

# **seca EMR Module for SystmOne**

## **Technical Documentation**

# CONTENTS

- 1 Glossary .....3**
- 2 *seca emr flash 101* integration with *SystmOne* architecture .....4**
  - 2.1 Architecture overview .....4
  - 2.2 Integration from *SystmOne* to *seca emr flash 101* .....4
  - 2.3 Integration from *seca emr flash 101* to *SystmOne EMR* .....6
- 3 Integration workflows.....7**
  - 3.1 Normal workflow .....7
    - 3.1.1 Providing *seca emr flash 101* with patient data .....7
      - 3.1.1.1 Sending patient data to *seca emr flash 101* from *SystmOne* .....8
      - 3.1.1.2 Sending Patient ID from a code reader .....9
      - 3.1.1.3 Entering Patient ID from the keyboard .....9
    - 3.1.2 Sending measurements from *seca emr flash 101* to *SystmOne* .....9
  - 3.2 Autosend workflow ..... 11
- 4 Deployment instructions..... 12**
  - 4.1 Installing and configuring *seca EMR Module for SystmOne* ..... 12
    - 4.1.1 Installation steps ..... 12
    - 4.1.2 Configuration ..... 14
- 5 Protocol details ..... 16**
  - 5.1 Receiving patient data from *SystmOne* by *seca emr flash 101*..... 16
  - 5.2 Sending measurement data from *seca emr flash 101* to *SystmOne*..... 16

# 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 SystmOne**

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

## **SystmOne**

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 SystmOne** 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 **SystmOne**.

