

MOUNTING AND OPERATING INSTRUCTIONS



EB 6611-2 EN

Translation of original instructions



TROVIS 6611-2 Control and Automation Unit

Firmware version 3.91



Edition December 2022

Note on these mounting and operating instructions

These mounting and operating instructions assist you in mounting and operating the device safely. The instructions are binding for handling SAMSON devices. The images shown in these instructions are for illustration purposes only. The actual product may vary.

- For the safe and proper use of these instructions, read them carefully and keep them for later reference.
- If you have any questions about these instructions, contact SAMSON's After-sales Service (aftersaleservice@samsongroup.com).



Documents relating to the device, such as the mounting and operating instructions, are available on our website at www.samsongroup.com > **DOWNLOADS > Documentation.**

Definition of signal words

DANGER

Hazardous situations which, if not avoided, will result in death or serious injury

WARNING

Hazardous situations which, if not avoided, could result in death or serious injury

NOTICE

Property damage message or malfunction

Note

Additional information

Tip

Recommended action

1	Safety instructions and measures	1-1
1.1	Notes on possible severe personal injury	1-4
1.2	Notes on possible property damage	1-5
2	Markings on the device	2-1
2.1	Nameplate	2-1
3	Design and principle of operation	3-1
3.1	Technical data	3-2
3.2	Dimensions	3-3
4	Shipment and on-site transport	4-1
4.1	Accepting the delivered goods	4-1
4.2	Removing the packaging from the control and automation unit	4-1
4.3	Transporting the control and automation unit	4-1
4.4	Storing the control and automation unit	4-1
5	Installation	5-1
5.1	Installation conditions	5-1
5.2	Preparation for installation	5-1
5.3	Mounting the control and automation unit	5-1
5.4	Electrical connection	5-3
6	Operation	6-1
6.1	Operating controls at the front	6-1
6.2	Back of device	6-3
7	Start-up and configuration	7-1
7.1	Start-up	7-1
7.1.1	User login	7-1
7.1.2	Loading a project	7-1
7.1.3	Setting the system time	7-1
7.1.4	Network settings	7-2
7.1.5	Assigning modules	7-3
7.1.6	Calibrating the touch screen	7-3
7.1.7	Quick check	7-4
7.2	Configuration	7-6
8	Operation	8-1
8.1	User administration	8-1
8.2	Operating the system	8-1
8.3	Resetting the unit	8-1
8.4	Setting up a WiFi hotspot	8-2

Contents

9	Malfunctions	9-1
9.1	Emergency action	9-2
10	Servicing	10-1
10.1	Updating the firmware	10-1
11	Decommissioning	11-1
12	Removal	12-1
13	Repairs	13-1
13.1	Returning devices to SAMSON	13-1
14	Disposal	14-1
15	Certificates	15-1
15.1	EU declaration of conformity.....	15-2
15.2	GNU GENERAL PUBLIC LICENSE	15-3
15.2.1	GNU GENERAL PUBLIC LICENSE, Version 2, June 1991	15-3
15.2.2	GNU GENERAL PUBLIC LICENSE, Version 3, 29 June 2007	15-8
15.2.3	GNU LESSER GENERAL PUBLIC LICENSE, Version 3, 29 June 2007	15-19
16	Annex	16-1
16.1	Accessories	16-1
16.2	After-sales service	16-2

1 Safety instructions and measures

Intended use

The TROVIS 6611-2 Control and Automation Unit is freely programmable and allows autonomous operation and management of 32 I/O modules. It has an integrated color touch screen for visualization.

To allow the control and automation unit to access the I/O modules in the required manner, the I/O modules must be mapped logically as a project in the unit. For this purpose, SAMSON provides ready-made applications. Alternatively, a project can be programmed using the SAMSON graphical project management tool (logic circuits, menu navigation, visualization and start-up).

The control and automation unit as well as the I/O modules are designed to operate under exactly defined conditions (e.g. power supply, ambient conditions). Therefore, operators must ensure that the unit is only used in applications where the operating conditions correspond to the technical data. In case operators intend to use the control and automation unit in applications or conditions other than those specified, contact SAMSON.

SAMSON does not assume any liability for damage resulting from the failure to use the device for its intended purpose or for damage caused by external forces or any other external factors.

➔ Refer to the technical data for limits and fields of application as well as possible uses. See the 'Design and principle of operation' section.

The operator is responsible for the physical and logical project management, if not agreed otherwise.

Reasonably foreseeable misuse

The control and automation unit is not suitable for the following applications:

- Use outside the limits defined during sizing and by the technical data

Furthermore, the following activities do not comply with the intended use:

- Use of non-original spare parts
- Performing service and repair work not described

Qualifications of operating personnel

- The unit must be mounted, started up, serviced and repaired by fully trained and qualified personnel only; the accepted industry codes and practices are to be observed.
- The projects must be configured and set by trained and experienced personnel only.

Safety instructions and measures

According to these mounting and operating instructions, trained personnel refers to individuals who are able to judge the work they are assigned to and recognize possible hazards due to their specialized training, their knowledge and experience as well as their knowledge of the applicable standards.

Personal protective equipment

No personal protective equipment is required.

Revisions and other modifications

Revisions, conversions or other modifications of the product are not authorized by SAMSON. They are performed at the user's own risk and may lead to safety hazards, for example. Furthermore, the product may no longer meet the requirements for its intended use.

Safety features

The operation of the unit is password-protected to protect it from unauthorized access. A user role with individual privileges and password is assigned to each user.

Warning against residual hazards

The control and automation unit has direct influence on controlled plant components (e.g. control valves and pumps) over the I/O modules. To avoid personal injury or property damage, plant operators and operating personnel must prevent hazards that could be caused in the plant components by the process medium, the operating pressure, the signal pressure or by moving parts by taking appropriate precautions. Plant operators and operating personnel must observe all hazard statements, warnings and caution notes in the referenced documents.

Responsibilities of the operator

Operators are responsible for proper use and compliance with the safety regulations. Operators are obliged to provide these mounting and operating instructions to the operating personnel and to instruct them in proper operation. Furthermore, operators must ensure that operating personnel or third parties are not exposed to any danger.

Responsibilities of operating personnel

Operating personnel must read and understand these mounting and operating instructions as well as the specified hazard statements, warnings and caution notes. Furthermore, operating personnel must be familiar with the applicable health, safety and accident prevention regulations and comply with them.

Referenced standards, directives and regulations

The TROVIS 6611-2 Control and Automation Unit with a CE marking fulfills the requirements of the Directives 2014/30/EU and 2011/65/EU.

The declaration of conformity is included in the 'Certificates' section of Mounting and Operating Instructions EB 6611-2.

The TROVIS 6611-2 Control and Automation Unit has been designed for use in low voltage installations.

