



seca EMR Module for SystmOne

Technical Documentation

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1 GLOSSARY

EMR

Electronic medical record

PDMS

Patient data management system

seca emr flash 101

An application designed for the reception of results from weight and height measurements and their storage in a patient data management system

seca EMR integration module (SEM)

A plugin for **seca emr flash 101** that exchanges data between **seca emr flash 101** and an **EMR**

seca EMR Module for SystemOne

The **SEM** that exchanges data between **seca emr flash 101** and **SystemOne**

SystemOne

A clinical computer system for the UK

2 SECA EMR FLASH 101 INTEGRATION WITH SYSTMONE ARCHITECTURE

2.1 Architecture overview

The **seca EMR Module for SystemOne** was designed to function as a native plug-in for **seca emr flash 101**.

The following diagram (Figure 1) displays a high level overview of the integration points between **seca emr flash 101** and **SystemOne**.

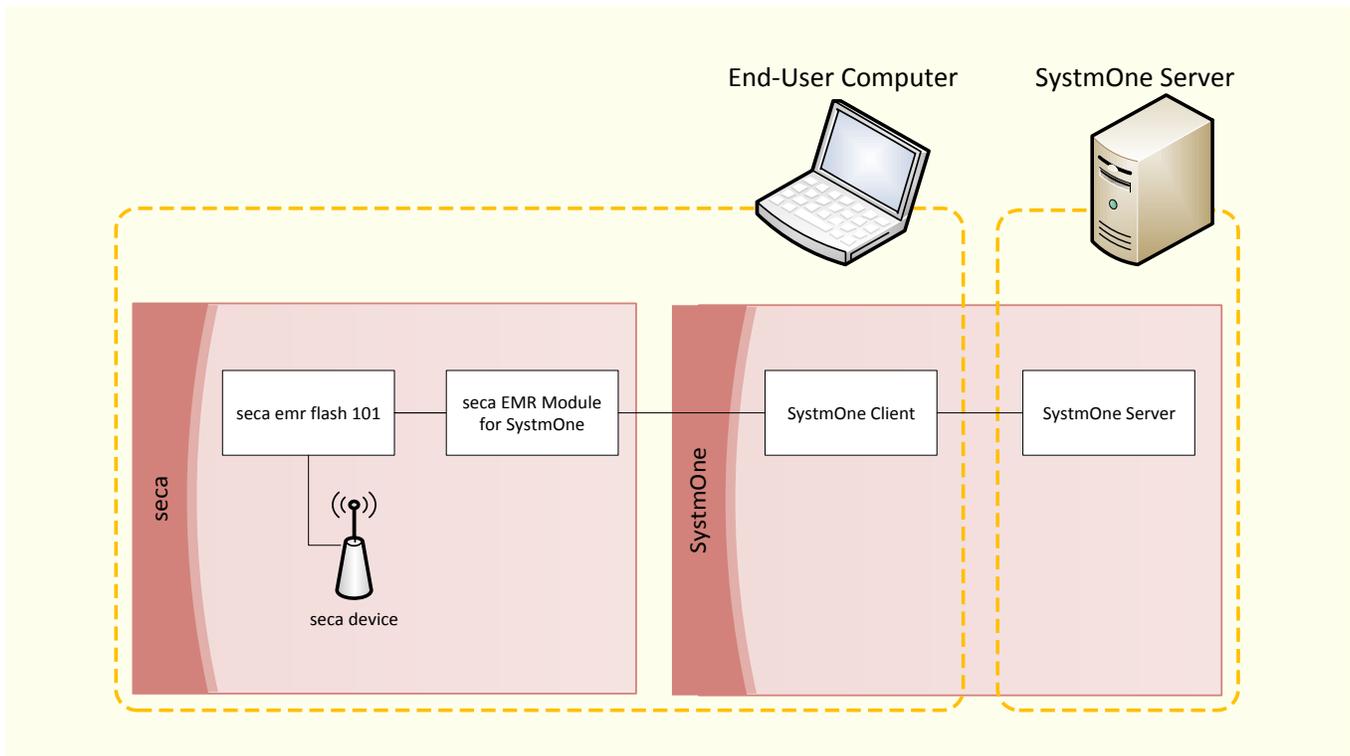


Figure 1 - High-level architecture

2.2 Integration from SystemOne to seca emr flash 101

NOTE:

