

GV6.1300

**Payment Terminal for Vending Machines using Contactless
RFID Data Carriers**



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Contact address of manufacturer

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Bundesstraße 12
6714 Nüziders, Austria
www.gantner.com/locations

Important Information

Dear Customer,

Our aim is to ensure that our product operates with safety and to your complete satisfaction. To achieve this aim, please take this opportunity to familiarize yourself with the following guidelines.

- Pay attention to the safety messages in this manual. The messages are indicated by the signal words "DANGER", "WARNING", or "CAUTION", and inform you about hazardous situations and how to avoid them.
- Pay attention to messages indicated by the "NOTICE" signal word. These messages include important information for avoiding property damage.
- Pay attention to the symbols and safety messages on the product.
- Read all instructions in this manual carefully before installing or operating the product.
- Where not otherwise specifically documented, the appropriate installation, commissioning, operation, and maintenance of the product is the customer's responsibility.
- Keep this manual in a safe place for quick reference.

Notation of Safety Information and Safety Symbols

This manual includes important safety messages and symbols intended to inform the user about potentially hazardous situations or important information for the safe and proper use of the described product(s). The safety messages also include directives on how to avoid hazardous situations. These safety messages and directives must be read and observed.

The structure of the safety messages and the meaning of the symbols used in this manual are described in this section.

1. Safety Messages for Personal Injury

Personal safety messages contain a signal word, describe the nature of the hazard, and indicate how to avoid the hazard.



The safety alert symbol used without a signal word always precedes important safety information that must be read carefully, and the instructions carefully observed. Not doing so may cause personal injury.

Format of safety messages that apply to an entire section:

These safety messages may be used with or without a symbol.

CAUTION



Electrical shock

- ➔ *Touching current-conducting parts may result in injury due to electrical shock.*
- *Do not remove safety protection and covers.*
- *Do not touch the electrical connections while power is being supplied.*

Format of safety messages that are embedded in text and apply to a specific point:

CAUTION! **Electrical shock.** Never remove safety protection and covers. Do not touch the electrical connections while power is being supplied.

2. Property Damage Messages

Property damage messages are used to describe potentially hazardous situations that may lead to property damage. These messages have the same layout as safety messages but use the signal word "NOTICE" instead of "CAUTION".

Format of property damage messages that apply to an entire section:

NOTICE

Risk of damage to the device and connected devices

Risk of malfunction

- Read the following instructions carefully before installing the device.
- Always adhere to the instructions.

Format of property damage messages that are embedded in text and apply to a specific point:

NOTE! Risk of damage to the device and connected devices. Read the following instructions carefully before installing the device.

3. Definition of the Signal Words

	Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.
	Indicates information considered important, but not hazard-related (e.g., messages relating to property damage).

4. Definition of the Safety Symbols

	Caution: General Information This symbol indicates general warnings or cautions that are not related to a particular type of hazard.
	Caution: Electrical Shock This symbol indicates warnings related to electrical hazards (danger due to high voltage).
	Prohibited: Do Not Disassemble This symbol indicates warnings about not disassembling certain components or equipment. Disassembling may lead to damage or malfunction of the device.
	Mandatory Action: General Information This symbol indicates general information that must be read and followed before proceeding with the accompanying instructions.
	Mandatory Action: Read Instructions This symbol indicates information referring to an important description in the manual, or other documentation, which must be read and followed.

⚠ Important Safety Information ⚠



- The installation, commissioning, and servicing of our products must be performed only by suitably trained personnel. In particular, electrical connections must only be made by correspondingly qualified specialists. Always observe the relevant installation regulations in accordance with the National Electrical Engineers Association.

➔ Unqualified personnel may potentially perform actions that result in injury due to electrical shock.



- Where not otherwise stated, installation and maintenance work on our products must be carried out when disconnected from the power supply. This applies in particular to appliances that are normally supplied by low-voltage current.

➔ If the appliance is not disconnected from power, touching terminals or other internal parts of the appliance may lead to injury due to electrical shock.



- It is prohibited to alter the products (devices, cabling, etc.).

➔ Alterations to the products may subsequently result in personal injury, property damage, or damage to the products.

- Do not remove protective shields and covers.

➔ Removing protective shields and covers may result in personal injury or property damage.

- Do not attempt to repair a product after a defect, failure, or damage is detected. In addition, do not put the product back into operation. In such cases, it is essential to contact your GANTNER representative or the GANTNER support hotline.



- The installation, commissioning, operation, and maintenance of the product must be carried out in accordance with the technical conditions of operation as described in the corresponding documentation. Therefore, it is essential to read the corresponding chapter of this manual and observe the instructions and information therein.

- If there are still some points that are not entirely clear, please do not take a chance. All queries can be clarified by your GANTNER representative or by ringing the GANTNER support hotline.

- Directly on receipt of the goods, inspect both the packaging and the product itself for any signs of damage. Also check that the delivery is complete and includes all accessories, documentation, auxiliary devices, etc.



- If the packaging or product has been damaged in transport, or should you suspect that it may have a fault, the product must not be put into service. Contact your GANTNER representative who will endeavor to resolve the problem as quickly as possible.

- GANTNER Electronic GmbH accepts no responsibility for any injuries or damage caused as a result of improper use.

Although great care is taken and we are continuously aiming for improvement, we cannot completely exclude the possibility of errors appearing in our documentation. GANTNER Electronic GmbH therefore accepts no responsibility for the completeness or the accuracy of this manual. The right is reserved to make alterations at any time without prior notice.

Should you discover any fault with the product or in its accompanying documentation, or you have any suggestions for improvement, you may confidently inform your GANTNER representative or GANTNER Electronic GmbH directly.

We especially look forward to hearing from you if you want to let us know that everything is functioning perfectly.

The GV6.1300 terminal was developed and manufactured under the ISO 9001 quality management standard and GANTNER Electronic GmbH is also certified according to ISO 14001 standard.



This product is in conformity with the following EC directives, including all applicable amendments:
- 2014/53/EU (Radio Equipment Directive)
The full text of the CE declaration of conformity is available on the GANTNER partner website.



GANTNER is committed to meeting or exceeding the requirements of the RoHS directive (2011/65/EU). The RoHS directive requires that manufacturers eliminate or minimize the use of lead, mercury, hexavalent chromium, cadmium, polybrominated biphenyls and polybrominated diphenyl ethers in electrical and electronic equipment sold in the EU after July 1, 2006.



The WEEE symbol on GANTNER products and their packaging indicates that the corresponding material must not be disposed of with normal household waste. Instead such marked waste equipment must be disposed of by handing it over to a designated electronic waste recycling facility. Separating and recycling this waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. Please contact your local authority for further details of your nearest electronic waste recycling facility.

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1 INTRODUCTION

1.1 About this Manual

This manual contains a detailed description of how to install and configure the GV6.1300 terminal. Furthermore, the operation for the end user is described. The installation and electrical connection of the GV6.1300 can also be found in this manual.

The GV6.1300 can operate offline or online and can be integrated into a vending software (backend). This manual only describes the online operation in GANTNER operating mode, where the customer data is stored on the server and is managed via vending software. There is no wallet on the customers' data carriers; data is only read from the data carrier, but no data is written onto the data carriers.

Please also refer to the documentation of the vending software used by the system integrator and the vending machine to which the GV6.1300 is connected.

1.2 Chapter Overview

In chapter "2. GENERAL INFORMATION" you will find the functional description and a device overview of the GV6.1300 terminal, an overview of the system components of the GV6.1300, and a description of the terms used most frequently in this manual.

In chapter "3. INSTALLATION" you will find the installation instructions for the GV6.1300, i.e., how to install the GV6.1300 terminal on-site or on the vending machine.

Chapter "4 ELECTRICAL CONNECTIONS" describes how to complete the electrical connections of the GV6.1300 (e.g., vending machine MDB interface, network interface, power supply).

In chapter "5 CONFIGURATION" you will find a description of the configuration interface and user interface (web interface) and the configurable settings of the GV6.1300.

In chapter "6 OPERATION" an overview of the operation on the GV6.1300 is available. The operation depends on the type of vending machine and vending software being used.

Chapter "7 FREQUENTLY ASKED QUESTIONS (FAQ)" contains an overview of the possible error messages indicated by the GV6.1300 and answers to frequently asked questions.

Chapter "8 TECHNICAL DATA" contains the technical data of the GV6.1300 terminal.

1.3 Target Group

This manual contains information relevant for the different stages in the operating life of the GV6.1300. Information about the installation, commissioning, and service/maintenance of the GV6.1300 is separated into corresponding chapters. When a chapter is intended for a specific audience, this is clarified at the beginning of the chapter.

Information for the following target groups is available in this manual:

- Installation technicians (installation, configuration).
- Service technicians (configuration, operation).
- End users of the GV6.1300 (operation).

Where not explicitly stated, the information in this manual is intended for all target groups in general.

⚠ CAUTION! Injury and property/equipment damage. The tasks described in each chapter must only be performed by the specified target group. Unqualified personnel who perform the described tasks risk personal injury or damaging property/equipment.

1.4 Formatting

1.4.1 Safety-Critical Information

The following formatting (with example text) is used in this manual to display important, safety-critical information that must be read and followed.

NOTE! Following on from this signal word in the manual is a reference text that must be read and followed. The reference text contains important information. Non-observance can lead to damage to the device or associated equipment.

1.4.2 Non-Safety-Critical Information

The following formatting (with example text) is used in this manual to display important, but not safety-critical information.

i *The text accompanying this symbol contains interesting information relevant to the current chapter. You do not necessarily need to read this text, however; it will help you to understand the information in the section or provide interesting tips for the described device or the operation of the software.*

1.4.3 Instructions and Results

Instructions, which must be completed by the reader, and the results of these instructions are formatted as follows.

- This symbol represents an action or instruction that must be followed.
 - This symbol represents the result after completing the previous instruction.

1.5 Contact & Inquiries

If you have any questions concerning the GV6.1300, please contact your local sales partner or one of the GANTNER branch offices directly. The contact details are available via the following link: www.gantner.com/locations

2 GENERAL INFORMATION

2.1 Intended Use

The GV6.1300 terminal is intended exclusively for providing a payment function using contactless RFID data carriers for vending machines or similar, and cashless payment options in self-operation.

To ensure correct and safe use, please observe all instructions in this manual as well as the technical data of the GV6.1300 (see "8. TECHNICAL DATA").

2.2 System Overview

The following figure shows schematically how the GV6.1300 terminal can be used together with a vending machine.

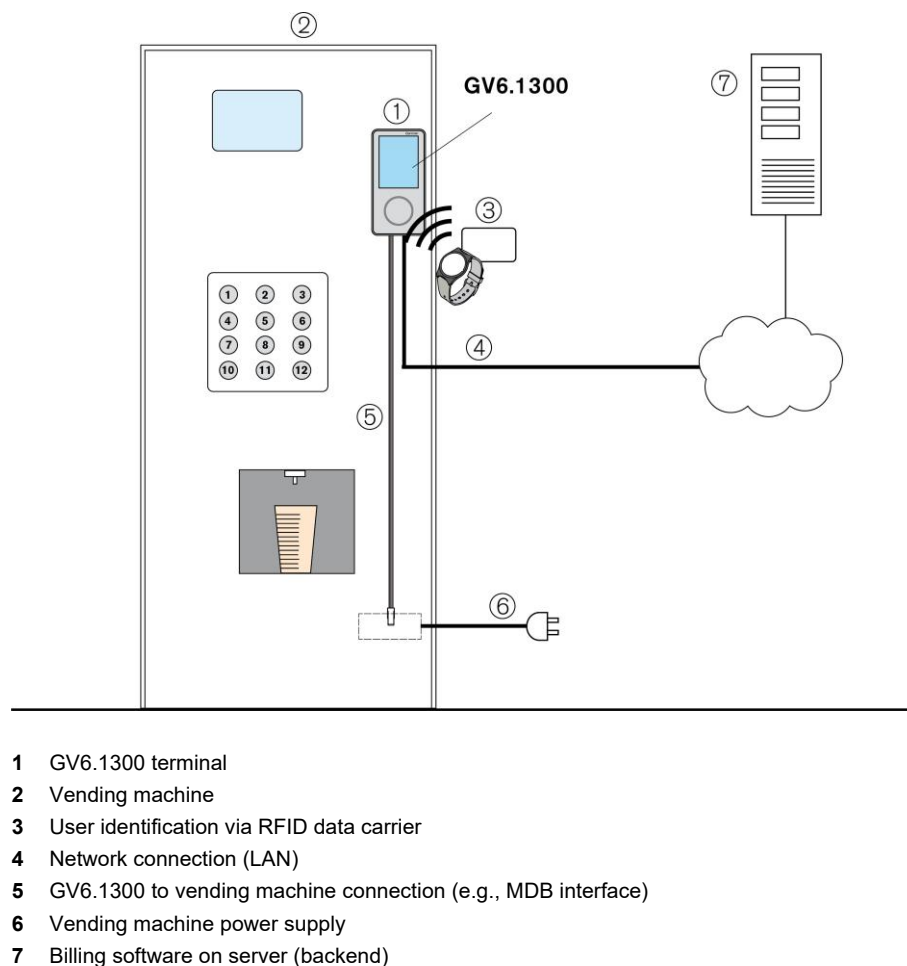


Figure 2.1 – System overview and typical application

2.3 Functional Description

When a user wishes to purchase a product, they identify themselves on the GV6.1300 by holding their contactless RFID data carrier in front of the circular reading field of the GV6.1300. The GV6.1300 communicates with a server-based vending software via the network interface. The standard network connection is via LAN (Ethernet). WLAN or GSM connections are also possible and communication via GAT DIRECT.Connect is also supported. Please contact your sales partner to discuss these solutions.

The vending software identifies the user via the data carrier UID number and checks the account credit of the user, which is managed by the vending software. The credit is sent to the GV6.1300 where it is shown on the display.

The user now selects the desired product on the vending machine. The GV6.1300 terminal is connected to the vending machine using a vending machine interface (MDB) and the vending machine reports the selected product to the GV6.1300, which sends the information to the vending software, which performs the sales check. In addition to the user's credit, other information can be checked here depending on the settings, e.g., different time slots with different prices, credits, user groups (visitors or employees), etc.

The vending software confirms the sale if the check is valid and communicates accordingly with the GV6.1300. The information (e.g., "valid sale" or "sale canceled" is shown on the display of the GV6.1300 and forwarded by it to the vending machine to dispense the product (if valid).

RFID data carriers with 13.56 MHz radio technology can be used for user identification by default.

2.4 Terminology

The terms used frequently in this manual are defined as follows.

GV6.1300 / Terminal

Terminal with RFID reader and display as described in this manual.

Vending machine

Designates the vending machine that is connected to the GV6.1300 via an MDB interface. This can be, e.g., a beverage, coffee, or food vending machine. Other applications, e.g., bottle return or menu selection at canteens, are also possible. The term "vending machine" is used here for all these applications. If special requirements or settings are necessary for an application, this will be indicated in this manual

Vending software

A software solution provided by the operator of a facility where the GV6.1300 with vending machines are used. This software is responsible for price calculation, user account debiting or crediting during transaction, activation of vending, etc.