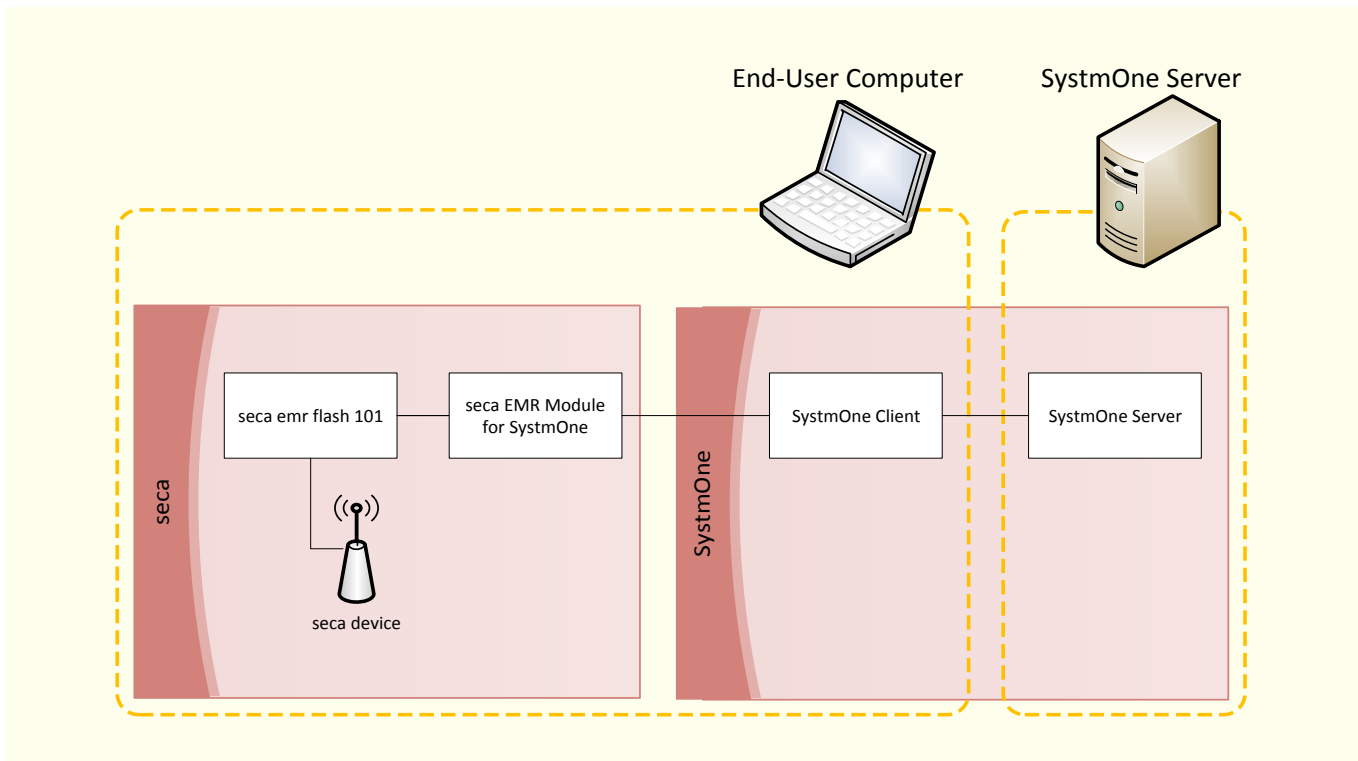


Figure 1 - High-level architecture

### 2.2 Integration from SystmOne 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.

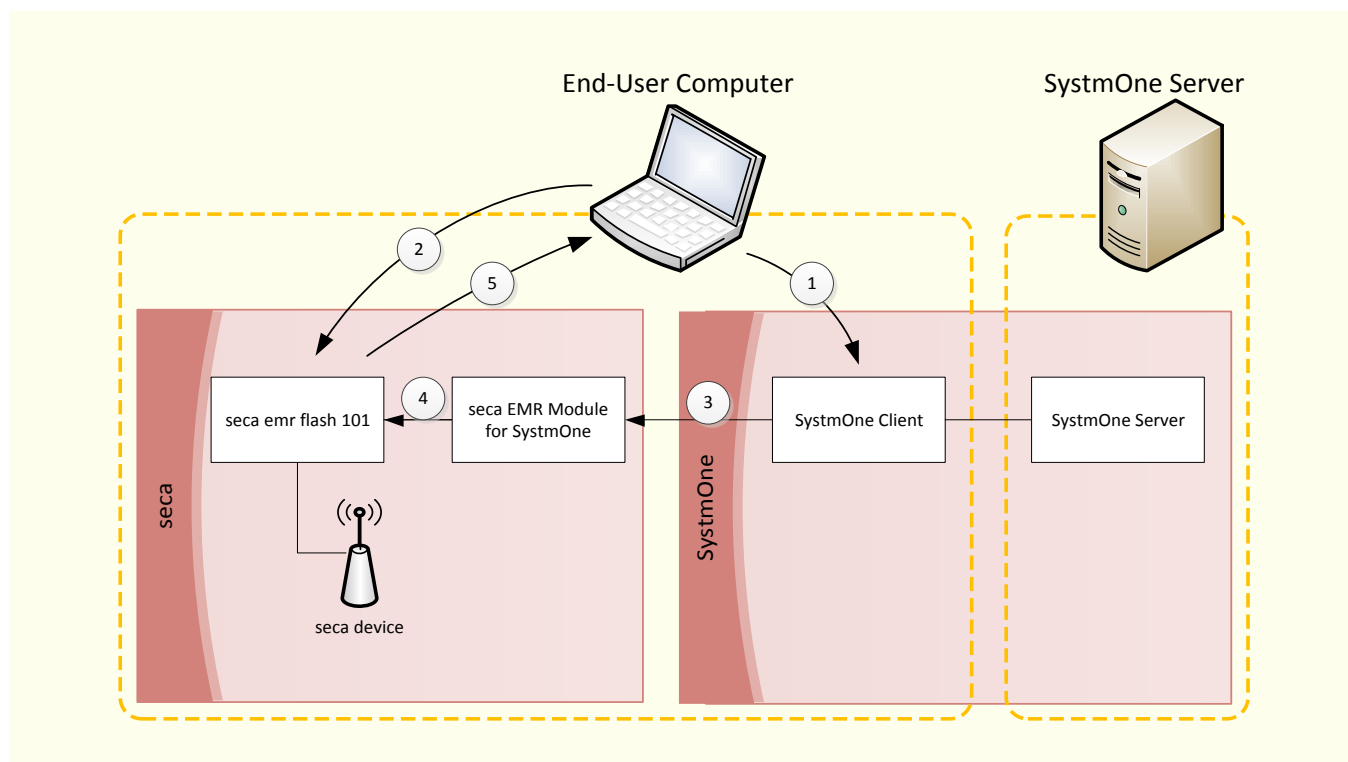


Figure 2 - Integration from EMR to seca emr flash 101

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 *SystmOne EMR*

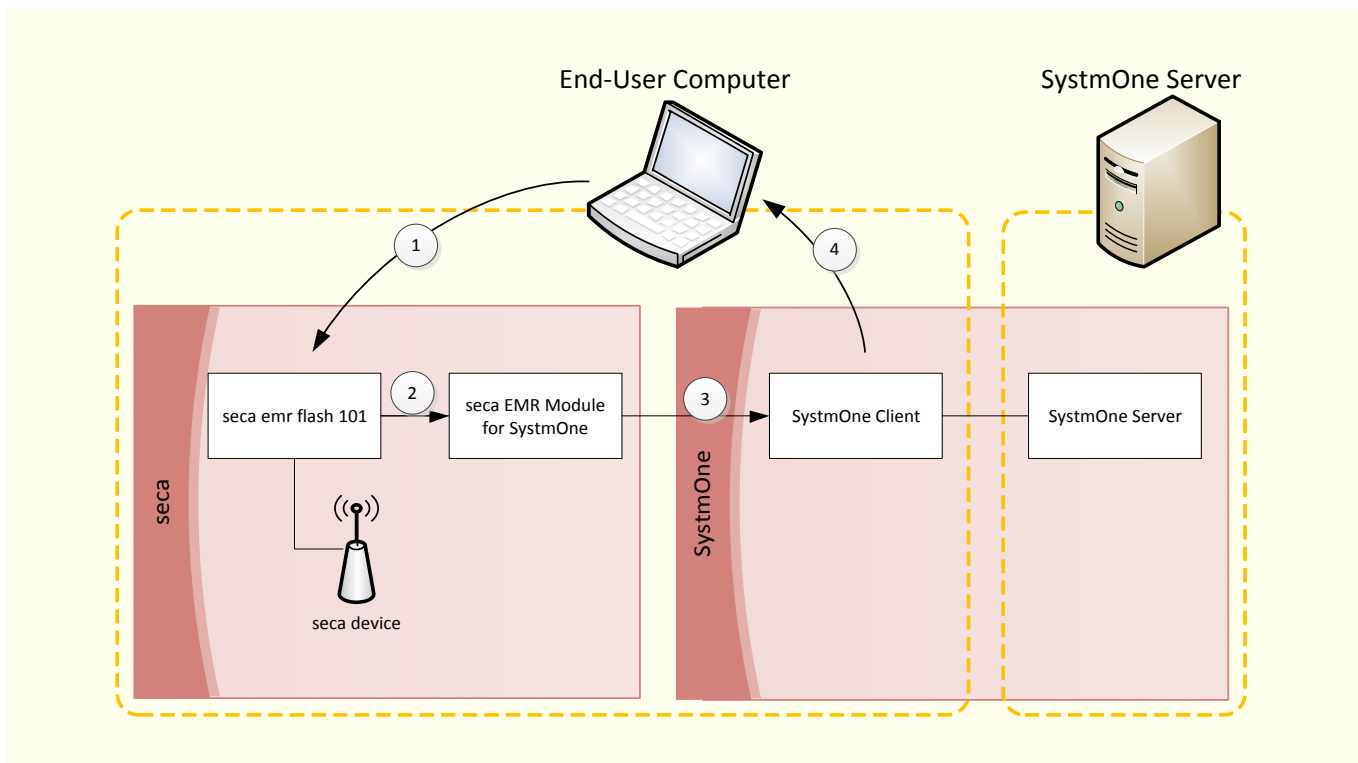


Figure 3 - Integration from *seca emr flash 101* to *EMR*

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 SystmOne**
2. The **seca EMR Module for SystmOne** will parse out the data presented by **seca emr flash 101** and prepare it for submission to **SystmOne**
3. The **seca EMR Module for SystmOne** will transmit the measurements to **SystmOne**
4. The updated patient information will be available within the **SystmOne** 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**

