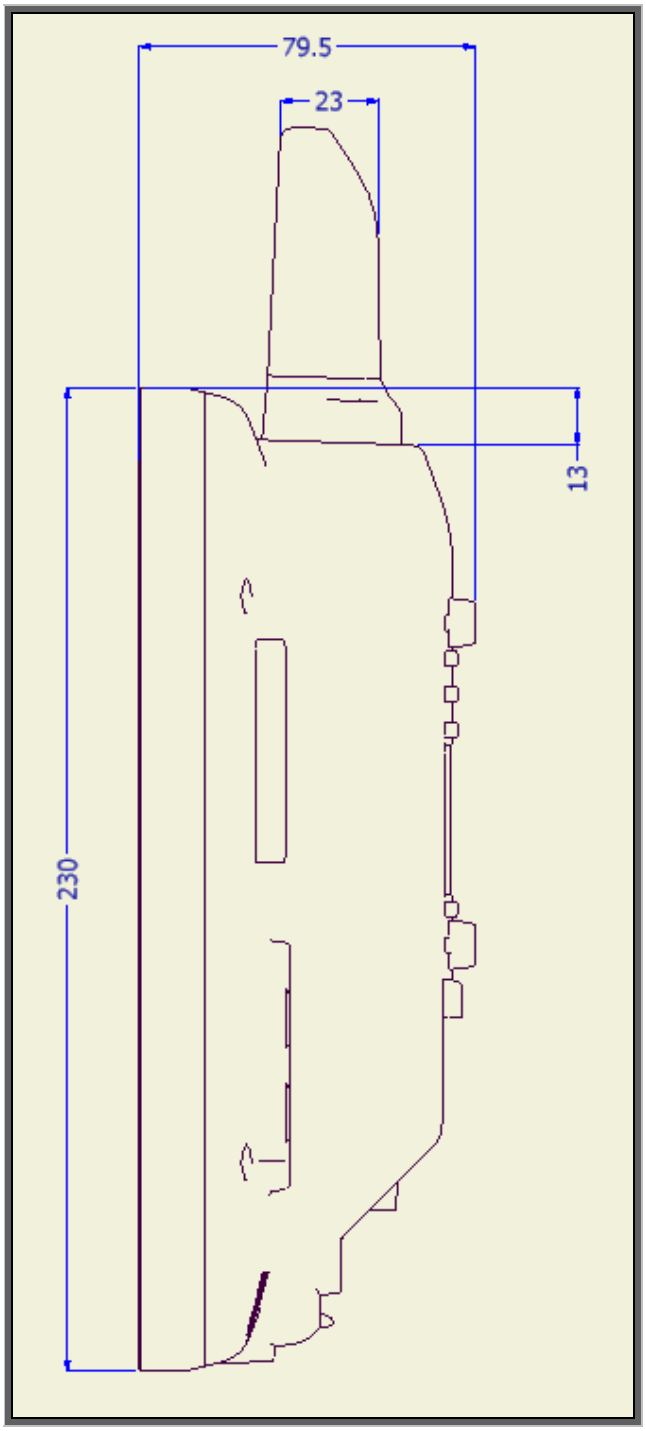


Figure 3.4: Dimensions DLoG MTC 6/10 side view

Top view

Dimensions without add-ons (in mm):

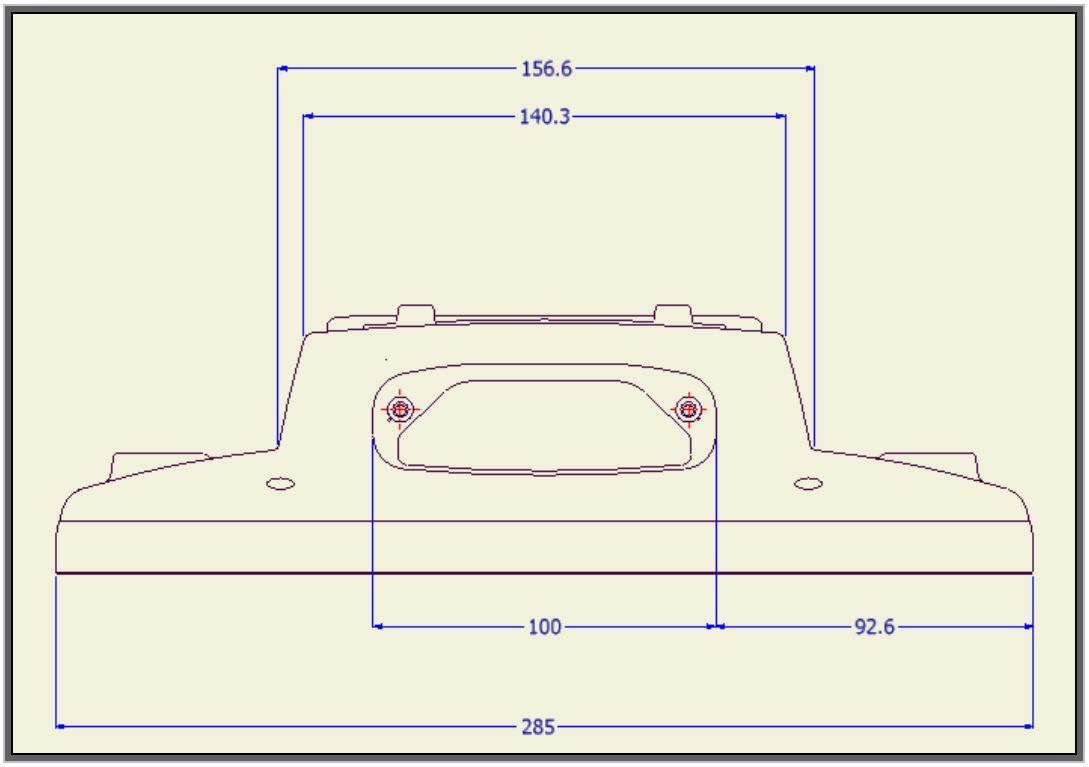


Figure 3.5: Dimensions DLoG MTC 6/10 top view

3.6.1. VESA drill holes

The VESA drill holes on the DLoG MTC 6/10 are visible on this diagram.

