

Manual

Computer

DLT-V6210

DLTV6210XXXXXXXXXXXXXX

(where X may be any alphanumeric character , blank or “.”.)

V 1.00

English



IMPORTANT:

Read this manual carefully.

Keep for future reference.

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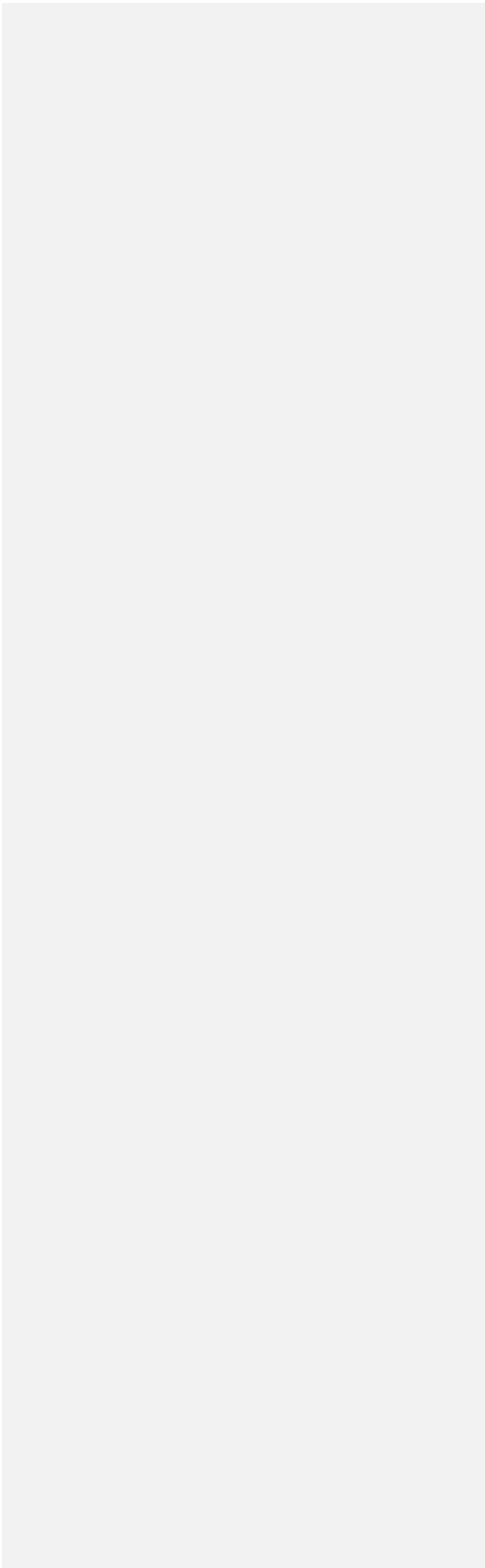
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1. Important information about DLT-V6210 manuals

1.1. Available manuals (in printed form and on the Internet)

The following manuals are available for DLT-V6210 Series:

	Contents	For target group	Availability
Safety instructions	Important information about protecting personnel and property	skilled personnel	Printed, enclosed with the device
Quickstart Guide	First steps in commissioning, mechanical and electrical installation and mounting	skilled personnel	Printed, enclosed with the device
Mounting instructions for accessories	Mounting steps	skilled personnel	Printed, enclosed with the respective accessories
User Manual	Complete operating instructions	skilled personnel	PDF file (Download Center at www.advantech-dlog.com)
MDevice description	Configuration tool	skilled personnel	PDF file (Download Center at www.advantech-dlog.com)

- ⇒ Pay attention to these manuals because they help avoid hazards, reduce repair costs and downtimes, and increase the reliability and service life of DLT-V6210.
- ⇒ Keep the manuals for future use.
- ⇒ Please contact DLoG GmbH if you require additional information or clarification. You can find the contact address in section *Technical customer support*.

Current manual versions



The latest versions of our manuals are available at our website:
www.advantech-dlog.com -> Download -> Products

1.2. Design elements in the manual

The following design elements are used in this manual:



DANGER / WARNING / CAUTION

DANGER means that death or severe bodily injury will occur if this information is not observed.

WARNING means that death or severe bodily injury can occur if this information is not observed.

CAUTION means that slight bodily injury can occur if this information is not observed.

NOTICE: Physical damage

Information about possible physical damage

TIP / HINT

Tips, hints for using the product



Note about additional information in manuals

2. Functional description

2.1. Intended use

DLT-V6210 industrial PCs are data communication terminals for using in commercial environments (e.g. logistics, warehouse, manufacturing). Any other or additional use beyond this shall be deemed improper use. The user/operator of DLT-V6210 is solely responsible for any resulting damage. This also applies to any unauthorized modifications made to the device.

DLT-V6210 industrial PCs:

- are not approved for using in EX zones (potential explosion hazard).
- are not approved for using on ships.
- are not approved for using in life-support systems or critical safety systems where system malfunction can lead to direct or indirect endangerment of human life.

Indented use includes the following:

- The compliance with all safety instructions.
- The compliance with the approved environmental conditions and specifications for the device.

2.1.1. Requirements for safe operation

The requirements are:

- Proper transportation and storage.
- Proper setup and use.
- Proper maintenance and service.
- Operation by trained personnel.

2.1.2. Permitted environmental conditions

DLT-V6210 industrial PCs may only be used under specified environmental conditions.
See section 11.1 *Environmental conditions*.

2.2. Mount, operate and service the device correctly

DLT-V6210 industrial PCs were designed and built according to modern technology and accepted safety regulations. However, the operation of DLT-V6210 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 configured improperly.
- operated by untrained or uninstructed personnel.
- improperly operated and maintained.
- not used as intended.

The owner/operator commitments with regards to safety (accident prevention regulations, occupational safety) are to be followed.

2.3. Warranty conditions

For DLT-V6210 industrial PCs, accessories the Advantech-DLoG TOB regulations are valid (section *Liability for defects -> limitation period for claims*).

Find details on the Advantech-DLoG Internet homepage.

LCD display

The LCD display of DLT-V6210 series fulfills the highest quality standards and was inspected for pixel defects. However, due to technological reasons pixel defects can occur.

This is not a malfunction; it is a part of the technical specifications.

2.4. Device identification/name plate

The name plate is located on the rear side of DLT-V6210. It must remain legible at all times for the purpose of identifying the device.

⇒ Do not damage the name plate or remove it from the device.

Information about the name plate:

Information		Explanation	
DLoG GmbH		Manufacturer contact information	
Model	DLT-V6210	Device name	
	9-digit ID	Identification code (characters from left to right)	
		<i>Component</i>	<i>Explanation</i>
		9	Core processor 7 : x86 Bay Trail
		10	Front unit P : PCAP
		11	Storage L: 32G MLC CFast
		12	Power supply 1 : 12/24/48 VDC :
		13	OS E : WES8 P : Win 7 pro
		14	LTE 0 : No LTE/GPS
		15	WIFI 0 : No WIFI W : WIFI
		16	Revision number 0
		17	RoHS appliance E : oHS
Input	V / A	Input voltage of DC power supply unit nominal current	
S/N		Serial number: Specific Advantech-DLoG device code	
Barcode		For Advantech-DLoG internal purposes	

Comment: X stands for not present / not applicable respectively as placeholder for add-ons.

3. Unpacking, transport and storage

3.1. Unpacking

- ⇒ Open the packaging carefully to prevent damaging the device inside.
- ⇒ Save the packaging material (for possible forwarding transportation or return of DLT-V6210).
- ⇒ Check the shipment for completeness and any possible damage.

- ⇒ **Always keep the supplied manuals and documents.**

3.2. Transport



WARNING

Risk of injury due to weight and sharp-edged parts.

DLT-V6210 can fall down and cause injuries due to its weight.

The strain relief rail can have sharp edges and cause cutting injuries.

