

SmartTag

Installation and Operation Guide

ST3905



Automatic Vehicle Identification Made Easy

Introduction

This document illustrates the process of assembling, pairing, charging and using SmartTag with a SmartFill Gen 2 or Gen 3. It also shows key information about the products.

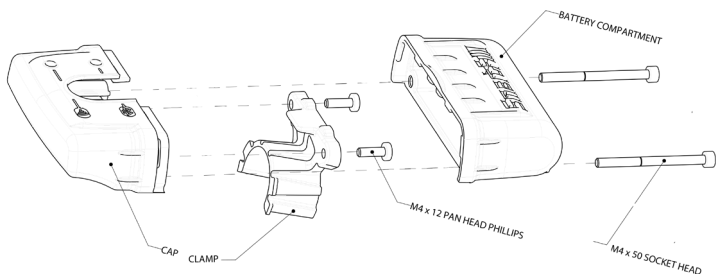


Required Items

The Installer will require:

- Phillips Head Screwdriver
- A1512 Wireless Comms Antenna
- SFM2055 Wireless Comms Module
- 2-Part Epoxy (clear, water and chemical-resistant, fast set and high viscosity)
- Can of degreaser or similar grease-removing cleaner
- ST3905 Assembly with correct hose clamp or handle.
- PCB, Vehicle Mount or RFID Sticker tags
- ST3905 Charger and AC adapter

ST3905 Assembly



The ST3905 is designed to be simple to assemble. It can be put together in only 3 steps:

1. Secure the clamp under the hose clamp supplied.
2. Fasten the cap to the clamp with 2x Phillips Head screws.
3. Slide the battery compartment into place from above and secure it with 2x Phillips Head screws.

To charge the battery of the ST3905:

1. Remove the 2x Phillips Head screws from the battery compartment.
2. Slide the battery compartment up to detach it from the cap.
3. Slide the battery charger into place from underneath the battery compartment, ensuring it slots into place securely.

Step 1: Secure the Clamp under the Hose Clamp

Secure the clamp to the nozzle



Slide the worm-drive hose clamp into place over the clamp and tighten.



Ensure the worm-drive hose clamp slots behind the fins on the clamp and the worm-drive mechanism is pressed into the cutout of the clamp.

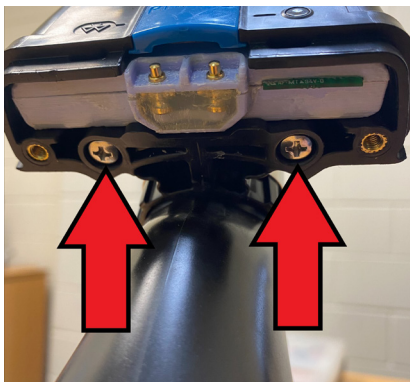


Step 2: Fasten the Cap to the Clamp

Hold the cap in place, ensuring the clamp slots into the cut-out in the cap.



Fasten the 2 screws, inserting them through the clamp and then into the cap's threaded inserts.



Step 3: Slide on the Battery and secure it

From above, bring the battery compartment into place and ensure it click into position.



Note: the tabs on the battery compartment will contact the pads in the cap to supply power.



Insert and fasten the 2 Phillips Head screws from the back of the battery compartment into the cap.



Charging the ST3905 Battery

A new feature of the ST3905 is a rechargeable battery pack. It's important to only use hardware provided by FMT to charge the battery pack.

Using the incorrect hardware to charge or use the ST3905 can cause damage to the product, hardware, the electrical systems or injury to the user.

Included with the ST3905 is the Charger Pack.

This is made up of:

- 1x AC Adapter
- 1x Charger Plate



To Charge the ST3905 Battery

1. Unscrew the battery compartment



2. Slide the battery compartment up and off of the cap



3. Slide onto the battery charger and plug in the AC adapter



The LED on the AC Power Adapter will glow to indicate status:
Green LED: Connected or Charged
Red LED: Charging

Connecting the ST3905 to SmartFill

The ST3905 needs to be paired with the SmartFill so that communication between the two devices can be established.

To do this, the following steps need to be followed:

1. Ensure that the SmartFill has the latest compatible firmware installed.
2. The current versions of software required:
 - a. In the SmartFill – **3.1.5.2** (Gen 3) **1.9.5.0** (Gen 2)
Hold <6> on the keypad of your SmartFill to find the version number.
 - b. In the SFM2055 – **1.5.11**
Version number is located on the sticker on the bottom of the module
 - c. In the ST3905 – BLE: **20411** / MSP: **30005**
Found in the Installer Menu> Pumps > AVID > Nozzle Info
3. Within the SmartFill an SFM2055 wireless module and an A1512 antenna must be installed.
4. On the SmartFill, Press and hold *CLR+ENT*
5. Enter *6789 ENT*
6. Press *8* for Pumps, select the appropriate pump
7. Press *9* for AVID
8. Press *1* to search for a new nozzle (to pair with the ST3905).
With the assembled ST3905 in hand, press the button to wake the nozzle when prompted, a blue LED should flash.
9. The system will indicate that a new nozzle has been added.
10. Press *CLR* until you exit the menu system and save the changes.

Adding Tags to the system

Tags may be added either via the website as normal by selecting the vehicles tab or plant tab at the top of the screen and then selecting "Add". The tags are added as type Smart Tag in the drop-down box.

