Chapter 3
Station Installation Manual

Version 13.1

GASNGO

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Overview

This Chapter details the main parts and components that have to be assembled or installed at the gas station. Descriptions of the parts are accompanied by installation instructions and test procedures if required.

The Gasngo system hardware components that are installed in the gas station consist of: the Gas Station Communicator (GSC) and the Readers.

Station

Parts List

The following table summarizes the parts used at the station.

Table 1: Station Parts List

Designation	Description/Function	Illustration
Gas Station Communicator (GSC) GSC-FG0101	GSC is the core of all system communications. It controls all station components	
Reader 7 RDR-FG0101	Reads the vehicle's tag via encrypted and coded RFID and transmits the data to the GSC	
Battery BAT-FG0101	Power source for the reader	
Nozzle insulator (cover) For part number see Appendix 6	Used to hold the Reader on nozzle. Each nozzle has a unique insulator.	
Reader Wiggins 150 SET-FG0109	Reader for the Wiggins 150 high pressure nozzle	

Gas Station Communicator (GSC / GRT)

The GSC (GRT) is a component that contains a hardware unit that is installed on the canopy ceiling of the gas station and a software application running on the station's PC.

There is an additional software component (GPS) to be installed at the station's PC.

The GSC is the core of all system communications. It controls all station components, connects to the Readers and meters and communicates with GPS software.

The location of the GSC is critical for system performance.

Reader

The Reader is installed on the fueling nozzle. It reads the vehicle's tag via encrypted and coded RFID and transmits the data to the GSC.

Each Reader has a unique serial number.

To activate the Reader it must to be connected to the Gasngo Reader battery.

The Reader does not execute searches independently but only upon a tag search request from the system.

The Reader continues to ensure the presence of the tag throughout the entire fueling process.

FCC Compliance Statement

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio and television reception.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit different from the one that supplies power to the receiver.
- Consult the dealer or an experienced radio/TV technician.

Gas Station Communicator (GSC) Installation Overview

The GSC Installation Includes:

- Preparing the infrastructure to install the GRT which includes the communication cable (TCP/IP) and the power cables.
- Installing the Gasngo GSC on the gas station canopy.
- Installing a Gasngo Reader on each fueling nozzle.
- Installing the Gasngo software on the gas-station's PC.
- Configuring and testing all system components.

Required Components

1. Gasngo™ GSC Real Time (GRT)

Figure 1: Gasngo GSC Real Time (GRT)

#	Description/Function
1	12VDC power inlet
2	Communication TCP/IP cable
3	Label with: ID number IP address MAC address

Table 2: Gasngo GRT Overview

List of Recommended Tools and Materials is listed in Chapter 1 - General.

Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired

Operation.

2. Gasngo™ Reader

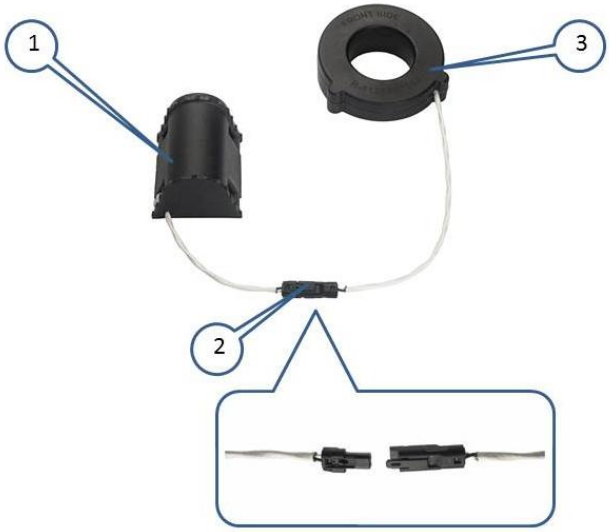


Figure 2: Gasngo Reader

#	Description/Function
1	Battery
2	Connector
3	Reader

Table 3: Gasngo GRT Overview

For Nozzle Insulators according to nozzle type and model, see **canopy of the gas station or** on the pole

Appendix 5 – Isolator Fitting Matrix.

Figure 3: ZVA nozzle

Figure 4: : ZVA nozzle with Insulator

Figure 5: OPW Insulator

Figure 6: OPW nozzle with Insulator

3. PC with the Gasngo™ application.

Installing Gasngo System at the Station

General

- Conduct a thorough survey of the station to assess pump and nozzle types and to determine the optimal location for the GSC (See survey procedure in

Appendix 6 – Gas Station).

- Select appropriate insulators (cover) for installation on each nozzle according to the type of the nozzle and product.
- Install communication and power cables at the GSC installation location.
- Set up anchoring points to secure workers when installing the GSC.
- Install the GSC on the gas-station's canopy as illustrated below.

Figure 7: GSC installed at the Gas Station Canopy

Exceptions

If there is no canopy, install the GSC on a stable pole of at least 4.2 meter as illustrated below.

The GSC has to be centered above the pumps. If not centered, rotate the GSC toward the area of the pumps. Consult the Gasngo technical team for more information.

Figure 8: GSC installed on a pole

- Connect the Gasngo Readers to the batteries.
- Place each Gasngo Reader inside an Insulator and connect it to the fueling nozzle.
  See Figures 9 to 11.
- Install the Gasngo™ application on the gas-station's PC.
  See

Reader8 Installation

Figure 17: Reader8 Installed

Adapter A Supported Nozzles

Vendor	Model	Grip
OPW	11A	Short
	11B	Short
	11AP	Short
	7H	Short
	11BP	Short
ZVA	16 VP SL2	Long
	16 SL2	Long
	19	Short
	25	Short
	AD Blue	Short
CATLOW	NENL-3532	Short
	NM1-3530	Short
	NEPNL-3533	Short *
HUSKY	1A	Long
RICHARDS	7 0110	Short *

Table 5: Adapter A Supported Nozzles

Notes:

- Reader8 must be installed on a nozzle with its original insulator.
- The battery for Reader8 is provided separately from the Reader.
- The list in Table 5 above includes nozzle models that were tested with Reader8.
  The Reader may fit other nozzle types as well.
- The nozzles marked with * will only fit short grip.
  Other nozzles stated as short can be installed with long grip as well.

Figure 18: Reader8 Installation Parts and Tools

Note: Reader8 installation section shows the short grip, but instructions are the same for the long grip.

Parts and tools

1. Nozzle
2. Reader8
3. Battery for RDR8
4. Battery Phillips screws (M6)
5. Phillips screw driver (Not provided)
6. 3mm Allen key (Not provided)

Reader8 Battery Connection

1. Connect the battery to the Reader.

2. Place the connector under the battery and connect the battery to the Reader bracket with the two Phillips screws.

3. Tighten the screws with Phillips screw driver.

Reader8 Installation

1. Place the Reader on the nozzle all the way down

2. Tighten up the four M6 screws with an Allen key.

   Try to keep the Reader at the center.