- ⇒ Always hold DLT-V6210 by the housing with both hands.
- ⇒ Never use the antenna cap as a handle. It can break due to the weight involved.
- ⇒ Do not hold DLT-V6210 by the strain relief rail.
- ⇒ Use the assistance of a second person for installation work.

3.3. Storage

- ⇒ Observe the permissible storage temperature range in the manual, section *11.1 Environmental conditions*.

3.3.1. Protection of touchscreen during storage

NOTICE: Physical damage

Damage to the touchscreen due to incorrect storage.

- ⇒ Protect touchscreen from sharp edges, impacts, and heavy objects.
- ⇒ If stacking, do not stack higher than two devices.
- ⇒ Place devices front-to-front in this case.
The VESA mounting point on the rear side of the device can damage the touchscreen of another device.
- ⇒ Use protective material (non-flammable!) between the devices as precaution.

3.4. If return/repacking is necessary

If DLT-V6210 is being returned to the manufacturer, a completely filled-out return package slip must be enclosed with every DLT-V6210.

You can find this return package slip:

- at the end of this manual
- and on the Internet at www.advantech-dlog.com

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. Device configuration using software tools



WARNING

Risk of injury and damage due to improper configuration.

These instructions are directed to skilled personnel.

- ⇒ Only qualified skilled personnel (e.g. IT personnel with good knowledge of PCs, operating systems and wireless networks) may configure DLT-V6210.

If DLT-V6210 is incorrectly configured, the DLoG GmbH warranty for this device will be void.

4.1. Configuring the front keys, automatic shut down, etc.

The **MDevice** software is used to configure DLT-V6210 devices with **Microsoft Windows operating system**.

Configuration examples:

- Automatic shut down
- Network settings



The MDevice manual is available in the Download Center at www.advantech-dlog.com.

4.2. Wi-Fi configuration (optional)

Depending on the optional equipment and intended use of DLT-V6210, the settings and access data for Wi-Fi networks should be defined.

4.2.1. Radio wave emission hazards

This information applies exclusively to DLT-V6210 devices that are equipped with wireless technology.



CAUTION

Excessive radio wave emission due to incorrect Wi-Fi configuration.

Risks to health are possible due to excessive radio wave emission if the transmission power and the frequency are set incorrectly during the Wi-Fi configuration.

- ⇒ Observe the applicable regulations for your deployment location/country with regard to frequencies and the maximum permissible transmitting power.
- ⇒ Responsibility for this lies with the company who is operating DLT-V6210. The regulatory authorities in the relevant country can provide information on this.

Country-specific regulations

Example for Germany: 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 (100 mw).

⇒ Set the transmitting power of the Advantech-DLoG antenna so that the permitted EIRP limit value is complied with.

Examples for worldwide:

Region	Regulatory authority
EU	EU Verification Notified Body V1.9.1 ETSI
China	CNCA-07C-031
Japan	Japan SDoC, Certificate
Taiwan	Taiwan Certification
Canada	Canada Certification Body
USA	USA Certification
Brazil	Brazil Certification and Homologation
Russia	Russian Certification
Argentina	Argentinian Certification, CNC



WARNING

Electromagnetic radio frequency energy can interfere with technical devices.

Some technical equipment in hospitals and aircraft is not shielded against radio frequency energy.

- ⇒ Do not use DLT-V6210 in aircraft or hospitals without receiving prior authorization.
Usage in both occasions is only permitted if such authorization has been obtained.

DLT-V6210 industrial PCs can affect the functioning of implanted medical devices such as pacemakers and cause them to malfunction.

- ⇒ Do not use DLT-V6210 near pacemakers.
- ⇒ Always keep a distance of at least 20 cm between a pacemaker and DLT-V6210 to reduce the risk of interference.
- ⇒ Before using the device please obtain information about the use of the device within certain areas (e.g. airports, hospitals, etc.) and also about the respectively applicable regulations and obtain an approval for the operation of the device, if necessary.

4.2.2. Antenna solutions for use in Germany

The Advantech-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 (300 Mbps if using IEEE 802.11n) using the 2.4 GHz and 5 GHz frequency band.

5. Mechanical installation at the deployment location

5.1. Safety notice – observe before installing



WARNING

Risk of injury and damage due to improper mechanical installation.

These mounting instructions are directed to skilled personnel.

- ⇒ Only qualified skilled personnel may perform the mechanical installation work on DLT-V6210.

If DLT-V6210 is incorrectly mounted, any DLoG GmbH warranty for this device will be void.

5.1.1. Correct installation location



WARNING

Risk of injury and damage due to improper deployment location.

- ⇒ Observe the intended use of DLT-V6210, e.g. not in potentially explosive areas, not in life-supporting facilities.
- ⇒ Ensure that the deployment location of DLT-V6210 complies with the permissible environmental conditions.



WARNING

Risk of accident on the targeted objects due to limited field of view of the user.

User's field of vision must remain free.

- ⇒ During installation, reserve sufficient space for DLT-V6210 and related accessories.
- ⇒ Make sure that the user's field of vision is not restricted in a prohibited way when mounting peripheral devices.



CAUTION

Radio wave emission in the vicinity of persons.

To ensure that the limits set for exposure to radio waves are not exceeded:

- ⇒ Install DLT-V6210 so that persons maintain a minimum distance of 20 cm to the antenna.

NOTICE: Physical damage

Installation environment without cooling air can overheat/damage DLT-V6210.

DLT-V6210 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 work/operate properly, sufficient fresh air circulation is required.

If there is no access to fresh cooling air, it may result in overheating and severe damage to the device.

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

The maximum permissible ambient temperature for the entire system needs to be taken into account for the specific application area.

5.1.2. Secure attachment

Observe the following information about the mounting brackets:

- All brackets and mounting parts supplied by Advantech-DLoG are only intended to be used for attachment of the industrial PCs and the peripheral devices and may not be misused.
- Only use suitable mounting brackets and screws permitted by Advantech-DLoG.
- Ensure that ball-and-socket bases and mounting brackets are always attached correctly.



Please observe the mounting instructions supplied with the optional brackets.



DANGER

Risk of accident on the target objects due to unexpected emergency stop because of electroconductive connection of DLT-V6210 to the targeted object chassis.

Due to a variety of technical properties of forklifts and forklift trucks, it can be necessary to electrically isolate DLT-V6210 from the chassis of the targeted object to prevent malfunctions.

The necessity of this must be studied on a case-by-case basis, however, it is recommended for targeted objects' with potential-free chassis.

- ⇒ For example, using rubber buffers ensures that the terminal has no electrically conducting connection to the chassis.
- ⇒ If peripheral equipment (such as scanners, printers, scales or similar) which has its own power supply unit to be used, you must ensure that the power supply units of these peripherals are galvanically separated from the supply of the targeted object. Moreover, the peripheral equipment and its cabling must be attached electrically isolated.
- ⇒ If antennas are being used, you must ensure that the antennas are isolated at the mounting point on the targeted object chassis.



WARNING

Risk of accident on the targeted objects due to unstable attachment of DLT-V6210.

- ⇒ When installing DLT-V6210, make sure that no one will be injured if the bracket breaks (e.g. because of a stress fracture).
- ⇒ Alternatively you can put appropriate safety measures in place (e.g. install a security cable in addition to the mounting bracket).

5.1.3. Handling the device



WARNING

Hazardous voltage, electrical shock from contacting with live parts.

- ⇒ Do not put DLT-V6210 into operation if it is visibly damaged.
- ⇒ Do not open or modify DLT-V6210.



WARNING

Risk of injury due to weight and sharp-edged parts.

DLT-V6210 can fall down and cause injuries due to its weight.

The strain relief rail can have sharp edges and cause cutting injuries.

- ⇒ Always hold DLT-V6210 by the housing with both hands.
- ⇒ Never use the antenna cap as a handle. It can break due to the weight involved.
- ⇒ Do not hold DLT-V6210 by the strain relief rail.
- ⇒ Use the assistance of a second person for installation work.