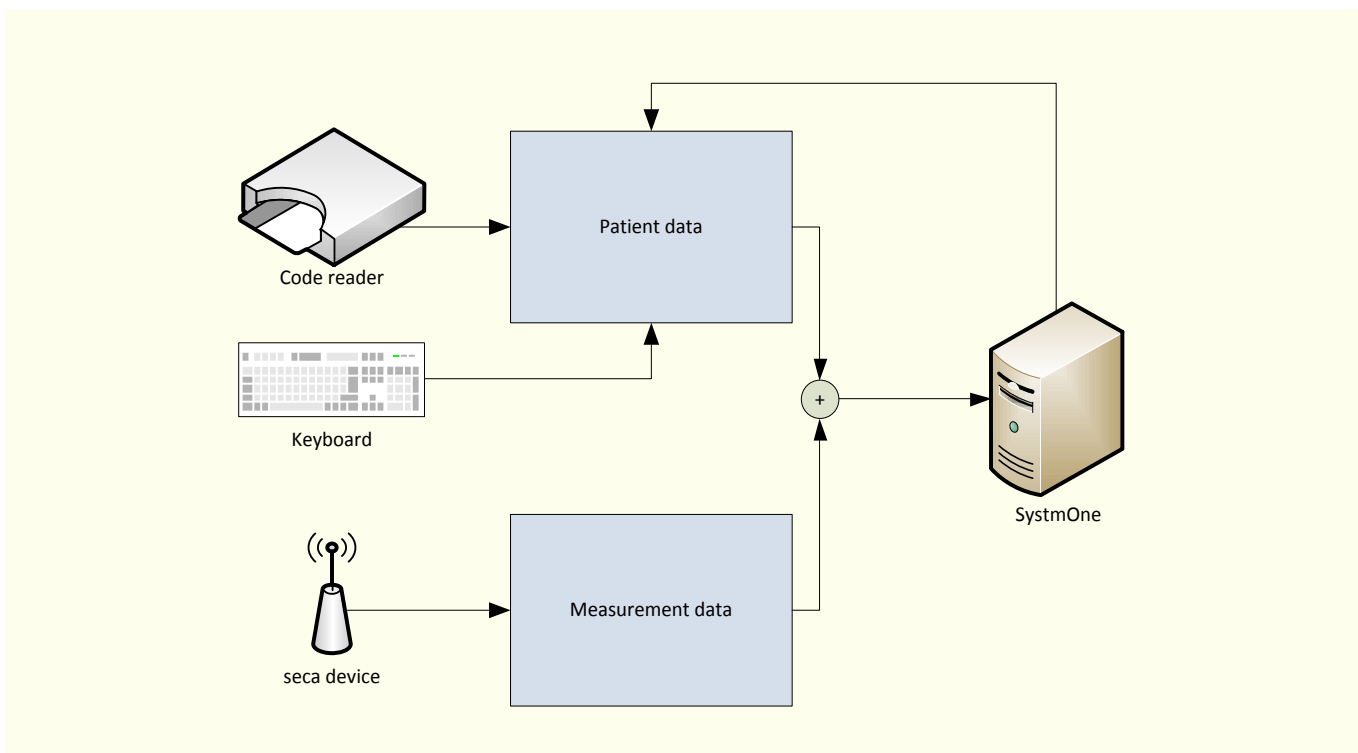


Figure 4 - Normal workflow

#### 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 *SystmOne*

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

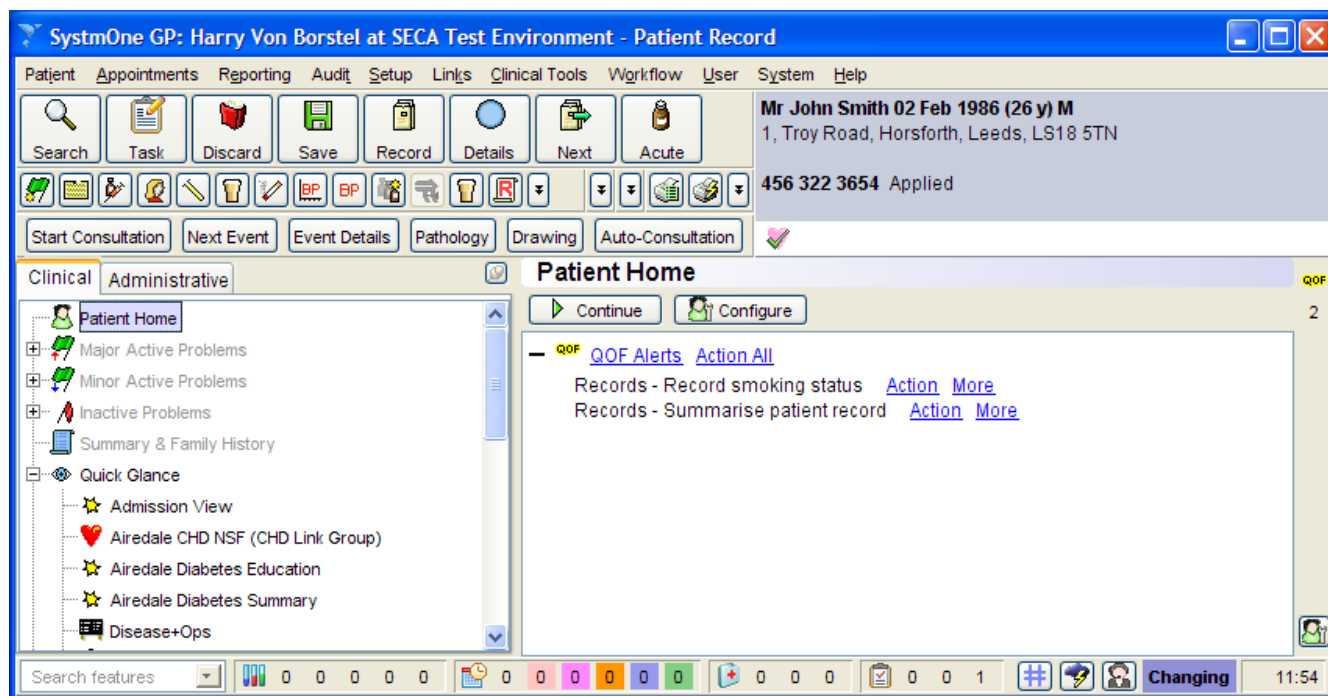


Figure 5 - Patient selected in *SystmOne*

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". Inside, there's a header with the text "seca emr flash 101" and a small image of a barcode scanner. Below this, there are several input fields for patient data:

- Weight: 85.50 kg
- Height: (empty field)
- Patient ID: 107751
- First name: John
- Surname: Smith
- Date of birth: 02/02/1986
- Sex: ☒ Male ☐ Female

A red oval is drawn around the Patient ID, First name, Surname, and Date of birth fields. At the bottom right, there's a "Devices: Scale 0, Scale 0" label and a ">>" button. At the bottom left, there are buttons for "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).

seca emr flash 101

seca emr flash 101

Weight: 85.50 kg

Height: 1.820 m

Patient ID: 107751

First name: John

Surname: Smith

Date of birth: 02/02/1986

Sex: ☒ Male ☐ Female

Devices: Scale 0, Scale 0 >>

help send to EMR cancel settings

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).