3. Tighten up the two M6 screws with an Allen key (one on each side)

4. Test the Reader installation and functionality by reading a Tag.

5. The installation is completed.
6.

Reader8 Grips

Reader8 Type A can be supplied with two types of grips - short or long.

The difference between the grips is the place where the Reader antenna is located on the nozzle.

- **Short grip** – The antenna is placed backwards.

  This grip is recommended as the default grip.

- **Long grip** - The antenna is pushed to the front of the nozzle.

  This can help overcoming RFID range problems.

Notes:

- Check the nozzle list above to decide which type of grip will fit the nozzle.

  The required grip type must be checked prior to ordering.

- Verify that the nozzle including its grip fits the house (boot) on the pump.

- The installation process is the same for both grips.

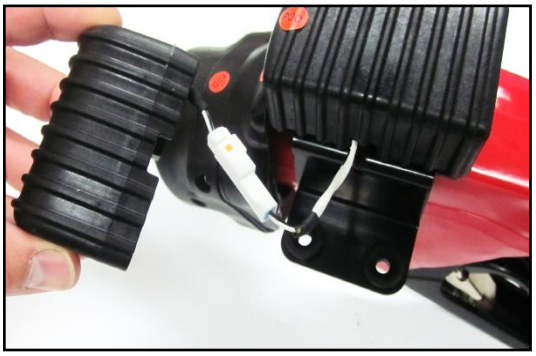
Figure 19: Reader8 Short Grip

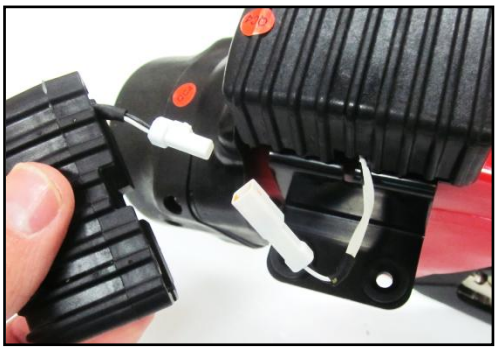
Figure 20: Reader8 Long Grip

Reader8 Battery replacement Instructions

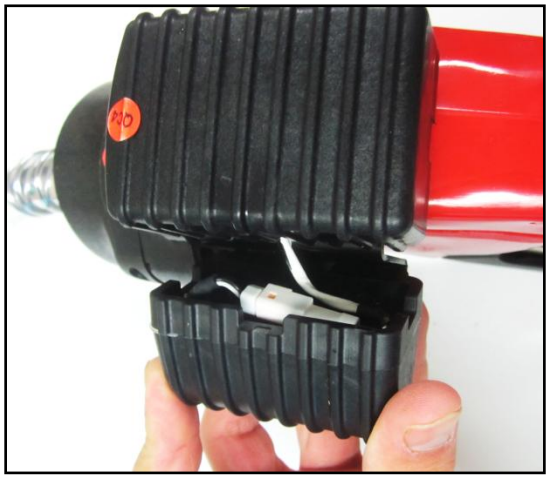
1. Open the two Phillips screws.

2. Disconnect the battery connector from the Reader.





3. Connect the new battery and place the connector and cable in their proper place between the battery house and the Reader controller.



4. Place the battery on the bracket and close the two Phillips screws.

5. Test the Reader.

- Software Installation on page 19.
- Configure the GSC.

  This includes assigning a serial number to each nozzle at the gas station and to the GSC.
- Configure the Remote Connection Settings and Log Transmission.
- Fuel vehicles from each pump to test the system's installation and configuration.

Installing Gasngo System at the Station – Full Procedure

- Survey the station to assess pump and nozzle types, and to determine the optimal location for the GSC.

  See

Appendix 6 – Gas Station Survey.

- Determine the optimal location of the Gasngo GSC based on the following guidelines:

  1. Center an ellipsis of 17 meters x 20 meters (radios) at gas stations with continuous roofing (see

Appendix 3 – GSC Range)

2. If the coverage required is above 17 x 20 meters, install more than one GSC.

3. The GSC must be installed horizontally at a minimum 4.2 meters above ground.

4. All wiring and cables must be weather-resistant and waterproof. For cable requirements see

5. **Appendix 2 -** Infrastructure Requirements

- Set up communications and power cables to the location of the GSC. The cables should comply with the infrastructure requirements detailed in

- **Appendix 2 - Infrastructure** Requirements.
- Check voltage stability and communication continuity.

Long cables can cause voltage drop. Check the voltage at the connection point before connecting the GSC to the power supply.

Secure the worker who installs the GSC.

- Install an anchoring point on the Gas Station Canopy.
- Install the GSC using the dedicated arm.
- Connect the GRT to the 12V endpoint.
- Affix all cables with holding pins.
- Verify that the GRT is secured and stable in its location and can withstand wind.

At ground level:

1. Connect the electrical cable to a 12 V power supply and plug it into a designated wall socket. Connect the communications cable to the gas-station's network.
2. Test the connectivity to the GRT by executing a Ping command.
   Mark all system components, including the hub or electrical sockets in order to identify them during future maintenance.
3. Connect the Reader to the battery.

It is possible to install the Readers on the nozzles when they are in storage, and replace each nozzle at the station with nozzles equipped with a Reader and Insulator.

To install an eGSC devise (embedded GSC) (see

Appendix 4 - eGSC Installation).

Warning: To avoid electrostatic discharge wipe only with a damp cloth.
Warning: In case of damaged insulators replace with a new product.

Communications and Power

Place all system cables inside 16 mm-diameter PVC piping or inside a conduit with minimum dimensions of 17 x 25 mm.

All raw materials used for laying the infrastructures must comply with all required standards.

The GSC 12 V power supply is installed in the office of the gas station or next to the PC.

For cabling requirements see

Appendix 2 - Infrastructure Requirements.

Power	Requirement
Input voltage	100–240 VAC
Input frequency	50 – 60 Hz
Output current	500 mA DC
Maximum output current (peak current)	1.5 A min
Minimum output peak current	650 mA DC
Fixed output dc voltage	12 V
Rated power	18 W
Ripple and noise	80 mVp-p
Voltage tolerance	+3%
Working temperature	-20 °C to +70 °C

Table 4: Infrastructure Requirements for the GSC Power Supply

Reader7 Installation

This guide refers to installation of the Reader7 on the following nozzles types:

Healy 600, OPW 7H, OPW, 11AP/A/B, OPW 11AVI, OPW 11VW, ZVA25, ZVA SL2.

1. Connect the battery to the Reader

   Before connecting the battery to the Reader, verify the position of the connector.

   Confirm that both sides are facing upwards.

   (See illustration below).

Figure 9: Molex connector

2. Insert the Reader into the insulator.

Assembling the Reader with the battery

Set the wire around the back of the reader and fasten with 3 plastic strips.

Make sure not to turn it counterclockwise.