Dimensions without add-ons (in mm):

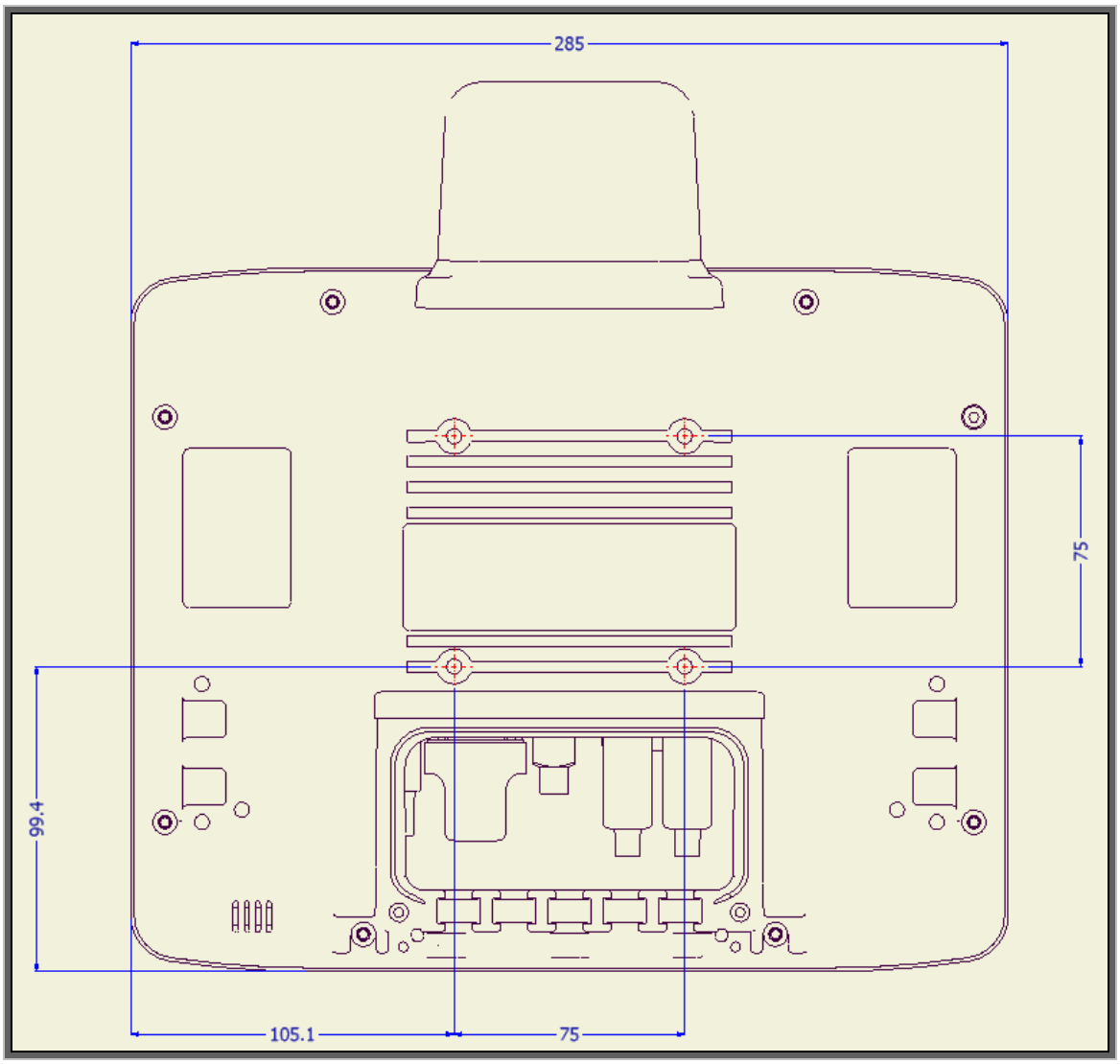


Figure 3.6: Position of the VESA drill holes

4. Unpacking the device

4.1. Scope of delivery

The delivery includes at least the following:

- DLoG MTC 6
- Cable cover
- Optionally ordered assembly set
- Optionally ordered accessories

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.

Caution: Property damage	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

WARNING

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

Configure the DLoG MTC 6 before fastening it to machines or vehicles. Software configuration for the WLAN, shutdown automation, etc. is significantly simpler and more convenient on the desktop.

5.1. DLoG Config: Front keys, automatic switch-off …

The program DLoG Config can be found on your DLoG MTC 6. Use it for settings like the following:

- Configuring the front keys of the DLoG MTC 6
- Setting up the WLAN status display
- Turning the DLoG MTC 6 on and off together with the vehicle ignition (automatic switch-off)

Figure 5.1: DLoG Config Program Menu

You can find detailed information in the user manual for the DLoG Config program.

5.2. WLAN settings

The settings and access data form must be defined for radio networks like WLAN depending on the optional equipment and intended use of the DLoG MTC 6.

WARNING

Please pay attention to all *Basic safety guidelines*, for WLAN especially chapters 2.9 *RTTE Directive 1999/5/EC* and 2.10 *FCC user information.*

5.2.1. Radio performance

WARNING

Do not exceed the maximum permissible transmitting power which is specified by each separate country. DLoG MTC 6 users must verify this themselves.

Please keep in mind the configuration for the transmitting power:

- Wireless card (programmed driver capacity)
- Connecting cables
- Antenna gain

Help table for the correct setting:

Translation between mW and dBm																						
dBm	-1	2	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
mW	1	2	3	4	5	6	8	10	12	15	20	25	30	40	50	60	80	100	125	150	200	250

5.2.2. DLoG antenna solutions for use in Germany

The integrated DLoG antenna solutions are based on the prevailing IEEE 802.11 standard. This standard allows wireless data transfer at rates from 1 Mbps to 54 Mbps using the 2.4 GHz and 5 GHz frequency band (300 Mbps if using IEEE 802.11n).

WARNING

In Germany according to regulations published in the gazette 89/2003 of the RegTP (regulating body for telecommunications and mail), now: “Bundesnetzagentur” - Federal network agency for electricity, gas, telecommunications, post and railway - the maximum permissible transmitting power, EIRP (equivalent isotropically radiated power), in the 2.4 GHz frequency band is set at 20 dBm.

The transmitting power of the integrated DLoG antenna (DLoG 3 dBi) must be set to 50 mW (17 dBm) so that the EIRP limit value is adhered to when using the antenna.