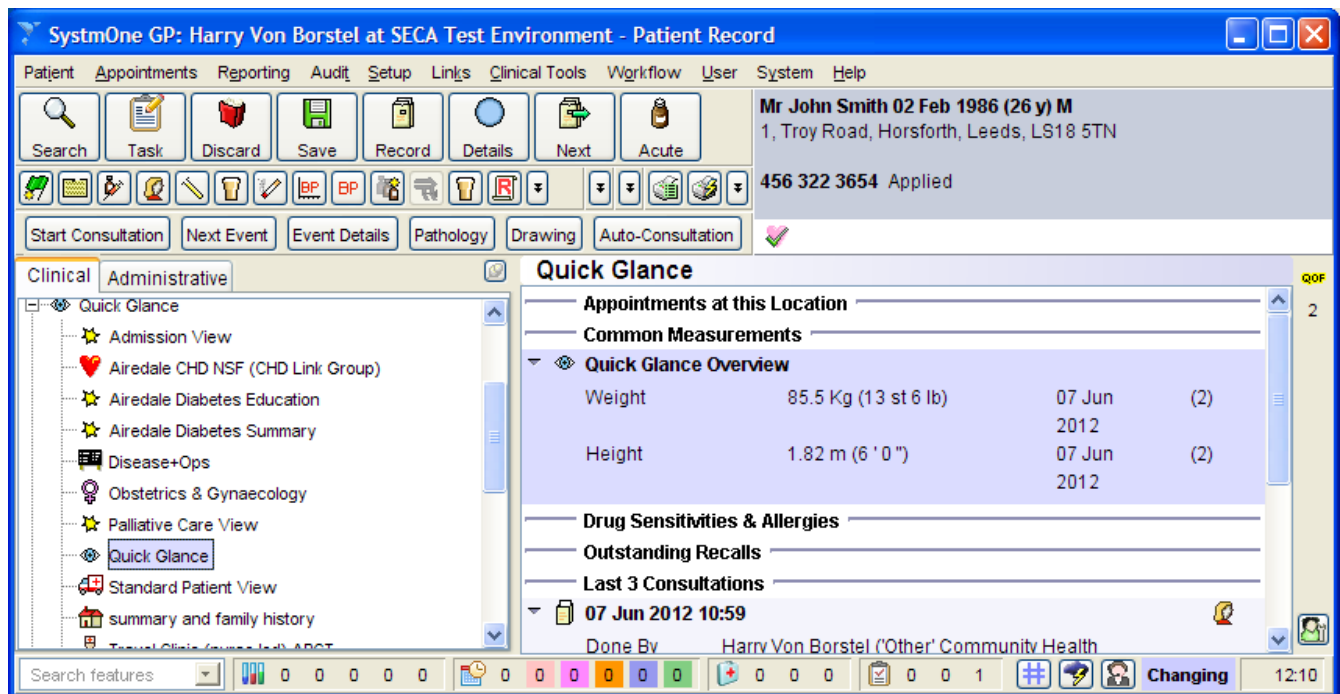


Figure 8 - Measurements received in EMR

## 3.2 Autosend workflow

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

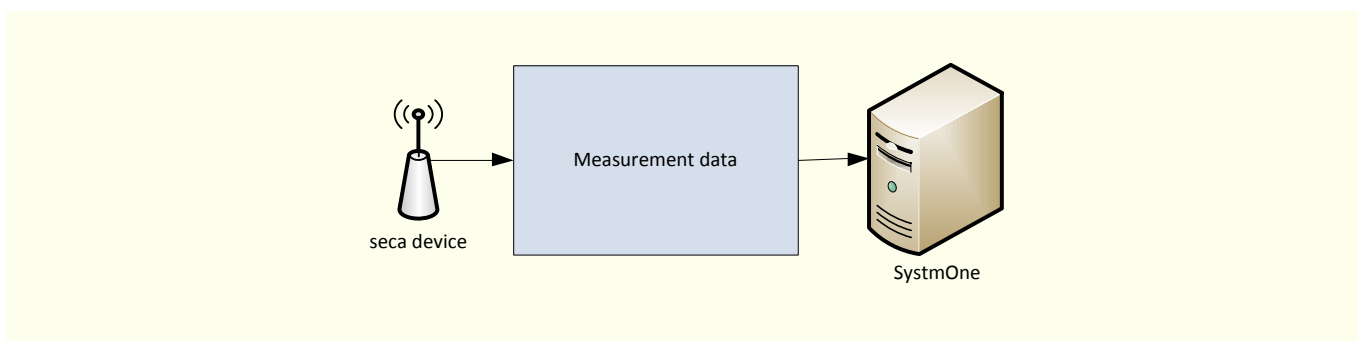


Figure 9 - Autosend workflow

## 4 DEPLOYMENT INSTRUCTIONS

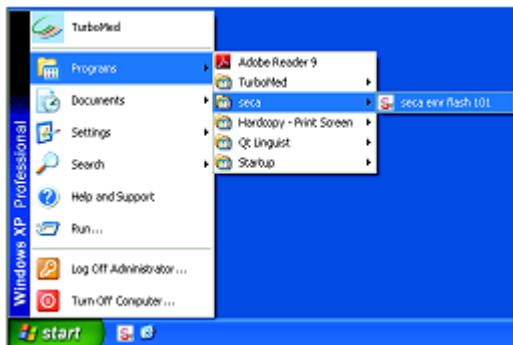
### 4.1 Installing and configuring *seca EMR Module for SystmOne*

