

## FileLink – Installation and Configuration

One of the great plugins for CardioPerfect® Workstation (CPWS) is FileLink (FL).

FileLink allows you to automatically create files from your tests. These files can be reports in PDF or TIFF format or XML files with all the test results that can be used to populate a patient record in an Electronic Medical Record (EMR) system.

FileLink can also create so-called TFL files, which are basically shortcuts to a test. Activating such a shortcut would open CPWS straight into the test to which the TFL file links.

The best thing is that if you have CPWS, you have FileLink as well and all you have to do is install and configure it.

These are the steps to install and configure FileLink (based on CPWS Version 1.6.6.)

### Prerequisites

First make sure that you are an administrator on the PC on which you want to install FL.

FileLink can only be installed on a PC that already has CPWS installed.

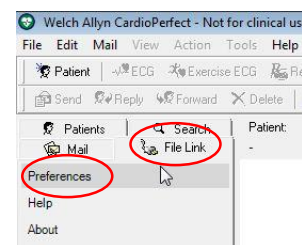
Before installing FL, make sure to create a folder where you will save the FL files, this folder can be local on your PC's HDD or on a shared network drive. You and the other users that will later use this PC and CPWS will need to have read & write permissions on that folder, so make sure not to use a personal users folder that is only accessible to you.

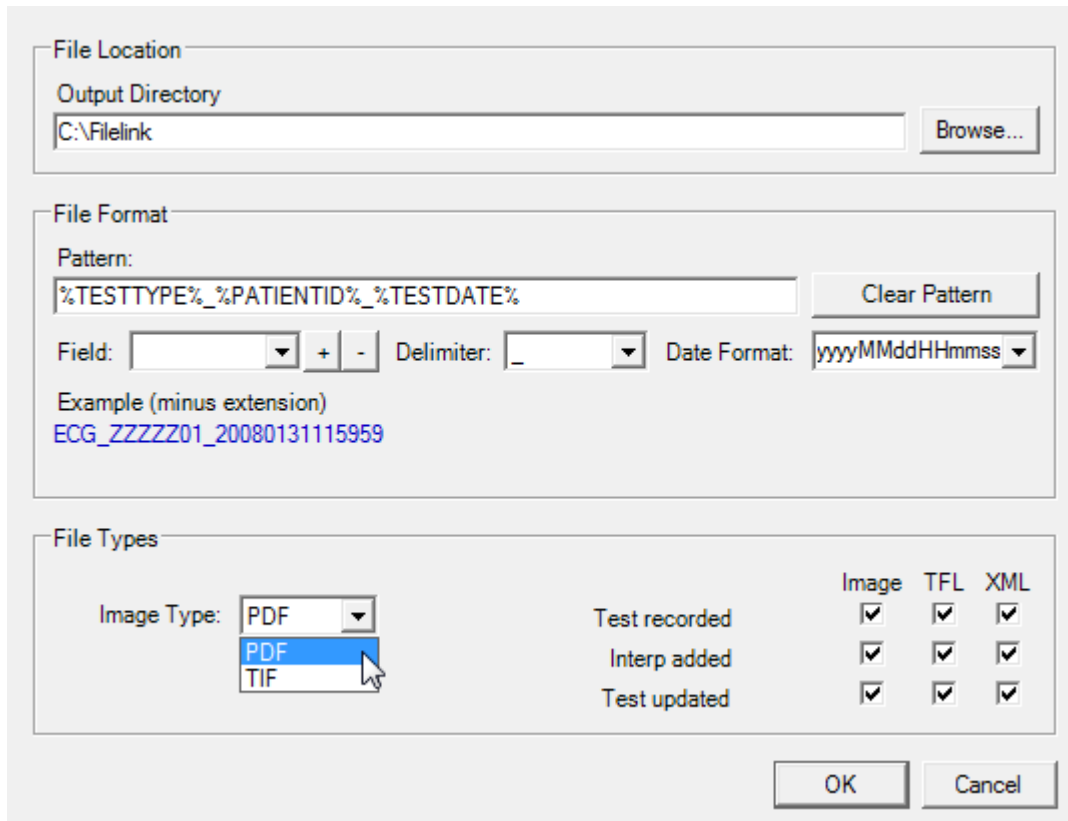
### Installation

1. Insert the CPWS DVD into the DVD drive and wait for the menu to appear
2. Select "CardioPerfect Connectivity Tools"
3. Select "Install CardioPerfect FileLink"
4. Select "next" on the welcome screen and accept the terms of the license agreement
5. Select complete installation or custom (custom allows you to skip installation of a TIFF and/or PDF writer and help files, and allows you to not set the TFL association to CPWS)
6. In the next step, you're able to configure FileLink. Configuration is best done however after the installation, so skip the configuration part for now by clicking "Next"
7. Select "install" to start the actual installation and wait for the installation to finish completely. You will now be prompted to restart your computer, select "OK" to do so

### Configuration

1. Start CPWS and select the FileLink tab on the left
2. Select "Preferences"





The screenshot shows a configuration dialog box with three main sections:

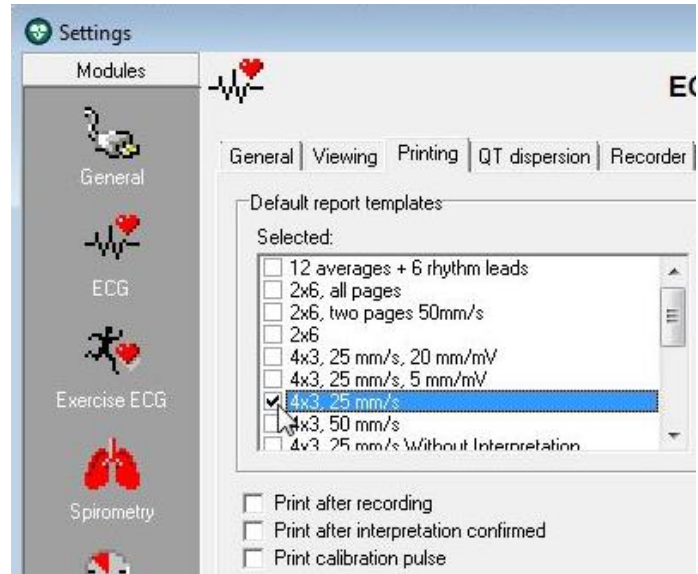
- File Location:** Contains an "Output Directory" field with the text "C:\Filelink" and a "Browse..." button.
- File Format:** Contains a "Pattern:" field with the text "%TESTTYPE%\_%PATIENTID%\_%TESTDATE%". Below it are fields for "Field:" (with a dropdown menu), "Delimiter:" (with a dropdown menu showing "\_"), and "Date Format:" (with a dropdown menu showing "yyyyMMddHHmmss"). There is also a "Clear Pattern" button. An example filename "ECG\_ZZZZZ01\_20080131115959" is shown below.
- File Types:** Contains an "Image Type:" dropdown menu with options PDF, PDF, and TIF. To the right is a 3x3 matrix of checkboxes for "Image", "TFL", and "XML" across three rows: "Test recorded", "Interp added", and "Test updated". All checkboxes in the matrix are checked.

At the bottom right of the dialog are "OK" and "Cancel" buttons.

3. We now see the same screen as during the installation, however, the pattern field can now be populated from selection fields
  - a. Output Directory: Click "Browse" to select a previously created directory or use the "Make new folder" button to create a (sub)folder  
Keep in mind that this folder must be accessible to all users (read and write permission)  
The folder can also be on a server somewhere (use a mapped drive or a UNC path)  
A mapped drive must be mapped with the same drive-letter for all users
  - b. File Format: this will define the filename of the output files
    - i. First select a delimiter like "\_"
    - ii. From the field dropdown list select an item, then click "+" and select the next item followed by "+" and so on
    - iii. If you have selected a date field (test date or Interpr date), the Date Format field allows you to adjust to your preferences (if a different format is required than what is available in the dropdown list, you can just type it in according to date & time standards)
  - c. File Types settings define the type of document that is created and the moment that it will happen automatically
    - i. Image type defines if you will get a PDF or TIFF file if you select image output in the next step (you cannot leave this field blank, so even if you do not want an image output at all, you still have to select one)
    - ii. In the 9-box matrix you can select at what moment (on new test, on interpretation confirmation and/or on test update) which type of file (image (PDF or TIFF), TFL and/or XML) will be created

- d. Select “OK” to close the preferences window
4. If FileLink creates an output, it needs to know which report template(s) to use for each type of test

- a. In the CPWS main screen go to <File><Settings>, select the test type (ECG, Spiro, etc) and select the “Printing” tab
- b. Select at least one report template for each test type, these templates will be used to create the PDF or TIFF output files  
*Even if you have selected not to create a TIFF or PDF in the FileLink preferences, you will still need to select a report template*



## Using FileLink

In the configuration section we’ve seen that FileLink can automatically create an output on 3 different events:

1. “Test Recorded”: once you have recorded a test and it’s being stored in the database, the output will be generated
  - a. For ECG and exercise ECG this would mean after the test has been recorded
  - b. For spirometry this would mean after each effort
  - c. For ABPM this would mean after the results have been read back from the recorder
2. “Interpr added”: if you open the interpretation editor and select “Confirm”, an output will be triggered
3. “Test updated”: this could be re-analyzing an ECG or spiro or recalculating the predicted on a spiro, etc.

There’s a fourth way to trigger the output of FileLink and that is a manual trigger: After the installation of FileLink you will notice an extra tab on each test type next to the existing tabs with the different views of a test. In this tab you will find a button that activates a FileLink output

## About fileformat

Depending on the fileformat-name, FileLink outputs may automatically be overwritten by a next output.

In this example I have chosen the format to be:

%TESTTYPE%\_%PATIENTID%\_%TESTDATE% and as Date Format I have chosen yyyyMMdd (date only)

If I record a spiro effort with patient 12345 on 10 august 2016, the output PDF would be named: SPRO\_12345\_20160810.PDF, if I then record a second effort for that same patient on that same day (this is quite likely to happen), another output file would be created with the same name and that would automatically overwrite the old file.

If the date format would be yyyyMMddHHmmss (Date and time), then the first output record at 9:35:10 AM would be SPRO\_12345\_20160810093510.PDF. The second effort recorded 2 minutes later would generate an output named SPRO\_12345\_20160810093710.PDF (the

second one containing both efforts), as this name is different than the first one, it would not overwrite that one.

Since the last output of a spirometry test would include all previous efforts of that test, it would be acceptable to overwrite the previous output files, so setting the date-format as yyyyMMdd would be normally OK.

### Importing files into an EMR

The FileLink output files can be used to add the test results to a patient record in an EMR:

- The PDF or TIFF can be added as an attachment to a patient record (some EMRs also allow you to do this manually)
- Adding a TFL to a patient record allows the user to open the defined test in CPWS from the EMR (provided CPWS is installed on that same computer)
- The information from the xml output can be used to populate fields in an EMR

The EMR will need to be programmed and/or configured to make this possible. Contact your EMR supplier to find out what the possibilities are.

### Other types of installations

FileLink can also be set up for automatic installation, please refer to the readme.pdf that is available in the FileLink installation folder on the CPWS installation DVD for various advanced installation options.

If you still have any questions regarding FileLink, please contact your Welch Allyn supplier for support.