NOTICE: Physical damage

Damage and scratching of the touchscreen without transportation protective film.

The front display of DLT-V6210 is protected during transportation 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 after all of the installation work has been completed.

5.2. Recommended sequence for the mechanical installation

Requirement: The installation location must be prepared (e.g. connection to the ignition, correct voltage, etc.)

We recommend the following sequence for the mechanical and electrical installation:

1. Determine a suitable mounting position for DLT-V6210.
2. Secure device mounting at the targeted object (RAM Mount etc.).
3. Connect external accessories to DLT-V6210.
4. Install an easily accessible disconnecting device, such as a switch close to the device.
5. Connect all cables.
6. Close DLT-V6210 with cable cover.
7. Mount DLT-V6210 on the device mounting bracket.

6. Electrical installation, cable connection, cable cover

6.1. Safety notice – observe before connecting

6.1.1. General



WARNING

Risk of injury and damage due to improper electrical installation.

These instructions are directed to skilled personnel.

- ⇒ Only qualified skilled personnel are permitted to perform the electrical installation of DLT-V6210.
- ⇒ Comply with the appropriate national installation regulations for all cable routing.

6.1.2. Installing the disconnecting device



WARNING

Electrical shock due to lack of disconnecting device.

DLT-V6210 industrial PCs are not equipped with disconnecting devices that are accessible from outside; they do not have switches.

To enable the devices to be quickly disconnected from the power supply in emergency situations:

- ⇒ Install an easily accessible disconnecting device such as a switch close to the device.
- ⇒ Make sure that the disconnecting device disconnects all power supply lines.



WARNING

Deployment location in fueling stations, chemical plants.

The operation of electrical equipment at locations where flammable gases or vapors are present poses a safety hazard.

- ⇒ Turn off DLT-V6210 when you are near gas stations, fuel depots, chemical plants or places where blast might take place.

6.1.3. Installation of DLT-V6210 on automotive objects



DANGER

Electrical shock due to insufficient EMERGENCY shut-off switch.

If the EMERGENCY-OFF switch of the automotive object does not switch off DLT-V6210, there is a risk of electrical shock.

- ⇒ Install DLT-V6210 and the EMERGENCY-OFF switch so that DLT-V6210 also switches off when the EMERGENCY-OFF switch is operated.

NOTICE: Physical damage

Overvoltage on DLT-V6210 when charging the targeted object's battery.

DLT-V6210 must be disconnected from the battery while the battery is being charged.

Or it must be ensured that the maximum permitted input voltage of DLT-V6210 is not exceeded.

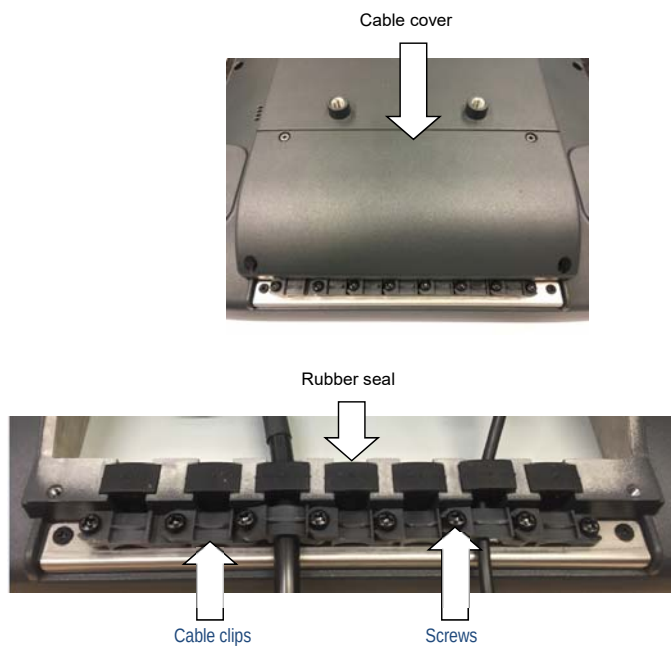
6.2. Preparations

- ⇒ Lay out all cables which are ready to be connected to DLT-V6210.
- ⇒ Select the appropriate slot on the connector panel of DLT-V6210.
- ⇒ Check and test which order of the cables routing is the best to fit in the cable compartment.



6.2.1. Material required

Cable sealing set (scope of delivery: cable cover)



Tools

- Hexagon screwdriver, size 3
- Philips screwdriver, size 3
- Torque wrench
- Flat head screwdriver, size 0
- Socket wrench, size 7

6.3. Inserting the rubber seal in the cable compartment

- ⇒ Select suitable rubber seal which diameter of middle hole can fit the cable's diameter.
- ⇒ There's opening on the rubber seal, please open it and put the cable through it.
- ⇒ Place the rubber seal in the frame of the cable compartment (see figure).
- ⇒ Press the plugs of the rubber seal into the holes of the frame.
- ⇒ If there's no cable in the compartment, please put dummy rubber seal into it.

Fig. 6.1: Rubber seal inserted in the cable compartment



WARNING

Electrical shock or fire due to incorrect cable routing or insufficient grounding.

- ⇒ Only use original Advantech-DLoG power cables; they meet the specific requirements for low-temperature flexibility, UV resistance, oil resistance, etc.
- ⇒ Make sure that the power supply cables are running without kinks and protected (securely protected against crushing and abrading).
- ⇒ DLT-V6210 may only be connected to a SELV circuit (Safety Extra Low Voltage). The SELV circuit is a secondary circuit that is designed to protect the voltage from exceeding the safe value when operation runs correctly or a single error occurs.
- ⇒ 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.
- ⇒ Observe the correct voltage ranges.
- ⇒ Ensure that power supply cables are fused correctly.
- ⇒ Read the labeling on the cable and connect the power supply cable with the correct polarity.
- ⇒ Cut the power supply cable to the minimum length. This avoids cables being tangled and improves the quality of the power supply.
- ⇒ Connect the power supply cable to a suitable place. Ensure that the connecting cable has an adequate cross section and ampacity at the connection point.

NOTICE: Physical damage

Observe the potential ratios.

On DLT-V6210, logic ground and shield ground are firmly connected to each other.

Logic ground is the ground (GND) used to supply the internal parts and components such as the display or CPU. All cable shields and the housing are connected to shield ground.

The chassis of some forklifts is on DC+. This means that DLT-V6210 chassis is also on DC+.

Short circuits can arise when, for example, the ground potential of a peripheral device is on DC-.

This may cause malfunctions or irreparable damage to DLT-V6210.

- ⇒ Always attach the ring tongue of the power supply cable to the provided ground bolt situated on the connector panel.
- ⇒ The other end of the yellow-green power supply cable must be connected to the targeted object's chassis.
- ⇒ Connect the power supply cable of DLT-V6210 as directly as possible to the battery and not to the power supply lines (e.g. the engine power supply) which a great deal of interference or otherwise affected by consumers.
- ⇒ Connecting DLT-V6210 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 DLT-V6210 (e.g. printers), be sure to power up the peripheral devices at the same time or after DLT-V6210; otherwise, you may encounter start-up problem, malfunctions or even irreparable damage to the device.

6.3.1. Plugging in and screwing on the power supply cable

Fig. 6.2: The power supply cable secured and inserted in rubber seal

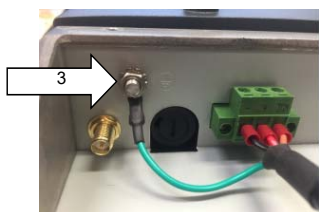
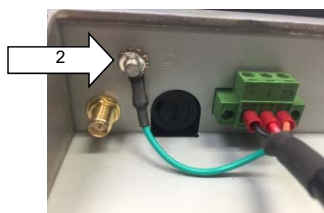
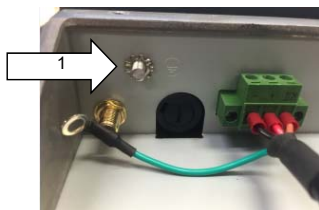


- ⇒ Plug the power supply cable into the power supply plug-in location.
- ⇒ Tighten both mounting screws hand-tight.
- ⇒ Fold-open the round cable passage in the rubber seal.
- ⇒ Insert the power supply cable.