Example configuration of the transmission power using the Summit Client Utility program (you can find more information about this program on the following pages):

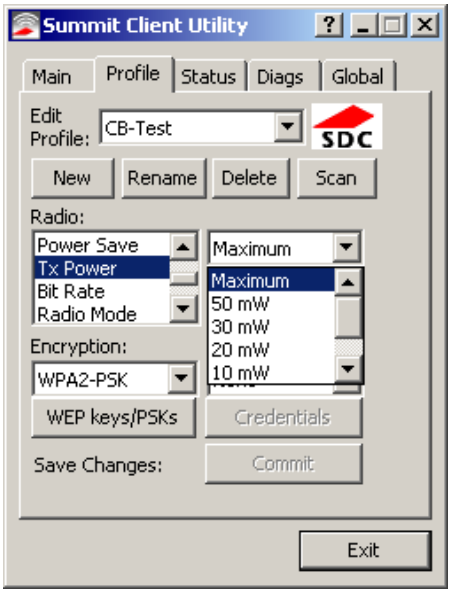


Figure 5.2: Configuring the antenna transmitting power with SCU (example)

5.2.3. Summit Client Utility for WLAN configuration

The Summit Client Utility (called "SCU" below) is used to set up the WLAN configuration for the DLoG MTC 6.

> **WARNING**
>
> WLAN configurations may only be modified by qualified IT technical staff.

Start the SCU with a double press on the SCU icon on the desktop:

Figure 5.3: Summit Client Utility Icon

Alternatively, you can also start the SCU with one of the following procedures:

- From the Start menu: **Start | Programs | Summit | Summit Client Utility**.
- Or from the **Wi-Fi** icon on the Control Panel, which you can reach from **Start | Settings | Control Panel**:

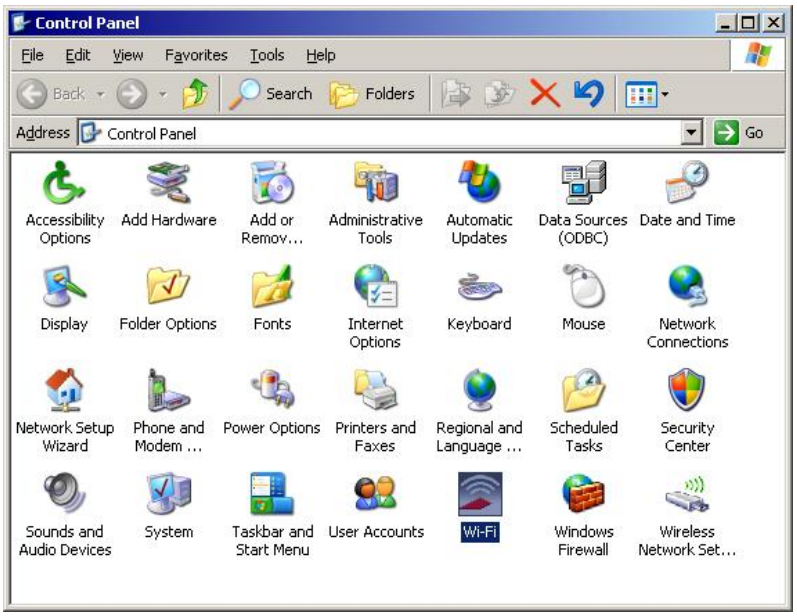


Figure 5.4: Wi-Fi Icon in Control Panel

5.2.3.1. Password SCU

Depending on the configuration, it may be necessary to enter a password.

Figure 5.5: Summit Client Utility menu

1. To do so, click the Admin Login button. An input field appears for the password.

Figure 5.6: Summit Client Utility password input

The standard password is: SUMMIT (must be entered in capital letters!) You can find details about the configuration parameters in the SCU online help.

5.3. Protecting the TFT display from the memory effect

The TFT display of the DLoG MTC 6 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 MTC 6 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.

5.4. Removing the protective film from the display

The front display of the DLoG MTC 6 is protected during transport by a transparent film. This film should remain on the front display during assembly to avoid damage to the front display surface.

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

5.5. Connectors

5.5.1. Overview of external connectors

Figure 5.7: Connectors overview

Detail view (24/48 VDC example):

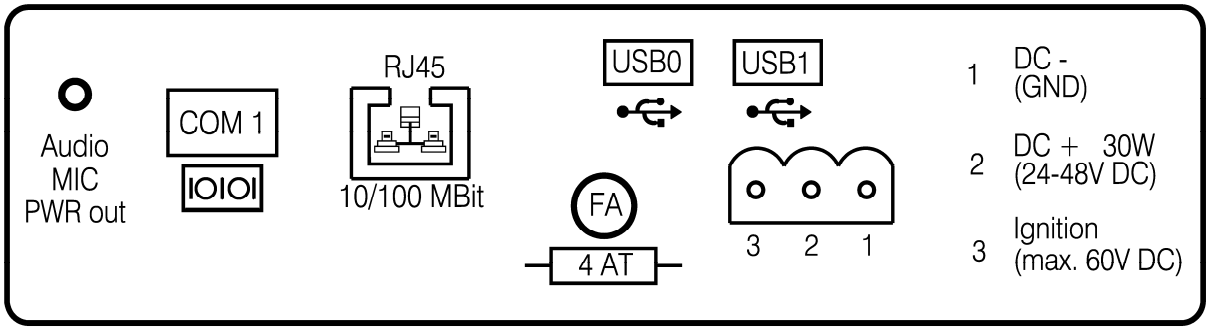


Figure 5.8: External connectors detail view (example 24/48 VDC)

5.5.2. Service USB interface

A service USB interface is arranged under the antenna cap of the DLoG MTC 6.

Caution: Property damage	The service USB interface may only be used for maintenance purposes, e.g. to load software updates. The antenna cap/service USB interface may only remain open for the duration of the service work. It may only be opened and closed by qualified technical personnel. No objects or fluids may be introduced into the DLoG MTC 6 while the antenna cap and the USB interface are open. Only when the antenna cap/service USB interface is properly closed again may operation be resumed; protection class is then ensured again. If the DLoG MTC 6 is operated with the antenna cap/service USB interface open for a longer period of time than required for service tasks, any warranty claim against DLoG GmbH for the unit will be void.

Figure 5.9: Service USB under the antenna cap

5.5.3. DC voltage supply connector

Version: Phoenix Combicon, 3-pin.

External view:

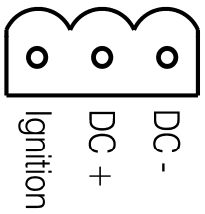


Figure 5.10: Exterior view of the DC power supply connector

Explanation:

Ignition on means that a control signal has to be routed to this connection (e.g., ignition of a vehicle), that matches the supply voltage level and is able to supply at least 1 W to the DLoG MTC 6.

The signal reference is DC-.