User

In this manual, the term "user" refers to the person or customer who identifies themselves at the GV6.1300 using an RFID data carrier in order to purchase a product from the connected vending machine.

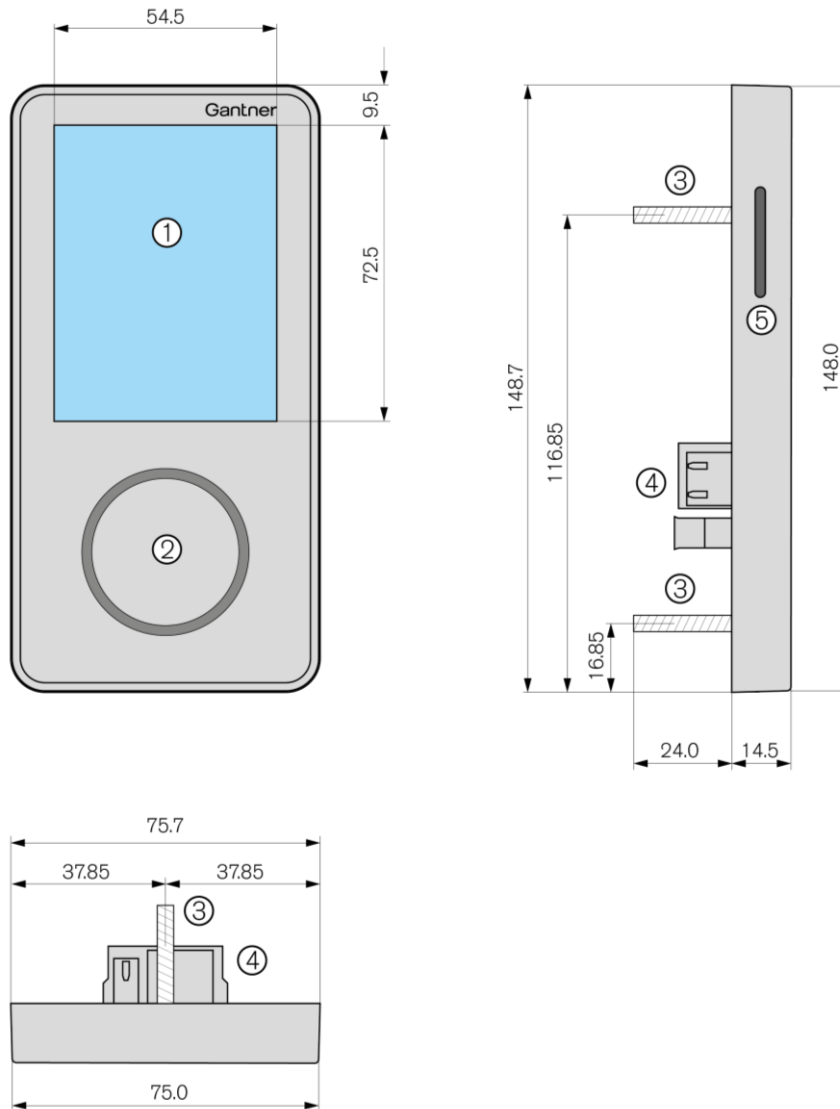
RFID data carrier

In this manual, RFID data carriers, or "data carriers" for short, refers to the electronic ID medium used by users to identify themselves at the GV6.1300. The data carriers with contactless RFID (Radio Frequency Identification = wireless identification) chips are available in various forms, e.g., cards, key tags, or wristbands, and for different identification systems (LEGIC, MIFARE® or ISO 15693) and are read at the RFID reader integrated in the GV6.1300 terminal (light gray circle on the front of the terminal below the display).

GAT DIRECT.Connect

Software for integrating compatible GANTNER devices into third-party software applications, e.g., accounting software in a leisure facility. The GV6.1300 can also be connected via GAT DIRECT.Connect.

2.5 GV6.1300 Terminal



Measurements in mm

- 1 Display
- 2 RFID reading field
- 3 Mounting thread
- 4 Connector plug
- 5 SD card reader (for backups)

Figure 2.2 – GV6.1300 features and dimensions

The GV6.1300 terminal has a reader for RFID data carriers and thus enables the identification of persons using their personal data carriers at the RFID reader.

Two mounting threads are provided for installation (3). The electrical connections are carried out via connector plugs (4). See the following chapters for more information.

3 INSTALLATION

The GV6.1300 terminals are designed to be installed on a flat, smooth surface (e.g., surface of the vending machine). The mounting surface can be constructed from metallic or non-metallic material. Ideally, a non-metallic mounting surface should be selected to guarantee trouble-free reading of the data carriers. Under no circumstances should the RFID reading field (light gray circle) be covered with metal.

A "Desktop Holder Set" and a "Mounting Set" are also available, with which the GV6.1300 can be mounted on a table stand or on a standard EVA cutout of a vending machine.

⚠ CAUTION



Electric Shock

- ➔ *Touching live parts can lead to injuries from electric shock.*
 - *Before working on the device or installation/dismounting, the device must be disconnected from the power supply.*
 - *The applicable safety and accident prevention regulations must be observed.*
 - *Protective devices must not be removed.*
-

NOTICE



Damage to or malfunction of the GV6.1300 terminal

- ➔ *Improper work on the device can damage the GV6.1300 terminal.*
 - *Read the information in this chapter carefully before installing the GV6.1300 terminal.*
 - *Installation and maintenance of this device may only be carried out by suitably trained personnel.*
 - *Observe the specified technical data and dimensional drawings of the device.*
 - *Use the correct tools to install the GV6.1300 terminal.*
-

3.1 Target Group

This chapter contains information for the technicians responsible for installing the GV6.1300 terminal. Experience in mechanical work and basic electrical engineering knowledge is assumed. Previous knowledge of the GV6.1300 terminal or the GANTNER access system is not required.

3.2 Installation Information

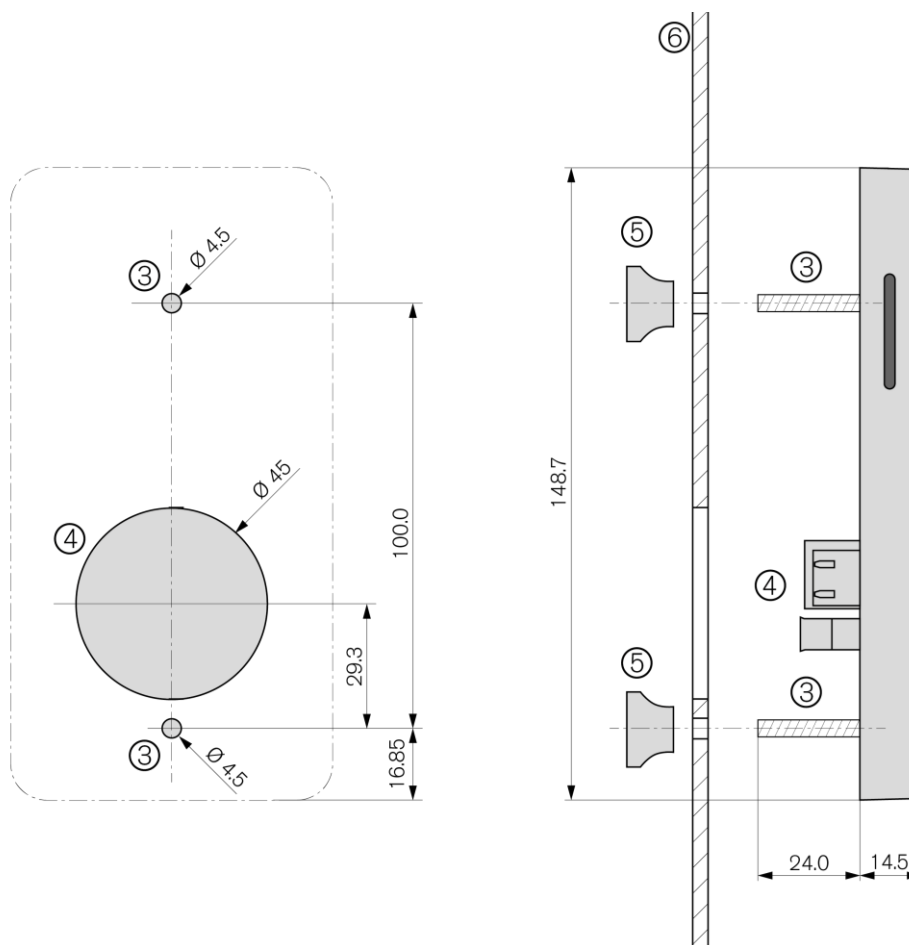
Please note the following during installation:

- Recommended mounting height measured to the center of the display = 1.3 m
- The GV6.1300 should not be exposed to direct sunlight. Otherwise, the readability of the display could be limited.

3.3 Installation Preparation

This chapter describes the standard installation of the GV6.1300 without the optional mounting sets. For a description of the mounting sets see the following chapters.

The GV6.1300 is mounted using two mounting threads. For this purpose, two mounting holes (3) and one hole for the connection plug (4) must be made in the mounting surface (e.g., the front of the food dispenser). To do this, observe the measurements in the following figure.



- 3 Mounting holes
- 4 Drill hole for connection plugs
- 5 Mounting nuts
- 6 Mounting surface (e.g., front wall of the food vending machine)

Figure 3.1 – Mounting holes and mounting of the GV6.1300

- Drill two $\varnothing 4.5$ mm holes for the mounting threads (4) and the $\varnothing 45$ mm recess for the connection plugs (4).

Note: You can use the drilling template included with the GV6.1300 to mark the hole positions.

3.4 Installation Instructions

Complete the following instructions to install the GV6.1300.

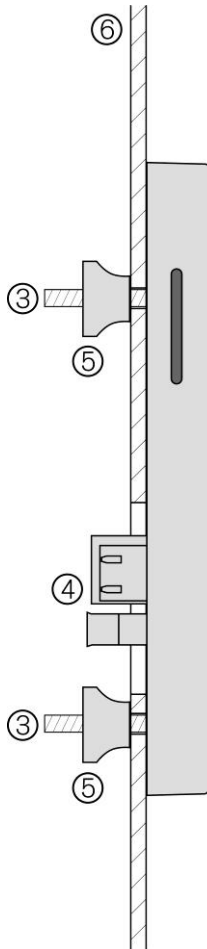


Figure 3.2 – Installed GV6.1300

- ▶ Ensure that the surface on which the GV6.1300 is to be mounted is clean and flat.
- ▶ Remove the mounting nuts (5) from the mounting threads.
- ▶ The mounting threads can be shortened to the required length if necessary.
- ▶ Attach the GV6.1300 to the surface and secure the housing using the two mounting nuts (5).
- ▶ Ensure that the housing is securely attached.

3.5 Optionale Montagesets

With the optional **Desktop Holder Set (part no. 1111419)**, the GV6.1300 is mounted on the included table stand, which can then be placed on a flat surface such as a counter or table surface. If desired, the table stand can also be attached to the table surface with screws. The cable feed can be on the back of the desktop holder on the table surface or hidden downwards through the table surface.

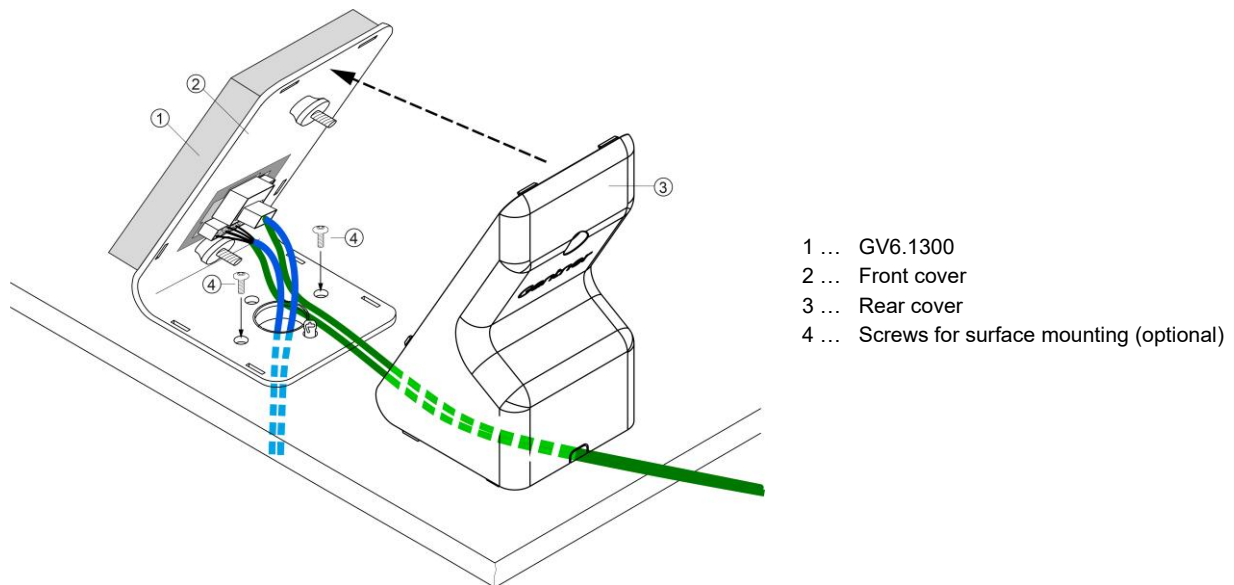


Figure 3.3 - GV6.1300 mounted on desktop with Desktop Mounting Set

With the optional **Mounting Set (part no. 1111418)** the GV6.1300 can be mounted at standard EVA cut-outs at vending machines.

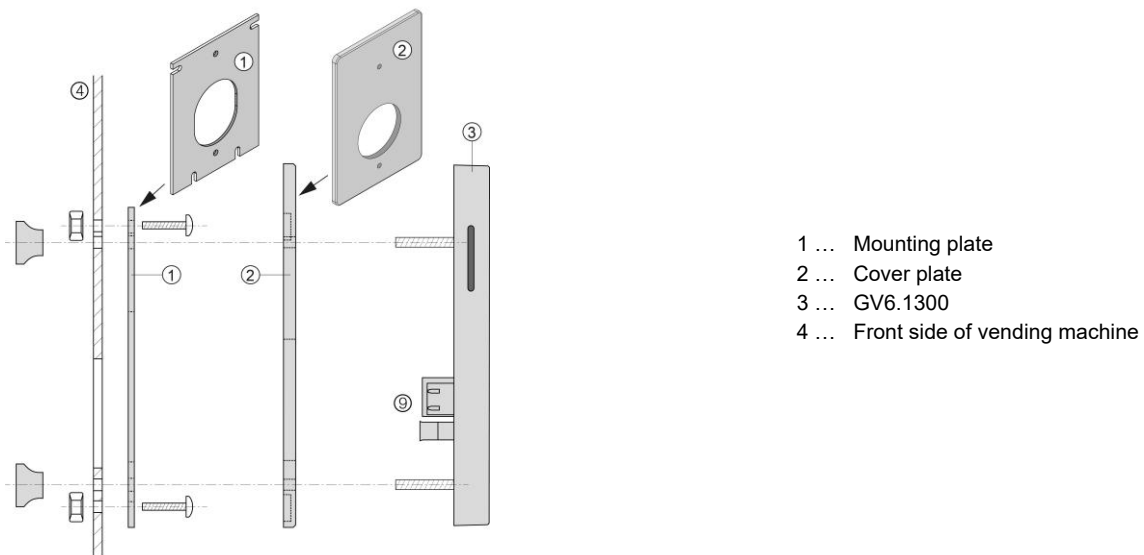


Figure 3.4 - GV6.1300 mounted at EVA cut-out with the Mounting Set

i A detailed description of the Monting Sets can be found in the respective packaging sheets included with the sets.