6.3.2. Securing the ground using ring tongue to the ground bolt

Fig. 6.3: Ring tongue secured to the ground bolt

⇒ Secure the ring tongue of the power supply cable to the ground bolt.



ATTENTION

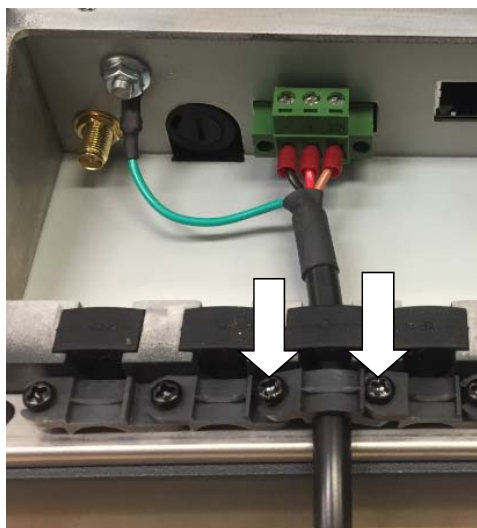
To make sure the device is grounding correctly, it is important to follow the correct order to put the components on the ground bolt as below (from inside to outside):

1. Place "**toothed washer**" first(internal).
2. Then put the "**Ring Tongue of the power supply cable**" (flat side faces DLT-V6210 connector panel).
3. Tightening the nut hand-tight.

6.3.3. Securing the power supply cable to the strain relief rail

- ⇒ Put the rubber seal into the compartment with power cable in the center of the rubber seal first.
- ⇒ Place one cable clip on the power supply cable.
- ⇒ Secure the cable clip to the strain relief rail using 2 mounting screws (M3x10 screws).
- ⇒ Tighten the mounting screws alternately
- ⇒ **ATTENTION:** Tighten the mounting screws sufficiently but on no account pinch or crush the cable. If you do, the cables may break or the cable insulation may get damaged.

Fig. 6.4: Cable clip secured to the strain relief rail.



6.4. Connecting the USB, Ethernet and COM cables

NOTICE: Physical damage

Observe the following instructions when connecting/removing external devices to/from DLT-V6210.

- ⇒ Only use accessories that have been tested and approved by Advantech-DLoG for the respective DLT-V6210.
 - ⇒ DLT-V6210 may not be connected to the power supply if external devices are being connected/removed (not applicable for USB devices)
 - ⇒ Otherwise considerable damage could be caused to both DLT-V6210 and the peripheral devices.
 - ⇒ Make sure that peripherals with their own power supply are either switched on at the same time as DLT-V6210 or after the start of DLT-V6210.
 - ⇒ Otherwise, you must ensure that the backflow from the external device to DLT-V6210 cannot take place.
 - ⇒ Only power up DLT-V6210 when all devices are completely connected and DLT-V6210 is closed correctly (remember the cable cover!). Otherwise, you may damage DLT-V6210.

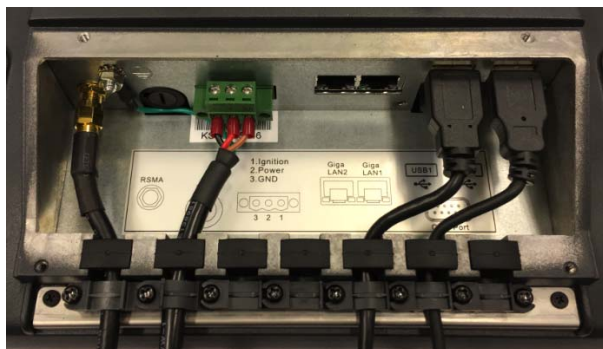


Please observe the mounting instructions supplied with the optional accessory.

6.4.1. USB cable

- ⇒ Plug the required USB cable into the associated port.
- ⇒ Insert the USB cable
- ⇒ Put the rubber seal into the compartment with USB cable in the middle of the rubber seal.
- ⇒ Secure the USB cable to the strain relief rail with cable clips and screws.
- ⇒ **ATTENTION:** Tighten the mounting screws sufficiently but on no account pinch or crush the cable. If you do, the cables may break or the cable insulation may get damaged.

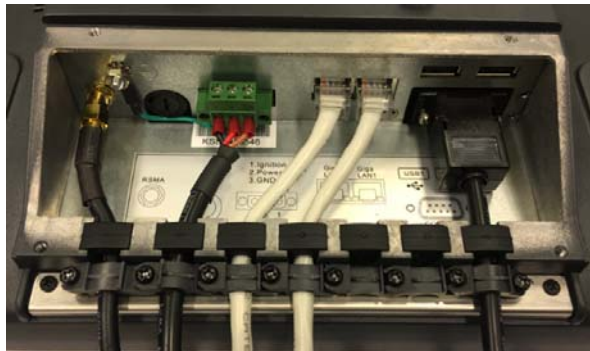
Fig. 6.5: USB cable on the connector panel; secured to the strain relief rail



6.4.2. Ethernet cable

- ⇒ Plug the Ethernet cable into the associated port.
- ⇒ Insert the Ethernet cable.
- ⇒ Put the rubber seal into the compartment with Ethernet cable in themiddle of the rubber seal.
- ⇒ Secure Ethernet cable to the strain relief rail with cable clips and screws.
- ⇒ **ATTENTION:** Tighten the mounting screws sufficiently but on no account pinch or crush the cable. If you do, the cables may break or the cable insulation may get damaged.

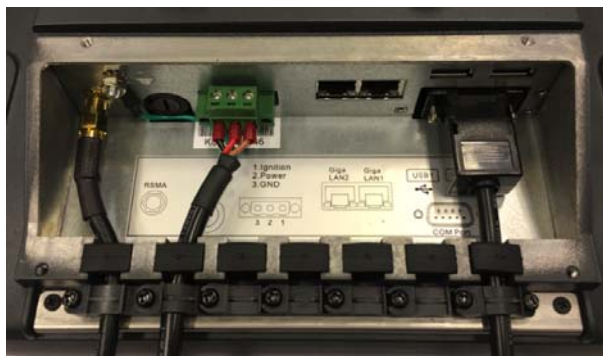
Fig. 6.6: Ethernet cable on the connector panel; secured to the strain relief rail



6.4.3. COM cable

- ⇒ Plug the required COM cable into the associated port.
- ⇒ Insert the COM cable.
- ⇒ Put the rubber seal into the compartment with COM cable in themiddle of the rubber seal.
- ⇒ Secure the COM cable to the strain relief rail with cable clips and screws.
- ⇒ **ATTENTION:** Tighten the mounting screws sufficiently but on no account pinch or crush the cable. If you do, the cables may break or the cable insulation may get damaged.

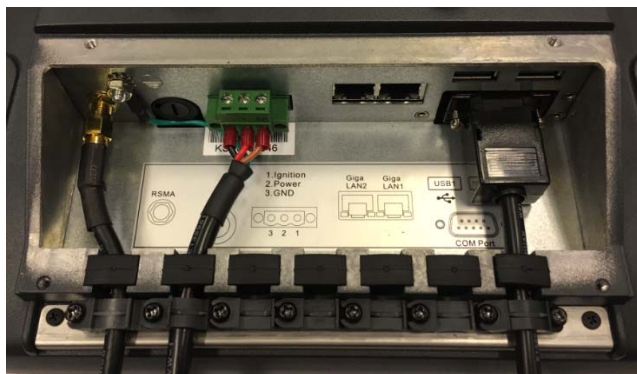
Fig. 6.7: COM cable on the connector panel; secured to the strain relief rail



6.5. Closing off unused cable openings

- ⇒ Close off all unused cable openings with the blind plug type of rubber seal so that they can be sealed.