5.5.4. DLoG MTC 6 supply cable

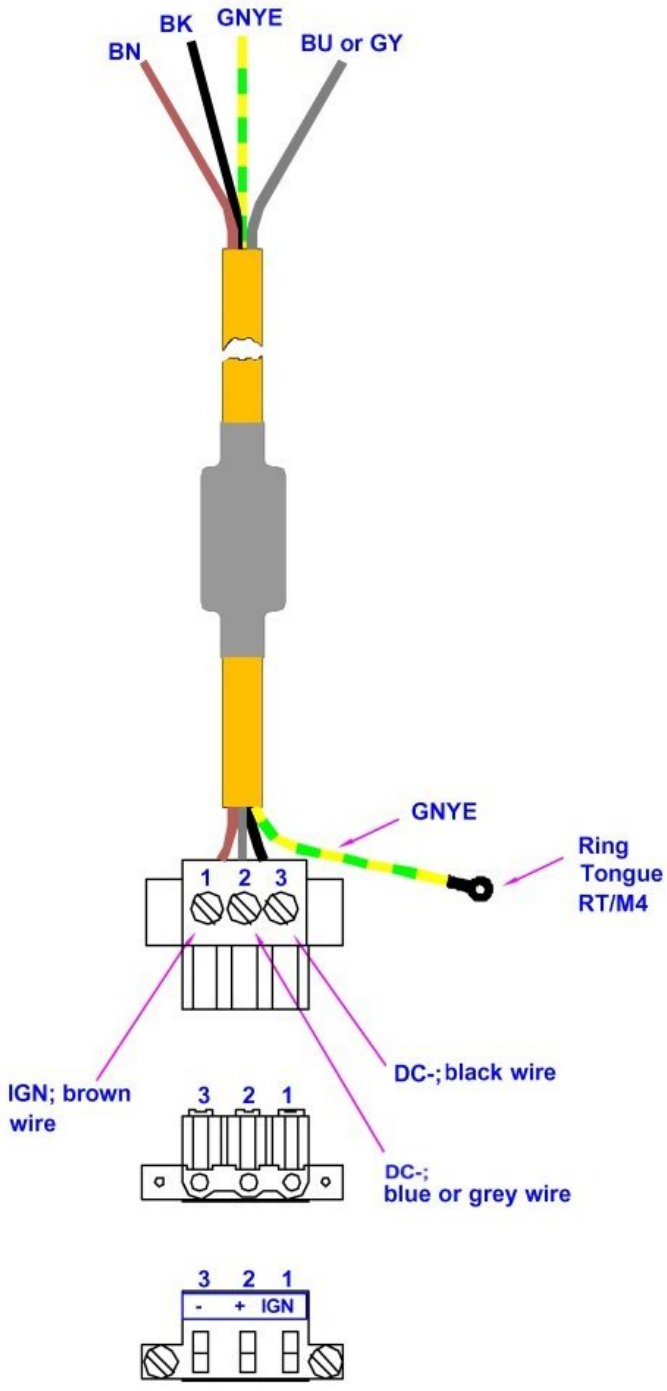


Figure 5.11: DC supply cable

5.6. Connecting external devices

The DLoG MTC 6 must be disconnected from the power supply:

- before external devices (e.g., scanner, keyboard) are connected or disconnected
- and before the DLoG MTC 6 can be connected to a network.

All connections and interfaces on the DLoG MTC 6 are located on the underside of the unit.

Caution: Property damage	Make sure that external peripheral devices with their own power supply are switched on at the same time as the DLoG MTC 6 or after you start the DLoG MTC 6. If this is not possible, please ensure that the DLoG MTC 6 is adequately protected from power leakage caused by an external device. Only power up the DLoG MTC 6 when all devices have been connected and the DLoG MTC 6 has been closed correctly (remember the cable cover!). Otherwise, you may damage the DLoG MTC 6.

5.6.1. Powering down the DLoG MTC 6

Always shut down the DLoG MTC 6 as follows:

1. Power down the device using the ignition input or the <Power>-key.
2. Remove the cable cover.
3. Disconnect the device from the DC supply voltage (pull the plug).

5.7. Powering up the DLoG MTC 6

Only power up the DLoG MTC 6 after connecting all of the devices.

The DLoG MTC 6 is powered up by connecting it to an appropriate power supply and then, depending on the version of the device, either using the <Power>-key or the ignition signal.

You have to hold the <Power>-key down for a short time.

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

Figure 5.12: DLoG MTC 6 <Power>-key

6. Accessories

6.1. Keyboard

On the DLoG MTC 6 any USB keyboard can be connected.

6.1.1. SMALL keyboard

A mountable SMALL keyboard with protection class IP 65(German/English) is available for the DLoG MTC 6.

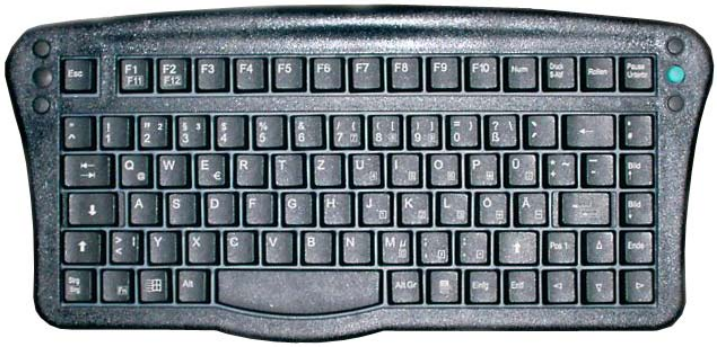


Figure 6.1: SMALL keyboard

6.1.2. 24-key keypad

A 24-key keypad which can be mounted onto the device, with a protection class IP 65 is available for the DLoG MTC 6.

Figure 6.2: 24-key keypad

6.2. Scanner bracket

Scanner brackets are available for the DLoG MTC 6 for current scanners (optional). Scanner brackets can be fastened to the left or right of the unit.

6.3. Mouse

Any USB mouse or any mouse with RS-232 port can be connected to the DLoG MTC 6.

6.4. External CD/DVD-ROM drive

An external CD/DVD-ROM drive is available for the DLoG MTC 6. This is connected via the USB interface.

Caution: Property damage	When connecting an external USB CD/DVD-ROM drive which has its own external power supply the DLoG MTC 6 must be disconnected from the power supply. The CD/DVD-ROM must be powered up **simultaneously** or **after** the DLoG MTC 6 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 CD/DVD-ROM is a proper USB CD/DVD-ROM drive. Only use devices approved by DLoG to ensure the device is fully compatible.

Operation

The CD/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 MTC 6.

Depending on the model, the external drive is powered either via the DLoG MTC 6 connecting cable or via a separate external power supply.

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

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

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

6.5. USB stick

You can connect a USB stick to the DLoG MTC 6 with a USB-A connector.