4 ELECTRICAL CONNECTIONS

The GV6.1300 is equipped with connection plugs on the rear side that are used to connect the terminal to the supply voltage, network, and vending machine.

⚠ CAUTION



Electric Shock

→ *Touching live parts can lead to injuries from electric shock.*

- *Before working on the device or installation/dismounting, the device must be disconnected from the power supply.*
- *Observe the specified technical data and dimensional drawings of the device.*
- *Protective devices must not be removed.*

4.1 Target Group

This chapter contains information for the electricians responsible for completing the electrical connections of the GV6.1300. This work may only be carried out by qualified personnel. Prior knowledge of the GV6.1300 is not required.

4.2 Network Connection (LAN / Ethernet)

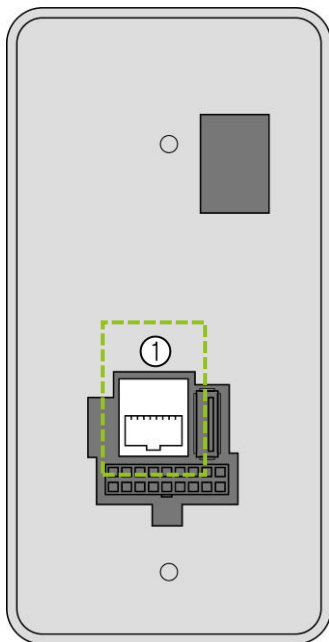


Figure 4.1 – Network cable connection

Recommended cables / cable lengths for LAN Ethernet:

- Shielded and twisted data cable (recommendation min. CAT 5 for 100 MBit).
- Cable length max. 100 m.

► Connect the Ethernet cable to the RJ45 connector (1) of the GV6.1300.

Depending on the standard used, the wire colors are as follows:

Terminal	Signal	Wire color TIA-568A	Wire color TIA-568B
Rx –	Receive signal Rx –	green	orange
Rx +	Receive signal Rx +	green/white	orange/white
Tx –	Transmit signal Tx –	orange	green
Tx +	Transmit signal Tx +	orange/white	green/white
Shld	Shield	-	-

Table 4.1 – Ethernet wire colors

4.3 Connecting the MDB Interface to the Power Supply

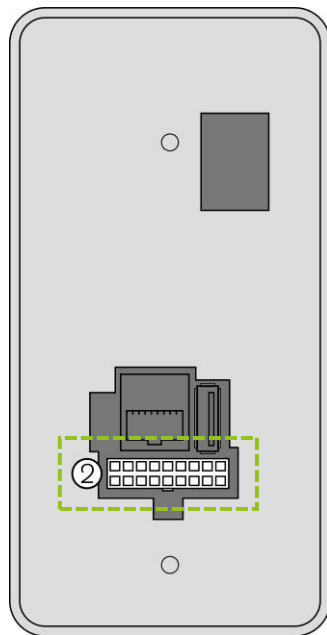


Figure 4.2 – Connection socket for the MDB interface and voltage supply

NOTICE

The plug of the MDB interface may only be connected / disconnected voltage-free. Connecting the plug with voltage applied may damage the GV6.1300!

The MDB interface (2) is used for the data connection of the vending machine. The GV6.1300 is also supplied with voltage via this connection (DC 12 - 24 V / 12 - 48 V). For the voltage supply, observe the technical specifications of the GV6.1300 (see "8. TECHNICAL DATA").

The pin assignment is as follows:

PIN	Signal
1	GND (supply)
2	VMC Comm: BDV Rx
3	VMC Comm: GND
4	VMC Comm: MDB Rx
5	VMC Comm: CCI Rx
6	GND
7	RS-232/V.24: Rx D
8	GND
9	TTL I/O: K1-B ($\pm 20\text{mA max.}$)
10	Supply voltage: DC 10-48 V, 1 A max.
11	VMC Comm: BDV Tx
12	VMC Comm: MDB Tx
13	VMC Comm: GND
14	VMC Comm: CCI Tx
15	Voltage output: DC +5 V, 500 mA max.
16	RS-232/V.24: Tx D
17	Open collector output: 100 mA/24 V max.
18	TTL I/O: K1-A ($\pm 20\text{mA max.}$)

Figure 4.2 – PIN assignment of the vending machine connection plug (gray = default MDB connections and power supply)

NOTE! Ensure that the vending machine is switched off. The supply voltage must not be applied when the connector is connected or disconnected!

- Ensure that the PIN assignment is correct (the default assignment for MDB is shown in Figure 4.2).
- Insert the connector plug (18-pin) into the socket (2). The plug should click into place in the socket.
- The vending machine can now be switched on.
 - The GV6.1300 starts automatically after the voltage is applied.
 - The display shows the start screen and the IP address with which the GV6.1300 can be reached via the network (see also “5. CONFIGURATION”).

4.4 USB Connector

The USB type-A connector is not required for normal operation and must not be used.

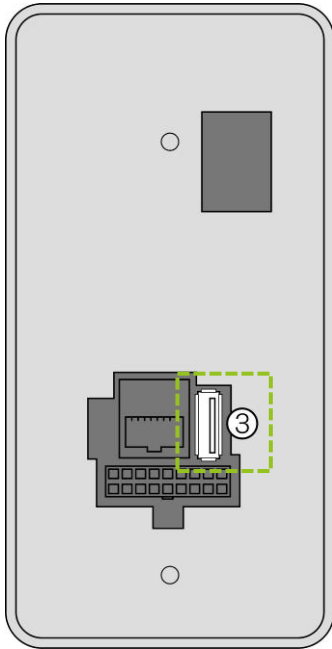


Figure 4.3 – USB connector (no function)

5 CONFIGURATION

5.1 Target Group

This chapter contains information for the technicians responsible for commissioning and configuring the GV6.1300. A basic understanding of electrical engineering is assumed. GANTNER recommends that the configuration of the GV6.1300 and the vending machine or system be carried out by trained personnel only. GANTNER offers regular training courses for its partners.

NOTE! This chapter only describes the configuration settings required for the GANTNER implementation of the GV6.1300.

5.2 Prerequisites for Use

- Min. firmware version 2.6.0.3 must be installed in the GV6.1300.
Note: The firmware can be installed and updated in the device via FTP (see "5.9. GV6 Inspector"). It is recommended to always use the latest firmware.
- A vending machine must be connected via the MDB interface.
- The GV6.1300 must be able to access a vending software via the network and the software must be configured accordingly.
- A web browser is used for configuration. All current browsers can be used. We recommend using Microsoft Edge, Firefox, or Google Chrome of the latest version.

5.3 Switching On and Starting the GV6.1300

- ▶ Ensure that the electrical connections have been completed according to chapter "4. ELECTRICAL CONNECTIONS".
- ▶ Switch on the voltage supply of the GV6.1300.
 - After applying the supply voltage, the GV6.1300 starts. The operating system and the application software are loaded first.
 - During the start-up process, the installed firmware version (e.g., "V2.6.0.3") is shown on the display.
 - A few seconds later, the network configuration is displayed:

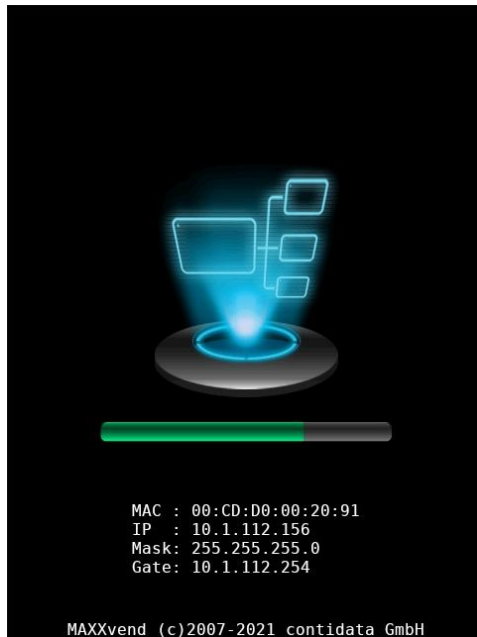


Figure 5.1 – Start screen with network information

- Displayed on the screen are the MAC address of the terminal, the assigned IP address, the netmask (Mask), and the gateway address (Gate).
- The entire startup process takes approx. 30 seconds. After that, the terminal is in the basic state.

The IP address of the GV6.1300 can be obtained automatically via a DHCP server. However, a fixed IP address or a network name can also be specified (see "5.6.2. Network").

NOTE! By default, the GV6.1300 terminal is configured to obtain an IP address automatically in the network via DHCP. If the GV6.1300 is not assigned an IP address, the last assigned address is used.

5.4 Configuration via Web Browser

- ▶ To edit the configuration of the GV6.1300, open a web browser and enter the IP address of the GV6.1300.
 - A login window opens, which may look different depending on the browser.

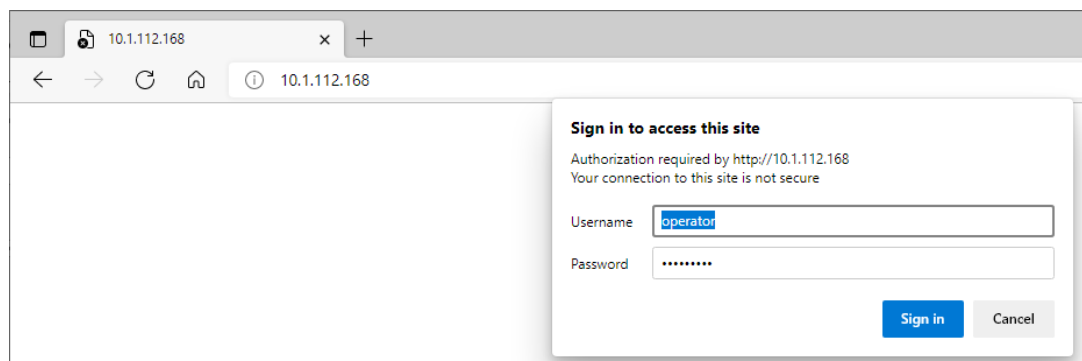


Figure 5.2 – GV6.1300 login window

- Enter your username and the corresponding password and click on "OK". By default, the username "operator" and the password "contipass" are preset.

WARNING! The device will prompt you to set a root password during the initial startup. Please save this password in a secure place. Password recovery is not possible in the field; if you forget your password, the device must be returned to the factory for a reset.

- The start page of the configuration interface is displayed.

The screenshot shows the start page of the GV6.1300 configuration interface. It features a header with the 'contidata' logo and a language dropdown menu set to 'English'. Below the header is a blue bar displaying 'GV6.1300'. A main menu bar contains tabs for 'Info', 'System', 'Pricing', and 'Service'. A sub-menu bar shows 'Protocol' and 'Live view'. The main content area displays a welcome message 'Welcome to the device web interface of unit 12' and a table of current device operations. The footer shows the current system time '15.12.2021 12:55:16' and the manufacturer 'GANTNER Electronic GmbH'.

Date/Time:	Message:
16.11.2021 10:54:04	No communication with the machine control possible
15.12.2021 12:54:22	Card read: sequence number=36417865262111236, category=0, price list=0
15.12.2021 12:54:22	Read card... (UID=36417865262111236)
15.12.2021 12:52:23	Card removed
15.12.2021 12:52:21	Card read: sequence number=36417865262111236, category=0, price list=0
15.12.2021 12:52:21	Read card... (UID=36417865262111236)
15.12.2021 12:52:20	Card removed
15.12.2021 12:52:18	Card read: sequence number=36417865262111236, category=0, price list=0
15.12.2021 12:52:18	Read card... (UID=36417865262111236)
15.12.2021 12:52:14	Card removed
15.12.2021 12:52:12	Card read: sequence number=36138523004206084, category=0, price list=0
15.12.2021 12:52:12	Read card... (UID=36138523004206084)
16.11.2021 10:40:41	Kommunikation (VMC) hergestellt, Einheit betriebsbereit!
16.11.2021 10:40:35	Die Automatensteuerung meldet fehlende Betriebsbereitschaft

Figure 5.3 – Start page of the configuration interface, "Protocol" view

The configuration interface is divided into the following areas:

- 1 Language: Here you can select the desired display language for the configuration interface.
- 2 Main menu (categories): The different configuration categories are accessed via these tabs.
- 3 Sub-menu tabs: These sub-menu tabs change depending on which main category is selected. Via these tabs you can access the different configuration sub-pages.
- 4 Content area: Depending on the selected sub-menu, the configuration page with information or settings is displayed here.

The individual categories and configuration pages are described over the following pages.

5.5 Category "Info"

No settings are available here. You can display the status information of the GV6.1300 via this category.

5.5.1 Protocol

Info	System	Pricing	Service
Protocol	Live view		

Welcome to the device web interface of unit 12

Current device operations:

Date/Time:	Message:
16.11.2021 10:54:04	No communication with the machine control possible
15.12.2021 12:54:22	Card read: sequence number=36417865262111236, category=0, price list=0
15.12.2021 12:54:22	Read card... (UID=36417865262111236)
15.12.2021 12:52:23	Card removed
15.12.2021 12:52:21	Card read: sequence number=36417865262111236, category=0, price list=0
15.12.2021 12:52:21	Read card... (UID=36417865262111236)
15.12.2021 12:52:20	Card removed
15.12.2021 12:52:18	Card read: sequence number=36417865262111236, category=0, price list=0
15.12.2021 12:52:18	Read card... (UID=36417865262111236)
15.12.2021 12:52:14	Card removed
15.12.2021 12:52:12	Card read: sequence number=36138523004206084, category=0, price list=0
15.12.2021 12:52:12	Read card... (UID=36138523004206084)
16.11.2021 10:40:41	Kommunikation (VMC) hergestellt, Einheit betriebsbereit!
16.11.2021 10:40:35	Die Automatensteuerung meldet fehlende Betriebsbereitschaft

Current system time: 15.12.2021 12:55:16

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Figure 5.4 – Start page of the configuration interface, protocol view

All live actions occurring on the GV6.1300 and terminal messages are displayed here. The information is indicated with different colors:

- **Blue:** Information (e.g., start-up of the GV6.1300 and reading of data carriers).
- **Gray:** Information about the product sale.
- **Green:** Success messages (e.g., valid/successful sale).
- **Red:** Error messages (e.g., data carrier read error).
- **Yellow:** Warnings.