The tags can also be added directly at the unit using the same add vehicle or add plant menu selection as a FOB or iButton.

1. On the SmartFill, Press and hold *CLR+ENT*
2. Enter *6789 ENT*
3. Press *1* for Vehicles or *2* for Plant
4. Press *1* to ADD
5. Wake up the ST3905 and hold the nozzle next to the tag, preferably with the tag resting on metal or already installed
6. The tag will then be added to the unit, sending the new tag to the website. All details against the tag will need to be added online as with any key added directly to a unit.



Understanding ST3905 light sequences

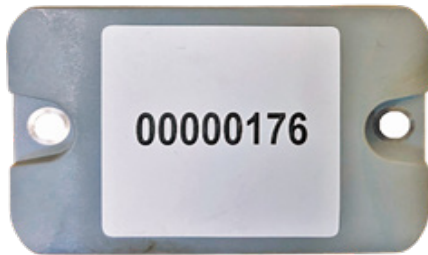
The ST3905, once woken with a button press, will indicate its status with a sequence of coloured LEDs.

There are 2 LEDs: Reader (R) and Connection Status (CS)



Single Flash (CS: Blue , R: Off)	ST3905 is awake.
Flashing (CS: Blue R: Off)	Searching for a connection to SmartFill.
Single Flash (CS: Blue R: Off)	Successfully connected to SmartFill.
Flashing (CS: Off & R: Red)	Searching for a tag. (Will search for 30 seconds)
Single Flash (CS: Red & R: Red)	An unauthorised tag has been read.
Single Flash (CS: Green R: Green)	A tag has been read
Flashing (CS: Yellow R: Yellow)	Waiting for input (lift nozzle, enter ODO, etc)
Single Flash (CS: Blue & R: Red)	ST3905 enters sleep mode.

SmartTag RFID Vehicle Mount Tag (ST1012)

**Description:**

Grey tags are the recommended tag for use with the SmartTag product. They are thicker than the other tags, and as such have the capability for longer read ranges. They are suited for use in situations where:

- Heavy-duty tags are needed.
- The tag will be exposed to the elements frequently.
- A longer read range is desired.

Dimensions (L x W x H):

36mm x 55mm x 7mm

Mounting Surface:

Metal Only

How to Install: Screw Method

1. Clean the surface that the tag will be mounted to with a degreaser or isopropanol solution.
2. Place the tag on the surface and use appropriate screws or pop rivets to secure the tag to the surface.

Note: The bottom of the tag must be in firm contact with the metal surface to ensure the proper function of the tag.

Epoxy Method:

1. Use an abrasive material (sandpaper) to scuff the surface that the tag that will be mounted.
 2. Clean the surface with a degreaser or isopropyl alcohol solution.
 3. Place the tag on the surface and apply pressure to the centre of the tag with one hand.
 4. Using your other hand, apply epoxy around all 4 edges of the tag. It's important to ensure the epoxy is applied to enough of the tag and surface to create a true bond.
- Note: The bottom of the tag must be in firm contact with the metal surface to ensure the proper function of the tag.**



SmartTag PCB Tag (ST1011)

**Description:**

SmartFill PCB Tags are the smallest tags that can be mounted on a metal surface. They are thin for use in situations where:

- There is not a lot of room to install a tag.
- A shorter read range is desired.

Dimensions (L x W x H):

10mm x 50mm x 3mm

Mounting Surface:

Metal Only

How to Install:

Screw Method

1. Clean the surface that the tag will be mounted to with a degreaser or isopropanol solution.
2. Place the tag on the surface and use appropriate screws or pop rivets to secure the tag to the surface.

Note: The bottom of the tag must be in firm contact with the metal surface to ensure the proper function of the tag.

Epoxy Method:

1. Use an abrasive material (sandpaper) to scuff the surface that the tag that will be mounted.
2. Clean the surface with a degreaser or isopropyl alcohol solution.
3. Place the tag on the surface and apply pressure to the centre of the tag with one hand.
4. Using your other hand, apply epoxy around all 4 edges of the tag. It's important to ensure the epoxy is applied to enough of the tag and surface to create a true bond.

Note: The bottom of the tag must be in firm contact with the metal surface to ensure the proper function of the tag.



SmartTag RFID Sticker Tag (ST1013)

**Description:**

The SmartTag RFID Sticker Tag is designed for use on non-metal surfaces such as automotive plastics/fibreglass.

This tag will allow you to identify vehicles that weren't previously possible to identify with the metal-only tags.

They're best suited for:

- Easy Application
- Use with vehicles that have plastics around the fuel inlet.
- Applications requiring a very thin tag

Dimensions (L x W x H):

90mm x 40mm x 0.1mm

Mounting Surface:

Non-Metal surfaces including plastic

How to Install:

1. Clean the surface with a degreaser or isopropyl alcohol solution.
2. Remove the RFID sticker from the paper, and apply it to the surface making sure to avoid wrinkles.
3. Remove air bubbles by sweeping air bubbles towards the outside with a credit card or similar.
4. Remove the protective sticker from the paper and apply it directly over the centre of the RFID sticker. Ensure you avoid creating wrinkles.
5. Smooth all edges to ensure nothing will catch or rip the stickers.

FMT

SmartTag



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