Fig. 6.8: Unused cable outlets sealed off with blind plugs



6.6. Attaching the cable cover

NOTICE: Physical damage

The device is not completely sealed due to incorrect attachment of the cables and the cable cover.

The protection class/category of DLT-V6210 is only ensured if the cable cover is properly installed.

Improper installation can result in liquid penetrating into DLT-V6210 during operation. This will cause the risk of short-circuiting, corrosion and wear.

- ⇒ Place the cable cover in DLT-V6210 housing slot.
- ⇒ Lock the screws loosely into the holes of the cable cover.
- ⇒ Then fully tighten the screws with 3 Nm torque.

Fig. 6.9: Cable cover closed and screwed together



7. Operation

7.1. Switching DLT-V6210 on/off

The following factors determine how DLT-V6210 can be switched on and off:

- Is DLT-V6210 mounted on a automotive object and connected to the ignition signal?
- What are the automatic shut down settings that were defined in the MDevice configuration program?

Switch on

Switch DLT-V6210 on as follows, depending on the configuration:

- ⇒ Press the <Power> button.
- ⇒ Or: Through the ignition signal of the targeted object (depends on the automatic shutdown settings).

Fig. 7.1: <Power> button



Switch off

Switch DLT-V6210 off as follows, depending on the configuration:

- ⇒ Press the <Power> button of the activated DLT-V6210.
- ⇒ Or: Disconnect the supply voltage.
NOTICE: Devices will be hard-terminated (data loss possible).
- ⇒ Or: Deactivate the ignition of the connected targeted object (depends on the automatic shut down settings).

Time between switching off and on: 10 seconds

After DLT-V6210 is shut down and switched off, it needs to wait at least 10 seconds until the device can react to a switch-on signal (<Power> button / ignition).

7.2. Operating the touchscreen

NOTICE: Physical damage

Improper operation can cause damage and downtimes to DLT-V6210 and to the connected complete system.

Operators of DLT-V6210 must be trained in the handling of the device.

Prevent damage to the touchscreen

- ⇒ Keep the touchscreen clean.
- ⇒ Do not touch the touchscreen with pointed, sharp, rough or hard objects, e.g. ball point pens, writing implements, tools of any kind (e.g. screwdrivers).
- ⇒ Make sure that no adhesives get on the surface of the touchscreen.
- ⇒ Ensure that the touchscreen surface is not influenced by high voltages or static electricity.
- ⇒ Do not use excessive force when touching the touchscreens, and do not hit or press hard.
- ⇒ If the device with the touchscreen is placed down: Place a clean, soft cloth underneath.

Operating the touchscreen

- Clean, dry fingers.
- Clean, dry, soft gloves.
- Suitable touch stylus with capacitive (electrically conductive) tip.

NOTICE: Physical damage

Salty water on the PCT touchscreen can be interpreted as a "touch" and lead to malfunction.

Multi-touch capability

Depending on the installed operating system type, the PCT touchscreen of DLT-V6210 is multi-touch capable. This means it can detect two touch points simultaneously.

7.3. Front keys and LEDs

7.3.1. Overview

Fig. 7.2: Operating elements: Front keys and LED

- Keys:
- Power on/off
 - LCD Brightness up
 - LCD Brightness down

LED:

System Status	LED Status
System power on	Static
System power off	Off
System over/under tempertuare	Blinking 0.2 sec. on / 0.8 sec. off
System thermal sensor faculty	Blinking 0.5 sec. on / 0.5 sec. off



NOTICE: Physical damage

Improper operation can cause damage and downtimes to DLT-V6210 and to the connected complete system.

Operators of DLT-V6210 must be trained in the handling of the device.

7.4. Operating states

Status of LEDs	DLT-V6210 status
Supply voltage (green) 	
OFF	Waiting for a new ignition signal or activation of the <Power> key after switch-off; no voltage supply
STATIC ON	Computer start-up/normal operational state/shutdown delay time
Blinking : 0.2 sec. on / 0.8 sec. off	Temperature sensor faulty
Blinking : 0.5 sec. on / 0.5 sec. off	Ambient temperature lies beyong the permitted range, i.e. < -30 or > +50 °C

8. Power supply unit, power supply, external connectors

8.1. Integrated power supply unit

DLT-V6210 is equipped with a galvanically separated, integrated DC power supply unit.
Power is connected to the back of the unit using a Phoenix Contact plug.
There is no power switch.

Power supply	
DC power pack 12/24/48 VDC (wide-range power supply unit)	12/24/48 VDC nominal Galvanically isolated Withstands bursts up to 2 kV
Voltage range	9 to 60 VDC
Maximum output power	Vin < 36V => 42W Vin > 36V => 50.4W
Nominal current	12V -- 3.5A 24V -- 1.75A 48V -- 0.875A
Connection to SELV circuit only	The SELV circuit is a secondary circuit that is designed to protect from the voltage exceeding the safe value when operation runs correctly or if a single error occurs.

Power consumption	
DLT-V6210	Typically 34 W

Power supply unit fuses		
Power supply unit	Fuse type	Example
Advantech Dlog owned- design power supply unit	5 x 20 mm, 8 A, 250 V	LittleFuse 0477008.MXP or similar product produced by other manufacturers

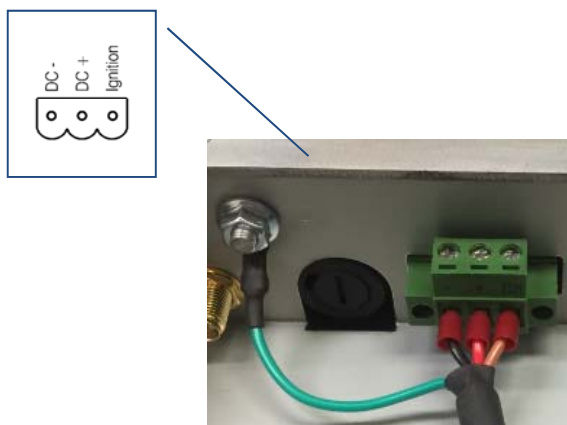
The symbol of the fuse is **FA**. You will find the exact position on the sticker located on the connection plate of DLT-V6210.

8.1.1. DC voltage supply connection

Version: Phoenix Combicon, 3-pin.

External view:

Fig. 8.1: DC power supply connector with power cable connector detail view

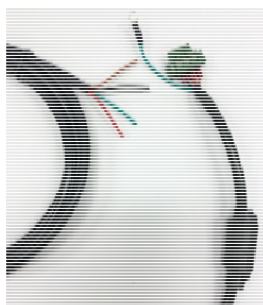


Explanation:

"Ignition on" means that a control signal can be routed to this connection that matches the supply voltage level. The signal reference is DC-.

8.1.2. DC Power supply cable

Fig. 8.2: DC Power supply cable with Phoenix Combicon, 3-pin



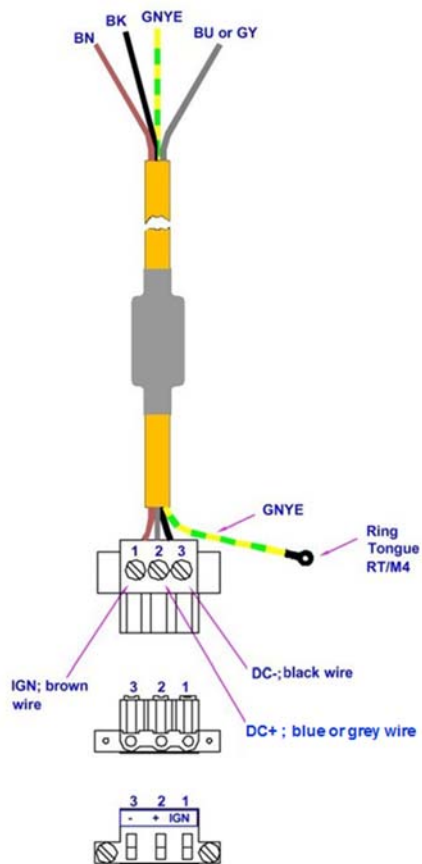


WARNING

Electrical shock or fire due to incorrect power supply cable.