6.6. USB recovery stick

With the optional DLoG recovery stick, images can be backed up and restored on the DLoG MTC 6 if necessary (backup and recovery). Please consult your DLoG sales representative if necessary.

6.7. Scanners

You can connect scanners to either the USB port or the serial port. If connected to COM1, the scanner can be powered through the port (optional, 5 V).

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

6.8. WLAN card (PCIe MiniCard)

The WLAN card is integrated into the unit by DLoG at the factory (internal PCIe MiniCard slot).

In general, only drivers for WLAN cards approved by DLoG can be integrated into operating system images.

7. Mounting

The DLoG MTC 6 can be mounted in a variety of ways:

- It can be positioned horizontally on a desk or mounted on a steering wheel and vehicle console.
- Wall mounts are also available for mounting the unit on machines and operating panels.
- Roof mounting is also possible, for example under the vehicle roof.

Depending on the vibration resistance and pivoting demands, mounting brackets, clamp foots or RAM mount elements can also be used to attach the device. 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.

7.1. Follow and retain the mounting instructions

Please follow the mounting instructions included with assembly kit when installing your DLoG MTC 6. Please make sure that you retain the instructions.
Pay careful attention to the *Basic safety guidelines* included in the beginning of this manual.

7.2. Mechanical dynamic loading

Since the DLoG MTC 6 is a weighted structure, it is invariable that the unit will be subject to mechanical dynamic effects. Therefore optimizing the mounting can be necessary.

7.3. Cooling through the supply of fresh air

The DLoG MTC 6 employs a passive cooling concept whereby 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 MTC 6 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.

7.4. Power supply

The DLoG MTC 6 is equipped with a galvanically separated, integrated DC power supply.

Power is connected to the underside of the unit using a Phoenix Contact plug. There is no power switch.

Caution: Property damage	The DLoG MTC 6 must only be connected to a SELV circuit.*) Ensure that there is a suitable disconnecting device such as a power switch or circuit breaker in the power supply circuit. Ensure that the disconnecting device isolates all supply voltage lines. The DC+ connecting cable must be protected by a fuse (30 AT max.). The ignition connecting cable must be protected by a fuse of the following type: 5x20 mm T 125 mA L / 250 V, for example, a Wickmann 195-125 mA / 250 V.

*) The SELV circuit is a secondary circuit that is designed and protected so that its voltages will not exceed a safe value both when operating correctly or if a single error occurs.

WARNING

Use the connecting cables supplied by DLoG to connect the DLoG MTC 6 to the power supply.

Make sure that the connecting cables are laid without kinks and are protected.

7.5. Vehicle applications (such as forklifts)

7.5.1. Electrical installation

Pay special attention to the various electrical potentials when installing the unit on a vehicle (such as a forklift).

n the DLoG MTC 6, the logic ground and the shield ground are firmly linked.

The “logic ground” is the earth line (GND) for all of the internal electrical components, such as the isplay and the CPU.

The cable shielding and the housing are connected to the “shield ground”.

Figure 7.1: DLoG MTC 6 forklift application

Caution: Property damage	Pay attention to the following warnings!

- Some forklifts have a chassis that is connected to DC+. Therefore, the DLoG MTC 6 chassis is also connected to DC+. However, if you use peripheral devices that supply DC– to the DLoG MTC 6 via an interconnector (such as a DC– serial port), this will cause a short circuit. This will inevitably lead to malfunctions or even a total system failure.
- In DC-powered devices, always attach ring tongues on the supply voltage cable to the ground bolt situated on the connector bay.

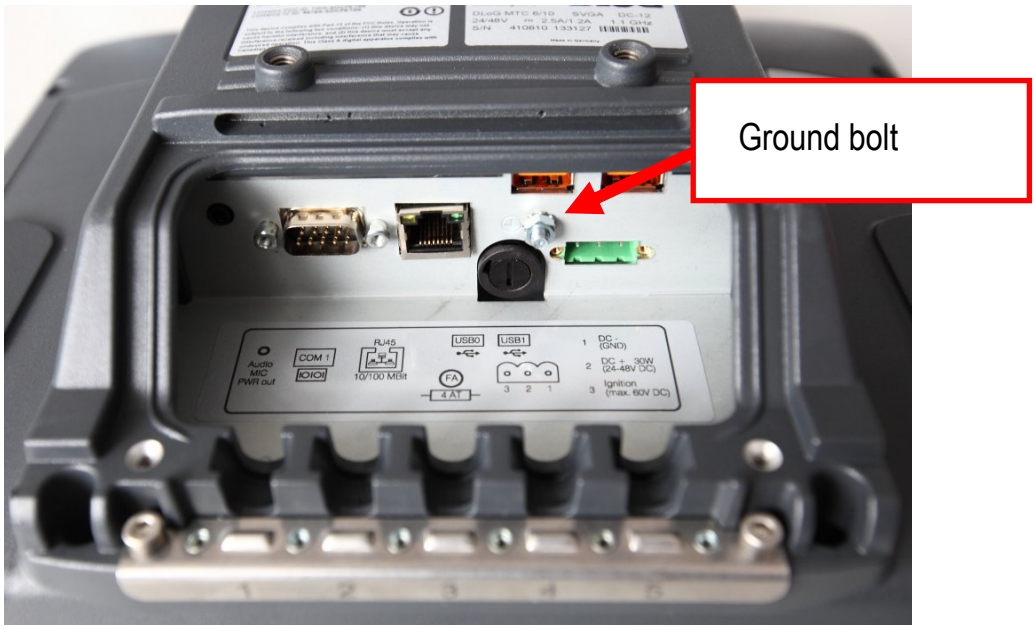


Figure 7.2: Position of the ground bolt

- The other end of the yellow-green supply voltage cable should be connected to the vehicle's chassis.
- Make sure that the DLoG MTC 6's connecting cable is attached as close to the battery as possible. Connecting the DLoG MTC 6 to large electrical loads, such as converters for the forklift motor may result in random restarts, malfunctions and/or irreparable damage to the device.
- If you want to connect devices fed by other power sources to the DLoG MTC 6, such as printers and so on, be sure to power up the peripheral devices at the same time or after the DLoG MTC 6. Otherwise, you may encounter start-up problems, malfunctions or even irreparable damage to the device.

7.5.2. Position of the DLoG MTC 6 in the vehicle

In the vehicle, the driver's field of view must be kept free.

If a keyboard and scanner should be installed on the DLoG MTC 6, please plan sufficient space.

No part of the DLoG MTC 6 system may project beyond the vehicle.