→ For wiring, maintenance and repair, observe the relevant safety regulations.

Referenced documentation

The following documents apply in addition to these mounting and operating instructions:

- ▶ AB 6600: System integration guidelines for electrical technicians
- ▶ T 6620-1 for TROVIS 6620-1 I/O Module
- ▶ T 6625 for TROVIS 6625 Input Module
- ▶ T 6630 for TROVIS 6630 AO Module ¹⁾
- ▶ T 6640 for TROVIS 6640 AI Module ¹⁾

– Technical documentation for the room panel in use

¹⁾ Discontinued

1.1 Notes on possible severe personal injury

DANGER

Risk of fatal injury due to electric shock.

The TROVIS 6611-2 Control and Automation Unit has been designed for use in low voltage installations. Electrical connection of the device involves potential hazards.

- Observe the relevant electrotechnical regulations of the country of use as well as the regulations of the local power suppliers.
- Only allow trained and experienced personnel to perform the work.
- Before electrical connection, disconnect the supply voltage and protect it against unintentional reconnection.
- Only use power interruption devices that can be protected against unintentional reconnection of the power supply.
- Do not open the control and automation unit when the supply voltage is connected.
- Do not remove any housing parts.

1.2 Notes on possible property damage

! NOTICE

Damage due to water entering the device.

The front pane of the control and automation unit is protected against vertically falling drops of water (IP 41).

→ Avoid drops, sprays and jets of water.

Manipulation of settings due to unauthorized access.

The TROVIS 6611-2 Control and Automation Unit supports various communications protocol (e.g. a web server). This allows remote access. To protect it from unauthorized access, the onsite and remote operation of the unit is password-protected:

→ Change the initial administrator password after first start-up.

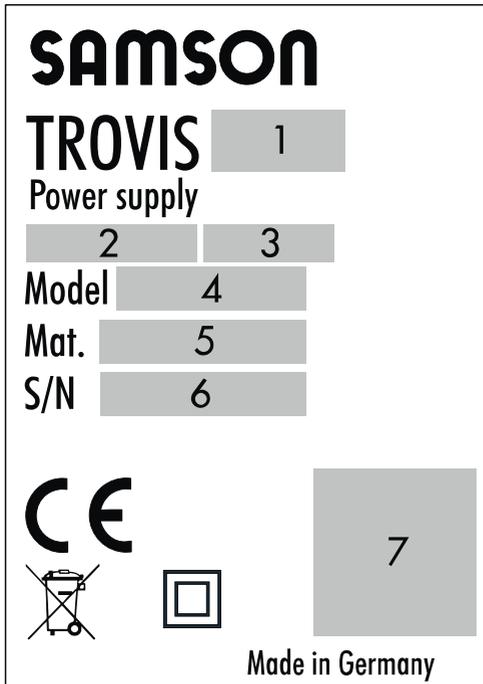
→ Regularly change all user passwords.

→ Do not pass login data on to unauthorized persons. Keep them in a safe place inaccessible to unauthorized persons.

2 Markings on the device

2.1 Nameplate

The nameplate shown was up to date at the time of publication of this document. The nameplate on the device may differ from the one shown.



- 1 Type designation
- 2 Supply voltage; power line frequency
- 3 Power consumption
- 4 Model number
- 5 Material no.
- 6 Serial number
- 7 Data Matrix code

3 Design and principle of operation

The TROVIS 6611-2 Control and Automation Unit is freely programmable and allows autonomous operation and management of 32 I/O modules (up to 640 physical data points). It has an integrated color touch screen for visualization. The SAMSON Graphical Project Management tool is required to create applications.

i Note

The control and automation unit does not contain any applications in the delivered state.

System-specific applications can be ordered from SAMSON.

Max. number of units

Modules

- 32x I/O modules (TROVIS 6620, 6625, 6630 oder 6640) per TROVIS 6611-2
- 32x TROVIS 6611-2 per application (graphical project management tool)

Cable length without repeaters, hubs etc.

- Ethernet 100BASE-T type: LAN
- I/O bus 1200 m
- 24 V AC/DC Max. 1.5 mm² strand (12 mm-long wire end ferrule)
- Ethernet Min. Cat 5 cable, shielded (STP)
- I/O bus Jy(St) Y 2 x 2 x 0.8 (12 mm-long wire end ferrule)

3.1 Technical data

Technical data

Supply	
Supply voltage	24 V AC/DC
Power consumption	8 VA/W
Port	2-pin screw clamp terminal (orange)
Wire cross-section	Up to 1.5 mm ²
Permissible ambient conditions	
Operating temperature range	0 to 55 °C
Temperature range for transportation and storage	-20 to +70 °C
Relative humidity	5 to 95 %, no dew formation
Electromagnetic compatibility	
Noise emission	According to EN 61000-6-3
Noise immunity	According to EN 61000-6-2
Device safety	
Class of protection	II according to DIN EN 61140
Overvoltage category	II according to DIN EN 60664-1
Degree of contamination	2 according to DIN EN 60664-1
Degree of protection	IP41 according to IEC 60529 (with seal for panel mounting)
Display	
Key figures	3.5" QVGA, resistive touch screen
Resolution	320 x 240 pixel
Installation	
Dimensions	W x H x D including terminals: 147 mm x 96 mm x 50 mm
Mounting	Panel mounting
Panel cutout	W x H: 138 mm x 92 mm (recommended installation depth: min. 80 mm)
Weight	Approx. 0.4 kg

Interfaces	
Serial interfaces	1x RS-485 Modbus RTU (3-pin screw clamp terminal) 1x RS-485 I/O bus (3-pin screw clamp terminal), e.g. for TROVIS 6620
Ethernet	1x RJ-45 10/100 Mbit, BACnet IP (AMEV Profile AS-A, AS-B)
USB	2x USB 2.0 A, (FAT32)
Supported protocols	Modbus RTU, Modbus TCP, BACnet IP (AMEV Profile AS-A, AS-B), OPC UA, MQTT
Conformity	CE