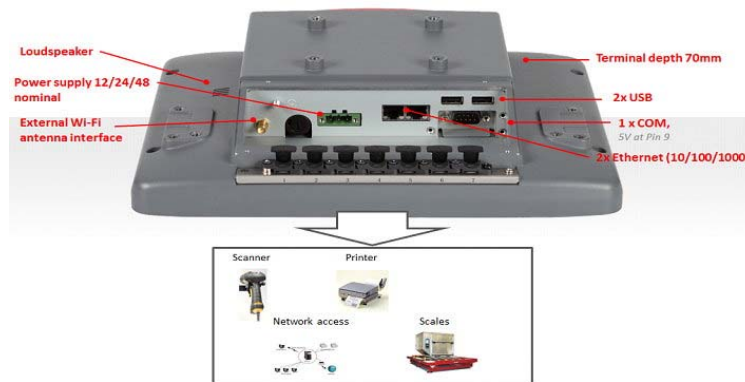
- ⇒ Only use original Advantech-DLoG power supply cables; these meet the specific requirements for low-temperature flexibility, UV resistance, oil resistance, etc.

Fig. 8.3: DC connection cable pin assignment



8.2. External connectors under the cable cover

Fig. 8.4: External connectors of DLT-V6210



8.3. Service CFast under the antenna cap

NOTICE: Physical damage

Improper opening of the antenna cap can impair the function of entire DLT-V6210 system and in particular the Wi-Fi functionality.

The antenna cap may only remain open during the service work.

No objects or liquids may enter the opened DLT-V6210 during this.

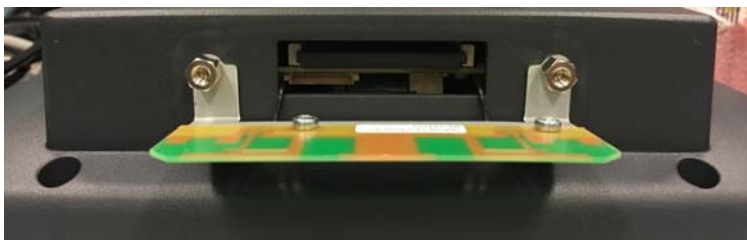
Only when the antenna cap is properly closed again may operation be resumed; the protection class/category is only ensured again after doing so.

8.3.1. Antenna cap opening/closing

Opening

- ⇒ Loosen the two screws of the antenna cap using Torx screwdriver.
- ⇒ Carefully lift up the antenna cap.

Fig. 8.5: Antenna cap opened



Closing

- ⇒ Place the antenna cap back onto DLT-V6210.
- ⇒ The antenna cap seal must not be damaged; it must be seated correctly in the groove.
- ⇒ Tighten the two screws of the antenna cap again (1 Nm torque).

8.3.2. CFast slot

There is a CFast slot under the antenna cap.

- ⇒ Exercise special care when removing and re-inserting CFast card.
- ⇒ Only use CFast cards that have been approved by Advantech-DLoG.

9. Optional equipment/accessories

9.1. Integrated low profile Wi-Fi antenna (optional)

Fig. 9.1: Integrated low profile Wi-Fi antenna (optional)



Technical data	
Application	Wi-Fi IEEE 802.11 a/b/g/n Dual Band Diversity
Number of antennas	2
Type	Omnidirectional antenna
Directionality	Optimized for the DLT-V6210 housing
Antenna gain	2.4GHz :6.5 dBi / 5GHz:2.5 dBi
Impedance	50 Ω
Polarization	Vertical/Horizontal
Maximum transmitting power	100 mW / 20 dBm

9.2. Wi-Fi card (optional)

Technical data	
Wi-Fi PCIe MiniCard	Integrated in the device at the factory by Advantech-DLoG (internal PCIe MiniCard slot).
Driver	Generally, only drivers for Wi-Fi cards approved by Advantech-DLoG can be integrated into operating system images.
Maximum radiated power	100 mW EIRP

9.3. Keyboards and keyboard mounts (optional)

Any USB keyboard can be connected to DLT-V6210.

Advantech-DLoG offers the following keyboards:

Fig. 9.2: SMALL keyboard



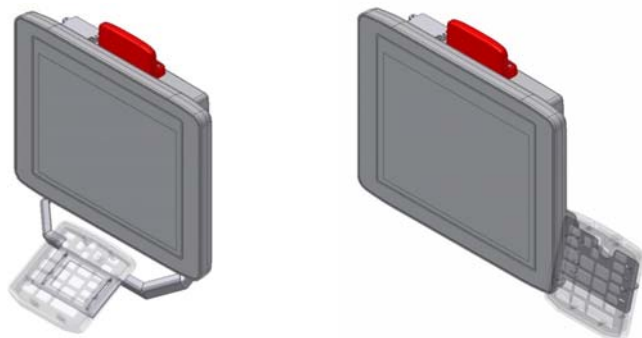
- SMALL keyboard
- Mountable
- Protection class IP65
- Keyboard layouts: German, English, French

Fig. 9.3: 24-key keypad



- 24-key keypad
- Mountable
- Protection class IP65

Fig. 9.4: Keyboard mounting examples



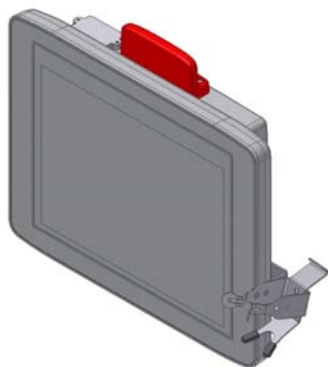
9.4. Scanner and scanner bracket (optional)

You can connect scanners to either the USB interface or the serial interface.
Please contact your Advantech-DLoG sales representative if needed.
If connected to COM1, the scanner can be powered through the interface with a voltage of 5 V.

⇒ Use only scanners that have been approved by Advantech-DLoG.

Optional scanner brackets are available for DLT-V6210.

Fig. 9.5: Example scanner bracket



9.5. Touch stylus

Advantech-DLoG offers some touch stylus pens (with associated mountings) for resistive and PCT touchscreens. Please contact your Advantech-DLoG sales representative if needed.

⇒ Use only touch stylus that have been approved by Advantech-DLoG.

Fig. 9.6: Example touch stylus for PCT touchscreen



9.6. USB recovery stick (optional)

The optional Advantech-DLoG recovery stick allows images to be backed up and restored onto DLT-V6210 when necessary (backup & recovery).

Please contact your Advantech-DLoG sales representative if needed.

10. Automatic shut down

10.1. Functional description

DLT-V6210 is equipped with an automatic shut down module.

If wired up accordingly, DLT-V6210 conveniently switches off together with the ignition.

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

DLT-V6210 is connected with three supply cables.

DC+ and DC- are directly connected to the power supply, the connection is of course run through fuses. The supply voltage is then linked to DLT-V6210's ignition input via a switch, for example, the key switch of the ignition (also with a fuse).

10.2. Sequence

When the ignition is turned on or DLT-V6210 <Power> button is pressed, DLT-V6210 checks its internal temperature and runs a test to confirm that the automatic shut down function is working.

If the check of the environmental conditions is successful, DLT-V6210 starts the operating system normally.

Once these checks are completed, DLT-V6210 starts the operating system. No environmental conditions (e.g. the internal temperature of the device or the state of the ignition input) are checked for one minute during startup.

After one minute, DLT-V6210's internal temperature and the state of the Ignition input are constantly monitored.

If DLT-V6210's internal temperature reaches a critical level, shutdown of the operating system will be carried out. The computer will remain switched off until the temperature is once again within the permitted range.