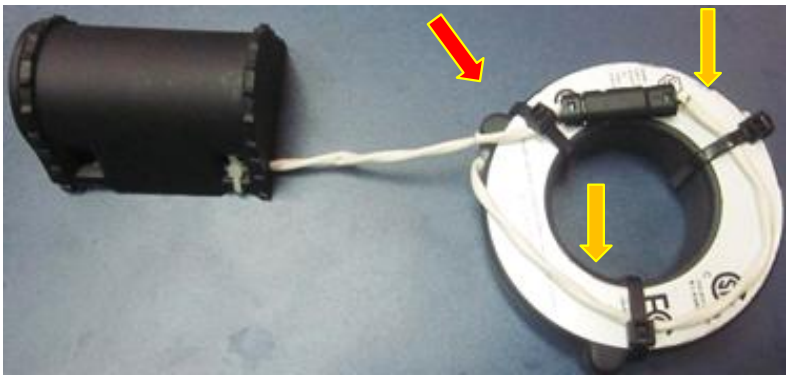


Figure 10: Reader with Plastic Strips

When installing the Reader on one of the nozzles, never use the outside plastic.

(See red arrow).

OPW 11AVI and OPW 12 VW

1. Tighten the stripes not closer than 5 mm from the connector so it will be firmly on the white strip.
2. Place the Reader into the Insulator's front part.
3. Ensure that the caption "front side" faces towards the vehicle.
4. Ensure that the two protrusions in the front of the Reader fit exactly into the Insulator.
5. Ensure that the Reader's battery wire extends backwards into the direction of the battery's pouch.
6. Insert the battery into the battery's pouch inside the Insulator.

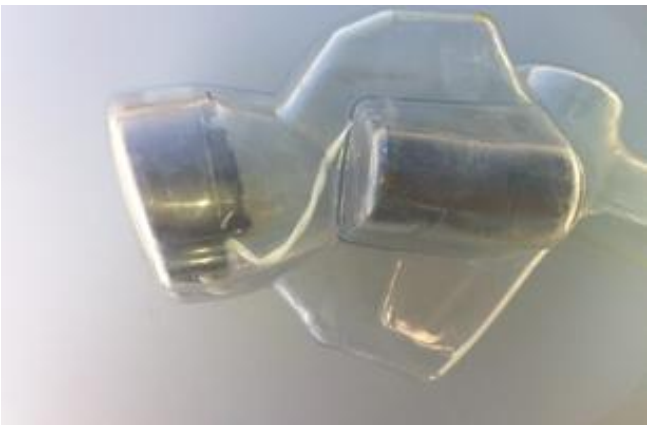


Figure 11: Battery inside the Pouch

Opening the connector

Although the connector is extremely robust in field, it has to be handled with extreme caution when opening it.

Carefully follow the instruction below.

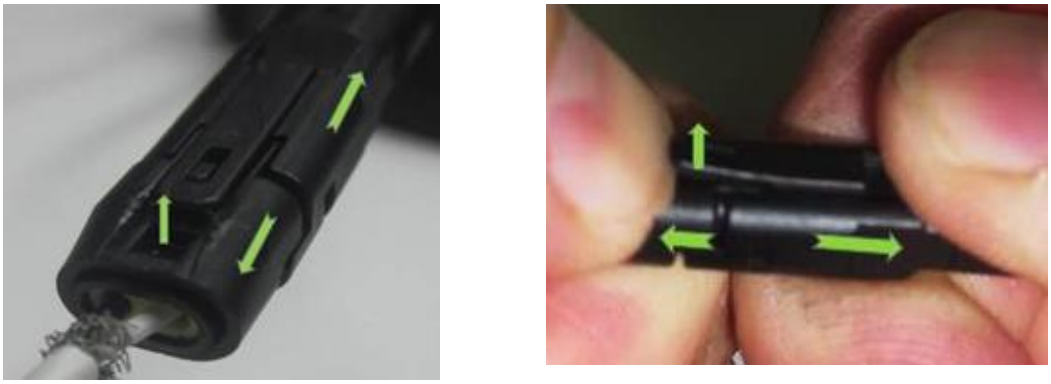


Figure 12: Opening the Connector

Gently lift up the locking mechanism and pull the two parts of the connector in opposite directions.

Do not pull from the connector from the cable.

Black (Old) connector

Connect the battery to the Reader.

Before connecting the battery to the Reader, verify the position of the connector pins.

(See arrows in Figure 12)

A wrong connection (as shown by the arrows above) can cause a short circuit and destroy the battery!

Figure 13: Battery Connector polarity check

Installing the Reader in the insulator

1. Set the wire around the back part of the Reader and fix it with 3 plastic strips.

   Make sure to do this **clockwise**.

Figure 14: Plastic Strips on the back-part of the Reader

2. Assemble the Reader in the Insulator with the "Front Side" groove facing the inlet.

Figure 15: Assembling the Reader in the Insulator

3. Insert the battery with the connector into the battery's pouch in the Insulator when the connector is on the low end of the Reader.

Assembling the insulator with the Reader onto the nozzle

1. Remove the existing Insulator!
2. After inserting the Reader into the Insulator, slide the Insulator onto the nozzle.
3. If the nozzle is installed on the pump, cut the loop at the rear of the Insulator.
4. Tighten that cut loop around the nozzle and close it with a zip tie.

Figure 16: Assembling the Insulator with the Reader

Warning: To avoid electrostatic discharge, only wipe with a damp cloth.
Warning: In case of a damaged insulator, immediately replace with a new one.

Battery change/replacement of all models

In general, batteries are stored in sleep mode to maintain longevity.

This mode may affect installing the battery for the first time.

After the battery is installed, perform several tag searches to verify that the installation was successful.

This will unlock the full potential of the battery.

This process may require several searches and could involve several failures until the Reader will be able to find the tag.

Reader8 Installation

Figure 17: Reader8 Installed

Adapter A Supported Nozzles

Vendor	Model	Grip
OPW	11A	Short
	11B	Short
	11AP	Short
	7H	Short
	11BP	Short
ZVA	16 VP SL2	Long
	16 SL2	Long
	19	Short
	25	Short
	AD Blue	Short
CATLOW	NENL-3532	Short
	NM1-3530	Short
	NEPNL-3533	Short *
HUSKY	1A	Long
RICHARDS	7 0110	Short *

Table 5: Adapter A Supported Nozzles

Notes:

- Reader8 must be installed on a nozzle with its original insulator.
- The battery for Reader8 is provided separately from the Reader.
- The list in Table 5 above includes nozzle models that were tested with Reader8.
  The Reader may fit other nozzle types as well.
- The nozzles marked with * will only fit short grip.
  Other nozzles stated as short can be installed with long grip as well.