3.2 Dimensions

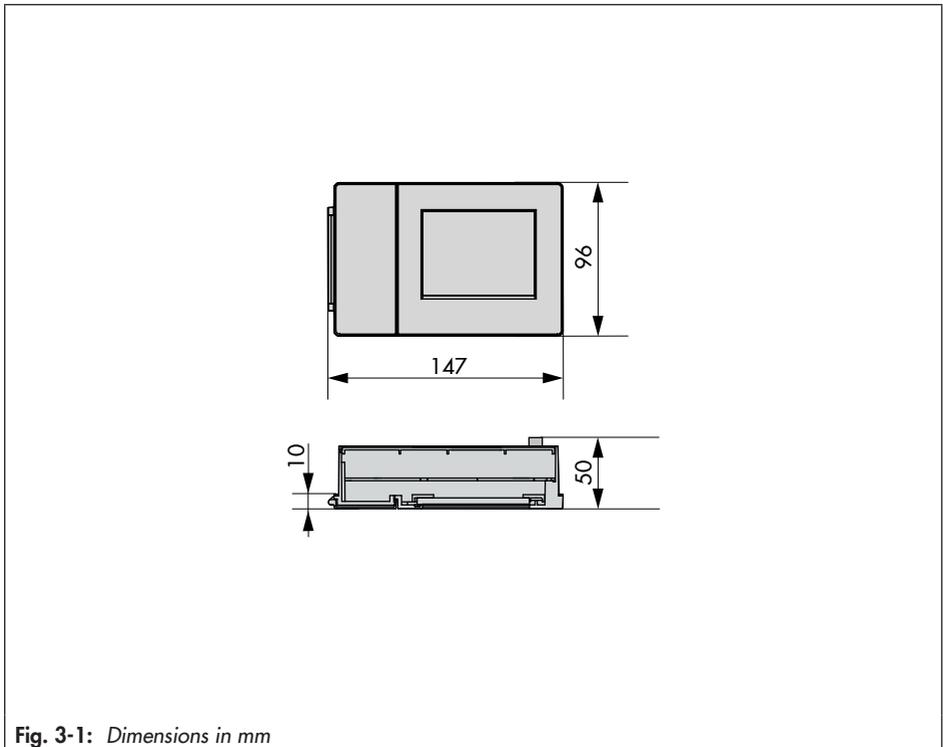


Fig. 3-1: Dimensions in mm

4 Shipment and on-site transport

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

4.1 Accepting the delivered goods

After receiving the shipment, proceed as follows:

1. Compare the shipment received with the delivery note.
2. Check the shipment for transportation damage. Report any damage to SAMSON and the forwarding agent (refer to delivery note).

4.2 Removing the packaging from the control and automation unit

NOTICE

Risk of device damage due to foreign particles entering it.

→ Do not remove the packaging and protective films until immediately before mounting.

1. Remove the packaging from the device.
2. Check scope of delivery (see Fig. 4-1).

3. Dispose of the packaging in accordance with the valid regulations.

1x TROVIS 6611-2 Control and Automation Unit
 1x Document IP 6611-2
 (Important Product Information)

Fig. 4-1: Scope of delivery

4.3 Transporting the control and automation unit

- Protect the device against external influences (e.g. impact).
- Protect the device against moisture and dirt.
- Observe the permissible transportation temperature of -20 to $+70$ °C.

4.4 Storing the control and automation unit

NOTICE

Risk of damage to the unit due to improper storage.

- Observe the storage instructions.
- Avoid long storage times.
- Contact SAMSON in case of different storage conditions or longer storage times.

Note

We recommend to regularly check the unit and the prevailing storage conditions during long storage times.

Shipment and on-site transport

Storage instructions

- Protect the device against external influences (e.g. impact).
- Protect the device against moisture and dirt.
- Make sure that the ambient air is free of acids or other corrosive media.
- Observe the permissible storage temperature from -20 to $+70$ °C.
- Do not place any objects on the device.

5 Installation

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

5.1 Installation conditions

Work position

The work position for the unit is the front view onto the display seen from the position of operating personnel.

Operators must ensure that, after installation of the unit, the operating personnel can perform all necessary work safely and easily access the unit from the work position.

5.2 Preparation for installation

Before installation, make sure the following conditions are met:

The control and automation unit is not damaged.

Proceed as follows:

→ Lay out the necessary material and tools to have them ready during installation work.

5.3 Mounting the control and automation unit

The control and automation unit is mainly designed for panel mounting.

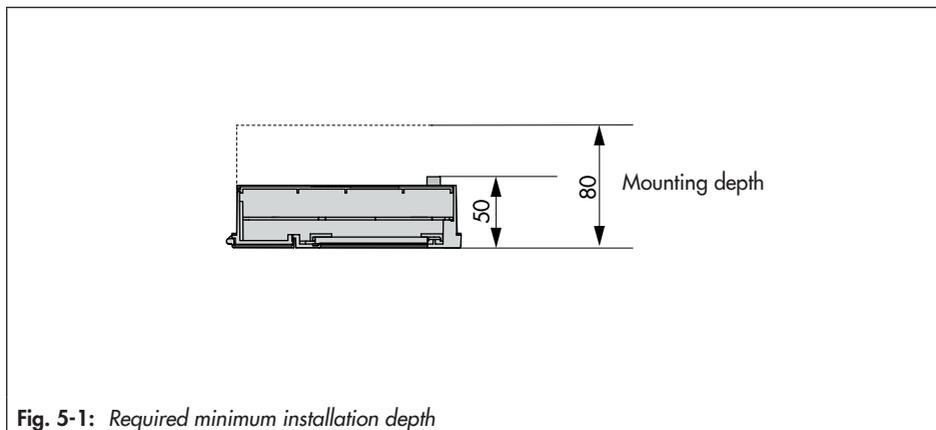


Fig. 5-1: Required minimum installation depth

Installation

- Make the panel cut-out.
 - Panel cut-out (W x H): 138 x 92 mm
- Push the unit from the front through the panel cut-out.
- Slide the supplied screw rails into the guide rails:
the clamps on the screw rails must face towards the control panel.
- Fasten the screw rails with the supplied screws:
the tips of the screws must point towards the control panel.
- Connect the wiring (see section 5.4).

5.4 Electrical connection

⚠ DANGER

Risk of fatal injury due to electric shock.

The control and automation unit has been designed for use in low voltage installations. Electrical connection of the device involves potential hazards.

- *Observe the relevant electrotechnical regulations of the country of use as well as the regulations of the local power suppliers.*
 - *Only allow trained and experienced personnel to perform the work.*
 - *Before electrical connection, disconnect the supply voltage and protect it against unintentional reconnection.*
 - *Only use power interruption devices that can be protected against unintentional reconnection of the power supply.*
-

Notes on electric wiring

- Use a stranded wire with a 1.5 mm² wire cross-section for the supply line.
- Use at least a shielded Cat 5 cable (STP) for the Ethernet connection.
- Inductances in the control cabinet, e.g. contactor coils, must be equipped with suitable interference suppressors (RC elements).
- Control cabinet elements with high field strength, e.g. transformers or frequency converters, must be shielded with separators providing a good connection to the grounding conductor (PE).

Surge protection

- If signal lines are installed outside buildings or over large distances, make sure appropriate surge or overvoltage protection measures are taken. Such measures are indispensable for bus lines.
- The shield of signal lines installed outside buildings must have current conducting capacity and must be grounded on both sides.
- Install surge diverters at the entry of the control cabinet.

Electrical connection

The terminals for the supply voltage have reverse polarity protection.

