



Siemens Technical Bulletin STAB16-0106

# ST950 Firmware Release 46059 Issue11

16th December 2016

**Product:** ST950

**Modifications Req:** No

**Retrospective Action Req:** No

**Priority of Change:** Information only

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## Introduction

The ST950 Firmware 667/TZ/46059/000 has now been updated to Issue11 and is available from [► Siemens Traffic Downloads](#).

This release adds the ability for the controller to connect to and be remotely monitored by Stratos.

This new firmware includes a number of improvements and fixes. The [► ST950 Compatibility Handbook](#) (667/SU/46000/000 Issue7 or later), summarises all the changes but the highlights are:

- Support for user credentials issued by Stratos to identify users to the equipment for authentication and change identification.
- Recent fault and notification histories available through *View History* buttons on *Fault Table* web page.
- *Movacomm* command in web terminal.

There is no specific charge for this updated firmware but if a customer wants to upgrade an existing site, a price for upgrading should be negotiated with the local Field organisation.

However, Stratos Remote Monitoring functionality is a licensed feature. If the site already has a UTMC OTU license this will automatically enable the Monitoring functionality in the controller. If not a UTMC License will also need to be purchased. Connection to Stratos requires that the customer has the Stratos Traffic Signals module appropriately enabled.

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## Scope

ST950LV & ST950ELV Firmware upgrades

The previous general release of ST950 Firmware was Issue10. Upgrading from Issue 10 or earlier will require a power cycle and period when the signals are switched off.

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## Procedure

To upgrade to ST950 Firmware 46059 Issue11 please follow the following steps:

### 1. Prerequisites

The firmware package file REL\_46059\_11\_0\_46pkg can be downloaded from [► Siemens Traffic Downloads](#).

This file needs to be loaded onto the laptop or mobile device that will be used to access the web browser interface. We recommend the web browser interface rather than WIZ is used to perform the firmware upgrade and check the operation of the controller.

In case there is a problem during the upgrade, it is advisable to also have:

- Replacement ST950 CPU Card
- 667/HQ/46000/002 ST950 Replacement of CPU Card Quick Start Guide

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This Firmware Upgrade will require the Signals to be Switched OFF, and remain OFF for several minutes. It will also require the controller power to be switched off briefly. Ensure that the Customer and any Central Office Staff are aware beforehand.

## 2. Before Upgrading

We recommend that a restore point is saved before performing an upgrade so that it is possible to return to the existing system if desired in the future.

Restore points are managed using the *Status and Configuration – Controller – Heart – Backup & Restore* web page.

The controller can automatically maintain a restore point; this is known as the latest restore point and is listed at the top of this web page. If the time of creation of this restore point is not suitable or timings / settings changes have been made since then, a new restore point can be created by pressing the [Refresh] button. This will take a few minutes.

Press the [Retain] button so a backup of the system in the state before upgrade will always be available on the Heart SD Card. Retaining a backup should only take a few seconds. If problems occur during or after the upgrade, one option available will be to return the system to this Restore Point.

It is important not to turn off the controller while a requested operation is in progress or very soon after it completes as doing so will cause the requested operation to fail.

## 3. Performing the Upgrade

It is recommended that the following sequence be used for this firmware upgrade:

- Turn off the signals using the switch on the manual panel. As always, consider the impact on all Road Users before switching off the signals and consider whether 'Signals Not In Use' boards are required.
- Power cycle the controller (turn power off then back on). This avoids a restart related problem in earlier firmware versions, see [> STAB16-0105](#) for further details
- Use the *Status and Configuration – System – Upgrade* page to upgrade the firmware. The Package File named *REL\_46059\_11\_0\_46pkg* is used for this upgrade. After the file has been imported and verified, the upgrade will be placed on hold until the PRG button is pressed on the CPU PCB (behind the Level-3 button).
- Press the PRG button. This is a large upgrade and there can be several minutes between pressing the PRG button and the blue PRG LED starting to fast flash to indicate re-programming. DO NOT SWITCH OFF THE POWER until the Blue PRG LED remains illuminated and is no longer flashing. Ideally, wait until access to the web pages is available and the Fault Table notifications indicate that reprogramming of the devices has completed successfully and that the power now needs to be switched off and back on.
- Power cycle the controller (turn power off then back on).

There is a known issue with some CPU PCB that may cause the upgrade sequence to abort before it completes. When this occurs, the web pages return but the Blue PRG LED never starts to fast flash. If this occurs, press the PRG button again. For details, see [> STAB16-0102](#)

## 4. After the Upgrade

While upgrading from issue 5 (or earlier) to issue 11, the web interface will not automatically refresh and so may continue to indicate that the controller is rebooting. This is because of the change from HTTP to the more secure HTTPS connection. A refresh of the browser interface can be requested by pressing F5 while the Blue PRG LED fast flashes (to indicate it is programming the CPUs) or while it remains illuminated (after completing the programming). On first connection after the upgrade the browser will display a security warning. Please follow the browser's instructions to create an exception for the site - see the [> > User Interface Handbook](#) for information on how to do this.

On completion of upgrade from issue 5 (or earlier) the Fault Table may indicate that the upgrade failed. This is a known problem with the original firmware. Please visit the System web page and confirm that the package version is 11.0. This indicates that upgrade has completed successfully. The upgrade fault on the Fault Table can then be cleared by pressing the button associated with the fault text.

## 5. Verify the Upgrade

Navigate to System web page and verify that the Package Version is displayed as: 11.0.46  
Navigate to Fault Table web page and verify that no unexpected faults or notifications are present.

Verify the correct operation of the Controller before attempting to switch the Signals ON.



**Related Documents**

> [667/SU/46000/000 ST950 Compatibility Handbook](#) Issue 7 (or later) for a list of all the changes.

> [667/HU/46000/000 ST950 and Stratos O/S User Interface Handbook](#) Issue 4 (or later) for changes to the user interface, including details on the change from HTTP to HTTPS and from TELNET to SSH and issue 5 (or later) for v11 features including connection to Stratos.



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