Figure 18: Reader8 Installation Parts and Tools

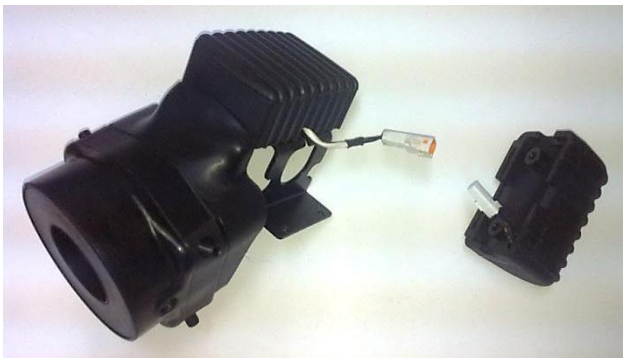
Note: Reader8 installation section shows the short grip, but instructions are the same for the long grip.

Parts and tools

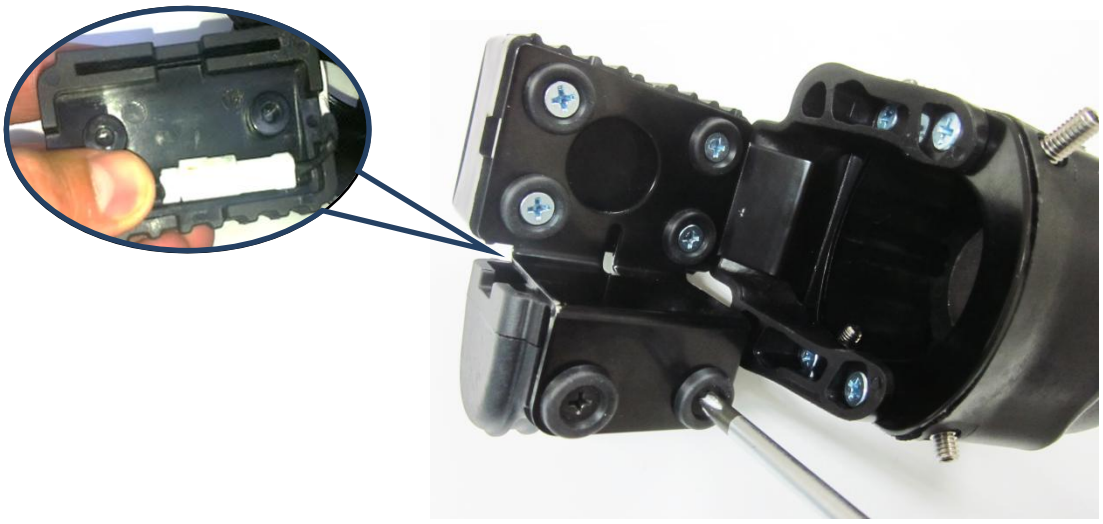
7. Nozzle
8. Reader8
9. Battery for RDR8
10. Battery Phillips screws (M6)
11. Phillips screw driver (Not provided)
12. 3mm Allen key (Not provided)

Reader8 Battery Connection

4. Connect the battery to the Reader.



5. Place the connector under the battery and connect the battery to the Reader bracket with the two Phillips screws.



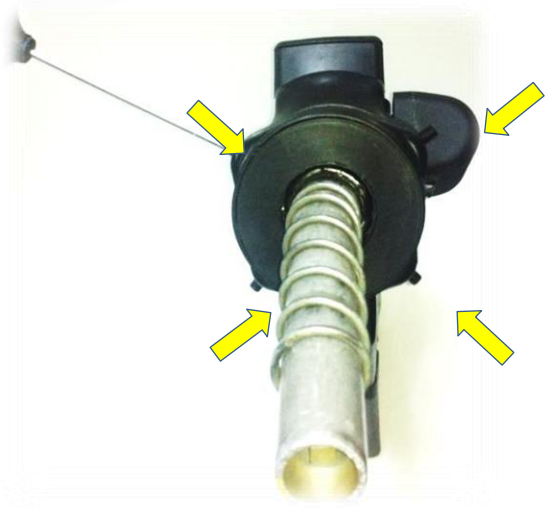
6. Tighten the screws with Phillips screw driver.

Reader8 Installation

7. Place the Reader on the nozzle all the way down

8. Tighten up the four M6 screws with an Allen key.

   Try to keep the Reader at the center.



9. Tighten up the two M6 screws with an Allen key (one on each side)

10. Test the Reader installation and functionality by reading a Tag.

11. The installation is completed.
12.

Reader8 Grips

Reader8 Type A can be supplied with two types of grips - short or long.

The difference between the grips is the place where the Reader antenna is located on the nozzle.

- **Short grip** – The antenna is placed backwards.

  This grip is recommended as the default grip.

- **Long grip** - The antenna is pushed to the front of the nozzle.

  This can help overcoming RFID range problems.

Notes:

- Check the nozzle list above to decide which type of grip will fit the nozzle.

  The required grip type must be checked prior to ordering.

- Verify that the nozzle including its grip fits the house (boot) on the pump.

- The installation process is the same for both grips.

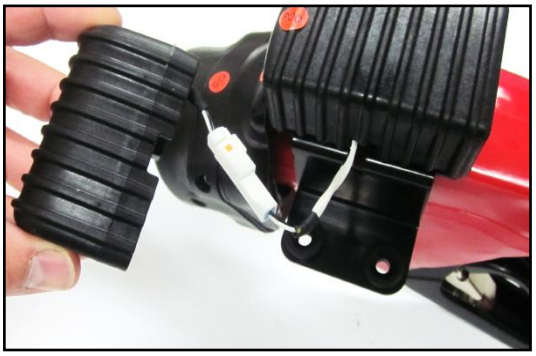
Figure 19: Reader8 Short Grip

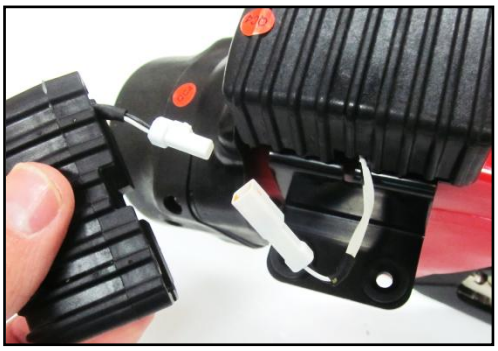
Figure 20: Reader8 Long Grip

Reader8 Battery replacement Instructions

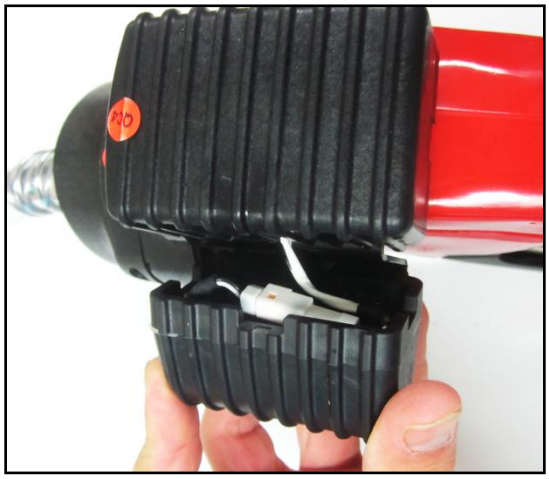
6. Open the two Phillips screws.