- Connect the control and automation unit to the supply voltage.

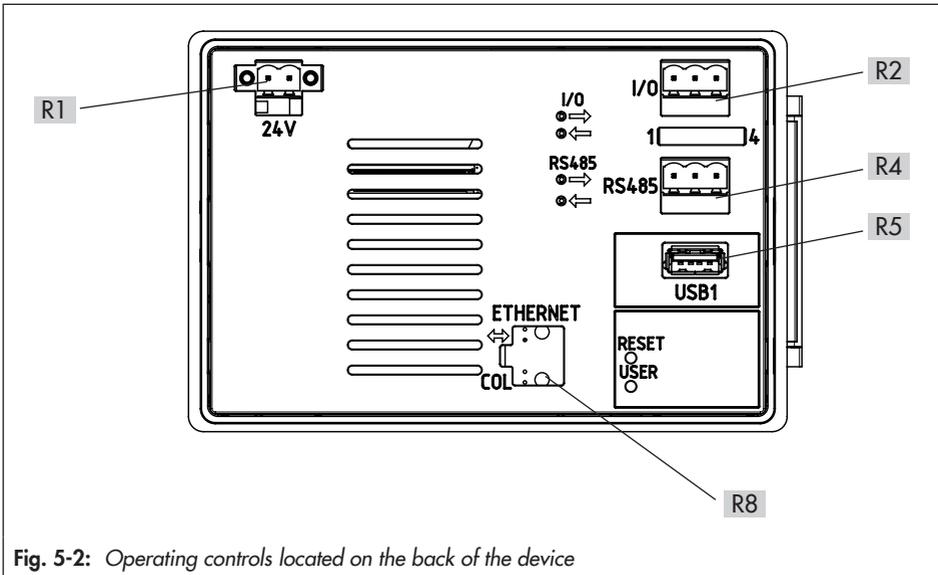


Fig. 5-2: Operating controls located on the back of the device

R1 Connection for supply voltage

R2 Connection for I/O bus (physical inputs on the input/output modules)

Distributed I/O modules are required to connect the physical input and outputs. The two terminals are labeled "IA" and "IB" and must be wired consistently in exactly the same way.

Maximum cable core length: 1200 m

A maximum of 32 I/O modules (e.g. TROVIS 6620, 6625, 6630 ¹⁾ or 6640 ¹⁾) can be connected to one TROVIS 6611-2 Control and Automation Unit.

R4 Connection for Modbus (RS-485 2W)

R5 USB port

Functions:

- Load and save data
- Memory extension for historical data

USB flash drive requirements: 2.0 with FAT32

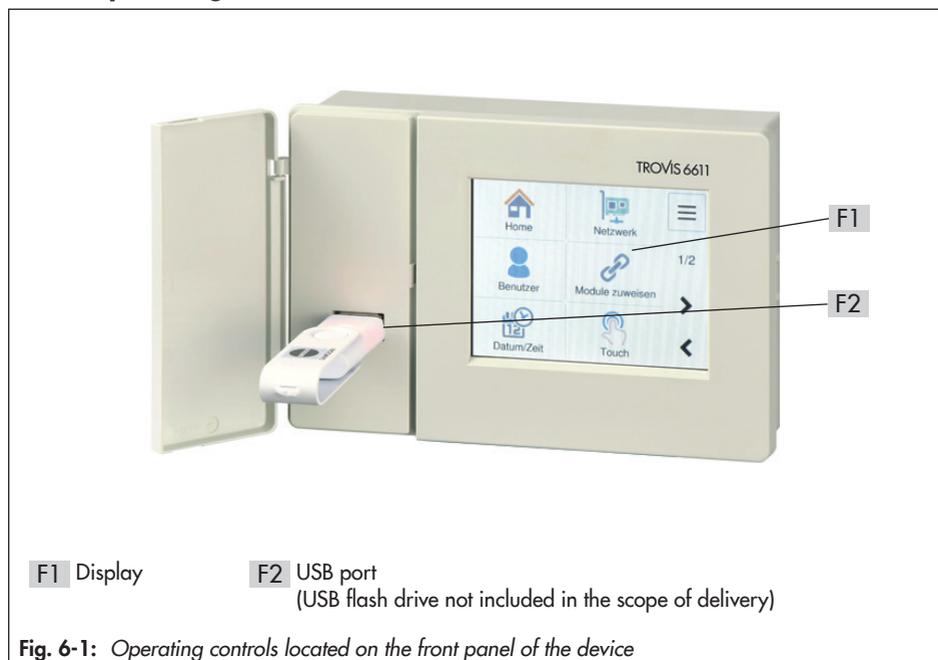
R8 Ethernet connection

¹⁾ Discontinued

6 Operation

The operating controls are located on the front panel as well as the back of the unit.

6.1 Operating controls at the front



Touch screen (F1)

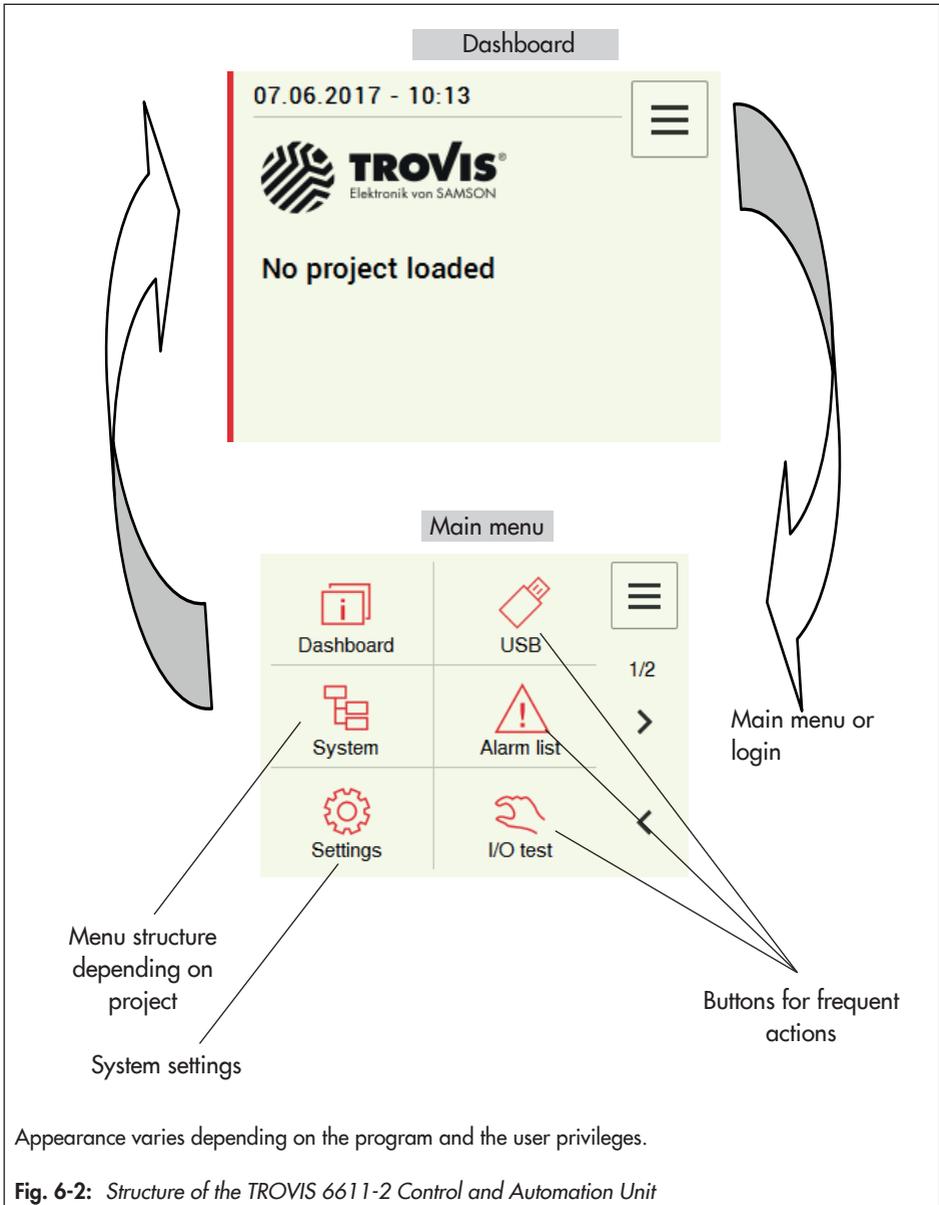
The touch screen is the main operating element.