- This integration (transferring patient data to **seca emr flash 101**) is optional. As an alternative, you might enter the **Patient ID** directly in **seca emr flash 101**, either by keyboard or using a device like a bar code scanner or an RFID scanner.

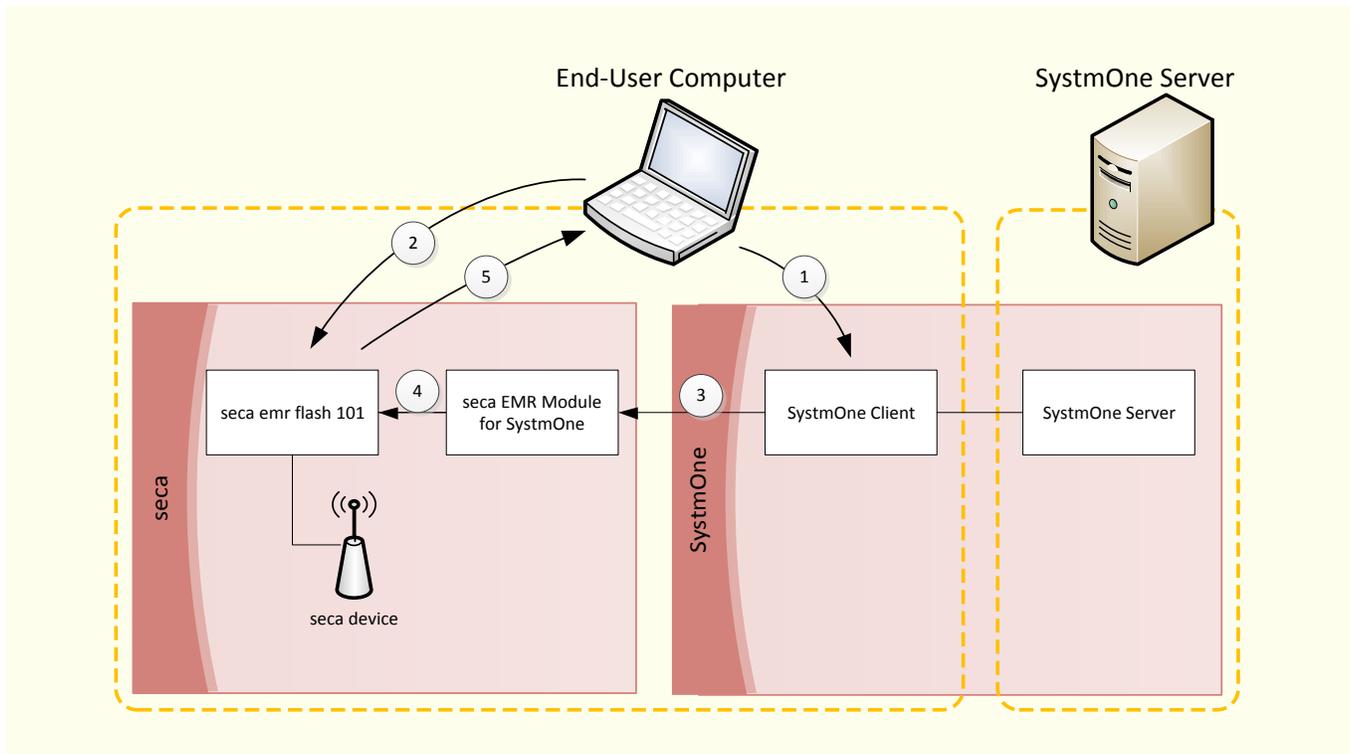


Figure 2 - Integration from EMR to *seca emr flash 101*

1. The end-user will authenticate in **SystemOne** and will select a patient.
2. The user will trigger a request to transfer patient data from **SystemOne** to **seca emr flash 101** by either
 - a. reading a measurement to the empty **seca emr flash 101** screen or
 - b. pressing a button in **seca emr flash 101**
3. **SystemOne** will send one or more of the following user parameters to the **seca EMR Module for SystemOne**
 - a. Patient ID
 - b. Patient First Name
 - c. Patient Last Name
 - d. Patient Date of Birth
 - e. Patient Gender
4. The **seca EMR Module for SystemOne** will pass the patient information to the **seca emr flash 101** user-interface
5. The **seca emr flash 101** user interface will display the new patient information

