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# Temp-Taker<sup>®</sup> 3

## SFTP Edition

T3SFTP01-150826



## Notices

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## Introduction

Starting with v3.5.73 Temp-Taker® is available in an SFTP Edition. SFTP stands for Secure File Transfer Protocol, or SSH File Transfer Protocol. The SFTP Edition allows an organization to integrate the Temp-Taker® system into their custom data reporting service.

This document first gives a high-level description of the functionality provided by the Temp-Taker® 3 – SFTP Edition and then provides a technical description of its behavior.

 **NOTE:** The SFTP Edition is identical in all respects to the General Edition except that SFTP functionality is enabled.

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# 1 High-Level View of SFTP Edition

Figure 1.1 shows a graphical representation of the SFTP Edition. As with all other editions, setting changes (e.g. entering new users, food items, etc.) in the SFTP Edition must be performed via the Temp-Taker® software application running on a local Windows machine. Setting changes are automatically downloaded to each handheld device during the next USB connection (see Label 1 in Figure 1.1).

**NOTE:** The Auto-Import feature allows organizations with multiple locations to **remotely** update the Temp-Taker® settings in all their locations.

Temp-Taker® handhelds generate data as usual. However, in the SFTP Edition, whenever a device is connected via USB to the software application, all data stored in the device is not just uploaded and stored in the application's database on the local machine, but it is also automatically sent via SFTP to a pre-specified server in the form of a CSV (comma separated values) file. This functionality is represented in Labels 2 & 3 of Figure 1.1. At this point, custom software can parse the CSV file, extract the data of interest, store it into its own database, and display it as desired.

In summary, the SFTP Edition requires that a Windows PC (with internet access) running the Temp-Taker® software application be available in each location where devices are utilized. The SFTP Edition is essentially designed to serve as a data portal between Temp-Taker® devices and a custom data-reporting service.

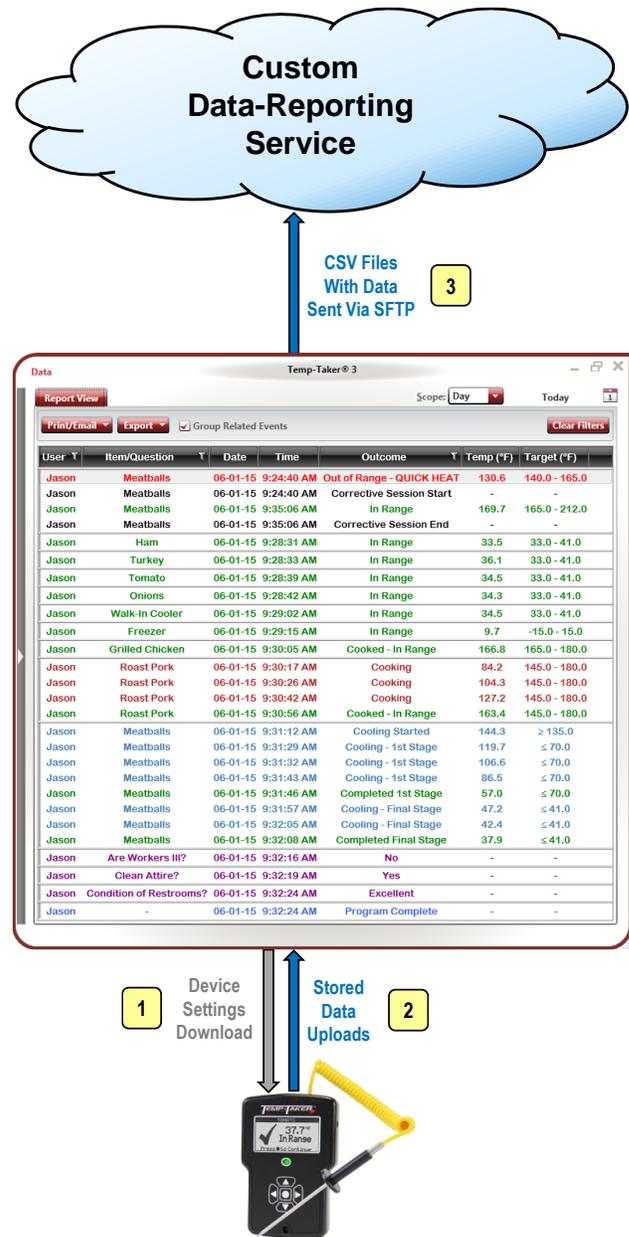


Figure 1.1 Graphical Representation of SFTP Edition

## 2 Technical Details

### 2.1 Unique Behavior of SFTP Edition

The following are details of the SFTP Edition's unique behavior:

- After each successful device data upload, a uniquely-named CSV file containing the newly uploaded data is created in the directory `C:\ProgramData\Temp-Taker 3\AutoGenCsv` (Windows 7 & 8). In addition, anytime a user adds or modifies the "Comments" field of any row in the Data section of the software application, a new CSV file containing the modified record will be created. In this case, the unique "ID" field for the modified record will remain unchanged and can be used to locate the original record in the database of the custom data-reporting service.
- After a new CSV file is generated, the Temp-Taker® application will attempt to transfer the file to the remote server specified in *config.ini* via SFTP (see Section 2.34 page 6). If the file is successfully uploaded to the remote server, it is then automatically deleted from the AutoGenCsv folder.
- If the CSV file is not successfully uploaded (e.g., server down or wrong credentials specified in *config.ini*) the Temp-Taker® application will continue to try every 5-10 seconds to send all CSV files still present in the AutoGenCsv folder. Also, upon application startup, if any CSV files are found in the AutoGenCsv folder, the application will attempt to send them (every 5-10 seconds) until successful.
- The first time the program attempts to send a file to the remote server, two text files (*psftpError.txt* and *psftpOutput.txt*) are created in the AutoGenCsv folder detailing the results of the communication attempt. These files are overwritten with each subsequent attempt to send another file. Consulting these files should help when troubleshooting failed connections.

### 2.2 Auto-Generated CSV Data Schema

Table 2-1 (page 5) contains a full description of the data schema used for auto-generated CSV files in the SFTP Edition.

The "Outcome" field contains either a static value (taken from a predefined set) or one of the following two dynamic values:

- An arbitrary string ranging from 1-29 characters in length representing custom answers
- The string "Out of Range – " followed by an arbitrary string ranging from 1-29 characters in length representing Corrective Options

The static value of the "Outcome" field is always one of the following:

- Completed 1st Stage
- Completed Final Stage
- Cooked - In Range
- Cooking
- Cooking Ended
- Cooling
- Cooling - 1st Stage
- Cooling Completed
- Cooling - Final Stage
- Cooling Started
- Corrective Session End
- Corrective Session Expired
- Corrective Session Start
- Expired Item Purged
- False Measurement Detected
- In Range
- Insufficient Correction Time
- Insufficient Time Lapse
- Item Discarded
- Item Purged
- No
- Overcooked
- Program Complete
- Reheat Selected
- Supervisor PIN Entered
- Supervisor PIN Omitted
- TILT Period End - Consumed
- TILT Period End - Discarded
- TILT Period End
- TILT Period Expired
- TILT Period Start
- TILT Start Failure
- Yes