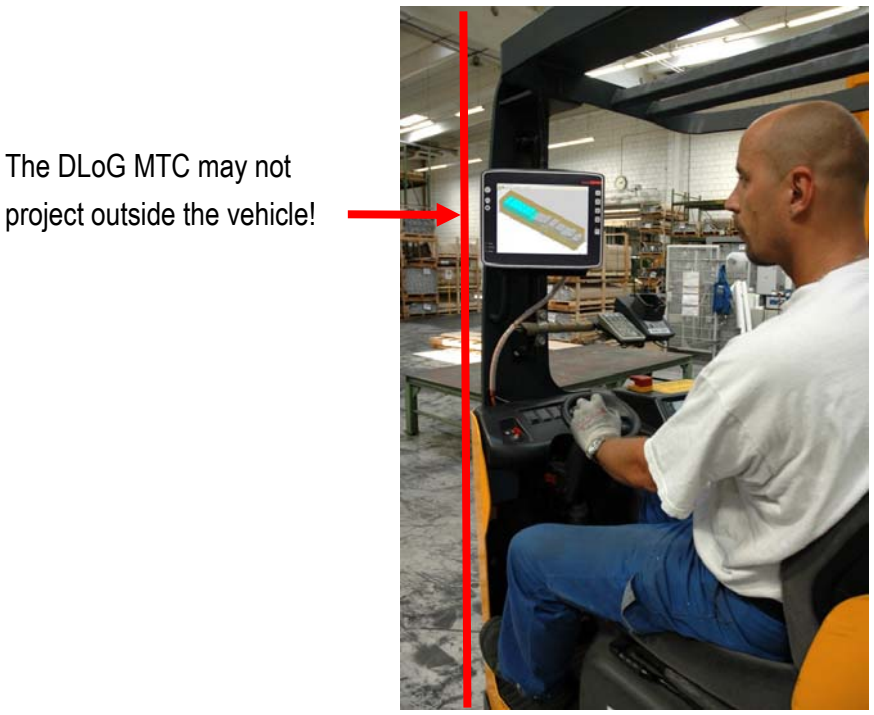


Figure 7.3: Position of the DLoG MTC 6 on a forklift

7.5.3. Overview of the assembly steps

Before fastening the DLoG MTC 6 to the vehicle:

- the shutdown automation must be configured
- the forklift must be prepared (connection to ignition, correct voltage, etc.)

We recommend the following installation sequence:

- Step 1: Fasten the bracket to the vehicle
- Step 2: Install DLoG MTC 6 to the bracket

7.6. Cable cover (splash guard)

Caution: Property damage	For safety reasons, the supplied cable cover for the external ports must be installed prior to using the DLoG MTC 6.

Protection class

In order to comply with the certified protection class, please use the optionally available assembly kit from DLoG.

Please observe the installation instructions included with this assembly kit.

7.7. Strain relief

After the DLoG MTC 6 and bracket are fastened:

- Prepare the strain relief.
- Install the cables loosely on the strain relief rail.
- As far as possible, route cables leading to or away from the unit next to one another without crossing.

Completing:

- Fasten the cables to the strain relief rail.
- Be sure that the cables are fastened precisely at the positions at which the cable openings in the cable cover are located.

7.8. Minimum distance to WLAN antenna

CAUTION

In order to avoid exceeding the limits determined by the FCC for exposure to radio waves, you (and other people in your vicinity) should maintain a minimum distance of 20 cm from the antenna integrated into the computer.

Please note this while mounting DLoG industry computers with WLAN antennas.

7.9. Antenna cap and Service USB interface

Under the antenna cap or protective cap of the DLoG MTC 6 there is a Service USB interface.

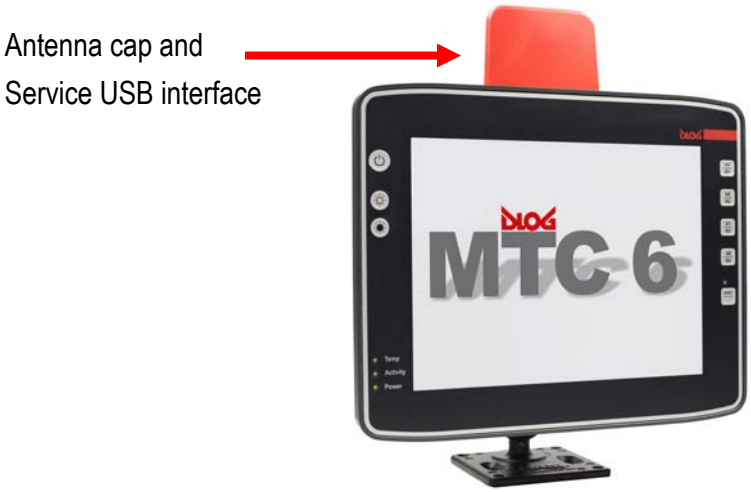


Figure 7.4: Antenna cap DLoG MTC 6

To access this Service USB interface, you need to remove the antenna cap from the unit.

Caution: Property damage	Incorrect or improper removal and fastening of the antenna cap can impair the function of the entire DLoG MTC 6 system and in particular the WLAN functionality! Incorrect or improper changes made to the DLoG MTC 6 will invalidate any warranty provided by DLoG GmbH.

Do not pull the antenna connection cable too far out of the unit or catch or cut it.

Figure 7.5: Opened antenna cap

Unfasten antenna cap from unit and refasten it:

1. Unscrew the two screws from the antenna cap with an Allen key (size 3 mm).
1. Lift the antenna cap carefully to avoid pulling on the antenna connection cables (max. 2 to 3 cm).
2. Keep hold of the antenna cap, making sure that no pulling tension is exerted on the antenna connection cables.
3. The Service USB interface is now accessible.

   CAUTION: One end of the antenna connection cables is attached to the antenna cap, the other end to the internal WLAN unit of the DLoG MTC 6. The cables must not be pulled out of the DLoG MTC 6 too far and become detached from the WLAN unit! This might damage the WLAN unit or other components of the device.
4. Place the antenna cap back onto the DLoG MTC 6.
5. Take care not to trap the antenna connection cables when doing this.
   The antenna cap seal must not be damaged; it must be seated correctly in the groove.
6. Reinsert and tighten the two screws of the antenna cap (1 Nm torque).

8. Operation

8.1. Touch Screen

The DLoG MTC 6 is equipped with a resistive touch screen.

Caution: Property damage	Keep the panel surface clean. Prevent any kind of adhesive applied on the surface. Avoid high voltage and/or static charge. Touch screens may not be operated with ball-point pens or writing utensils, tools of any kind (e.g. screwdrivers) or with sharp objects (knives, scalpels, etc). Touch the panel with your finger or stylus only to assure normal operation. Any sharp edged or hard objects are prohibited. Operate the panel in a steady environment. Abrupt variation on temperature and humidity may cause malfunction of the panel. Avoid applying excessive activation force or sudden impact on the panel surface.