2.3 Integration from *seca emr flash 101* to *SystemOne EMR*

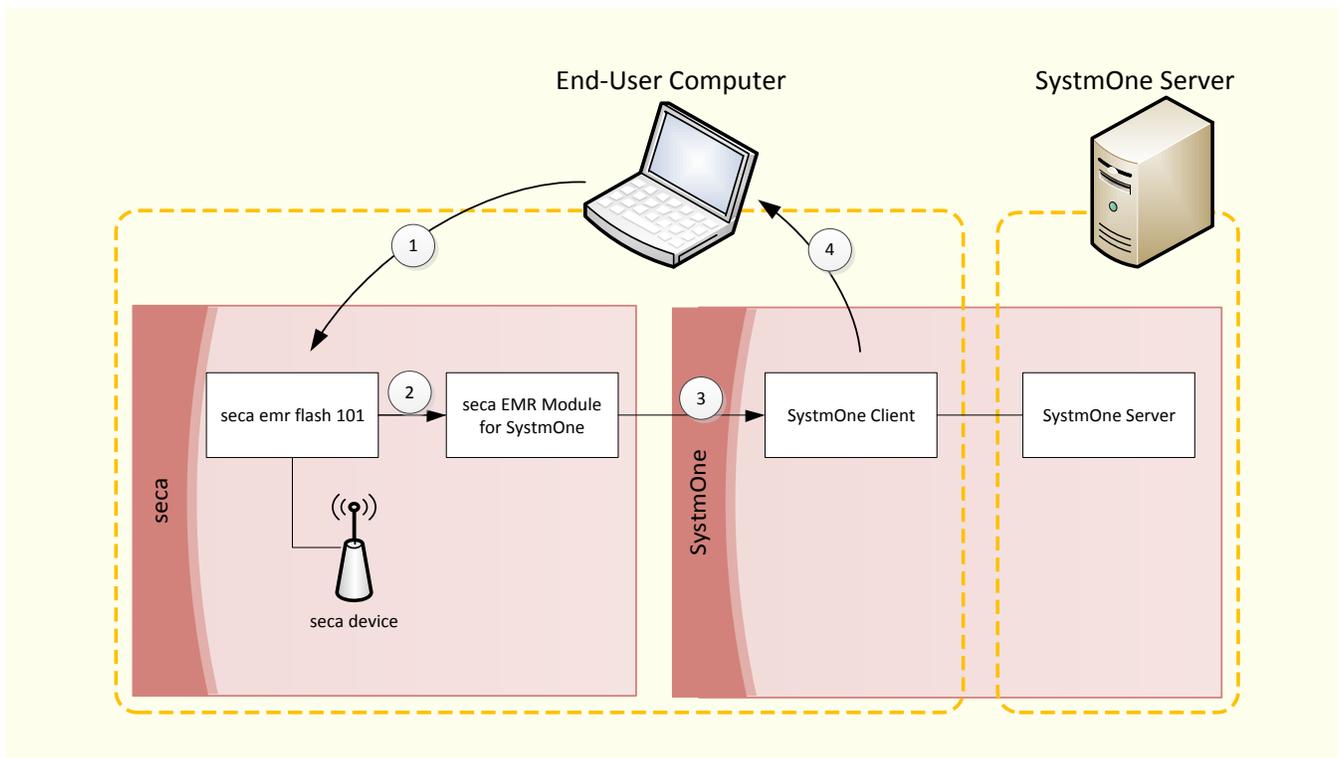


Figure 3 - Integration from *seca emr flash 101* to *EMR*

1. Once a patient reading has been taken, the end-user will trigger **seca emr flash 101** to send the measurement to the **seca EMR Module for SystemOne**
2. The **seca EMR Module for SystemOne** will parse out the data presented by **seca emr flash 101** and prepare it for submission to **SystemOne**
3. The **seca EMR Module for SystemOne** will transmit the measurements to **SystemOne**
4. The updated patient information will be available within the **SystemOne** user-interface

3 INTEGRATION WORKFLOWS

The following section details the steps taken during the integration process of **seca emr flash 101** and **seca** devices with **SystemOne**.

There are several workflow alternatives supported by **seca emr flash 101**.

3.1 Normal workflow

In the normal workflow, measurement data is sent along with patient data to **SystemOne**. Thus, the normal workflow uses two steps:

1. Collect patient and measurement data in **seca emr flash 101**
2. Send patient and measurement data to **SystemOne**

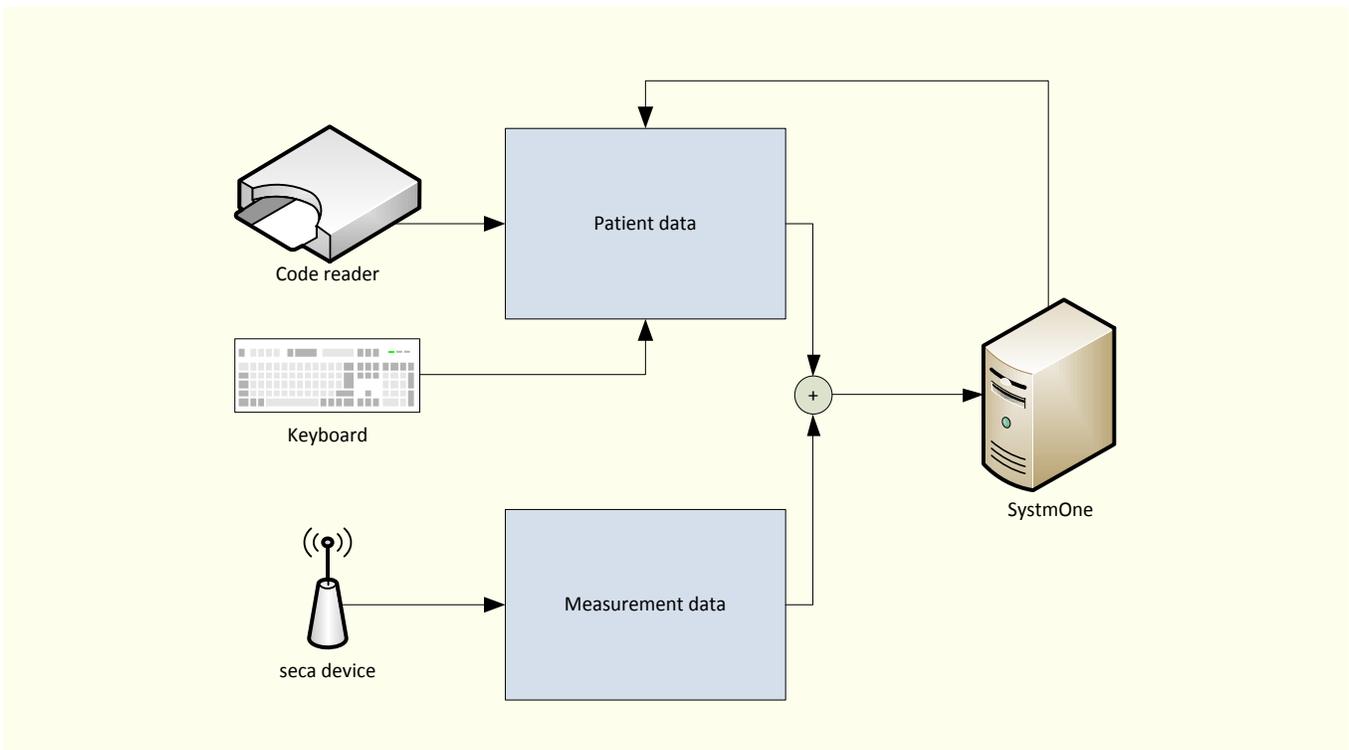


Figure 4 - Normal workflow

3.1.1 Providing **seca emr flash 101** with patient data

There are different methods to provide **seca emr flash 101** with patient data:

1. Patient data is being sent from **SystemOne**
2. Patient ID is being sent from a scanner
3. Patient ID is entered manually

3.1.1.1 Sending patient data to *seca emr flash 101* from *SystemOne*