If the ignition input is grounded or isolated during normal operation of DLT-V6210, the device will switch to a delayed shut-off state.

The device will continue to operate normally in this state until the shut-off delay (e.g. 20 minutes) has elapsed.

If the ignition is turned on again during this shut-off delay, DLT-V6210 will revert to a normal operational state.

Once the shut-off delay (afterrun time) has elapsed, the operating system will shut down and the device will automatically shut down (e.g. after one minute or a signal from the operating system).

Device shut down

If the operating system is shut down, all applications will be notified via the Windows message "WM_QUERYENDSESSION" first.

Every application must then respond within the time set in the registry. If there is no response within the preset time, the application will be hard-terminated.

It may not be possible to close an application automatically if it has unsaved data. For example, the WORDPAD.EXE program (included in Windows) cannot be closed automatically if there are unsaved changes. In such a situation, WORDPAD.EXE will acknowledge the "WM_QUERYENDSESSION" Windows message by prompting the user to choose whether to save it or not.

All applications that can be terminated without user confirmation using the keyboard shortcut <ALT> + <F4>, which will normally also respond correctly to the "WM_QUERYENDSESSION" message and therefore do not need to be hard-terminated.

To ensure that the important data is saved correctly, the application must respond appropriately to "WM_QUERYENDSESSION", i.e. the backup data must be saved without user confirmation and within the preset time.

10.3. Configuration

The **MDevice** program is used for the configuration of the automatic shut down under **MS Windows**.



The MDevice manual can be found online in the download center at www.advantech-dlog.com.

11. Technical data

11.1. Environmental conditions

Operating temperature	-30 to +50 °C Specification according to EN 60068-2-1/2
Storage temperature	-30 to +65 °C Specification according to EN 60068-2-1/2
Relative humidity	10% to 90% at 25 °C relative humidity Noncondensing Specification according to EN 60068-2-3
Mechanical vibration and shock resistance	Class 5M3 according to EN 60721-3-5 US Highway Truck according to MIL-STD 810F
IP protection class	IP65

11.2. Projected-capacitive touchscreen (PCT)

Technical data	
Type	Projected-capacitive touchscreen
Construction	Glass-film-film
Surface Hardness	9 H at 500 g according to JIS-K-5400:
Impact Energy Resistance	IK08 (5 joule) according to ECN62262
Mechanical properties	Chemically strengthened soda lime glass
Chemical resistance	Alcohols, Dilute Acids, Dilute Alkalis, Esters, Hydrocarbons, Ketones, Household Cleaning agents (according to DIN 42 115 PartIII)

11.3. Serial interface COM1

- Max. 115,200 Baud (16550A compatible, 16 byte FIFO)
- Supports EIA-232-E on external 9-pin D-Sub connection
- ESD Level 4 protected (according to EN 61000-4-2)

11.4. Network adapter (10/100/1000)

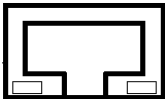
DLT-V6210 is equipped with a 10/100/1000 Mbit network adapter with 10/100/1000 Mbit per second. This adapter can be accessed via the bottom of the device and offers an RJ45 connection jack. The RJ45 connection port has two integrated status LEDs and are assigned as follows:

Fig. 11.1: RJ45 network port

Left LED (green):

LED off: no connection

LED on: connection (link)



Right LED (orange):

LED off: no activity

LED flashing: activity

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 the cable 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 to use a shorter cable.

11.5. USB

USB connection, for example for mouse, keyboard, USB stick	2 x USB 2.0 Host USB 2.0 Hi-Speed Fused at 0.5 A per channel ESD Level 4 protected (according to EN 61000-4-2)
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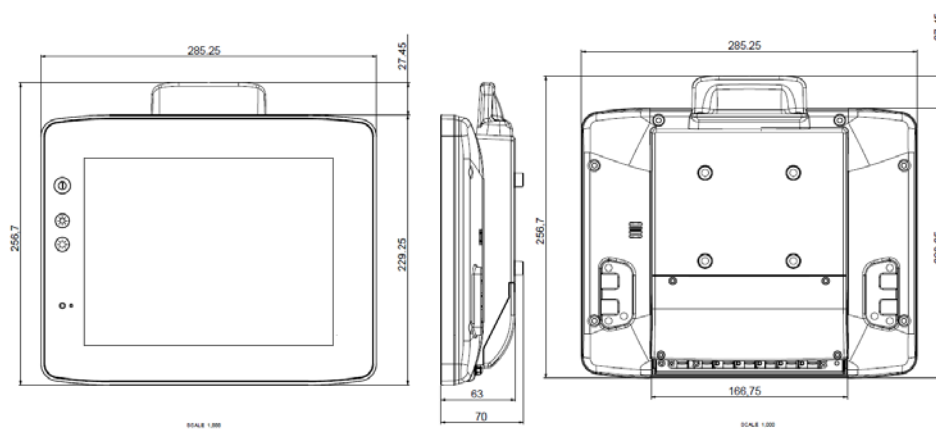
11.6. Internal speaker, sound

DLT-V6210 is equipped with an internal speaker as standard (2 W). The system messages from the industrial PC are output via this speaker. The internal speaker can be configured in the audio settings of operating system in question.

11.7. Device dimensions

Dimensions without add-ons (in mm)

Fig. 11.2: Dimensions of DLT-V6210



11.8. Position of VESA drill holes

DLT-V6210 is designed to support VESA mount standard. VESA-compatible drilling patterns for the RAM attachment and swivel joint brackets are located on the rear side of DLT-V6210.

Dimensions without add-ons (in mm) :

Need to use **M6** screws and the length of thread should be **between 8 to 10mm** depending on the bracket thickness to decide.

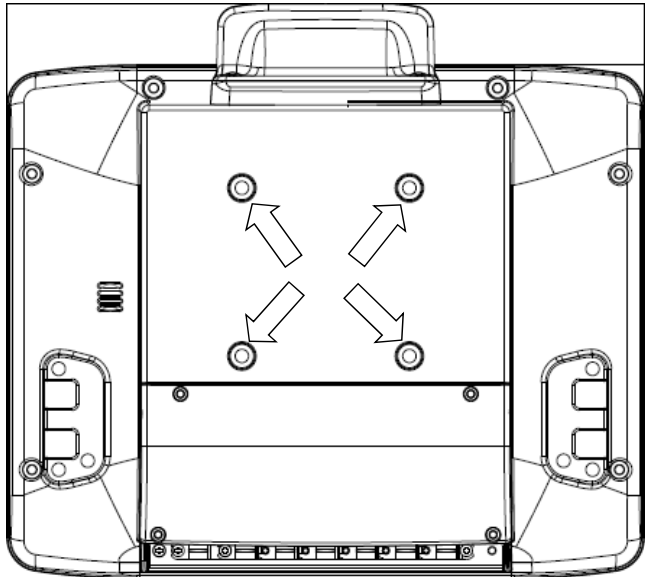


CAUTION

Risk of injury due to using unsuitable mounting apparatus.

To ensure that the device can be mounted and secured safely, must follow this instruction to select the suitable apparatus.

Fig. 11.3: Position VESA drill holes of DLT-V6210



12. Maintenance

12.1. Do not repair or modify

Only the manufacturer and its authorized service centers may:

- Conduct repairs
- Carry out modifications
- Replace modules
- Open the device

Loss of warranty

The legal warranty shall apply. It expires if the customer performs measures on the device that are only permitted to be performed by the manufacturer and its authorized Service Centers.

12.2. Regular checks and maintenance of the complete system

To ensure the stability and security of DLT-V6210 complete system:

- ⇒ Regularly check whether DLT-V6210 is firmly seated in the associated holder (RAM mount, mounting bracket) and the mounting screws are not loose.
- ⇒ Also check whether the bracket is secured stably to the respective deployment location. This is particularly important if DLT-V6210 is installed on any automotive object.
- ⇒ Check whether all connected cables are secured and the cable cover shuts tightly.