Operation of the resistive touch screen is recommended with:

- clean, dry fingers
- clean, dry, soft gloves
- suitable touch stylus (plastic or wood, rounded tip)

8.2. Front keys and LEDs

The DLoG MTC 6 has the following front keys and LEDs:

Figure 8.1: DLoG MTC 6 front keys and LEDs

8.2.1. <Power> key

If you want to start the DLoG MTC 6 using the <Power>-key, please:

- You must hold the <Power>-key down for a short time.

8.2.2. Manual brightness control

Manual brightness control: brighter

Manual brightness control: darker

8.2.3. LEDs

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

Activity (green) LED indicates access of the flash drive

Power (green) LED indicates an available internal power supply

8.2.4. Special keys

Special keys <S1> to <S8>

The special keys can be configured with the “DLoG Config program” (select the **Front keys** menu).

8.2.5. <Shift>-key

Switch the keys <S1>, <S2>, <S3> and <S4>

to <S5>, <S6>, <S7> and <S8>

The lucent LED indicates an activated <Shift>-key.

8.3. Operating states

The following operating states are possible for the DLoG MTC 6:

Status of internal LEDs		DLoG MTC 6 status
Power (green)	Temp (red)	
OFF	OFF	Initial state, idle time - waiting for a new ignition signal after switch-off; no power supply
OFF	FLASHING	Temperature sensor malfunctioning
FLASHING	OFF	DLoG MTC 6 is in stand by mode (S3).
OFF	ON	The computer will not start until the temperature inside the unit is between -30 °C and +62 °C again.
ON	OFF	Computer is starting up; normal operational state; shutdown delay time is running
ON	ON	Temp. < -30 °C or Temp. > 70 °C
ON	FLASHING	Temperature sensor malfunctioning; automatic switch-off software configuration

9. Operating system

9.1. Pre-installed on Flash

When a DLoG MTC 6 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 graphic, sound, network and touch screens – are also pre-installed.

In DLoG MTC 6 units with a pre-installed operating system, the system is located on the C partition.

9.2. Installing on Flash

When a DLoG MTC 6 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 professionals familiar with the system environment.

9.3. Special features of the operating systems

9.3.1. MS® Windows® XP Embedded

If the DLoG MTC 6 is running MS® Windows® XP Embedded, not all USB devices will be supported.

10. Touch screen

10.1. Construction type and resistance

- 5-wire touch sensor using analog-resistive touch technology
- Construction: Film-Glass (FG)
- Hardness of surface: 3H (ASTM D3363)
- Resistance : 35 million actuations

10.2. Operation

The finger or a suitable stylus can be used for operation.

For more details, please see Chapter *8 Operation*.

10.3. Cleaning

Use neutral detergent or isopropyl alcohol on a clean soft cloth to clean the panel surface.

Prevent using any kind of chemical solvent, acidic or alkali solution.

10.4. Touch for MS® Windows® XP Embedded

10.4.1. Installation

The touch drivers to be used can be found on the Flash medium under Util/atouch/<verNR>.

In addition you will find the DLoG drivers on the Internet under www.dlog.com.

1. Open the corresponding folder and run Setup.exe.
2. On the Welcome dialog click Next.
3. In the Software License Agreement window select I accept all of the terms of the above License Agreement and then click Next.
4. On the Select Controller dialog choose serial (RS/232) and click Next.
5. On the Serial Configuration dialog choose COM2 and 9600 Baud and click Next.
6. Deselect the option on the Configuration Complete dialog and close by clicking Finish.
7. Two Files Needed windows will appear querying the path to the tsufiltr.sys file.

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

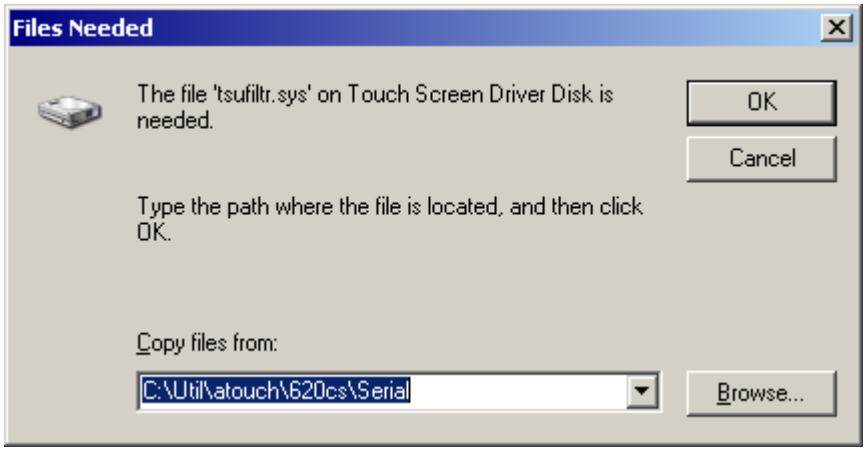


Figure 10.1: “Files Needed” touch installation dialog

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

10.4.2. 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. Serial port

The DLoG MTC 6 is equipped with an externally accessible serial interface COM1.

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

11.1. 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.

Depending on the specific system configuration, the maximum current consumption may be significantly lower.

11.2. Serial port printers

Printers with a serial port can be connected to the DLoG MTC 6.

11.3. Serial port barcode scanners

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 COM1 port and BAUDrate.

6. Confirm the change with OK.

7. Click OK again for the changes to take effect.

Caution: Property damage	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.

11.3.1. 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 1,200 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.

12. Internal devices

12.1. Chipset

The DLoG MTC 6 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, flash 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.

12.2. VGA adapter

The DLoG MTC 6 is equipped with a VGA-compatible adapter. This adapter controls the integrated display.

12.3. Onboard sound controller

The DLoG MTC 6 is equipped with an onboard sound controller.

This control the audio output via the internal speaker, or the speech input and output if the DLoG Voice Kit (optional) is connected.

12.4. Network adapter (10/100/1000)

The DLoG MTC 6 is equipped with a 10/100 Mbit network adapter. This adapter features an RJ45 port.

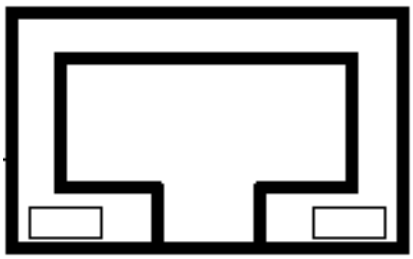
The network controller undertakes the entire task of connecting the hardware to the network.