An end-user will start the **SystemOne** client application. Once the user has authenticated within the application, they will find the patient within **SystemOne** and bring them into context (Figure 5).

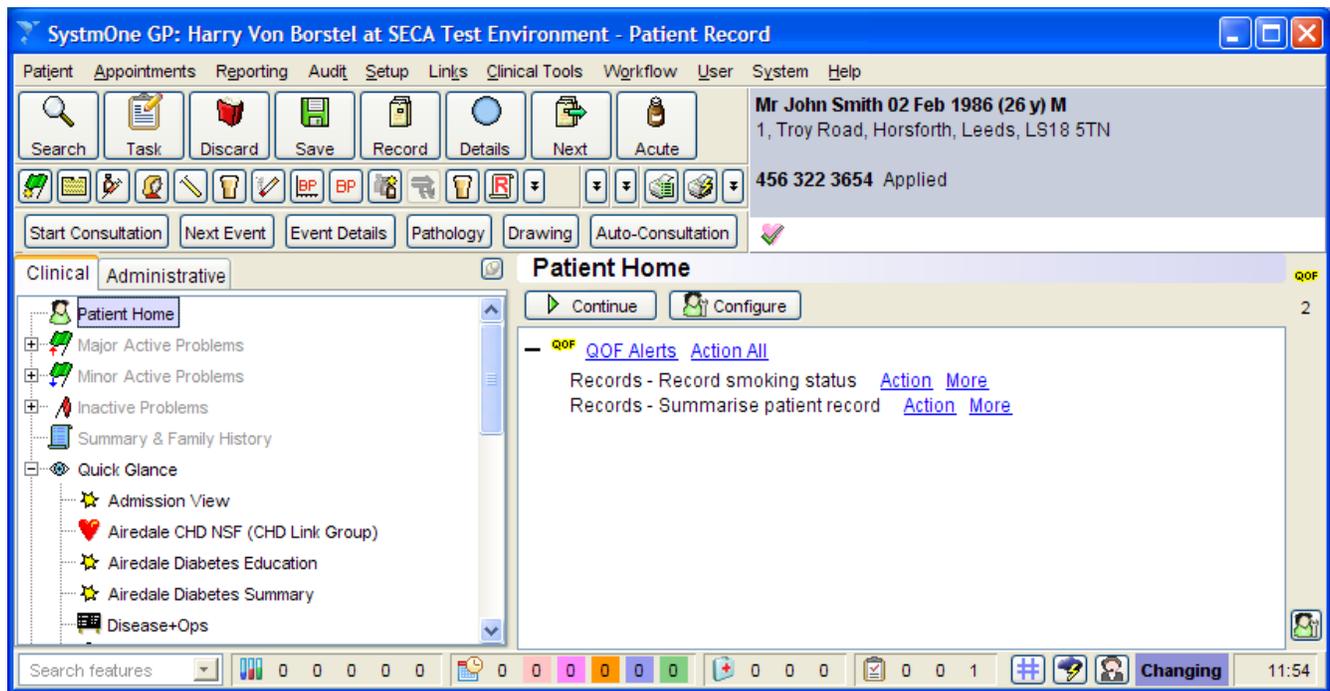


Figure 5 - Patient selected in *SystemOne*

At the same time, **seca emr flash 101** is running either showing its main screen or minimized. If a height or weight measurement from a **seca** device is received, **seca emr flash 101** will pop up showing the measurement along with the patient's demographic and identifying information (Figure 6).