Tap the menu button in the top right-hand corner of the screen to open various levels. Depending on the level, various functions can be executed by tapping the displayed buttons.

USB port (F2)

The USB port is accessible after opening the lid. Data can be transferred from a USB flash drive inserted into the port to the unit and vice versa.



6.2 Back of device

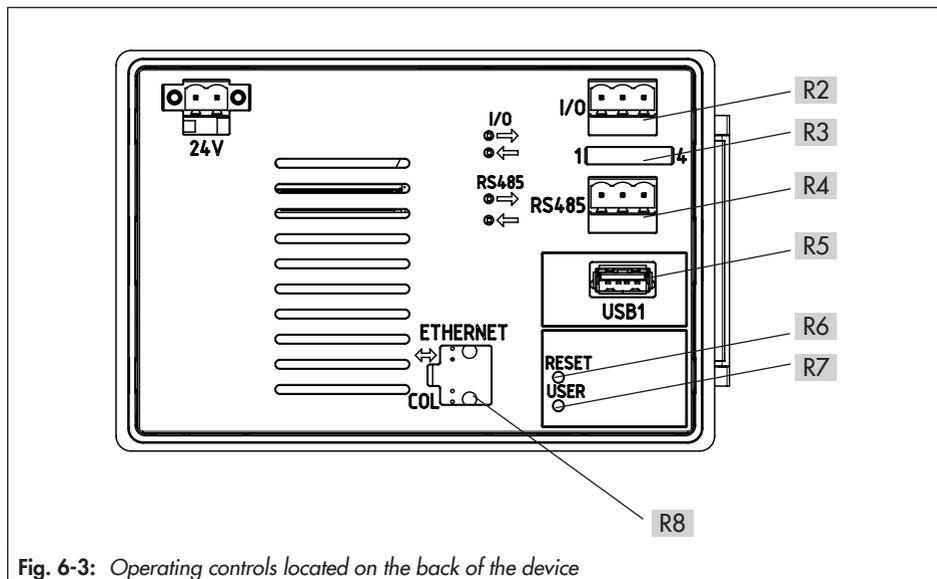


Fig. 6-3: Operating controls located on the back of the device

- R2** Connection for I/O bus (physical inputs on the input/output modules)
The two terminals are labeled "IA" and "IB".
- R3** Jumper for RS-485 configuration
- R4** Connection for Modbus (RS-485 2W)
- R5** USB port
Functions:
 - Load and save data
 - Memory extension for historical data
 USB flash drive requirements: 2.0 with FAT32
- R6** Reset key for restart
- R7** User key
- R8** Ethernet connection

7 Start-up and configuration

→ Connect a supply voltage to the control and automation unit.

7.1 Start-up

7.1.1 User login

- Select "Login" in the menu (☰ button).
- Enter your user name and password ("admin").

NOTICE

Insufficient security due to generally accessible password.

→ *Change the administrator password ("admin") after first login.*

7.1.2 Loading a project

- Insert the USB flash drive containing the project into the front USB port.
- Go to the main menu (☰ button).
- Select "Load project" in "USB" and select the required project.

Note

Select "USB" to perform further actions:

- Save project
 - Update the firmware
-

7.1.3 Setting the system time

- Go to the main menu (☰ button).
- Select "Date and time" in "Settings".
- Change the time and date.
- Select "Apply" in the menu (☰ button) to save changes.

7.1.4 Network settings

The unit has an integrated web server (TROVIS MOBILE), which can be simply accessed over the network and browser through the IP address. It must have the same address as the end device (smartphone, notebook, tablet computer, computer etc.) and an active HTTPS.

TROVIS MOBILE is designed for modern web browsers, e.g. Mozilla Firefox in version V.45 and higher. Access to the Internet requires port forwarding using a router (e.g. VPN) to be set up on site.

i Note

The LAN setting is set to DHCP in the default setting. In this setting, it is assumed that the TROVIS 6611-2 Control and Automation Unit is assigned to an IP address, e.g. belonging to a router. However, the IP address is not assigned, for example when the TROVIS 6611-2 unit is directly connected to a laptop using a network cable. In this case, DHCP must be deactivated to allow the preset static IP address to be used.

The currently used and active IP address can be found at [Main menu > Device information > Network: eth0]. This information is available regardless of the user role.

- Go to the main menu (☰ button).
- Select "Network settings" in "Settings".
- Set the "LAN port" to ON.
- Select "Back one level" in the menu (☰ button) to exit the level.
- Set all other parameters in "LAN settings":
 - DHCP: ON (= default)
 - IP address: 172.30.66.11 (= default)
 - Subnet mask: 255.255.0.0 (= default)
 - Host name: TROVIS-6111-2-xxx (xxx = device-specific MAC address)
 - DNS server
 - NTP server
- If necessary, select "Services" in "Network" and set the user options:
 - Activate FTPS for use with graphical project management (default = OFF)
 - Activate HTTPS for the use of the integrated TROVIS-MOBILE web server (default = OFF)
 - SSH for console access using the "root" user role

NOTICE

Impaired device function and loss of warranty through the improper use of the "root" user role.