The current system time of the GV6.1300 is also displayed. Check that this is set correctly.

5.5.2 Live View

On this configuration page, a live representation of the current GV6.1300 display is shown.

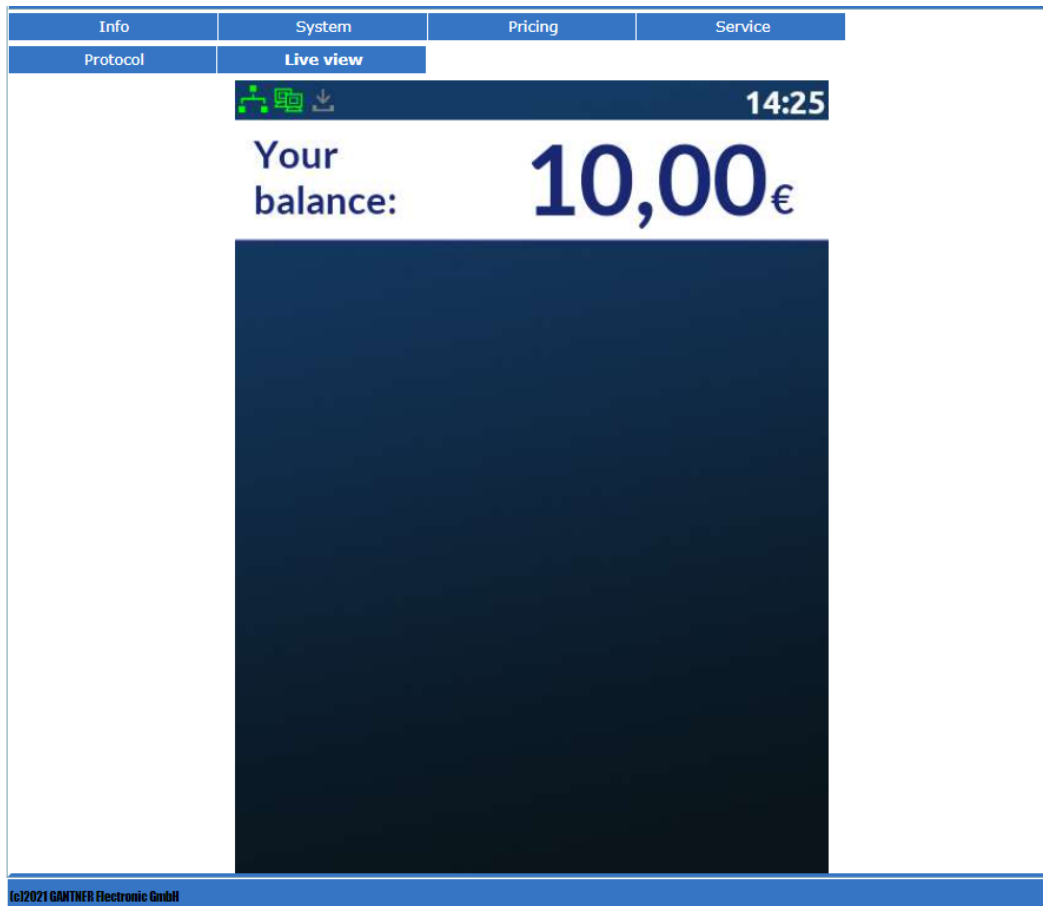


Figure 5.5 – Live view of the display

5.6 Category "System"

In this category, general settings of the GV6.1300 terminal, e.g., protocol and network settings or design preferences, are available for configuration.

5.6.1 Basic Settings

The most important settings that define the operation of the GV6.1300 terminal are available on this page. In this operating mode, only the UID number (card number) is read from the data carrier and transmitted to the vending software. The software is responsible for the checking, sales approval, and accounting of the customer accounts. The necessary or important settings are described below. All other values should be left unchanged or as shown in Figure 5.6.

GV6.1300			
Info	System	Pricing	Service
Basic settings	Network	Language/Desktop	Design
Save			
General settings Unit number: 20 Currency symbol: €		Vending machine interface* [Debug-Funktionen] Communication protocol: MDB v2 max. Currency symbol ID (ISO4217, only MDB): 0x1978	
Card reader* [Module-Init] Card reader type: Intern (onboard) Card number is card UID ☒ Only read card number (read-only) ☒ Activate fast mode ☒ Flip UID/card number byte order ☒ Timeout card virtualization 30 Timeout DirectMode 60 Show cancel (eject) button on screen ☒ Deactivate/disable the following RFID standards: ☐ Legic RF ☐ ISO15693 ☐ Inside Secure ☐ ISO14443A Ivl 3 ☐ ISO14443A Ivl 4 ☐ ISO14443B ☐ SONY Felica ☐ ST RS Emulate reader of type: Mifare		Show info during sale ☐ PID binary instead of BCD (only BDV) ☐ Suppress cash sale command ☐ Vending machine host interface (ext. periphery)* Communication protocol: *none* End external process after reference ☐ Allow change to be returned ☐ Allow cash sale with card ☐ Suppress "No change" message ☐ Card number base (ext.) 0	
Time/date settings* Time zone: -1 Automatic daylight save time ☒		Other Allow multiple sales (Multivend) ☐ Allow acoustic signals ☒ Boost: ☐ Allow offline booking with online system ☐ Hide card credit value ☐	
* Please note that changing settings marked with an asterisk requires a restart!			
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Figure 5.6 – "System" category, "Basic settings" configuration page

General settings

- Unit number: This number is the address of the GV6.1300. If there are several devices in the system, each must have a unique number.

- Currency symbol: For the prices of the products, the GV6.1300 internally only uses the values without a currency symbol. A currency symbol can be defined here that is used for the display of the values.

Card reader

- Card reader type: The internal reader is used to read the RFID data carriers by default. This reader can read LEGIC, MIFARE and ISO 15693 data carriers. For this purpose, set the value to "Intern (onboard)". If an external reader is to be used, select the appropriate type.
- Card number is card UID: Enable this setting. The UID number of the RFID data carriers is thus used as the number for user identification.
- Only read card number (read-only): This setting must be enabled. The UID number only is read from the RFID data carriers, but no data is written to the data carriers.
- Activate fast mode: If this setting is enabled, the processing and reading of the RFID data carriers is accelerated. Problems may occur when writing to the data carriers. However, since data carriers are not written in GANTNER mode, it is recommended to enable this setting.
- Flip UID/card number byte order: By default, the unique number (UID) of data carriers is stored and read by the GV6.1300 in little-endian format (the least significant bit in first place, i.e., the lower memory address). GANTNER uses the big-endian format in the communication protocol.

By enabling this option, the UID numbers are swapped from little-endian to big-endian and sent. This only affects communication via the GANTNER protocol. Processing in the device and display in the configuration interface is not affected by this setting.
- Timeout card virtualization: The time entered here (in seconds) determines how long a data carrier read at the reader of the GV6.1300 continues to be virtualized. This simulates the data carrier still being in the reading field although it has already been removed from the field. Entering a value of "0" deactivates the function. In this case, the data carrier must be kept in the field until the transaction is completed, otherwise an error message is generated.
- Timeout DirectMode: This time (in seconds) specifies how long a data carrier is virtualized during a DirectMode transaction. The data carrier is treated as being "in the field" for the specified time. An operation on the GV6.1300 terminates the virtualization.
- Show cancel (eject) button on screen: When this setting is enabled, a "Cancel" button will appear on the display. This allows a user to manually cancel a payment process.
- Deactivate/disable the following RFID standards: Here you can deactivate the RFID technologies, which are not used at the GV6.1300.
- Emulate reader of type: Here you can set the RFID technology that matches the data carriers used in your system for the payment function at vending machines.

Time/date settings

- Time zone: For the location where the GV6.1300 is operating, define the time zone here (hours before or after GMT standard time). For Central Europe, use "-1" (one hour ahead of GMT).
- Automatic daylight-saving time: If this option is enabled, the GV6.1300 automatically switches between summer and wintertime.

Vending machine interface

- Communication protocol: Set here the type of connection between the GV6.1300 and used interface (default = "MDB").
- Currency symbol ID (ISO4217, only MDB): Here, a currency symbol according to ISO4217 can be defined for the vending machine when using MDB mode.
- Show info during sale: If this option is enabled, information about the purchased product (PID), the amount of money reported by the vending machine (CR), and status information (F) is displayed on the GV6.1300 during each sale. This option is for service purposes only and should normally be disabled.

PID: 2 / CR: 50 / F: 07

- PID binary instead of BCD (only BDV): By default, the product ID numbers in the BDV protocol are encoded in BCD. This means that product IDs from 0 to 99 are possible. Occasionally, there are also vending machines that encode the product IDs in binary. In this case, this setting can be set in order to process the numbers correctly.
- Suppress cash sale command: This setting can be used to suppress cash-sale (MDB) requests while a data carrier is being read. This can be helpful with some machines if the machine sends too many of these commands.

Vending machine host interface (ext. periphery)

- Communication protocol: If *none* is selected here, no external peripherals are connected. If "MDB" is selected, peripheral devices such as coin changers or bill validators can be used.
- End external process after reference: If this setting is enabled, the vending process on the machine ends immediately after the transaction. Further identification is required for an additional transaction.
- Allow change to be returned: Allows change to be returned after a sales transaction has been completed or at the customer's request.
- Allow cash sale with card: If this setting is enabled, part of the sales price can be paid in cash and the rest using an RFID data carrier.
- Suppress "No change" message: If this setting is enabled, a message will not be displayed if there is no change. This can be useful for devices that cannot give change, e.g., bill validators.
- Card number base (ext.): If an MDB data carrier is connected, the data carrier number transmitted by it is added to the base value entered here. This can be used, e.g., to distinguish between different readers.

Other

- Allow multiple sales (Multivend): This setting enables the multivend function. This allows the user to make several purchases in succession after identification via RFID data carrier without the user having to identify themselves after each purchase. This can be helpful, e.g., with return vending machines, so that users do not have to identify themselves again after each returned bottle.
 - Allow acoustic signals: With this setting, the acoustic signal generator (beeper) of the GV6.1300 can be enabled or disabled. With the "Boost" setting, the volume can be increased.
 - Allow offline booking with online system:
With an online system, bookings and payments are settled online and saved on the server. If the GV6.1300 goes offline, e.g., when the connection is interrupted, bookings are made offline and then re-invoiced when the online connection is restored. This can lead to problems, e.g., if the credit has been exceeded or the GV6.1300 is exchanged in offline state.
 - Hide card credit value: Normally, the GV6.1300 displays a user's available credit when reading the data carrier. By activating this setting, this display can be suppressed (for an example see "6.2. Operating the GV6.1300").
- After configuring the settings, click on "Save" at the top left of the window.

5.6.2 Network

This configuration page contains the settings for the network communication between the GV6.1300 terminal and the host computer.

Figure 5.7 – “System” category, “Network” configuration page

Basic settings

- Speed: Transmission speed of the interface. Default = Auto Negotiation (= automatic setting). For long cable distances over 120 meters, it may be helpful to set the speed here to a low value of 10BASE-T to avoid transmission errors.
- IP address: Displays the IP address of the GV6.1300. The address can also be changed manually here, which is only applicable if a DHCP server is not being used. After changing the IP address and saving, the original IP address still remains. Only after the GV6.1300 has been restarted is the new IP address set. The configuration interface can then be accessed using the new IP address.
- Subnet mask: Definition of the subnet mask for the network.
- Gateway: IP address of the gateway in the network.
- DNS server: The IP address of a DNS server (if used) can be entered here.
- Determine data via DHCP: Enable this setting if a DHCP server is responsible for assigning IP addresses in the network. The GV6.1300 will then automatically obtain an IP address during start-up and show it on the display.

- Remember last DHCP data: If this setting is enabled, the GV6.1300 stores the last IP address used. Thus, if the GV6.1300 is restarted and the DHCP server is unavailable at that time (e.g., server power failure), the last obtained IP address is set independently.
- Activate WINS service: Here you can enable the WINS service for naming devices in the network and enter the relevant WINS name. However, this is not necessary for GV6.1300.
- Activate SNTP service: With SNTP, a time server in the network can be used to automatically set the time. If you want to use this function, enable this setting, and enter the DNS name or the IP address of the SNTP server ("Time server DNS/IP") and the "Communication port" below it. This function is usually performed by the vending software (backend).

- After configuring the settings, click on "Save" at the top left of the window.

5.6.3 Language/Desktop

Here you can define settings for the GV6.1300 display and the configuration interface.

Figure 5.8 – "System" category, "Language/Desktop" configuration page

System languages:

- System language: Select the language to be used on the GV6.1300 display here.
- WebUI language: This is the language used for display of the configuration interface. If "default" is selected, the appropriate language is automatically displayed.

► After configuring the settings, click on "Save" at the top left of the window.

5.6.4 Design

Here, the layout of the GV6.1300 display can be customized.

Figure 5.9 – "System" category, "Design" configuration page

- Profile: From the drop-down menu, select a predefined design for the display here. Then click on "Save". The display changes accordingly.
To define your own design, select the "Custom Background - Standard" selection and click "Save". The design is defined in an xml file named

"profiles.xml". This file contains all the required information on colors, font sizes, positions, images, etc. This xml file is saved together with the images of the design on the GV6.1300. For more information, see chapter "5.10.1. Customized Designs".

- After configuring the settings, click on "Save" at the top left of the window.

5.7 Category "Pricing"

Information about the prices of the sales products can be specified here. This includes the product prices or time dependencies of the prices. In addition, display images for the vending machines can also be set for the products.

5.7.1 Base Prices

On this page, the prices of the vending products can be set and display images for the products defined. Prices can also be supplied and set by the vending software (backend) or the vending machine. However, you also have the option of entering prices that will be used if prices are not specified by the vending software.

Info	System	Pricing	Service						
Periods: 0 Update	Base prices	Price periods	Remap table						
Save All = -1 All = 1.00 All = 0.00 All PLs = PL0 All items = item 1 Copy no → no									
Options									
☒ Transfer price from vending machine (see note below!) ☐ Use price as product ID (PID) (for Executive in any case/generally) ☐ Mask product ID to adjustable range (e.g., helpful for drum machines) ☐ Sales discount through external signal. →Discount amount: 0.00									
Price settings									
Selection	PL0	PL1	PL2	PL3	PL4	PL5	PL6	PL7	AGZ
Selection 1: 	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	☒
Selection 2: 	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	☒
Selection 3: 	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	☒
Selection 4: 	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	☒
Selection 5: 	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	☒

Figure 5.10 – "Pricing" category, "Base prices" configuration page

Different price periods are possible (see "5.7.2. Price Periods"). For each period, the prices can be set independently. In the first "Period" field at the top left, select the price period for which you want to set the prices.

In the top row, various buttons are available to easily set the prices in the "Price settings" list to specific values.