7. Disconnect the battery connector from the Reader.





8. Connect the new battery and place the connector and cable in their proper place between the battery house and the Reader controller.



9. Place the battery on the bracket and close the two Phillips screws.

10. Test the Reader.

Software Installation

4. Install the Gasngo Software Application on the gas station's PC.

   (See **Chapter 4 – Installing the Gasngo Application**).

5. Use the AVI Manager to configure the station's components.
6. Add and configure a new FS and disable it.
7. Add and configure one or several GSCs, as required.
8. For each new GSC, add and configure its Readers.
9. After connecting the battery, release the locked Readers to fully enable them.
10. Search for Readers. Make sure all Readers are ready.
11. Enable the FS.
12. Configure the GSC.
13. Configure the Remote Connect Settings and Logs transmissions.
14. Fuel a vehicle using each pump to test the system.

Appendix 1 – Reader Wiggins Installation

The Wiggins Nozzle and reader components are illustrated below and listed in the following table.

The callout numbers in the illustration refer to the sequence numbers in the Table 6 below.

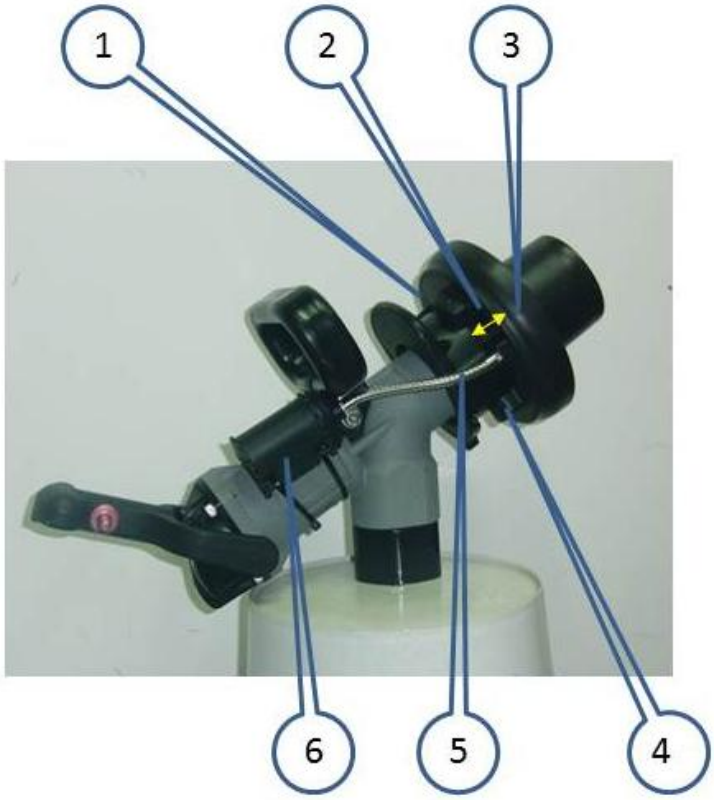


Figure 21: Wiggins Nozzle installation

#	Description
1	Reader in nozzle
2	Gap ~ 3 cm
3	Reader
4	Tightening screw
5	Power cable armor
6	Battery

Table 6: Wiggins Nozzle installation

Wiggins Insulator Assembly

Figure 22: Reader and Isolator location

#	Description
1	Insolator
2	Reader

Table 7: Reader and Isolator Location

1. Take the insulator and turn it inside (see Figure 23)

Figure 23: Inner site and Outer side of the Isolator

#	Description
1	Inner side
2	Outer side

Table 8: Isolator Sides

2. Place the insulator in front of the Reader (see Figure 24)
3. Make sure to place part of the insulator in front of the reader cable armor

Figure 24: Isolator in front of the Reader Cable Armor

#	Description
1	Reader cable armor
2	Insolator

4. Pull the insulator up on the Reader

Figure 25: Installing the Insulator

Figure 26: Insulator covering the Reader

Connecting the battery to the Reader

Figure 27: Insert the connector in to the Metal Armor 1

1. Insert the connector into the metal armor.

Figure 28: Insert the connector in to the Metal Armor 2

2. Screw the nipple nut on the nipple screw of the battery and tighten with two keys against each other.

Figure 29: Nipple Nut

Installing the Reader on the nozzle

1. Paste the inside of the insulator with a water brush

2. Slide the Reader into the nozzle

Figure 30: Installation Steps of the Reader on the Nozzle

3. Install the Reader on the nozzle as deep as possible, approximately 3 cm from the inner edge of nozzle plastic cover.
4. Close with 3 screws of 3mm with an Allen type screw driver.

Figure 31: Reader Assembly

5. Install a metal tie around the nozzle and the power cable.

Figure 32: Metal Tie

6. Install the battery on the side of nozzle and close 2 plastic/metal zip ties around the nozzle as shown in the illustrations.

Figure 33: Install Battery

Appendix 2 - Infrastructure Requirements

Electrical Cable

From the 12 V power supply to the GSC:

3 x 1.5 mm^2 XLPE n (N2XY) limited to a length of 200 m.

When using an extension cord within the allowed length, use an extension cord type 2 inside a 10 x 10 cm junction box for outdoor use.

Communications Cable

From the gas-station's exchange/PC to the GSC:

CAT5e UTP cable limited to 90 meters in length.

If a longer one is required, an extension may be used.

Use shielded sockets and cables.

PC and Operating System

The Gasngo™ software is installed and runs on the same PC as the station's FS.

It is recommended to use a UPS.

PC Minimum Requirements

- Windows XP operating system with .NET framework 2.0.
- Pentium 4 processor 1 GHz or more.
- 512 MB RAM and higher.
- 50 MB free disk space.

The Gasngo™ software takes approximately 8 MB.

The Gasngo™ system is designed to run on modern PCs equipped with the latest available updates to the operating system.

Network Settings

Allow access to the Gasngo™ on the firewall and in the router's settings.

The following settings are used.

Table 9: Router settings

TCP Access	Port
TCP access, outbound	Ports 3000, 6002
TCP access, inbound	Port 6001

The GSC requires a static and fixed IP address. Avoid IP conflicts by reserving a static IP address for the GSC outside the DHCP pool.

Connectivity

Internet connectivity is recommended to upload logs to the remote server and for remote access to the system.

The following options are recommended:

- Broadband/DSL/3G connectivity of 1 Mbps downstream and 512 kbps upstream
- GPRS – depending on Internet provider's service at site.

Appendix 3 – GSC Range

Overview

The Gasngo™ GRT is responsible for all communications between the systems' components in both the gas-station and the vehicle. It is therefore essential to follow the installation guidelines. Improper installation may jeopardize system performance.