- Only activate SSH for troubleshooting and administration activities performed by trained personnel.
 - Do not leave the SSH constantly activated.
 - Assign a "root" password to protect its access.
-

→ Select "Apply" in the menu (☰ button) to save changes.

7.1.5 Assigning modules

- Go to the main menu (☰ button).
 - Select "Module assignment" in "Settings".
The logical modules are listed.
 - Select one physical module for each logical module one after the other.
 - The LEDs of a physical module blink after it has been selected. Confirm selection by checking the box (top right) or repeat selection procedure until the correct physical module has been selected.
 - Select "Apply" in the menu (☰ button) to save changes.
-

i Note

We recommend SAMSON entering a restore point ("Restore system" command in "Settings") after assigning the module. This ensures the settings are saved and can be restored later.

7.1.6 Calibrating the touch screen

- Go to the main menu (☰ button).
- Select "Touch screen calibration" in "Settings". Select "Start touch screen calibration".
- Tap the crosshair with a pointed item each time it appears on the screen.

7.1.7 Quick check

"I/O test" allows the unit's ability to function to be checked. It allows you to check all the connected modules and the physical inputs and outputs.

- After changing to the main menu (☰ button), select "I/O test".
- Manually switch the outputs one after the other to check that they function.

Table 7-1: *User roles*

User	Load project	Set system time	Set network	Assign modules	Calibrate touch screen	Operate system on site	Reset unit	Create new user	Update the firmware
Default user	NO	NO	NO	NO	NO	YES	NO	NO	NO
User	NO	YES	NO	NO	NO	YES	NO	NO	NO
Service	YES	YES	YES	YES	YES	YES	YES	NO	NO
Administrator	YES	YES	YES	YES	YES	YES	YES	YES	YES



7.2 Configuration

R3 Jumper for RS-485 configuration

The jumpers are not set in the delivered state. Refer to the following table for the required setting.

1	2	3	4
Bus termination for I/O bus	Bus bias voltage for Modbus (jumper 3 must be closed)	Bus bias voltage for Modbus (jumper 2 must be closed)	Bus termination for Modbus
Closed = Active	Closed = Active	Closed = Active	Closed = Active
Open = Not active	Open = Not active	Open = Not active	Open = Not active

Close jumper 1 if TROVIS 6611-2 is at the end of the I/O bus line.

Close jumpers 2 and 3 to activate the Modbus bias voltage (if TROVIS 6611-2 is used as a Modbus RTU master).

Close jumper 4 if TROVIS 6611-2 is at the end of the bus.

R4 Connection for Modbus (RS-485 2W)

The TROVIS 6611-2 Control and Automation Unit supports the Modbus RTU fieldbus protocol with two-wire system. The corresponding jumpers must be set for the terminating resistors or bias voltage. Bus properties, such as master or slave operation, data bits, parity and stop bits must be configured in the SAMSON Graphical Project Management Tool software. The two terminals are labeled "RA" and "RB" and must be wired consistently in exactly the same way.

R8 Ethernet connection

Data transmission rate: 100 Mbit/s

Host name: Fallback IP-Adresse 172.30.66.11

The Ethernet connection can be configured and activated on site at the device. The services (SSH, FTPES, HTTPS, AVAHI (see section 7.1.4)) are deactivated in the delivered state. However, the TROVIS 6611-2 Control and Automation Unit in the default state obtains the IP addresses over DHCP.

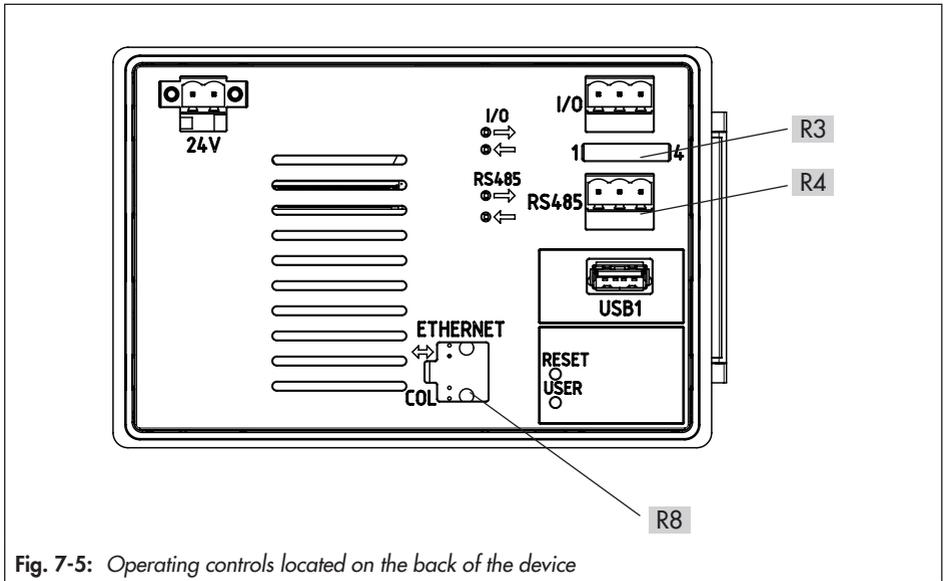


Fig. 7-5: Operating controls located on the back of the device

8 Operation

8.1 User administration

User administration is performed over the TROVIS MOBILE web server (see the 'Start-up and configuration' section).

Four different user roles can be assigned to users (see the 'Start-up and configuration' section).

8.2 Operating the system

The system is operated in "System". It depends on the loaded project.

→ After changing to the main menu ( button), select "System".

8.3 Resetting the unit

Reset to first start-up

By resetting to first start-up, all system parameters are set to the state upon delivery of the project.

→ Press the reset key on the back of the device.

Restore system

The "Restore system" command in "Settings" allows the system to be restored to a certain point. Once set, settings can be reset to this point again at any time.

→ Go to the main menu ( button).

→ Select "Restore system" in "Settings".

Resetting to default settings

Resetting to default settings causes all settings made during start-up (project, system time, network, module assignment) to be deleted.

→ Save data to a USB flash drive before resetting to default settings.

→ Press reset and user keys on the back of the device simultaneously. Hold the user key pressed until the reading indicates a reset to default settings.

8.4 Setting up a WiFi hotspot

External hardware (e.g. computer, laptop, smartphone, tablet computer) can be used to establish a WiFi connection to the TROVIS 6611-2 Control and Automation Unit. The unit's released services (e.g. web server, connection to the graphical project management tool) can be accessed over a WiFi hotspot. It can only be established using a WiFi flash drive¹⁾, within wireless coverage and when the end devices have been connected properly to the WiFi provided by the WiFi flash drive.

i Note

¹⁾ WiFi flash drive must support the approved chips with suitable drivers, e.g. Edimax EW-7811Un.