Perform this step on the  
End-User Computer



#### 4.1.1 Installation steps

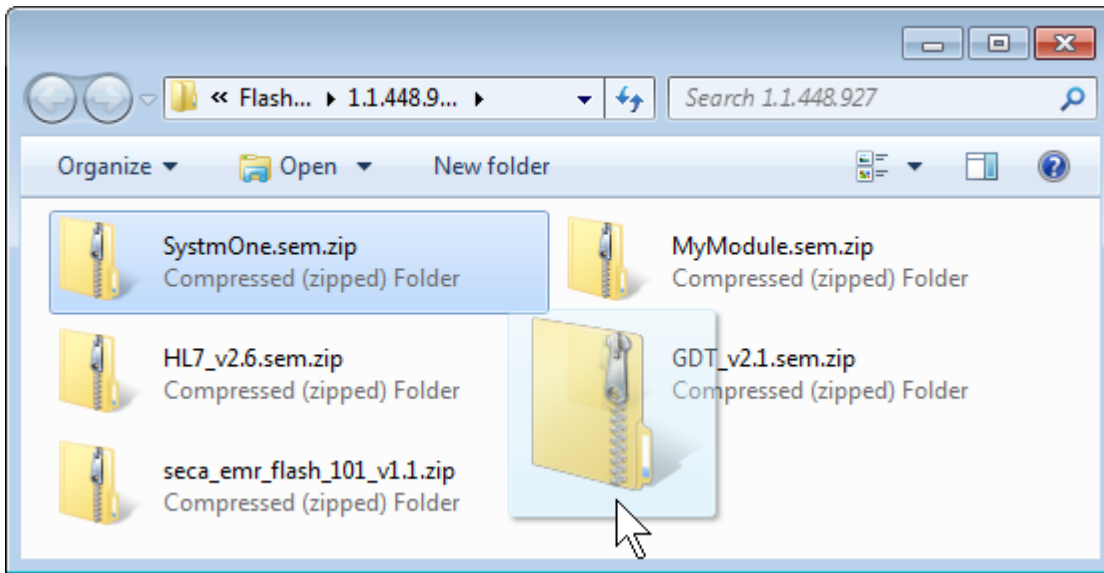
1. Open **seca emr flash 101** (Seca.Flash.exe)



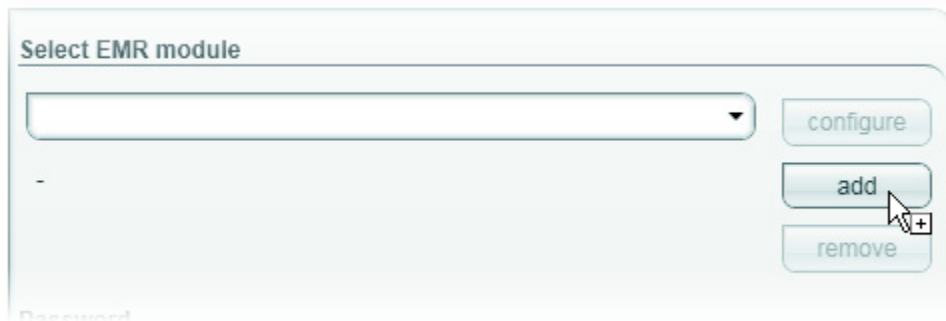
2. Click on the **settings** button



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



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



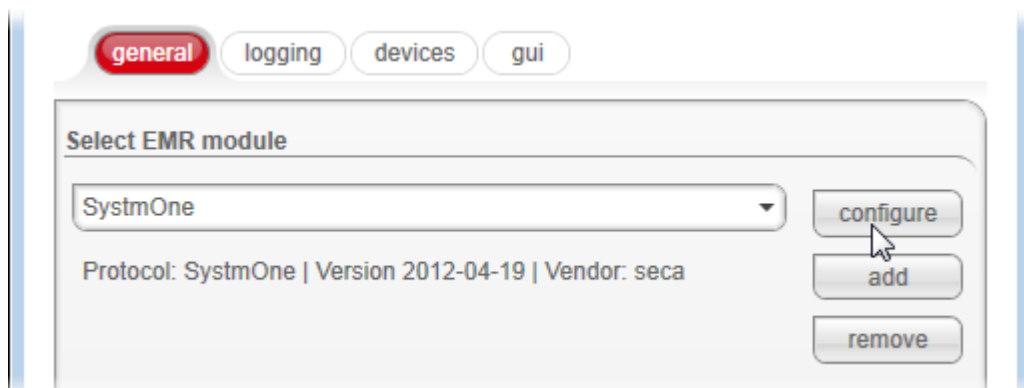
Alternatively, you may press the add button and select the file from an Open dialog.

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

### 5.1 Receiving patient data from *SystmOne* 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 *SystmOne*

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 **SystmOne**.

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 **SystmOne**.