The screenshot shows a software window titled "seca emr flash 101". At the top left, there is a logo and the text "seca emr flash 101". To the right of the title bar are standard window control buttons (minimize, maximize, close). Below the title bar, there is a header area with the text "seca emr flash 101" in a large, bold, red font. To the right of this text is a small image of a white handheld device. The main area of the window contains a form with the following fields:

- Weight: 85.50 kg (with a small triangle icon to the right)
- Height: (empty text box)
- Patient ID: 107751 (this field is circled in red)
- First name: John
- Surname: Smith
- Date of birth: 02/02/1986
- Sex: Male Female

At the bottom right of the form area, there is a label "Devices: Scale 0, Scale 0" followed by a button with the text ">>". At the bottom of the window, there are four buttons: "help", "send to EMR", "cancel", and "settings".

Figure 6 - Patient data received in *seca emr flash 101*

3.1.1.2 Sending Patient ID from a code reader

If you have a suitable bar code or RFID scanner connected to your computer, you may use this device to enter a Patient ID directly from a patient's badge or from a bar code printed on a routing slip.

3.1.1.3 Entering Patient ID from the keyboard

Of course you may enter the Patient ID with your keyboard.

3.1.2 Sending measurements from *seca emr flash 101* to *SystmOne*

With the patient in context, additional measurements might be read. When the measurements are valid the results will be transferred to **seca emr flash 101**. The end-user will then select **send to EMR** and the results will be transferred to **SystmOne** (Figure 7).



Figure 7 - Receiving measurements and sending to *SystemOne*

The end-user can use the **SystemOne** client to review the results taken from the **seca** device (Figure 8).