9 Malfunctions

→ Troubleshooting (see Table 9-1).

i Note

Contact SAMSON's After-sales Service for malfunctions not listed in the table.

Table 9-1: Troubleshooting

Error	Possible reasons	Recommended action
Screen remains black.	No or incorrect supply voltage connected.	→ Check the supply voltage and connections (see the 'Installation' section).
Readings on screen not legible	No or incorrectly set reading area of the screen.	→ Recalibrate screen (see the 'Start-up and configuration' section).
System components do not perform the required actions.	Wrong project loaded or project deleted.	→ Reload project (see the 'Start-up and configuration' section).
	Modules incorrectly/not assigned.	→ Perform quick check (see the 'Installation' section) and reassign modules, if necessary (see the 'Start-up and configuration' section).
TROVIS MOBILE web server cannot be used.	Network settings are incorrect.	→ Check settings and change them, if necessary (see the 'Start-up and configuration' section).

9.1 Emergency action

Plant operators are responsible for emergency action to be taken in the plant.



Tip

Emergency action in the event of failure is described in the associated documentation.

10 Servicing

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

i Note

The control and automation unit was checked by SAMSON before it left the factory.

– The product warranty becomes void if service or repair work not described in these instructions is performed without prior agreement by SAMSON's After-sales Service.

– Only use original spare parts by SAMSON, which comply with the original specifications.

10.1 Updating the firmware

The unit's firmware needs to be updated after certain applications and functions have been revised. The firmware is updated using a USB flash drive ¹⁾ containing the latest firmware.

¹⁾ The USB flash drive must have the FAT32 format, assigned the name "TROVIS 6611" and have the same folder structure.

This procedure requires administrator privileges.

- ➔ Insert the USB flash drive containing the firmware into the front USB port.
- ➔ Go to the main menu (☰ button).
- ➔ Select "Update firmware" in "USB" and select the required project.

11 Decommissioning

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

DANGER

Risk of fatal injury due to electric shock.

- *Only allow trained and experienced personnel to perform the work.*
 - *Before disconnecting live wires, switch off the supply voltage and protect it against unintentional reconnection.*
-
- Disconnect the supply voltage and protect it against unintentional reconnection.

12 Removal

The work described in this section is only to be performed by personnel appropriately qualified to carry out such tasks.

DANGER

Risk of fatal injury due to electric shock.

- *Only allow trained and experienced personnel to perform the work.*
 - *Before disconnecting live wires, switch off the supply voltage and protect it against unintentional reconnection.*
-
- Undo the screws on the guide rails and remove the unit.
 - Remove the wires from the plug-on screw terminals.

13 Repairs

A defective control and automation unit must be repaired or replaced.

NOTICE

Risk of damage due to incorrect service or repair work.

- *Do not perform any repair work on your own.*
 - *Contact SAMSON's After-sales Service for service and repair work.*
-

13.1 Returning devices to SAMSON

Defective control and automation units can be returned to SAMSON for repair.

Proceed as follows to return devices to SAMSON:

1. Put the control and automation unit out of operation (see the 'Decommissioning' section).
2. Remove the control and automation unit (see the 'Removal' section).
3. Proceed as described on the Returning goods page of our website
 - ▶ www.samsongroup.com > Service > After-sales Service > Returning goods

14 Disposal



SAMSON is a producer registered at the following European institution ► <https://www.ewrn.org/national-registers/national-registers>.
WEEE reg. no.:
DE 62194439/FR 025665

- Observe local, national and international refuse regulations.
- Do not dispose of components and hazardous substances together with your other household waste.

i Note

We can provide you with a recycling passport according to PAS 1049 on request. Simply e-mail us at offersaleservice@samsongroup.com giving details of your company address.

Tip

On request, we can appoint a service provider to dismantle and recycle the product as part of a distributor take-back scheme.

15 Certificates

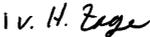
The following certificates are included on the next pages:

- EU declaration of conformity
- GNU GENERAL PUBLIC LICENSE

The certificate shown was up to date at the time of publishing. The latest certificates can be found on our website:

It can be downloaded from our website at ► www.samsongroup.com > Products & Applications > Product selector > Automation Systems > 6611-2 > Downloads

15.1 EU declaration of conformity

SMART IN FLOW CONTROL.		
SAMSON		
EU Konformitätserklärung / EU Declaration of Conformity / Déclaration UE de conformité		
Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller/ This declaration of conformity is issued under the sole responsibility of the manufacturer/ La présente déclaration de conformité est établie sous la seule responsabilité du fabricant. Für das folgende Produkt / For the following product / Nous certifions que le produit		
Bedien- und Automationsseinheit TROVIS 6611-2 / TROVIS 6611-2 Control and Automation Unit Typ/Type/Type TROVIS 6611-2		
wird die Konformität mit den einschlägigen Harmonisierungsrechtsvorschriften der Union bestätigt / the conformity with the relevant Union harmonisation legislation is declared with/ est conforme à la législation d'harmonisation de l'Union applicable selon les normes:		
EMC 2014/30/EU	EN 61000-6-2:2005, EN 61000-6-3:2007 +A1:2010, EN 61326-1:2013	
RoHS 2011/65/EU	EN 50581:2012	
Hersteller / Manufacturer / Fabricant:		
SAMSON AKTIENGESELLSCHAFT Weismüllerstraße 3 D-60314 Frankfurt am Main Deutschland/Germany/Allemagne		
Frankfurt / Francfort, 2017-07-29 Im Namen des Herstellers/ On behalf of the Manufacturer/ Au nom du fabricant.		
 _____ Gert Nahler Zentralabteilungsleiter/Head of Department/Chef du département Entwicklung Automation und Integrationstechnologien/ Development Automation and Integration Technologies	 _____ Hanno Zager Leiter Qualitätssicherung/Head of Quality Management/ Responsable de l'assurance de la qualité	
<small>cs_66112_de_en_fr_0607.pdf</small>		
<hr/>		
<small>SAMSON AKTIENGESELLSCHAFT Weismüllerstraße 3 60314 Frankfurt am Main</small>	<small>Telefon: 069 4009-0 · Telefax: 069 4009-1507 E-Mail: samson@samson.de</small>	<small>Revision 07</small>

15.2 GNU GENERAL PUBLIC LICENSE

15.2.1 GNU GENERAL PUBLIC LICENSE, Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect

making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The „Program“, below, refers to any such program or work, and a „work based on the Program“ means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term „modification“.) Each licensee is addressed as „you“.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
 - a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
 - b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
 - c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Pro-

gram itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:
 - a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or.
 - b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or.
 - c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

Certificates

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.
6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide

if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and „any later version“, you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM „AS IS“ WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA

Certificates

BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

15.2.2 GNU GENERAL PUBLIC LICENSE, Version 3, 29 June 2007

Copyright © 2007 Free Software Foundation, Inc. <<http://fsf.org/>>

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for software and other kinds of works.