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

Left LED (green)

LED off: not connected

LED on: connected



Right LED (orange):

LED off: no activity

LED flashes: activity

RJ45 network port

Figure 12.1: RJ45 network port

12.4.1. 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 (IEEE 802.3 standard).

The solution here is the use of a shorter cable.

12.5. Automatic switch-off

The DLoG MTC 6 is equipped with an automatic switch-off module.

Modes of operation

If wired up accordingly, the DLoG MTC 6 conveniently switches off together with the vehicle's ignition.

As disconnecting the power supply during operation can lead to data loss, the operating system needs to be shut down normally using the appropriate hardware and software installed on the system when the ignition is switched off.

The DLoG MTC 6 is connected to the vehicle with three supply cables. DC+ und DC- are directly connected to the power supply of the vehicle, the connection is of course run through fuses.

Therefore make sure that the cables are connected directly to the battery and not to high-interference supply lines (for example, motor supply) or to supply lines already used by other consumers.

The supply voltage connected is then linked to the DLoG MTC 6's ignition input via a switch, for example, the key switch of the ignition (also with a fuse).

12.5.1. Automatic switch-off process

When the ignition is switched on, the DLoG MTC 6 is supplied with power and begins checking its internal temperature and automatic switch-off function.

Once the ambient conditions have been verified as acceptable, the DLoG MTC 6 starts the operating system just like normal.

During the first three minutes of the start-up phase, none of the ambient conditions, such as the internal temperature or the *Ignition* input status, are checked. This allows the operating system and the operating software for the automatic switch-off module to fully load without interruption.

Following this three-minute period, the internal temperature of the unit and the status of the *Ignition* input are checked continuously.

If the inner temperature of the DLoG MTC 6 reaches a critical range, the operating system is shut down normally and the computer remains switched off until the temperature is back in the permitted range.

If the *Ignition* input is switched to earth potential or a potential-free source during normal operation, the unit switches to shutdown delay time.

In this state, the device continues to operate normally until the delay time (for example, 15 minutes) has elapsed.

- If the ignition is triggered again during this time, the DLoG MTC 6 resumes normal operation.
- If, however, the delay time elapses, the operating system is shut down normally by the DLoG operating software and the unit is automatically switched off (for example, after three minutes, or after a signal from the operating software).

12.5.2. Configuration with DLoG Config program

The DLoG Config program must be installed for the automatic switch-off module to function correctly.

If the DLoG Config has not been started, the DLoG MTC 6 will carry out a hard shutdown once the delay time and shutdown time set by the hardware (e.g. via MPCCOM.EXE) has elapsed. In this case, the operating system is not shut down normally before the power is switched off. The current application is unable to save its data, and the file system becomes increasingly unstable and inconsistent.

If the DLoG Config has been started, the program can recognize when the operating system needs to be shut down. Firstly, the Windows message "WM_QUERYENDSESSION" is sent to all running applications to inform them of the impending shutdown.

Now every application has to respond within the time that is set in the registry (see the DLoG Config manual). If a response is not sent in the specified time, the application is forced to quit.

If there are any open programs with unsaved changes, it may not be possible to automatically quit them (for example, an unsaved document in WORDPAD.EXE, a program supplied with Windows). In this case WORDPAD.EXE responds to the Windows message "WM_QUERYENDSESSION" with a user query to confirm if the current file is to be saved. Applications that can be quit with the key combination <ALT> and <F4> (that is, without a final user query) generally send the required response to the "WM_QUERYENDSESSION" message and are not shutdown "hard".

To ensure that vital data is always saved correctly, applications need to be able to properly respond to the "WM_QUERYENDSESSION" message, that is, without user queries and within the set time period.

Further information to the DLoG Config program can be found in the corresponding manual.

13. Troubleshooting

13.1. 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 (IEEE 802.3 standard).

The solution here is the use of a shorter cable.

14. Maintenance

WARNING: Danger due to electric shock when cleaning and maintaining the device.

To avoid electric shock, turn the DLoG MTC 6 off and disconnect it from the power supply before cleaning or maintaining it.

14.1. Cleaning the housing

The housing of the DLoG MTC 6 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.

14.2. Touch screen cleaning

Use neutral detergent or isopropyl alcohol on a clean soft cloth to clean the panel surface.

Prevent using any kind of chemical solvent, acidic or alkali solution.

15. Common mistakes in usage

15.1. Power supply

- Do not connect DLoG MTC 6 devices to an AC power supply.
- Observe correct voltage ranges.

15.2. Powering up/down

- Please note that the function of the DLoG MTC 6's <Power>-key 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).

15.3. Cable cover

- The supplied cable cover for the external ports must be installed prior to using the DLoG MTC 6.
- In order to comply with protection class, please use the optionally available assembly kit from DLoG.

15.4. Mounting/Installation

- 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 WLAN antenna should not be used as a handle when turning 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.
- 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.

15.5. Mobile application on vehicles

- Observe correct voltage ranges.
- Ensure that supply lines are fused correctly.
- Lay the supply cable so that it will not get crushed or frayed.
- Read the labeling on the cable and connect the supply cable with the correct polarity.
- Cut the supply cable as short as possible. This avoids tangled cables and improves the quality of the power supply.
- Observe the vehicle manufacturer's instructions for connecting additional loads, for instance, in conjunction with an emergency shut-off switch.
- Be sure that the connection of the line is as directly as possible to the battery and not to power supply lines with a great deal of interference (e.g. the engine power supply) or otherwise affected by consumers.
- Connect the supply cable to a suitable place. Ensure that the connecting cable has an adequate cross section and ampacity at the connection point.

15.6. Using the touch screen

- Keep the panel surface clean.
- Prevent any kind of adhesive applied on the surface.
- Avoid high voltage and/or static charge.
- Touch screens may not be operated with ball-point pens or writing utensils, tools of any kind (e.g. screwdrivers) or with sharp objects (knives, scalpels, etc).
- Touch the panel with your finger or stylus only to assure normal operation. Any sharp edged or hard objects are prohibited.
- Operate the panel in a steady environment. Abrupt variation on temperature and humidity may cause malfunction of the panel.
- Avoid applying excessive activation force or sudden impact on the panel surface.

15.7. Cleaning the touch screen

- Use neutral detergent or isopropyl alcohol on a clean soft cloth to clean the panel surface.
- Prevent using any kind of chemical solvent, acidic or alkali solution.

16. Disposal

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

17. 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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