- All = -1: All price fields are set to -1 (=product not available/locked).
- All = 1.00 / All = 0.00: All price fields are set to 1.00 or 0.00.
- All PLs = PL0: Several price fields (PL0 to PL7) are possible for each product, which are used depending on the configuration, e.g., time or user dependent. With this button, all prices for all products are set to the same value as the respective PL0 value.
- All items = item 1: This button sets all price fields for all products to the value entered in the PL0 field for the "Selection 1" product.
- Copy: Enter 1 price column name (e.g., PL0, PL1, etc.) into the two "Copy" fields and click on "Copy". This copies the prices for each product (each selection row) from the first selected column to the second selected column.

Now define the following settings:

Options:

- Transfer price from vending machine:
If this setting is enabled, the prices for the products are supplied by the vending machine. If desired, you can enter factors in the price setting list to change the prices. A value of "1.00" entered here means that the price supplied by the vending machine is used. A value of 2.00 will calculate double the price, and a value of 0.50 will calculate half the price.
- Use price as product ID (PID): For vending machines that do not provide product selection numbers, but only prices for the selected products, the price can be used as product selection (PID). If this is the case, this setting must be enabled.
- Mask product ID to adjustable range:
Helpful for vending machines where different positions are possible for a product ID (e.g., each product ID identifies a specific turntable that can be in different positions). The position of the turntable is then usually coded in the product ID in the upper bits, which can lead to unusable product IDs. By enabling this setting, the upper bits of the product ID are truncated thus allowing the product ID to be processed correctly.
- Sales discount through external signal -> Discount amount:
An external signal can be received by the GV6.1300 terminal, which can be sent by, e.g., an external card reader. This allows discounts to occur, i.e., if the signal is present (signal input = High) the discount is calculated, if the signal is not present (signal input = Low) no discount is calculated. The discount is not displayed; only the reduced amount is calculated. The amount to be deducted for the discount can be entered in the "Discount amount" field. A dot "." must be used for the decimal place.

Price settings:

The prices for the products are set in this list. Usually, the prices are managed by the vending software, but if the prices are not sent by the software, then the prices entered here will be used.

NOTE! When entering the prices, a dot "." must be used for the decimal place.

The prices are defined as follows:

- ▶ Each line from "Selection 1" to "Selection 128" represents one product (one product ID).
- ▶ 8 prices per product can be entered into the "PL0" to "PL7" columns. Only the first column "PL0" is relevant for GANTNER operating mode.
- ▶ A value of "-1" means that the product is not available or is blocked.
- ▶ The "AGZ" option for a product has no meaning for GANTNER operating mode. This would allow a special allowance for the individual products/articles.
- ▶ To quickly assign specific values to all fields, the buttons at the top of this configuration page can be used (see previous description).
- ▶ An image can be assigned to a product, which is then displayed on the GV6.1300 when the product is selected. The image is displayed next to "Selection 1" to "Selection 128". If no image is used, this is indicated by the symbol .

Price settings			
Selection		PL0	PL1
Selection 1:		1.00	1.00
Selection 2:		1.00	1.00
Selection 3:		1.00	1.00
Selection 4:		1.00	1.00
Selection 5:		1.00	1.00
Selection 6:		1.00	1.00
Selection 7:		1.00	1.00
Selection 8:		1.00	1.00

Figure 5.11 – Product images

- ▶ To define an image, click on the image of the desired product.
 - The following window opens.

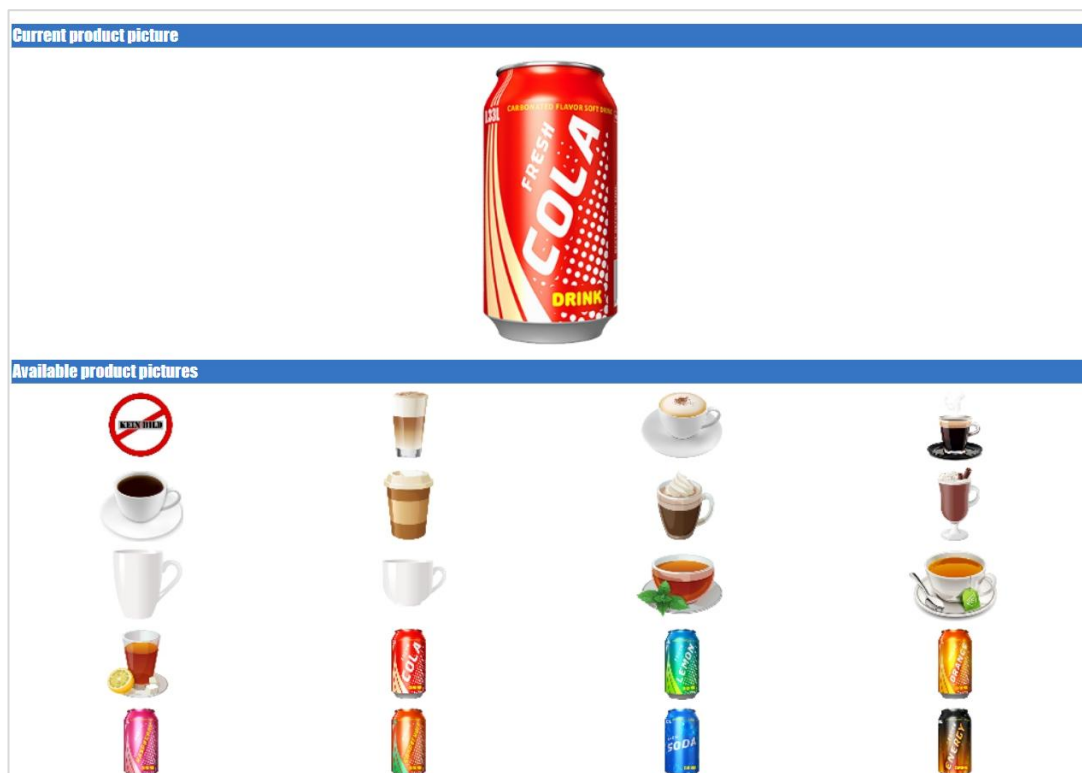


Figure 5.12 – Selecting product images

- The current image is displayed in the upper field. Below it, you can browse through all the available images and select the desired image by clicking on it.
 - The price list is displayed, and the selected product image is displayed in the list.
- After configuring the settings, click on "Save" at the top left of the window.

The product images are saved on the GV6.1300. Additional images can also be added here. Contact GANTNER Electronic or your sales partner for more information.

5.7.2 Price Periods

Up to 8 time periods can be defined here, which defines the price period to be used. This allows different prices to be implemented for the products at different times (e.g., happy hour).

NOTE! The use of the price periods depends on the vending software (backend) and must be considered by this software. The software can also determine and send prices itself, which would then invalidate the price periods.

Info	System	Pricing	Service
	Base prices	Price periods	Remap table

Save

Price periods calendar

Time period	Mo.	Tu.	We.	Th.	Fr.	Sa.	Su.
16:00 - 17:00	1	1	1	1	1	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

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Figure 5.13 – “Pricing” category, “Price periods” configuration page

Each line represents a time period.

- To define a time period in which a specific price period is to be active, enter the start and end time for the period in the fields under "Period time" with the format "hh:mm" (e.g., 16:00 for 4 pm).
- In the fields for Mo. (= Monday) to Su. (= Sunday), select the price period to be used. The price periods are identified with numbers and defined on the "Base prices" configuration page (see "5.9.3 Adding and Deleting Devices in the List", selection field at the top left).
- After configuring the settings, click on "Save" at the top left of the window.



For all times outside of the defined time periods or if no time period has been defined, the price period 0 is used.

5.7.3 Remap Table

Here you can define the automatic redirection of the product IDs supplied by the vending machine to a PID of your choice. This is helpful, e.g., if the vending machine delivers very long product IDs (e.g., 1234). Only a maximum of 128 PIDs are possible, and with the remap table, these long PIDs can be automatically changed to the desired PIDs.

Info	System	Pricing	Service
	Base prices	Price periods	Remap table

Save

Redirection table

PID redirection	... with selection
1234	1
5577	2
0	0
0	0
0	0
0	0
0	0

Figure 5.14 – "Pricing" category, "Remap table" configuration page

- ▶ Enter a product ID to be changed in the left field and the desired number to be used in the right field.
- ▶ Confirm the settings by clicking on "Save".

5.8 Category "Service"

In this category, various information about the GV6.1300 terminal can be retrieved and displayed. You can also create and add configuration backups, perform a system service (e.g., set maintenance mode, reset counters, etc.), and reboot the GV6.1300.



This category is intended for service technicians responsible for maintaining the GV6.1300 or who require detailed information in the event of an error. These settings are not absolutely necessary for the configuration of the GV6.1300.

5.8.1 Information

On this page, detailed information about the GV6.1300 terminal is displayed.

Info	System	Pricing	Service
Information	System service	Thread list	Restart

System version:	MAXXvend 2.4.7.5 / OEM: 001
Kernel version:	2.6.7.0
System time:	15.12.2021 16:05:29 Set
Up time:	5 hours 0 minutes 12 seconds
System temperature:	46°C
Sales records:	0
Sales memory defective:	0
ECC data corrections:	(recovered/unrecoverable)
Free RAM:	118678856 Byte
Clock rates:	CPU: 528MHz / BUS: 132MHz
File system:	31616kb/473376kb (6%)
Memory manufacturer:	Micron (0x2C)
Ethernet MAC:	00:CD:00:02:08:16
Display:	TFT 480x640 (TN panel)
Security ASIC:	present
Hardware error:	No

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Figure 5.15 – "Service" category, "Information" configuration page

- System version: The version of the firmware in the GV6.1300. The version number can be relevant for service purposes or queries in case of problems.
- System time: Here, the current time and date of the GV6.1300 is displayed when this configuration page is opened. You can manually set the time and date to a specific value by entering it here and clicking on "Set".
- Up time: Length of time that the GV6.1300 has been in operation since the last start-up.
- Ethernet MAC: The unique MAC address of the GV6.1300 for the network connection.

The remaining information is self-explanatory or only of interest to service technicians.

5.8.2 System Service

On this page, various functions for the GV6.1300 terminal can be carried out. These actions are only relevant for test or service purposes.

GV6.1300

Info

System

Pricing

Service

Information

System service

Thread list

Restart

Maintenance mode

Maintenance: On

Maintenance: Off

Sets the unit to maintenance mode during which user interactions are blocked.

System tests

Display test

Shows a test image on the display

System initialization

Format memory

☐ I have read and understood the notice

This function resets the unit to the default settings. In doing so, ALL data (sales, meter readings, settings, etc.) will be deleted and reset to the factory defaults upon restart. Since the file system is recreated, all system content (such as this web interface) will of course be lost! After formatting, it is recommended to load a firmware update into the unit to restore these files.

Configuration/Data recovery

Clone system from or to SD card:

Clone: System -> SD card

Clone: SD card -> System

Important: The process starts immediately and cannot be aborted. An SD card must be inserted, otherwise the process will abort after 20 seconds. Also, the function of data cloning from the SD card to the unit leads to a reboot if successful.

File system analysis

Enable disk scan

Scan disk now

Enables a forced disk scan for the next system startup.

Immediately starts a disk scan, but this is only done in "Read-Only" access. File system errors are therefore not repaired!

Electronic antenna calibration

0.00

Save

Service card redirection

The following card numbers should be treated as Service Cards to show the service menu:

Speichern

Access locks

☐ Lock all price changes via the network (also web interface)

☐ Changing of CGI deep links only with authentication

Save

Miscellaneous

☐ Disable fault monitoring (watchdog). Affected units no longer restart automatically.

☐ Automatic restart after system crash.

☐ Activate memory leak protection (reboot when limit value is undershot).

☐ The unit will run in demo mode (without backend)

Save

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Figure 5.16 – "Service" category, "System service" configuration page

- Maintenance mode: By clicking on "Maintenance: On", the GV6.1300 can be set to operate in maintenance mode. This is useful, e.g., when the vending machine is being refilled, or when the contained products have expired, and their sale is to be temporarily blocked. The following image is shown on the GV6.1300 display when maintenance mode is active.



Figure 5.17 – Indication of maintenance mode on the GV6.1300 display

If maintenance mode is active, a currently active product sale or product issuance is still completed, after which no further purchases are possible at the vending machine.

Click on "Maintenance: Off" to disable maintenance mode.

NOTE! In the configuration window, an active maintenance mode is indicated via the following message. Do not forget to disable maintenance mode after the maintenance has been completed, otherwise the vending machine cannot be used.

Info	System	Pricing	Service
Information	System service	Thread list	Restart
!!! Unit in maintenance mode !!!			
Maintenance mode			
Maintenance: On Sets the unit to maintenance mode during which user interactions are blocked.			
Maintenance: Off			
System tests			
Display test Shows a test image on the display			
System initialization			
Format memory This function resets the unit to the default settings. In doing so, ALL data (sales, meter readings, settings, etc.) will be deleted and reset to the factory defaults upon restart. Since the file system is recreated, all system content (such as this web interface) will of course be lost! After formatting, it is recommended to load a firmware update into the unit to restore these files.			
☐ I have read and understood the notice			

Figure 5.18 – Notification that the unit is in maintenance mode

- System tests:

With the "Display test" button, a test image is displayed on the GV6.1300 screen. Clicking the button again displays the default screen again.

- System initialization:

With the "Format memory" button, all data (sales, counter readings, settings, configuration interface, etc.) in the GV6.1300 is deleted. A new firmware must then be imported.

ATTENTION! Only use this function if you are aware of the consequences.

- Configuration/Data recovery:

In this section you can create a backup of the configuration settings and data of the GV6.1300 or restore an existing backup.

The "Config download" button is not relevant for GANTNER operating mode.

By clicking on "Clone: System -> SD card", a backup is saved on an SD card inserted in the GV6.1300. The SD card must be inserted in the slot on the left side of the GV6.1300. The file system format of the SD card must be FAT12, FAT16 or FAT32. Other file system formats such as ExFAT or NTFS are not supported.

ATTENTION! During a backup, a previously saved GV6.1300 backup is overwritten. However, any other data on the SD card is retained. If you want to back up multiple GV6.1300 terminals, use a separate SD card for each GV6.1300.

By clicking on "Clone: SD card -> System", a previously created backup of the GV6.1300 data is loaded from the SD card inserted in the terminal to the device and after successful updating, the GV6.1300 terminal restarts automatically.

- File system analysis:

By default, the GV6.1300 terminal automatically performs a background check (invisible to the user) of the internal memory during startup.

By clicking on "Enable disk scan", this check is carried out visibly for the user at the next startup.

By clicking on "Scan disk now", the scan of the file system starts automatically. No editing/repair of the file system is performed, only a check (read only).

- Electronic antenna calibration:

This slider is used to calibrate the sensitivity of the antenna for reading the data carriers. This calibration is usually only necessary in exceptional cases.

- Service card redirection:

This area is intended for service purposes. Data carrier numbers can be inserted in the text fields. If a data carrier with one of these numbers is read at the GV6.1300, the service menu will be displayed on the display of the GV6.1300.

- Access locks:

Security settings can be made here:

"Lock all price changes via the network (also web interface)":

If this setting is enabled, price changes via the network interface are no longer possible.

"Changing of CGI deep links only with authentication":

Access to the configuration interface via modified links is blocked for security reasons and can only be completed after valid authorization entry.