Table 2-1 Auto-Generated CSV Data Schema Field Description

Field Name	Length*	Description
ID	19	Unique 19-digit number (that may serve as a primary key) from which several fields of data can be inferred. <b>Example value:</b> 1209183004680000901 <ul style="list-style-type: none"> <li>▪ First 6 digits (120918) represent the date (YYMMDD) of the initial event in a group of related events</li> <li>▪ Next 7 digits (3004680) represent the serial number of the device that logged the event</li> <li>▪ Next 4 digits (0009) represent the event number of the event</li> <li>▪ Next 2 digits (01) represent the sequence number of the event</li> </ul>
Event #	1 - 4	Number that serves to group or associate related events.
Seq #	1 - 2	Sequence number within a group of related events.
Unit S/N	9	Alphanumeric serial number of the device that logged the event. <b>Example Value:</b> TT3004680
Unit Name	1 - 29	Name assigned to the device that logged the event. Where not assigned, value is “-”.
User	1 - 29	The name of the user associated with the logged event. Default value is “-”.
Program Group	1 - 29	Name of the Program Group containing the program in which the logged event was initiated. Where Program Groups are not enabled, value defaults to “Programs”. For Calendar-Based Programs, value defaults to the day/date of the Program (e.g. “Thu, Jun 4”).
Program	1 - 29	Name of the Program in which the logged event was initiated. Default value is “-”.
Process Group	1 - 29	Name of the Holding Group, Cooking Group, Cooling Group, TILT Group, or Checklist in which the logged event is organized within a multi-process program. Where multi-process programs are not enabled, value defaults to the name of the Program.
Item/Question	1 - 29	Name of the item or checklist question being measured or evaluated. Default value is “-”.
Date	8	Date on which the event occurred represented in the following format: “MM-dd-yy”
Time	8	Time at which the event occurred represented in the following format: “HH:mm:ss”
Outcome	1 - 44	Text describing or interpreting the answer or result of the action initiated by this event. The text in Section 0 (page 4) specifies all the possible values for this field. <b>Example values:</b> <ul style="list-style-type: none"> <li>▪ Yes</li> <li>▪ Out of Range – QUICK HEAT</li> </ul>
Temp (°C)	1 - 7	Temperature reading (where applicable) to the hundredths place in °C. Where a temperature reading is not applicable (e.g. a question), the default value is “-”. <b>Example values:</b> <ul style="list-style-type: none"> <li>▪ 0.89</li> <li>▪ -15.00</li> </ul>
Temp Difference	1 - 17	The difference between the temperature reading and the target temperature for the item being measured (in °C). Where not applicable the default value is “-”. <b>Example values:</b> <ul style="list-style-type: none"> <li>▪ 2.68° Above Max</li> <li>▪ 10.05° Below Min</li> </ul>
Target (°C)	1 - 17	Target temperature for the item being measured (in °C). Where not applicable the default value is “-”. <b>Example values:</b> <ul style="list-style-type: none"> <li>▪ -0.56 – 5.00</li> <li>▪ ≥41.0</li> </ul>
Zone Name	1 - 29	Name of the safe temperature zone (aka Holding Zone) for the item being measured when it is related to the Holding process. Where not applicable, value is “-”.
Comments	0 - 30	Optional comment added by the user to the logged event using the TT3 software application.

\* Length excludes the enclosing quotation marks around all fields

## 2.3 Auto-Generated CSV Filename

In order to prevent filename collisions from occurring if multiple locations are configured to transfer files to the same directory on a remote server, the auto-generated CSV files are created with a unique filename that conforms to the following pattern:

```
SerialNum_UtcOffset_DstFlag_UtcDateTime
```

The components of this filename are explained as follows:

- **SerialNum** – The unique serial number of the Temp-Taker® device from which the data was uploaded
- **UtcOffset** – A positive or negative number indicating the difference in hours between Coordinated Universal Time (UTC) and the time zone of the location that recorded the data. For example, if the file was transferred from a location in the Eastern Time Zone of North America, the **UtcOffset** would be -5 during standard time and -4 during Daylight saving time.
- **DstFlag** – A 1 or 0 indicating whether the the file was generated during Daylight saving time (1) or standard time (0)
- **UtcDateTime** – The date and time when the file was generated using Coordinated Universal Time and expressed in the format: yyyy-MM-dd\_HH:mm:ss

For example, a CSV file generated on August 1, 2015 at 10:30:22 AM (Eastern Standard Time) from a Temp-Taker® device with serial number 3008461 would have the following file name:

```
3008461_-4_1_2015-08-01_143022
```

## 2.4 Configuring the SFTP Edition

In order for the Temp-Taker® application to securely transfer files to a remote server, specific connection information for the server must be provided in the *config.ini* file installed in the directory **C:\ProgramData\Temp-Taker 3\AutoGenCsv**. The following shows the contents of a sample config.ini file when opened with Notepad.

```
hostname: example.server.com
port: 22
username: sampleUsername
password: samplePassword
```

To configure the Temp-Taker® application to connect to your SFTP server, you must do the following:

- Replace `example.server.com` with the name or IP address of your SFTP server
- Replace `sampleUsername` and `samplePassword` with the username and password required to connect to the SFTP server

You can optionally change the port number if your server is not using the default SSH port, 22.

Each Temp-Taker® application can also be configured to transfer files to a specific directory on the remote server instead of the default root directory. To change the destination directory where the files are to be transferred, open the *psftpScript.src* file (located in the same **AutoGenCsv** directory) with Notepad.

Locate the 2<sup>nd</sup> line:

```
#cd /path/to/valid/directory
```

Uncomment this line by removing the # sign at the beginning of the line, and replace `path/to/valid/directory` with your desired path.