Technical Overview

In laboratory conditions, the GRT transmits over a range of hundreds of meters in any direction at a straight line.

However, the situations at gas stations and/or environmental conditions can impact the actual transmission range.

Those conditions vary from gas station to gas station.

The GRT enables full communications coverage with all system components.

Guidelines for Positioning the GRT

The GRT communicates with the Readers installed in the gas stations as shown in the following diagram.

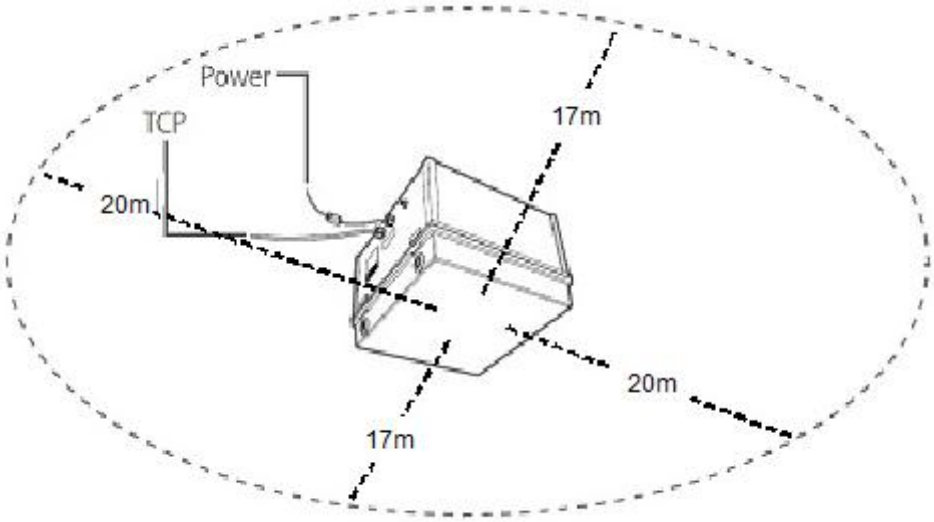


Figure 34: GSC Communication range when installed on the Ceiling

Installation without a canopy might impact the GSC range.

Range of open environment without any interference may be higher than specified above. It could reach a radius of 34M*40M.

The communication range at the site depends on various factors.

Each gas station is different in terms of its environment and the quality of the line of sight to the Readers.

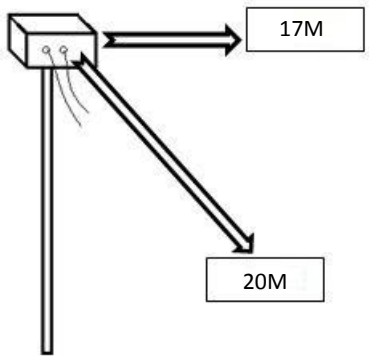
Follow the guidelines below when positioning the GSC:

- Ensure a straight line of sight to the Readers as much as possible.
- Install under the canopy of the gas station (if present).
- Center elliptically in a gas station that has continuous roofing.
- Install it at least 4.2 m from the ground.
- Keep it horizontal.
- Center it above the pumps area.
- All communication and electrical cables must be weather and waterproof.

Inaccurate positioning may impair system performance.

Special Conditions

If there is no canopy on the site or it is not possible to install the GSC on the station canopy, the GSC can be installed on a stable pole.



In case where the GSC is installed far away from the pumps on a pole/wall facing the pumps, keep the installation at a suitable height and rotate the GSC box by 90°.

(See the diagrams below).

Note: always keep a line of sight between the GSC and the Readers for best performance.