- Miscellaneous:

"Disable fault monitoring (watchdog). Affected units no longer restart automatically":

By default, a GV6.1300 that has experienced a software error will automatically restart to restore normal operation. If this option is enabled, the GV6.1300 will not restart automatically.

"Automatic restart after system crash":

If this setting is enabled, the terminal in the event of an error will not wait for a service technician (error display on the GV6.1300) but will automatically restart immediately, which can often solve an error automatically.

"Activate memory leak protection (reboot when limit value is undershot)":

If this setting is enabled, the internal memory is monitored and the GV6.1300 is rebooted in case of an error.

"The unit will run in demo mode (without backend)":

For normal operation, this setting is disabled and there must be a connection to a server-based backend software. If not, a corresponding error message, e.g., "Server connection interrupted! Function restricted ..." is shown on the display. This setting can be enabled if you want to operate the GV6.1300 offline (e.g., for demo purposes).

5.8.3 Thread List

Under "Service" -> "Thread list", an overview of the different processes running on the GV6.1300 is available. This display is only relevant for service purposes.

Info	System	Pricing	Service
Information	System service	Thread list	Restart

Handle	Name	Priority	Status	Event queue	Timer	Heap	Stack pointer	Free stack	Fault	Stack headroom
205F2A58	guiclock	250	SLP	00000000	204ECA10	205D365C	205F28AC	127568	OK	109512
00303768	tcpdm	32	SLP	20302558	205D3634	00303368	003036B4	844	OK	624
00303308	vdtpd1	150	SLP	208984C8	00000000	00302B0C	00302F6C	1120	OK	1124
00302AB0	ftpd1	150	SLP	207274AC	20726B20	003022B0	003029F4	1860	OK	1864
00302250	ftpd0	150	SLP	205D3614	20726AD0	00301A54	00302194	1856	OK	1860
20CB6538	httpd4	150	SLP	208982C8	208982E8	20C9713C	20CB6484	127816	OK	125048
20C970E0	httpd3	150	SLP	208058A8	20727A4C	20C77CE0	20C9702C	127820	OK	125052
20C77C80	httpd2	150	RUN	20301EE8	00000000	20C58884	20C77894	126992	OK	109256
20C58828	httpd1	150	SLP	2071ADA4	204EF684	20C39428	20C58774	127820	OK	125060
003019F8	netcfg	250	SLP	00000000	204EA954	003011F8	003018F4	1788	OK	1776
00301198	dhcpc	64	SLP	20305F1C	204EE374	00300D9C	0030109C	768	OK	532
00300D40	emacrx	9	SLP	2030220C	204EDF0C	00300940	00300C84	836	OK	748
003008E0	vmcpoll	15	SLP	20300448	2089712C	00300464	0030073C	728	OK	660
203268E8	main	100	SLP	20300350	205F8BDC	203074E8	20326444	126812	OK	108556
00300408	idle	254	RDY	20301EE8	00000000	00300008	0030035C	852	OK	856

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Figure 5.19 – "Service" category, "Thread list" configuration page

5.8.4 Restart

To restart the GV6.1300, click on "Service" -> "Restart". The device then restarts and displays certain parameters such as the firmware version and IP address. The restart process takes approximately 30 seconds.

Info	System	Pricing	Service
Information	System service	Thread list	Restart

Figure 5.20 – Restarting the device via the "Restart" button of the "Service" category

5.9 GV6 Inspector Configuration Tool

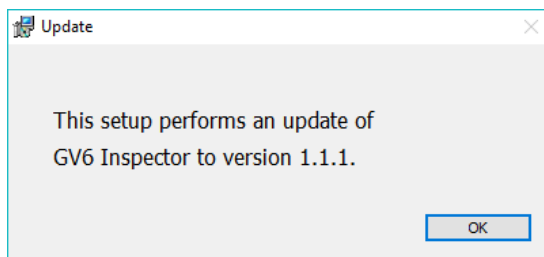
For the administration and service of the GV6.1300 devices, GANTNER provides the PC software "GV6 Inspector". In this software you can add your GV6.1300 devices and carry out tasks such as checking the connection status or loading configuration settings or firmware updates in a clear and simple way.

NOTE! GV6 Inspector does not work with firmware version 2.6.0.3 and later. Please use the admin panel to perform firmware updates.

5.9.1 Installation

The software must be installed once. An installation wizard guides you through the installation process.

- ▶ Run the setup file "GV6_Inspector_Setup.msi".
 - If an older version of the GV6 Inspector is already installed, the following message is displayed informing that an update to the new version is being performed. Confirm with "OK".



- The installation wizard opens.



Figure 5.21 – Installation wizard for GV6 Inspector

- ▶ Click on "Next".

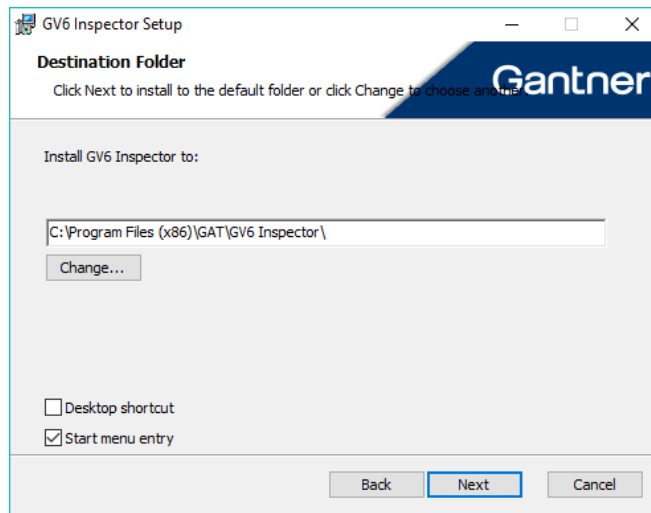
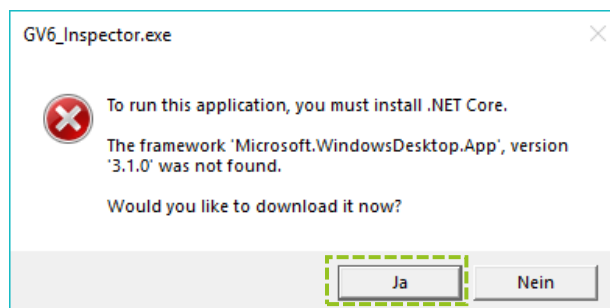


Figure 5.22 – Installation wizard for GV6 Inspector - Select installation path

- ▶ You can leave the default installation path or enter an individual path. Selecting "Desktop shortcut" creates a shortcut on the Windows desktop and selecting "Start menu entry" creates an entry in the Start menu of the software.
- ▶ Click on "Next".
- ▶ A new window opens in which you must click "Install" to start installing the GV6 Inspector.
- ▶ After successful installation, a window with the corresponding confirmation is displayed.
- ▶ Click on "Finish" to finish the installation.
 - The GV6 Inspector is now installed.

5.9.2 Starting GV6 Inspector

- ▶ Depending on the installation type, the GV6 Inspector can now be started via the Start menu, from the Windows desktop, or from the installation folder.
 - GV6 Inspector requires .NET Core 3.1.0. If this is not installed, the following message is displayed.



Click on "Ja" (yes) to open the website <https://dotnet.microsoft.com> where you can download and install this software. Under "Windows" select "Run desktop apps" and here the version of your Windows installation ("Download x64" or "Download x86").

- The main window is displayed.

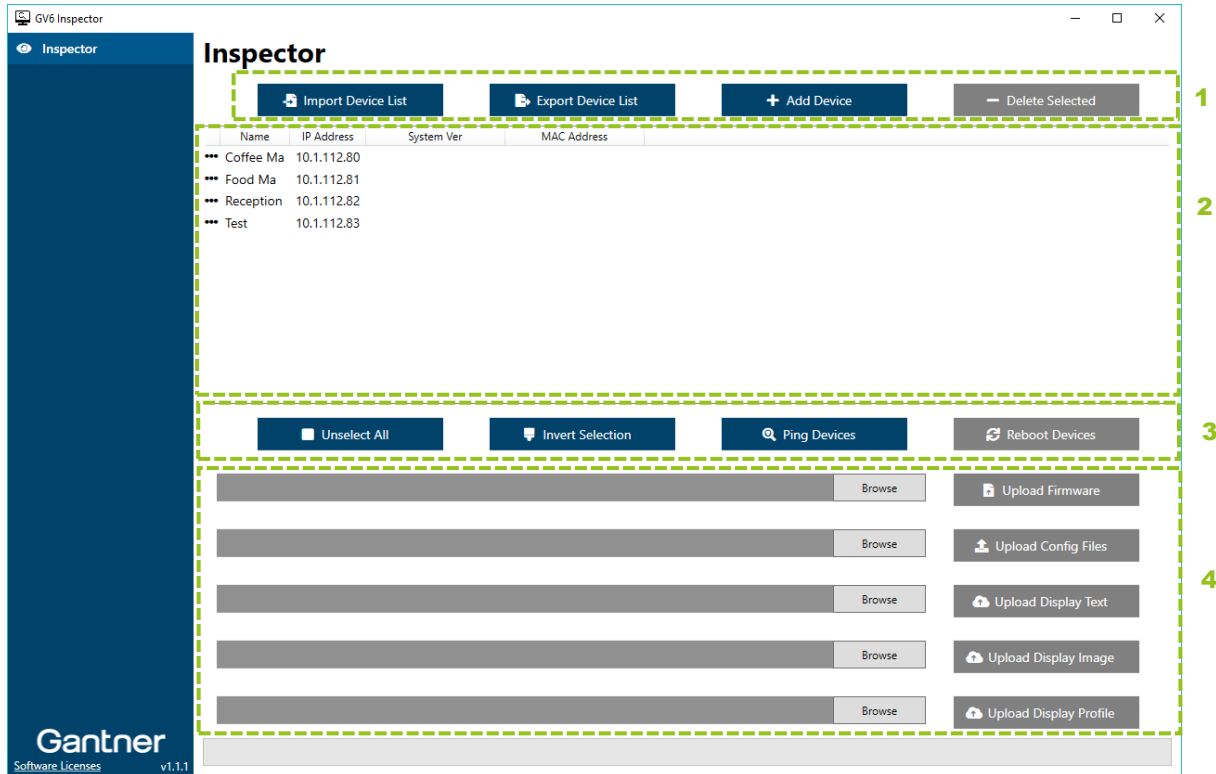


Figure 5.23 – Main window of GV6 Inspector

The configuration interface is divided into the following areas:

- 1 Manage GV6 devices: With these buttons you can edit the device list. You can add new devices or delete existing ones and export or import the list (see "5.9.3. Adding and Deleting Devices in the List").
- 2 Device list: Here you can see all GV6.1300 devices that are accessible on your network and have already been added. The system version and MAC address are displayed when you "Ping Devices" on the network.
- 3 Browse/Reboot Devices: With the "Unselect All" button, all selected devices in the list are marked as unselected. With "Invert Selection", the selection of the devices in the list is inverted. In addition, you can search and query the devices in the network here and restart the devices (see following pages).
- 4 Upload files to devices: Here you can load firmware files, configuration files ("Config Files"), display texts, and background images into the GV6.1300 devices.

5.9.3 Adding and Deleting Devices in the List

- To insert a new GV6.1300 into the list, click on "+ Add Device".
 - The following window opens.

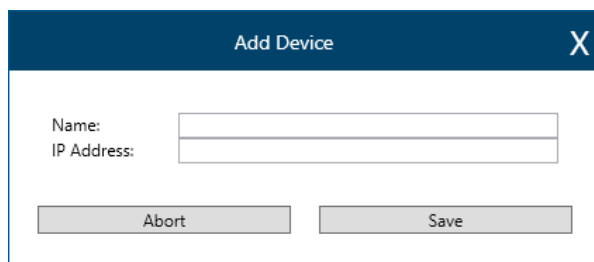


Figure 5.24 – Adding a GV6.1300

- ▶ Enter a name for the device.
- ▶ For "IP Address", enter the IP address of the device.
 - Note:** The IP address is shown on the display when the GV6.1300 is switched on.
- ▶ Click on "Save".
 - The device is displayed in the list.
- ▶ To delete one or more devices from the list, select the device(s) and click "- Delete Selected".
 - The device(s) are deleted from the list. The device itself continues to operate according to the configuration.

5.9.4 Searching for GV6.1300 and Testing the Connection ("Ping Device")

- ▶ To test whether a device can be reached on the network, click on "Ping Devices".
 - A ping packet is sent to all devices in the list.
 - For the devices that are reachable, the software version and MAC address are updated and displayed; these are marked green in the list, the unreachable devices are marked yellow.

5.9.5 Rebooting the GV6.1300

- ▶ To reboot one or more devices, select the device(s) and click "Reboot Devices".
 - The selected devices are rebooted. This can take up to one minute. Afterwards, the device is ready for use again.

5.9.6 Loading GV6.1300 (Firmware, Configuration, Display Texts, Background Images)

Updates can be transferred to the devices by transferring corresponding files. The files are selected in the lower 3 text fields. Proceed as follows:

- ▶ Click "Browse" at the first field to select a firmware file (file extension ".UPD"). A file window opens for the selection.

- ▶ To send the firmware, click on "Upload Firmware".
 - The file is transferred, and the progress is displayed with a green bar.
 - The GV6.1300 is then automatically restarted and the new firmware is installed.
- ▶ Click on "Browse" in the second field to transfer a configuration to a device. Several files are sent in the process. A file window opens for selecting a folder containing the files (format ".DAT").

Note: The configuration can be saved, e.g., by another GV6.1300 (see following page) and then transferred to others.
- ▶ To send the configuration, click on "Upload Config Files".
 - The file saved in the selected folder is transferred to the GV6.1300 device(s) and the progress is indicated by a green bar.
- ▶ Click "Browse" in the third field to select a file with display texts (file extension ".XML"). A file window opens for the selection.
- ▶ To send the display texts, click on "Upload Display Text".
 - The file is transferred, and the progress is indicated by a green bar.
- ▶ With the fourth and fifth fields, you can select an image file (file extension ".PNG") to use as the background image on the display of the GV6.1300 and upload a display profile. This is described in section "5.10.2 Loading Background Images for the Display".

5.9.7 Open GV6.1300 Configuration Page

A GV6.1300 is configured via its configuration interface using a web browser (see "5.4 Configuration via Web Browser").

- ▶ In the first column, click on the "☰" symbol for a device in the list.
 - The following menu is displayed.