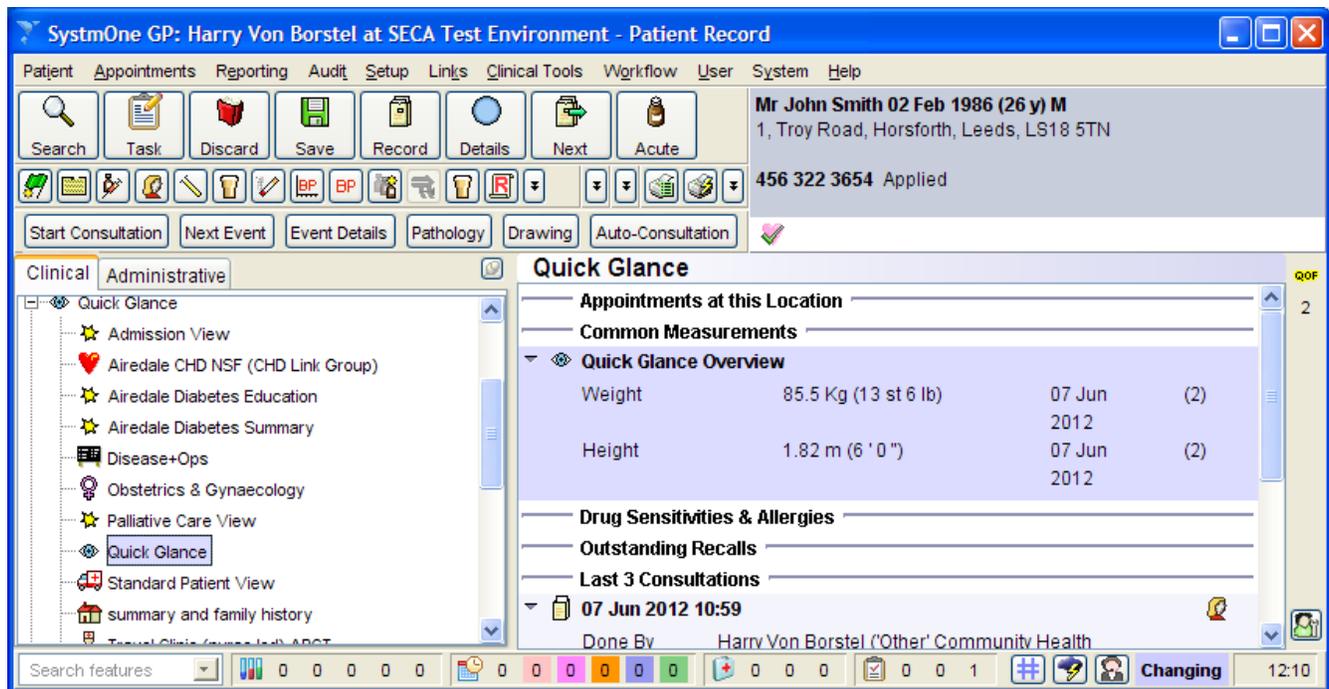


Figure 8 - Measurements received in EMR

3.2 Autosend workflow

In the autosend workflow, measurement data is sent without patient data to **SystemOne** automatically. Whenever a measurement arrives (e.g. the scale's "send" button has been pressed), this measurement is being sent to **SystemOne** immediately. In this case, the measurement is associated with the current patient retrieved from **SystemOne** automatically.

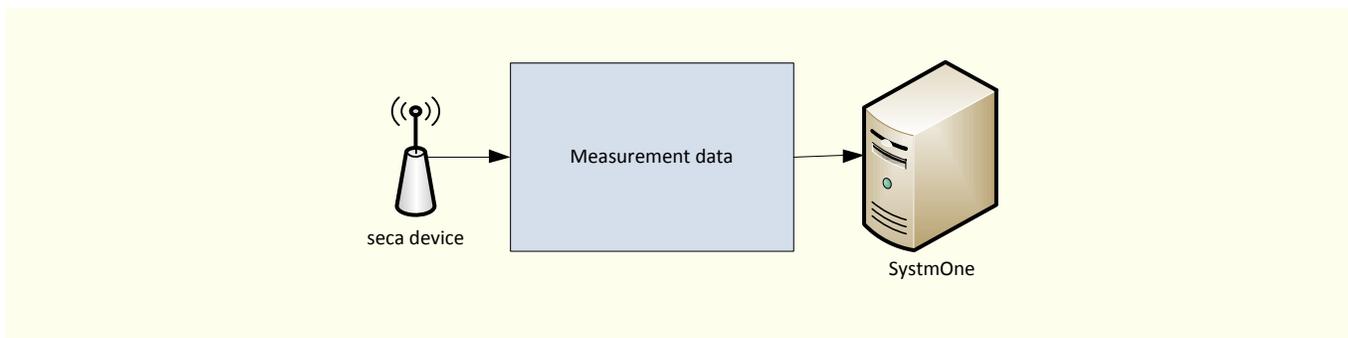


Figure 9 - Autosend workflow

4 DEPLOYMENT INSTRUCTIONS

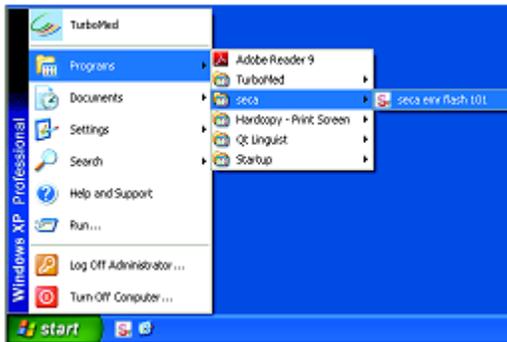
4.1 Installing and configuring *seca EMR Module for SystmOne*