WARNING

Risk of accident due to unstable attachment of DLT-V6210.

If the attachment of DLT-V6210 becomes loose and breaks during moving, this can lead to severe accidents.

- ⇒ Perform checks for the attachment as described above at regular intervals.

12.3. Cleaning DLT-V6210



WARNING

Hazardous voltage, electrical shock from contact with live parts when cleaning the device.

To prevent an electrical shock while cleaning the device:

- ⇒ Switch off DLT-V6210 before cleaning.
- ⇒ Disconnect from the power supply.
- ⇒ Disconnect all connected accessories.

NOTICE: Physical damage

Cleaning the touchscreen and housing:

- ⇒ Never use chemical solvents to clean the touchscreen.
- ⇒ Do not use acidic or alkaline solutions.
- ⇒ Do not use cleaning agents that contain ammonia or sulfur (tile cleaners, for example, contain ammonia).
- ⇒ Do not use any abrasive glass cleaner or cloths that could scratch the touchscreen.

Cleaning the housing

- ⇒ Ensure that DLT-V6210 is switched off and currentless.
- ⇒ Clean the housing with a slightly dampened 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.

Cleaning the touchscreen

- ⇒ Switch off the device completely.
- ⇒ Use a neutral glass cleaner without ammonia or isopropyl alcohol applied to a lint-free cloth.
ATTENTION: Do not apply cleaning agent to the touchscreen; apply it to the cleaning cloth
- ⇒ Then wipe off the touchscreen with it.

13. Malfunctions

Problem	Cause / remedy
Imprecise reaction of touchscreen	The touchscreen of DLT-V6210 is already calibrated at the factory and therefore does not need to be recalibrated. However, the MS Windows operating systems Windows 7 Pro, Windows 8.1 Industry and WE8S do permit recalibration of the touchscreen via software (Menu Control Panel -> Tablet PC Settings). This resets the sensitivity of the touchscreen to an operating system default setting, which can result in poorer detection of taps on the screen. You can use Reset to reset the software recalibration.

Please contact DLoG GmbH if DLT-V6210 malfunctions. You can find the contact address in section *Technical customer support*.

14. Reasonably foreseeable misuse

14.1. Observe the intended use

DLT-V6210 industrial PCs are data communication terminals for using in commercial environments (e.g. logistics, warehouse, manufacturing).

DLT-V6210 industrial PCs:

- are not approved for using in EX zones (potential explosion hazard).
- are not approved for using on ships.
- are not approved for using in life-support systems or critical safety systems where system malfunction can lead to the direct or indirect endangerment of human life.

⇒ Observe the permissible environmental conditions.

⇒ Observe correct voltage range.

14.2. Mobile application

Please observe the following chapters in this manual:

5.1 *Safety notice – observe before installing*

6 *Electrical installation, cable connection, cable cover*

6.1.3 *Installation of DLT-V6210 on automotive objects*

15. Guidelines and certificates

15.1. FCC USA/CAN

DLTG GmbH Germany indicated that the radiated emission of DLT-V6210 complies with the requirements set forth in Subpart B of Part 15 of the Federal Communication Commission (FCC) rules for Class B devices and the Canadian Interference-Causing Equipment Standard ICES-003 for digital apparatus.

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/TV technician for help.



CAUTION

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.

15.1. RED (Radio Equipment Directive) 2014/53/EU

With regard to the RED (Radio Equipment Directive) 2014/53/EU the statements as below in the declaration of conformity for DLT-V6210 industrial PC to apply.

Česky [Czech]:	Toto zařízení je v souladu se základními požadavky a ostatními odpovídajícími ustanoveními Směrnice 2014/53/EU.
Dansk [Danish]:	Dette udstyr er i overensstemmelse med de væsentlige krav og andre relevante bestemmelser i Direktiv 2014/53/EU.
Deutsch [German]:	Dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 2014/53/EU.
Eesti [Estonian]:	See seade vastab direktiivi 2014/53/EU (EÜ) oluliste nõuetele ja teiste asjakohastele sätetele.
English:	This equipment is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.
Español [Spanish]:	Este equipo cumple con los requisitos esenciales así como con otras disposiciones de la Directiva 2014/53/EU (CE).
Ελληνική [Greek]:	Αυτός ο εξοπλισμός είναι σε συμμόρφωση με τις ουσιώδεις απαιτήσεις και άλλες σχετικές διατάξεις της Οδηγίας 2014/53/EU.
Français [French]:	Cet appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la Directive 2014/53/EU.

Íslenska [Icelandic]:	Þetta tæki er samkvæmt grunnkröfum og öðrum viðeigandi ákvæðum Tilskipunar 2014/53/EU.
Italiano [Italian]:	Questo apparato é conforme ai requisiti essenziali ed agli altri principi sanciti dalla Direttiva 2014/53/EU (CE).
Latviski [Latvian]:	Šī iekārta atbilst Direktīvas 2014/53/EU (EK) būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]:	Šis įrenginys tenkina 2014/53/EU (EB) Direktyvos esminius reikalavimus ir kitas šios direktyvos nuostatas.
Nederlands [Dutch]:	Dit apparaat voldoet aan de essentiële eisen en andere van toepassing zijnde bepalingen van de Richtlijn 2014/53/EU.
Malti [Maltese]:	Dan l-apparat huwa konformi mal-htigiet essenzjali u l-provedimenti l-oħra rilevanti tad-Direttiva 2014/53/EU.
Magyar [Hungarian]:	Ez a készülék teljesíti az alapvető követelményeket és más 2014/53/EU (EK) irányelvben meghatározott vonatkozó rendelkezéseket.
Norsk Norwegian]:	Dette utstyret er i samsvar med de grunnleggende krav og andre relevante bestemmelser i EU-direktiv 2014/53/EU (EF).
Polski [Polish]:	Urządzenie jest zgodne z ogólnymi wymaganiami oraz szczególnymi warunkami określonymi Dyrektywą UE: 2014/53/EU.
Português [Portuguese]:	Este equipamento está em conformidade com os requisitos essenciais e outras provisões relevantes da Directiva 2014/53/EU.
Slovensko [Slovenian]:	Ta naprava je skladna z bistvenimi zahtevami in ostalimi relevantnimi pogoji Direktive 2014/53/EU.
Slovensky [Slovak]:	Toto zariadenie je v zhode so základnými požiadavkami a inými príslušnými nariadeniami direktív: 2014/53/EU.
Suomi [Finnish]:	Tämä laite täyttää direktiivin 2014/53/EU (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 2014/53/EU.

Wi-Fi special regulations for Germany and France

For DLT-V6210 with Wi-Fi 802.11a/b/g/n, the following restrictions to be applied:

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

15.2. CE marking

The devices of DLT-V6210 series were tested and fulfill the CE conformity requirements and carry the CE mark on the rear side of the device.

15.3. Declaration of conformity

16. End-of-life device disposal



DLT-V6210 devices which are defective or ready for disposal which should be considered as special waste and can be recycled. They must not be disposed as general/domestic waste.

Proper disposal in accordance with local regulations is required.

Please contact the responsible authorities in your country/region to find out about the applicable regulations, if necessary.

17. Technical customer support

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

Phone: (+49) 89 / 41 11 91 999

email: helpdesk@advantech-dlog.com

Manufacturer address:

DLoG GmbH

Industriestraße 15

D-82110 Germering

Internet: www.advantech-dlog.com

email: info@advantech-dlog.com

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

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 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/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This device complies with FCC SAR exposure limits set forth for an uncontrolled environment. The equipment can be used in close proximity to the human body without any restrictions.

statement.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Canada

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

(1) This device may not cause interference; and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage;

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 0mm between the radiator and your body.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 0mm entre le radiateur et votre corps.

1. The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
2. For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;
3. For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate.
1. les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;
2. le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la limite de p.i.r.e.;
3. le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5725-5825 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.