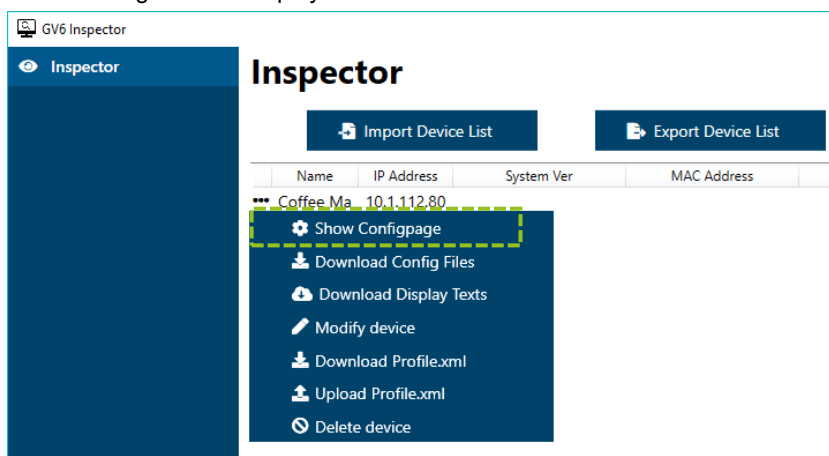


Figure 5.25 – GV6.1300 context menu

- ▶ Select "Show Configpage".
 - The configuration page of the GV6.1300 opens in the default web browser.

5.9.8 Loading Configuration Files and Display Texts from the GV6.1300

It is possible to load the configuration and the display texts from a GV6.1300 and to save them on the PC/server. These files can also be used for other devices, for example.

- In the first column, click on the "☰" symbol for a device in the list.
 - The following menu is displayed.

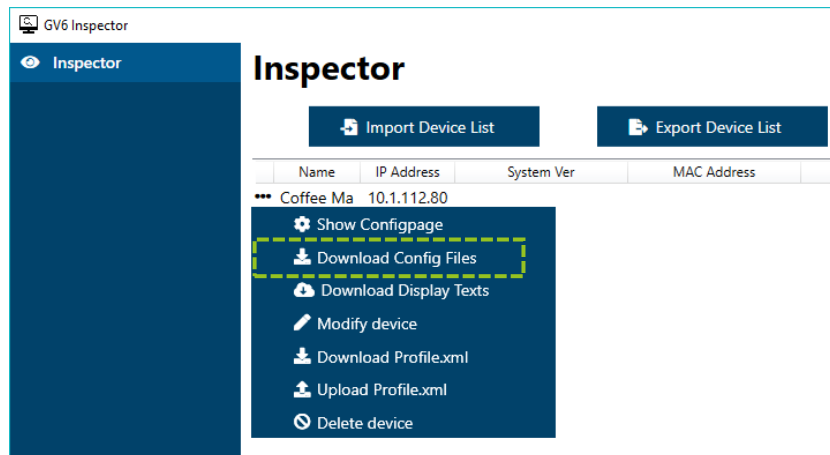


Figure 5.26 – GV6.1300 context menu

- Select "Download Config Files" to read out the configuration or "Download Display Texts" to read and load the display texts.
 - A file window opens where you can select a folder where the files are saved.
 - The configuration is stored in five ".DAT" files.
 - For the display texts, an info file "localization.xml" is downloaded as well as an additional file with language abbreviations such as "lang_deDE.xml" for each language.

5.10 FTP Interface

Via an FTP interface, direct access to the memory of the GV6.1300 is possible. This can be used to transfer customer-specific designs to the GV6.1300 or to update the firmware.



It is recommended to use the GV6 Inspector software for the firmware update (see "5.9. GV6 Inspector").

5.10.1 Customized Designs

The design of the display can be customized to meet individual customer requirements. The background image, icons, texts, and the layout of the elements can be customized. The settings are defined in an XML file and stored together with the required images in a subfolder on the device.

The designs are configured in the XML file "profiles.xml".

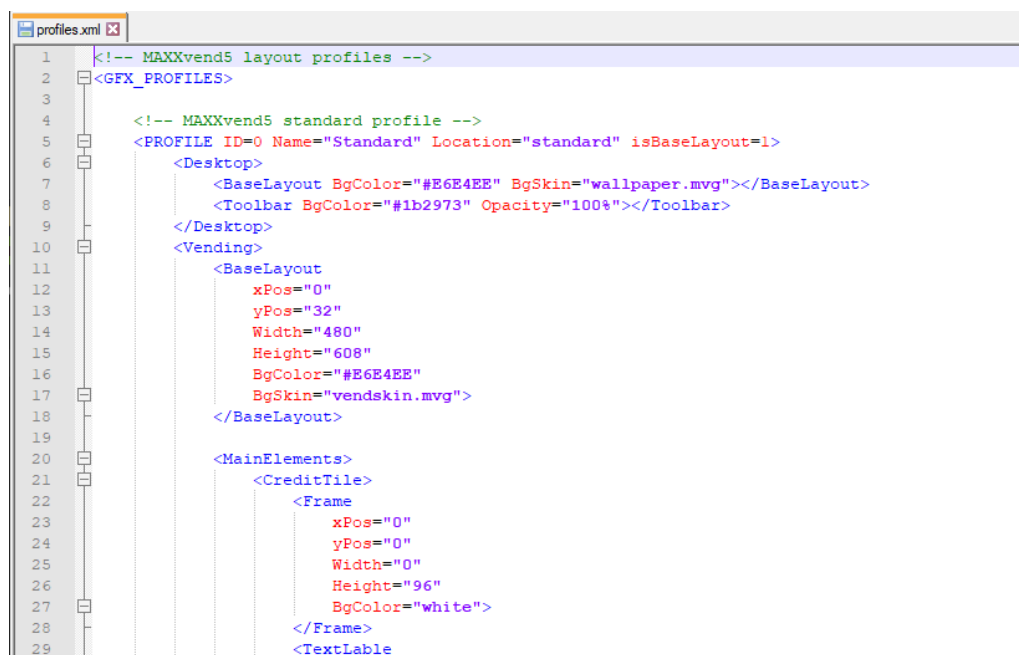


Figure 5.27 – Definition of the designs

The designs are stored in the GV6.1300 under the folder "/system/profiles ". The file "profiles.xml" is located in this folder and the images are located in the subfolder with the corresponding name.

The images are stored in RGB format in the ".mvg" file format. The resolution of the display is 640 x 480 pixels.

To create a design and the correct images, various specifications must be considered. Please contact GANTNER Electronic or your sales partner for assistance in creating the correct design.

The background images can be selected and loaded into a GV6.1300 as described in the following section.

5.10.2 Loading Background Images for the Display

GV6 Inspector allows you to load background images into the GV6.1300, which are then shown on the display. The following specifications for the image format must be observed:

- Only .png files can be used.
- The resolution of the image must be 480 x 640 pixels.
- The image must not contain a background layer. Often images downloaded from the Internet have such a background layer. You can remove this layer with a graphics program.

- In the GV6 Inspector, select the desired GV6.1300 (several are also possible).
- Click on "Browse" in the fourth field below the device list and select the desired PNG image.

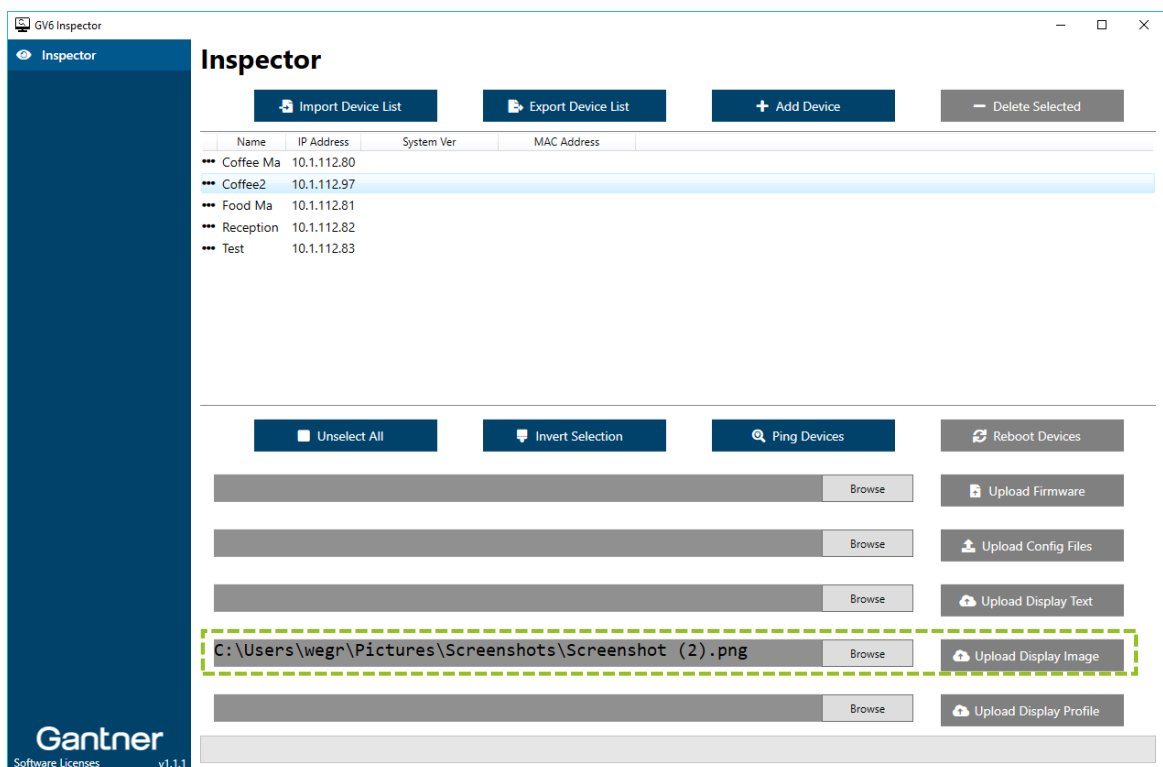


Figure 5.28 – Selecting a background image (.png)

- Click on "Upload Display Image".
 - If the image has the correct format, it is automatically converted to .mvg format. This creates a total of four variations of the file.
 - wallpaper.mvg: 480 x 640 pixels (complete background image)
 - vendskin.mvg: 480 x 608 pixels (cut background without header)
 - vend_bar.mvg: 480 x 3 pixels (bar below header)
 - toolbar_skin.mvg: 480 x 32 pixels (background of the header)
 - These images are then automatically uploaded to the GV6.1300 via FTP connection into the profile "customer_bg".
- Note:** In the web interface, this profile is called "Customer Background - Standard".

- Now the profile must be edited, which is done by downloading the "Profiles.xml" file from the GV6.1300 to the GV6 Inspector. To do this, click on "Download Profiles.xml" via the menu symbol "☰" on the left for the desired GV6.1300.

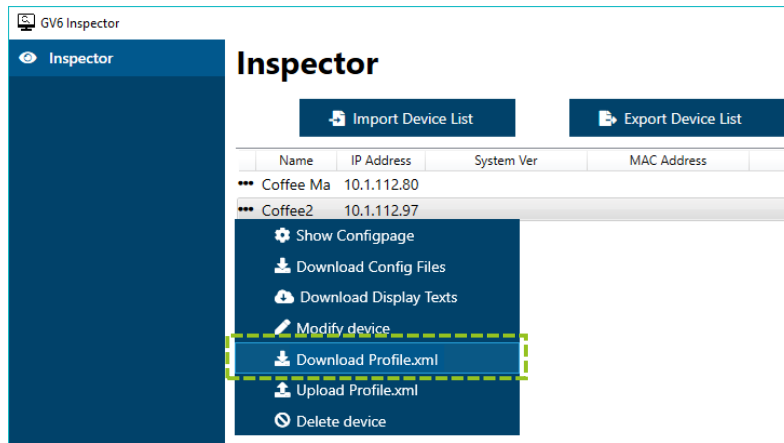


Figure 5.29 – Downloading the "Profiles.xml" file from the GV6.1300

- Save the profile file on the computer (it is an XML text file) and open the file in a text editor such as "Notepad++".

```

574
575 <!-- MAXXvend5 standard profile -->
576 <PROFILE ID=1000 Name="Custom Background - Standard" Location="custom_bg" isBaseLayout=0>
577   <Desktop>
578     <BaseLayout BgColor="#153a64" BgSkin="wallpaper.mvg"></BaseLayout>
579     <Toolbar BgColor="#153a64" BgSkin="toolbar_skin.mvg" LogoImage="logo.mvg" Opacity="100%"></Toolbar>
580   </Desktop>
581   <Vending>
582     <BaseLayout
583       xPos="0"
584       yPos="32"
585       Width="480"
586       Height="608"
587       BgColor="#153a64"
588       BgSkin="vendskin.mvg">
589     </BaseLayout>
590     <MainElements>
591       <TileSeperator>vend_bar.mvg</TileSeperator>
592     </MainElements>
593   </Vending>
594   <Webinterface>
595     <Thumbnail>thumbnail.jpg</Thumbnail>
596   </Webinterface>
597 </PROFILE>
598
599
600 </GVX_PROFILES>

```

Figure 5.30 – Editing the "Profiles.xml" file

- The names of the images are located in the section for the "Custom Background - Standard" profile.
- You can change the profile here as desired (e.g., the colors and image names). The colors are indicated in RGB values in HEX format from 0 to 255, e.g. #153a64 = Rot 21, Grün 58, Blau 100.

Example Toolbar:

```
<Toolbar BgColor="#000000" BgSkin="toolbar_skin.mvg" LogoImage="logo.mvg" Opacity="100%"></Toolbar>
```

- BgColor="#000000": With this example the toolbar will be shown in black.
- BgSkin="toolbar_skin.mvg": Will show the image toolbar_skin.mvg in the toolbar.

- LogoImage="logo.mvg": Here you can hide the logo in the toolbar by using an "empty" logo.mvg image or it is also possible to display a customer specific logo.
- Opacity="100%": This defines the opacity of the toolbar. If 0% is used here, the toolbar will be hidden.

- Save the changed profile as .xml file.
- Upload the profile file to the GV6.1300 by selecting the "Upload Profile.xml" option in the menu of the GV6.1300.
ATTENTION! Do not change the file name "profiles.xml", otherwise the GV6.1300 cannot find the file after uploading. After uploading the file, the GV6.1300 will restart. If the name has been changed and the file is consequently not found, try powering the GV6.1300 off and on again.
- It is also possible to upload the changed "profiles.xml" file (and the images) to multiple GV6.1300 devices simultaneously. To do this, mark the desired devices in the list and then select the profiles.xml file via "Browse" in the lowest selection field. Finally, click on "Upload Display Profile".