Perform this step on the
End-User Computer

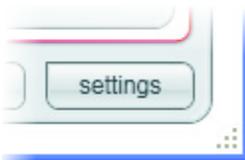


4.1.1 Installation steps

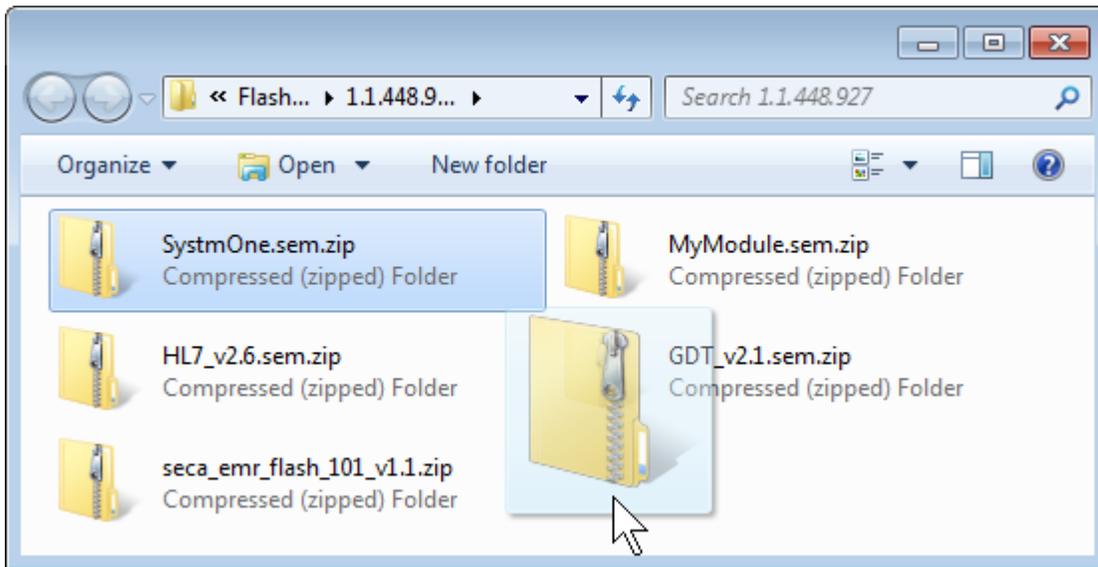
1. Open **seca emr flash 101** (Seca.Flash.exe)



2. Click on the **settings** button



3. In Windows Explorer locate and select the **SystemOne.sem.zip** package



4. Drag this file and drop it to the **add** button of the configuration screen.



Alternatively, you may press the add button and select the file from an Open dialog.

5. The **seca EMR Module for SystemOne** will now be ready for configuration



4.1.2 Configuration

1. Click **configure**



2. The configuration screen is shown



3. There is nothing to configure for the **SystmOne** module, but you may use the **help** button in order to display this documentation online.

5 PROTOCOL DETAILS

The **seca EMR Module for SystemOne** is using the SystemOne API. This involves a local TCP/IP connection (host 127.0.0.1) using port 40698.

5.1 Receiving patient data from *SystemOne* by *seca emr flash 101*

seca emr flash 101 uses the **GetCurrentPatient** message in order to retrieve patient data.

When **seca emr flash 101** receives in turn a **Patient** message, it pops up showing the patient data in its main page.

5.2 Sending measurement data from *seca emr flash 101* to *SystemOne*

Sending measurement data is done through an **UploadPatients** message.

When the "send to EMR" button is pressed in **seca emr flash 101**, the measurements are sent along with the Patient ID to **SystemOne**.

When "Autosend" is activated, no patient data or measurement data is available and a measurement is received in **seca emr flash 101**, the current Patient ID is retrieved using the **GetCurrentPatient** message and the measurement is sent to **SystemOne**.