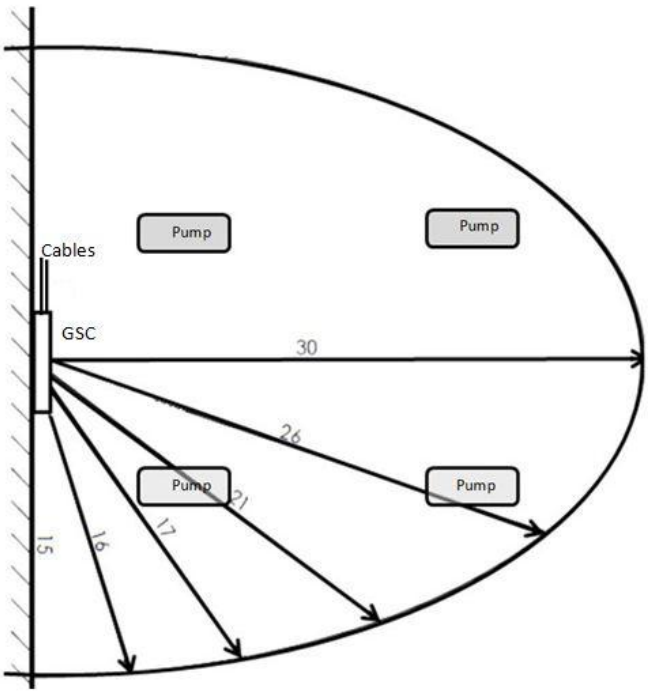


Figure 35: GSC 90° communication range

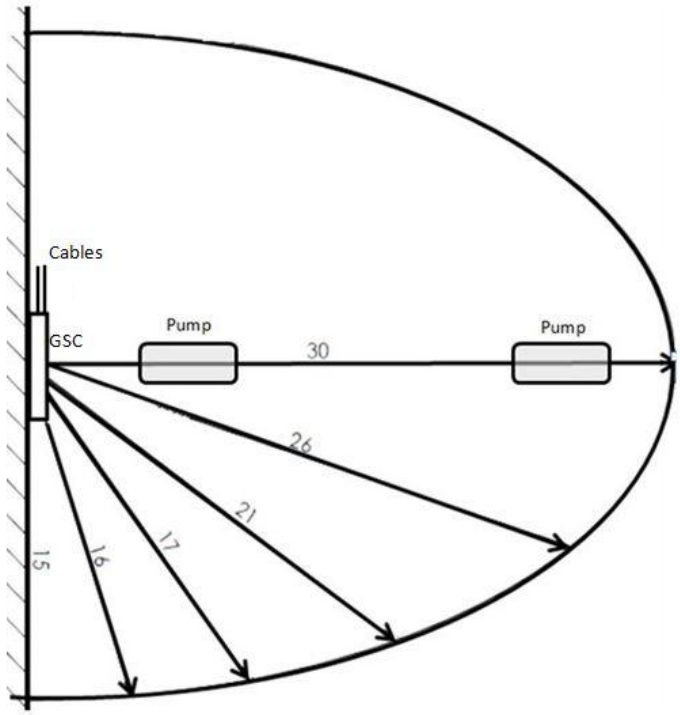


Figure 36: GSC 90° communication range with single line of pumps

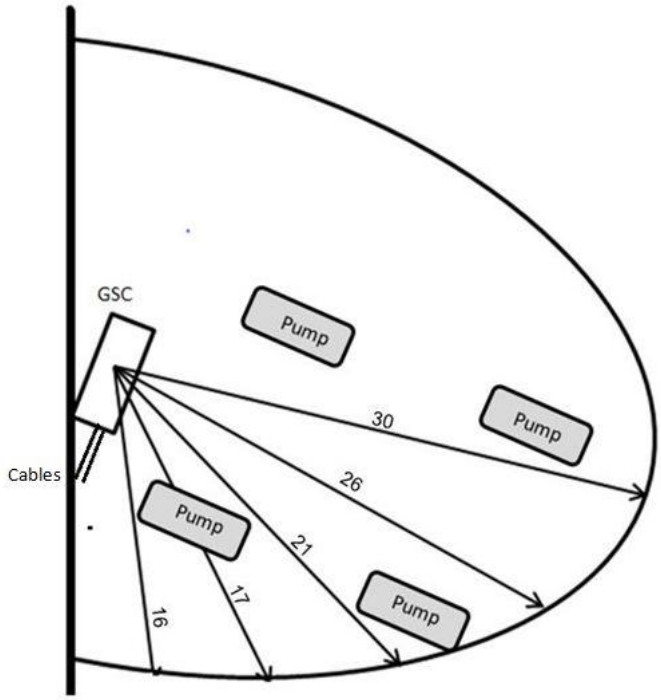


Figure 37: GSC 90° communication range when rotating and the pumps are in angle

Testing GSC Coverage

Test the radio coverage of the GSC as follows:

- Define the boundaries of the desired coverage.
  Map the furthermost pumps at the site of the gas station.
- Verify the status of the Readers installed on those pumps using the AVI Manager application.

The status should be **Ready** on all Readers, even when they are outside of the pump or located in a vehicle inlet.

In case of inside installations, the GSC should be aligned with the pump island in order to have line-of-sight while fueling large vehicles.

Appendix 4 - eGSC Installation

Overview

The eGSC (embedded eGSC) is used when the station PC is not available or the device has to be installed on a track.

The eGSC enclosure is same as the GSC.

Please consult Gasngo Technical team before ordering or installing the eGSC.

eGSC contents

The eGSC (embedded GSC) contained the following parts:

1. GSC
2. Embedded Windows XP board
3. AVI Service software
4. TCOM software for communicating with external components at the station

Remote shutdown and restart of eGSC

Turning the eGSC off without proper shutdown procedure might jeopardize system performance. Avoid powering of the eGSC without proper shutdown.

In order to restart or shutdown the eGSC please follow these instructions:

1. Use a remote PC that can be connected to the same LAN as the eGSC
2. Select Start -> Run
3. Enter "**cmd**"
4. The command line window will open.
5. Enter:

   telnet <eGSC IP> 5555

   For example, in case of an eGSC board with the IP Address 192.168.0.171, enter:

   telnet 192.168.0.171 5555
6. The window shown in Figure 35 will open.

7. Select: *R* for restarting the eGSC, *S* for shutting down the eGSC or *E* to exit telnet.

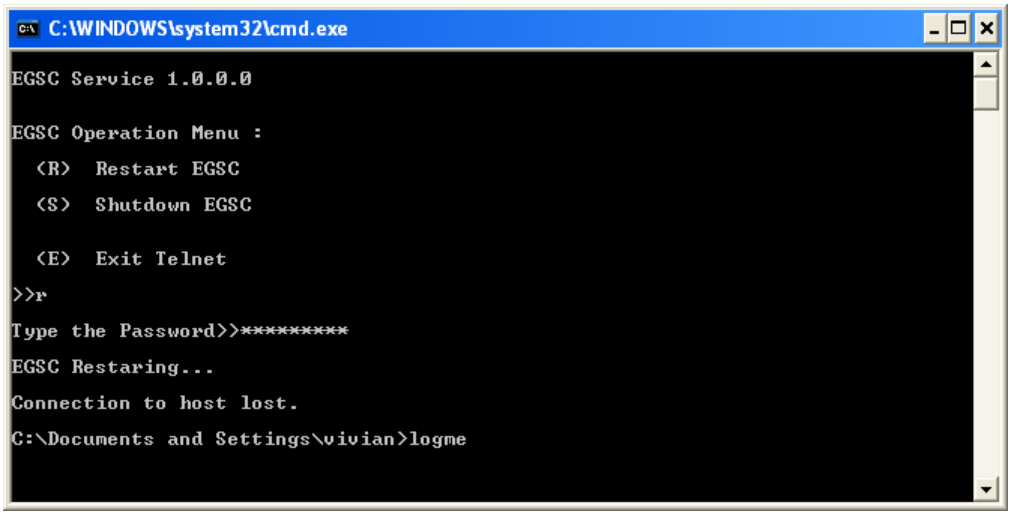


Figure 38: Command Line Interface

Gasngo Components Configuration

Since the AVI Manager is not installed on the eGSC, the Gasngo components must be configured with an AVI Manager installed on a different computer connected to the same LAN as the eGSC.

That computer will be defined as the remote PC.

The AVI Manager will be connected to the AVI Service on the eGSC as follows:

1. Get the eGSC IP Address (by typing “ipconfig” in the cmd window).
2. Install the AVI Manager on the remote PC (See Chapter 4).
3. Copy the AVI Manager shortcut and paste on a preferred location on the PC.
4. Right click the shortcut and select **Properties**.
5. At the end of the target field add the following:

   IP: {eGSC IP}

   for example:

   "C:\Program Files\Station\AVI Manager\AVIManager.exe" ip:192.168.0.117

   (See Figure 36).
6. Run the AVI Manager new **Shortcut Properties** window and start configuring the GSC and Readers.

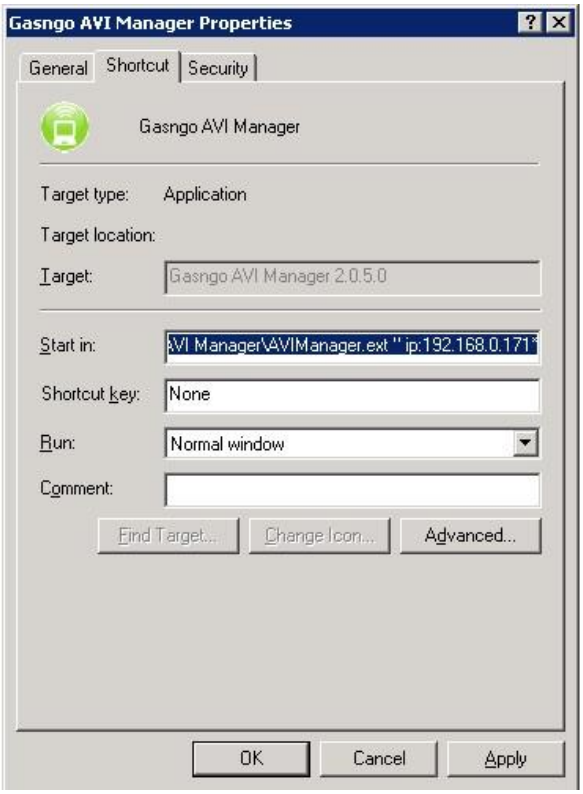
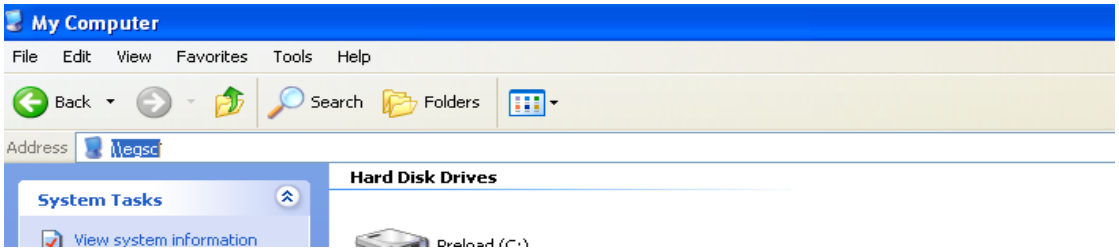