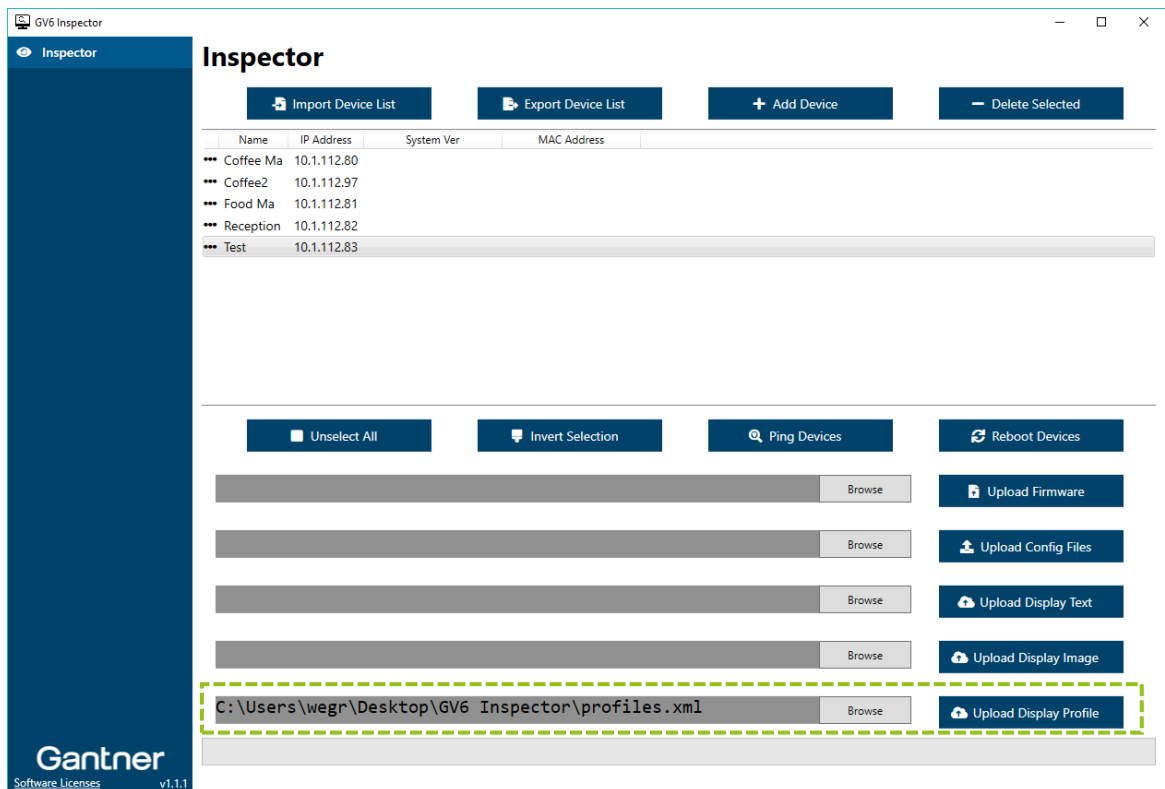


Figure 5.31 – Uploading the profile file to multiple GV6.1300s

6 OPERATION

6.1 Target Group

This chapter is intended for the customers (end users) who operate the GV6.1300 and vending machine in order to purchase a product. The standard operation of the GV6.1300 is described in the chapter. No special technical knowledge is required for this chapter.

6.2 Operating the GV6.1300

The operation and display of the GV6.1300 depends on various factors such as the type of vending machine, design, and vending software (backend). The standard operating process is as follows:

- ▶ Hold the data carrier near the reading field of the GV6.1300.
 - Your available credit balance is displayed.

NOTE: In the service menu there is the option to disable the display of the credit on the screen (see "5.6.1. Basic Settings").



Figure 6.32 – Displaying the credit balance

- ▶ Select your product at the vending machine.
 - The price for the selected product is displayed.
 - Below it, the remaining credit that is still available after you have purchased the product is displayed.
 - If you have stored an image for the selected product in the price list (see "5.7.1. Base Prices"), this is also displayed (see the following example).



Figure 6.33 – Selecting a product

- ▶ Wait until the product is ready to be removed from the machine before removing the product.
 - The vending machine displays the successful sale on the GV6.1300 screen.



Figure 6.34 – Sale successful

- If an error occurs while a product is dispensed, a corresponding error message is displayed.



Figure 6.35 – Sale unsuccessful

- In this case, the purchase amount is not debited or will be marked for chargeback.
- ▶ Hold your data carrier in front of the GV6.1300 again.

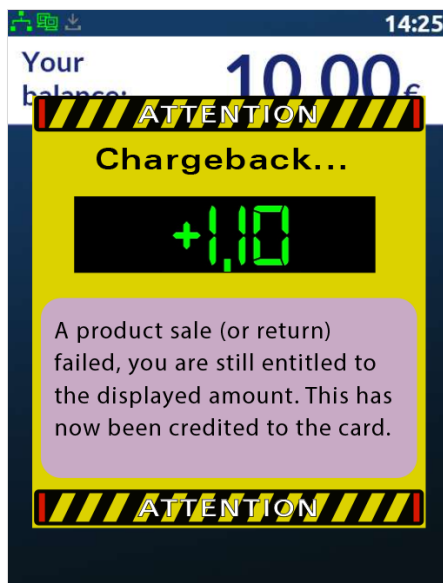


Figure 6.36 – Chargeback message

- A message is displayed indicating that an error occurred during the last sale and that the purchase amount will be charged back.



The process for the chargeback must be processed accordingly by the vending software or the backend. The exact process therefore also depends on the backend used and is only described here in general.

7 FREQUENTLY ASKED QUESTIONS (FAQ)

7.1 Error Messages

If an error occurs, an error message and an error code are shown on the GV6.1300 display. The following error codes are possible.

Error code	Description
10230 10330 10430 10530 10630	The data carrier was not detected by the reader anymore when an attempt was made to read it. These error codes can occur during read operations.
10237 10337 10437 10537 10637	The data carrier was not detected by the reader anymore when an attempt was made to read it. These error codes can occur during write/booking operations.
1E200	An error occurred while processing the CardIdent command. The command could not be executed as intended. Either because the host did not respond, the incorrect data was transmitted, or the corresponding data could not be transmitted to the host.
1E201	An error occurred while processing the CardIdent command. The command could be transferred to the host, but the host explicitly rejected the request.
1E202	An unknown/non-specific error has occurred during communication with the host. The reason for this is primarily a feedback, command, or data format that was not supported/expected.

7.2 "System Maintenance" Display

Reason:

Maintenance mode is enabled, which means that purchases are currently not possible.

Solution:

- Maintenance mode must be disabled by a service technician in the configuration interface via web browser (see "5.8.2. System Service").

7.3 "Communication Error" Display

The connection to the vending software has been interrupted.

Reason:

The LAN connection has been interrupted or the connection to the server/computer running the vending software has been interrupted, e.g., due to a power failure.

Solution:

- ▶ Check the network connection.
- ▶ Check whether the server/computer is supplied with power and switched on.
- ▶ Check whether the vending software is operating correctly.

7.4 “Card Error” Display

An error occurred while reading the RFID data carrier.

Reason:

Possibly the data carrier was removed from the reading area too early, or the data carrier is defective.

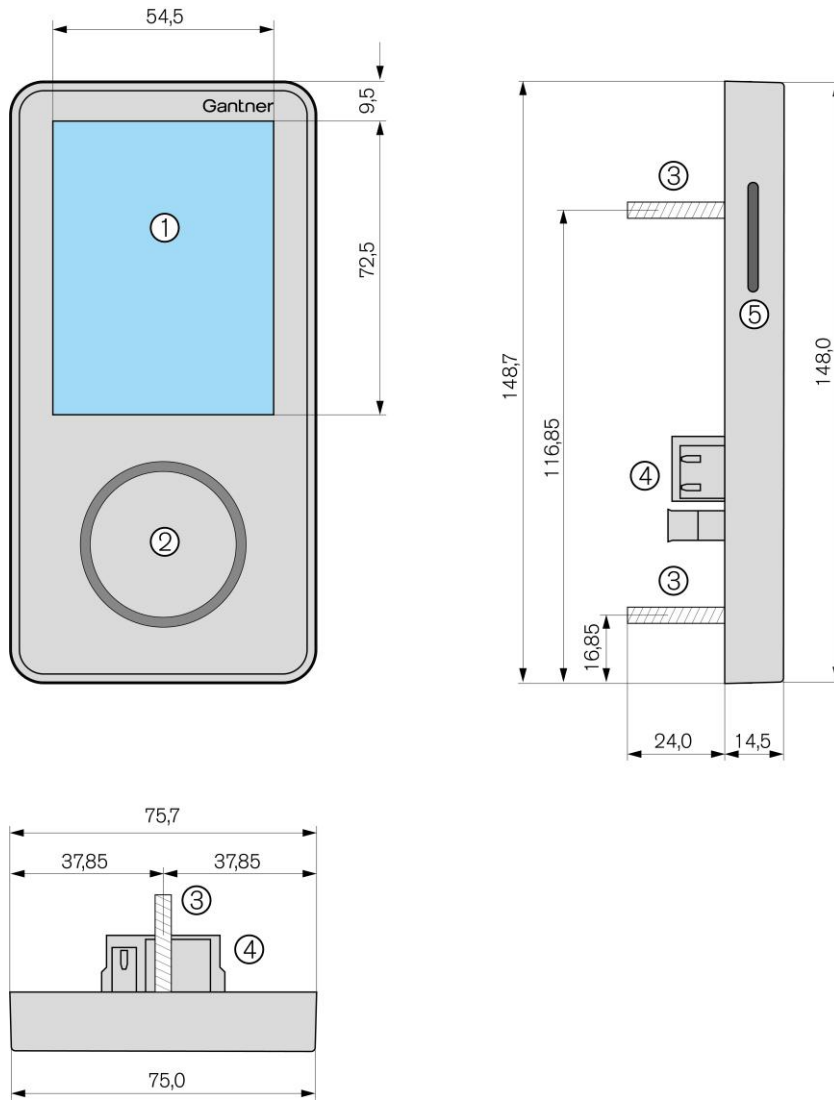
Solution:

- ▶ Hold the data carrier in front of the reading field again and wait a few seconds.
- ▶ Do not remove the data carrier from the reading area too soon.

8 TECHNICAL DATA

Nominal voltage:	DC 12 - 48 V (via MDB)
Current consumption:	max. 200 mA
Transmitting power:	max. 500 mW
Reader type:	Multi-technology RFID reader
Reading field frequency:	13.56 MHz
Data carrier:	- LEGIC prime / LEGIC advant - MIFARE (ISO 14443): Classic (1k and 4k), Ultralight®, DESFire EV1® and EV2® - ISO 15693
Reading range:	2 - 8 cm (depending on data carrier)
Display elements/signaling	
- Visual:	Full graphic 3.5" full color display (TFT), resolution 480 x 640 pixels, visible area 71 x 53 mm
- Audio:	Beeper
Host interface:	Ethernet 10/100 MBit/s
Vending machine interface:	MDB, BDV, Executive, CCI, RS-232 optional: parallel
Expansion interfaces:	1 x RS-232 (Rx/Tx) 2 x GPIO (In/Out optional) 1 x open collector output (100 mA) 1 x USB OTG (optional) 1 x Multi-Purpose-Interface (optional)
Connection:	- Ethernet: RJ45 port - MDB: 18-pin connector
Housing material:	ABS (POLYLAC® PA-757)
Weight:	190 g
Perm. ambient temperature:	-10 to +50 °C
Storage temperature:	-20 to +70 °C
Relative humidity:	20% to 80%, non-condensing
Protection type:	IP 32
Protection class:	III (protection by extra-low voltage)
Environmental class (VdS 2110):	II (indoor conditions)
Certification:	CE

8.1 GV6.1300 Dimensions



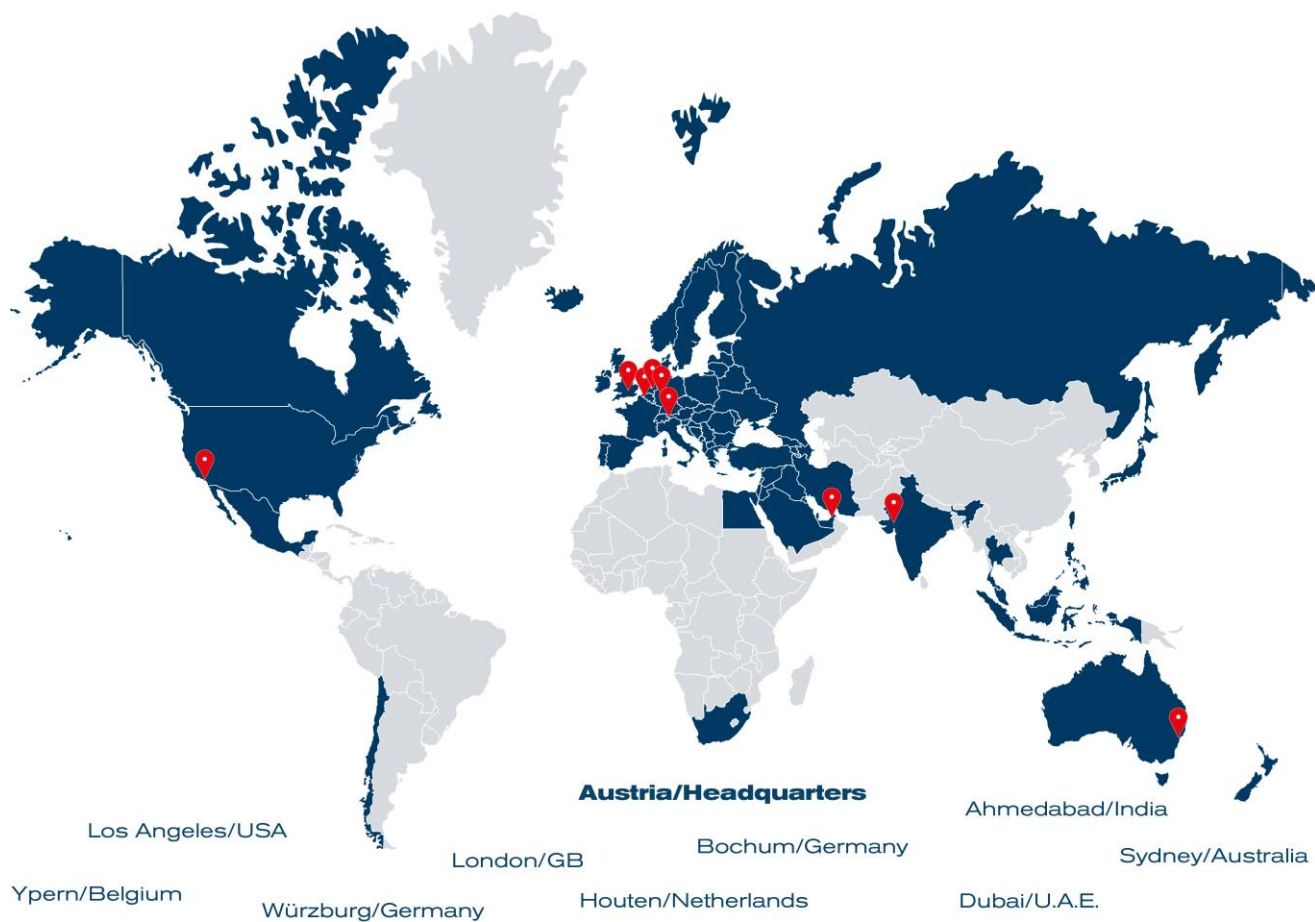
Measurements in mm

- 1 Display
- 2 RFID reading field
- 3 Mounting thread
- 4 Connector plug
- 5 SD card reader

Figure 8.1 – Dimensions of the GV6.1300

Note:

This manual is valid as of 20th July 2026. Changes and additions to
of this manual are possible at any time without prior notice!
Information in this manual refers to firmware version 2.6.0.3 of the GV6.1300 terminal.



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