The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program—to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps: (1) assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protect-

ing users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

Certificates

1. Source Code.

The “source code” for a work means the preferred form of the work for making modifications to it. “Object code” means any non-source form of a work.

A “Standard Interface” means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The “System Libraries” of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A “Major Component”, in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The “Corresponding Source” for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work’s System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for

you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

- a) The work must carry prominent notices stating that you modified it, and giving a relevant date.
- b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".
- c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

Certificates

- d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an “aggregate” if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation’s users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

- a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.
- b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.
- c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.
- d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

- e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A “User Product” is either (1) a “consumer product”, which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, “normally used” refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

“Installation Information” for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

Certificates

“Additional permissions” are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

- a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or
- b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or
- c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or
- d) Limiting the use for publicity purposes of names of licensors or authors of the material; or
- e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or
- f) Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on those licensors and authors.

All other non-permissive additional terms are considered “further restrictions” within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of

Certificates

the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A “contributor” is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor’s “contributor version”.

A contributor’s “essential patent claims” are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, “control” includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor’s essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a “patent license” is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To “grant” such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. “Knowingly relying” means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient’s use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of

the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is “discriminatory” if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

12. No Surrender of Others’ Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License “or any later version” applies to it, you have the option of following the terms and conditions either of that numbered version or of any later

Certificates

version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17. Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

15.2.3 GNU LESSER GENERAL PUBLIC LICENSE, Version 3, 29 June 2007

Copyright © 2007 Free Software Foundation, Inc. <<http://fsf.org/>>

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

This version of the GNU Lesser General Public License incorporates the terms and conditions of version 3 of the GNU General Public License, supplemented by the additional permissions listed below.

0. Additional Definitions.

As used herein, “this License” refers to version 3 of the GNU Lesser General Public License, and the “GNU GPL” refers to version 3 of the GNU General Public License.

“The Library” refers to a covered work governed by this License, other than an Application or a Combined Work as defined below.

An “Application” is any work that makes use of an interface provided by the Library, but which is not otherwise based on the Library. Defining a subclass of a class defined by the Library is deemed a mode of using an interface provided by the Library.

A “Combined Work” is a work produced by combining or linking an Application with the Library. The particular version of the Library with which the Combined Work was made is also called the “Linked Version”.

The “Minimal Corresponding Source” for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The “Corresponding Application Code” for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

1. Exception to Section 3 of the GNU GPL.

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL.

2. Conveying Modified Versions.

If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

Certificates

- a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or
- b) under the GNU GPL, with none of the additional permissions of this License applicable to that copy.

3. Object Code Incorporating Material from Library Header Files.

The object code form of an Application may incorporate material from a header file that is part of the Library. You may convey such object code under terms of your choice, provided that, if the incorporated material is not limited to numerical parameters, data structure layouts and accessors, or small macros, inline functions and templates (ten or fewer lines in length), you do both of the following:

- a) Give prominent notice with each copy of the object code that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the object code with a copy of the GNU GPL and this license document.

4. Combined Works.

You may convey a Combined Work under terms of your choice that, taken together, effectively do not restrict modification of the portions of the Library contained in the Combined Work and reverse engineering for debugging such modifications, if you also do each of the following:

- a) Give prominent notice with each copy of the Combined Work that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the Combined Work with a copy of the GNU GPL and this license document.
- c) For a Combined Work that displays copyright notices during execution, include the copyright notice for the Library among these notices, as well as a reference directing the user to the copies of the GNU GPL and this license document.
- d) Do one of the following:
 - 0) Convey the Minimal Corresponding Source under the terms of this License, and the Corresponding Application Code in a form suitable for, and under terms that permit, the user to recombine or relink the Application with a modified version of the Linked Version to produce a modified Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.
 - 1) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (a) uses at run time a copy of the Library already present on the user's computer system, and (b) will operate properly with a modified version of the Library that is interface-compatible with the Linked Version.

- e) Provide Installation Information, but only if you would otherwise be required to provide such information under section 6 of the GNU GPL, and only to the extent that such information is necessary to install and execute a modified version of the Combined Work produced by recombining or relinking the Application with a modified version of the Linked Version. (If you use option 4d0, the Installation Information must accompany the Minimal Corresponding Source and Corresponding Application Code. If you use option 4d1, you must provide the Installation Information in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.)

5. Combined Libraries.

You may place library facilities that are a work based on the Library side by side in a single library together with other library facilities that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of the following:

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License.
- b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

6. Revised Versions of the GNU Lesser General Public License.

The Free Software Foundation may publish revised and/or new versions of the GNU Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library as you received it specifies that a certain numbered version of the GNU Lesser General Public License “or any later version” applies to it, you have the option of following the terms and conditions either of that published version or of any later version published by the Free Software Foundation. If the Library as you received it does not specify a version number of the GNU Lesser General Public License, you may choose any version of the GNU Lesser General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide whether future versions of the GNU Lesser General Public License shall apply, that proxy’s public statement of acceptance of any version is permanent authorization for you to choose that version for the Library.

16 Annex

16.1 Accessories

Designation	Order no./configuration ID
Terminal and installation set (included in the scope of delivery)	Order no. 1402-1561
TROVIS 6620-1 I/O Module	Configuration ID: 4829008
TROVIS 6625 Input Module ¹⁾	Configuration ID: 2649861
Room panel depending on application	On request
TROVIS 6690 Graphical Project Management Tool (demo version)	Configuration ID: 3004922
TROVIS 6690 Graphical Project Management Tool (1 AS version)	Configuration ID: 3004921
TROVIS 6690 Graphical Project Management Tool (3 AS version)	Configuration ID: 3004920
TROVIS 6690 Graphical Project Management Tool (full version)	Configuration ID: 2039168

¹⁾ Only with 24 V AC supply voltage

16.2 After-sales service

Contact our after-sales service for support concerning service or repair work or when malfunctions or defects arise.

E-mail contact

You can reach our after-sales service at ► aftersaleservice@samsongroup.com.

Addresses of SAMSON AG and its subsidiaries

The addresses of SAMSON, its subsidiaries, representatives and service facilities worldwide can be found on our website (► www.samsongroup.com) or in all SAMSON product catalogs.

Required specifications

Please submit the following details:

- Order number and position number in the order
- Type designation
- Device version
- Serial number
- Material no.
- Serial number
- Firmware version

EB 6611-2 EN



SAMSON AKTIENGESELLSCHAFT
Weismüllerstraße 3 · 60314 Frankfurt am Main, Germany
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507
samson@samsongroup.com · www.samsongroup.com