Figure 39: Shortcut window

Getting log files from eGSC

1. Open **My Computer** on the remote computer.
2. Access the eGSC by typing **\\egsc** (as illustrated below)



3. Use **Administrator** as the username and **egscadmin** as a password

4. The log files are located at **AVI Service -> GPC -> backup**

   The zip files of the logs are sorted by date.

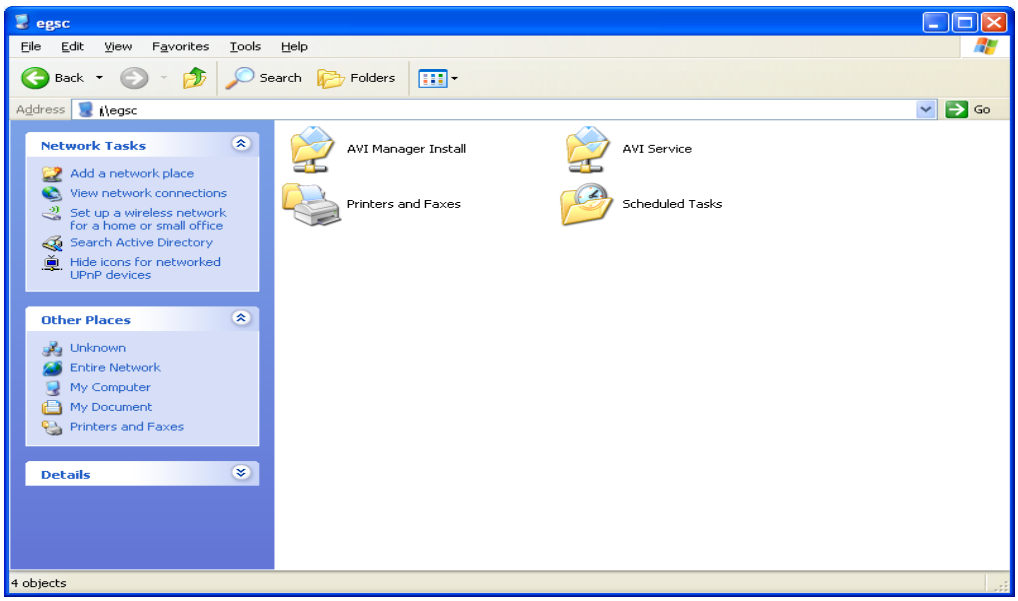


Figure 40: eGSC Library window

Infrastructure Requirements

Installing an eGSC requires an additional power supply to the GSC 12V.

This is necessary to support the embedded PC.

The power supply must comply with all local standards and requirements.

It is recommended to use a UPS system on the power supply line.

The power supply must meet the following specifications:

Power	Requirement
Output voltage	5 VDC +/- 0.1 VDC
Output current	3 ADC
Peak current	4 ADC or higher
Input voltage	Standard for territory

Table 10: Infrastructure requirements for the eGSC Power Supply

Recommendations:

- Keep the power supply cable as short as possible.
- Insert the power supply in a waterproof enclosure.
- Install the power supply on the canopy of the gas station or on the pole where the eGSC is installed.

  It is possible to install both power supplies on canopy of the gas station or on the pole

Appendix 5 – Isolator Fitting Matrix

The following matrix lists the isolators that fit the nozzle type.

Isolator type / Nozzle type	INS-FG20	INS-FG22	INS-FG23	INS-FG24	INS-FG25	INS-FG28	INS-FG33	INS FG34	INS-FG39	INS-FG40
OPW 11A		X	X	X						
OPW 11B			X	X						
OPW 11AP		X	x	x						
OPW 11VAI						X				
OPW 12VW						X				
OPW 7H		X								
ZVA 16 SL2GR(VP)				X			X*	X*		
ZVA 16 SL2				X			X*	X*		
ZVA 19				X			X*	X*		
ZVA 25							X	X		X
ZVA ADDBLUE				X						
HEALY 600	X									
CATLOW NM1P-3531		X		X						
CATLOW NM1-3530		X		X						
CATLOW NEPNL-3533		X	X	X						
CATLOW NENL-3532		X	X	X						
TATSUNO Z08/07		X		X						
TATSUNO Z09/10										
Husky ---VIII	X									
Husky 1A	X									
Husky X					X					
Husky V3	X									
Wiggins 150									X	

* May not be suitable for fueling with some new models of private vehicles due to range.

In such a case, INS FG-24 should be used

All colors are available

Appendix 6 – Gas Station Survey

Before and after the installation please perform the following survey:

General Information	
Name of the technician prepared the survey	
Date of the Survey	
Customer name	
Gasoline company name	
Gas-station name	
Gas-station number	
Gas-station address	
Gas-station phone number	
Gas-station manager name	
Gas-station manager telephone number	
Customer contact person	
Additional information	

General station information	
Peak traffic hours	
Dispenser working mode	Open / Close
Payment method	Prepaid / Post-paid
Service mode	Full / Self
Pumps make & model	
Number of "Satellite" Pumps	

Gas-Station Structure	
Ceiling height(s)	
If no ceiling, pole height	
Electric main plug location	
Station controller type and location	
Location of PC, GSC and PC operating system	
UPS	

Post Installation information	
Gasngo system version	
Reader(s) Driver	
Location of power supply	
Network connector location	
Local computer IP address	
Internet access at the station	
Team Viewer ID and Pass	

Please add a picture for each item in the table below.

Station Nozzles and Insulators:			
Nozzle type	**Number of Nozzles:**	**Insulator color:**	**Fuel type:**

Insert pictures of the gas-station below, including pumps, nozzles, ceiling, poles and other relevant details.

Draw a schematic diagram of the gas-station's area.

Indicate the location of the office, main electrical switch, pumps, and distance between them, heights and other dimensions.