



EMA DESIGN AUTOMATION

CIPTM Importer

User Guide and Tutorial

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Introduction

CIP Importer is an application that will import and update data from a Comma Separate Value (CSV) file into the CIP/CIS database. You will need to configure the mapping between the CSV and the CIP/CIS database. After configuration, you can perform an analysis of the run and review your log before the actual update to the database. Each run of the program creates a log file in a Logs directory within the installed location. The CIP Importer will only work with a specific version of CIP. The About link in CIP Importer provides this compatibility information.

Warning

CIP Importer will import and update the CIP/CIS database based on your input file and your configuration. Once the database is updated, you will NOT be able to undo what you have done. If you are unsure of the changes, make a backup before each time you add parts or update the database. Restoring data from a backup that you have made is the only way to recover your original data.

Performing the exercises in this tutorial will add parts to you database. You will need to backup your database before you start running the exercises and then restore your backup.

Installing CIP Importer

The CIP Importer download consists of a zip file with the following:

- CIP Importer installer – CIP Importer Setup.exe
- Sample files used for the tutorial
 - o capacitors.csv – To be used in tutorial module 1
 - o Sample.csv – Sample file that match mappings shown in Figure 8 and Figure 9
 - o Sample2.csv – To be used in tutorial module 3

CIP Importer is a client application that will run on a client PC. Before installing this application, you will need to obtain the name of the SQL Server that CIP-E was installed. You must also have administrative permissions to that SQL Server and the PC that you will be installing CIP Importer on.

Invoking CIP Importer Setup.exe will start the installation process with the following window.

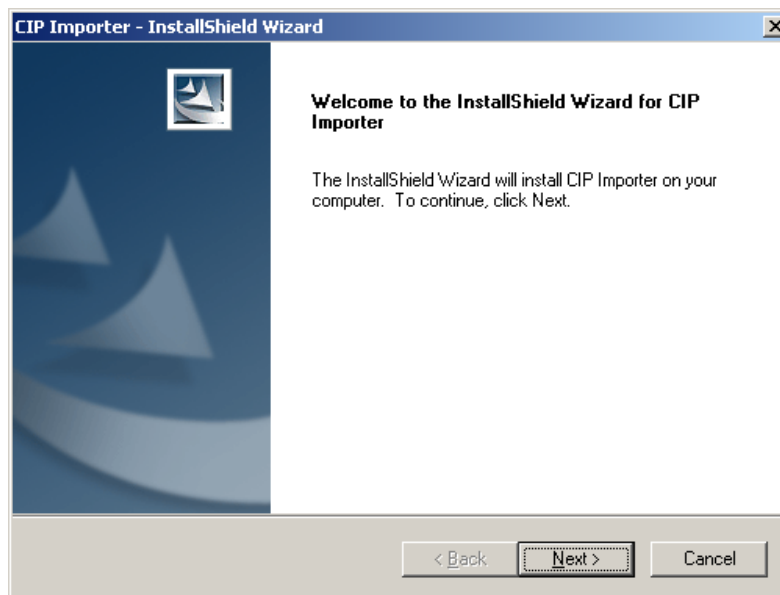


Figure 1: CIP Importer Installation Window

Click **Next** and you will be asked to review the End User License Agreement. After you have read and agreed to the terms in the license agreement, you can click **Next**. You can change the location of the installation at this time. If you choose to install at the default location, you can click **Next**.

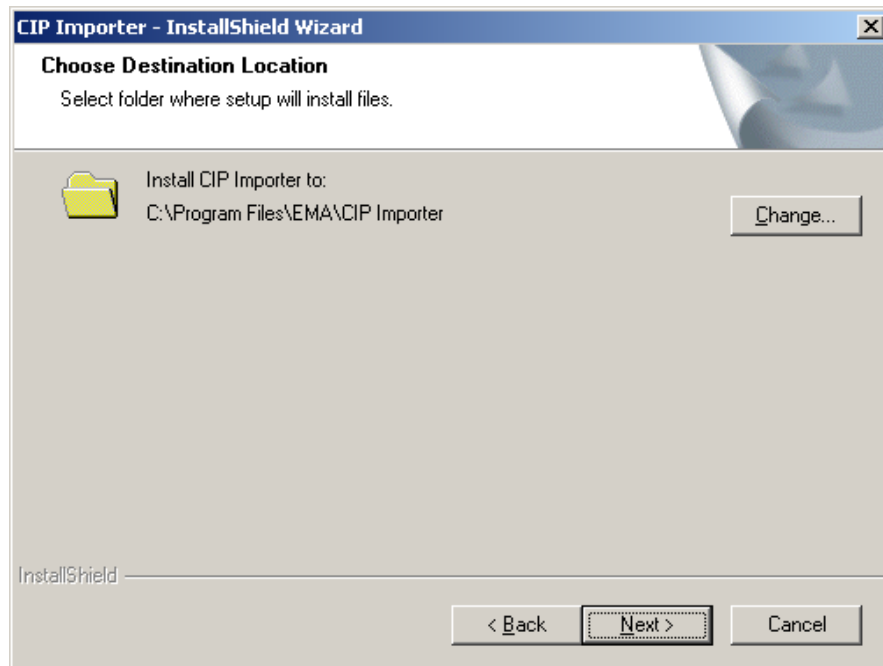


Figure 2: Configure Destination of CIP Importer Installation

You will need to enter the name of the database server that CIP-E has been installed. You will also need to enter the database name which is CIP_E.

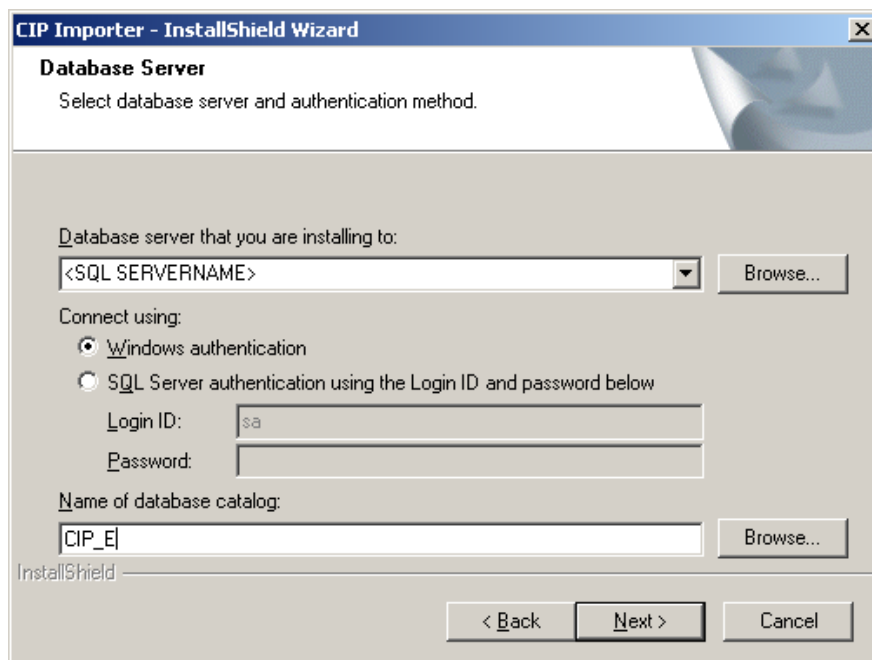


Figure 3: Enter Location and Name of Database

Click **Next** after entering the server and database name information. Click **Install**.

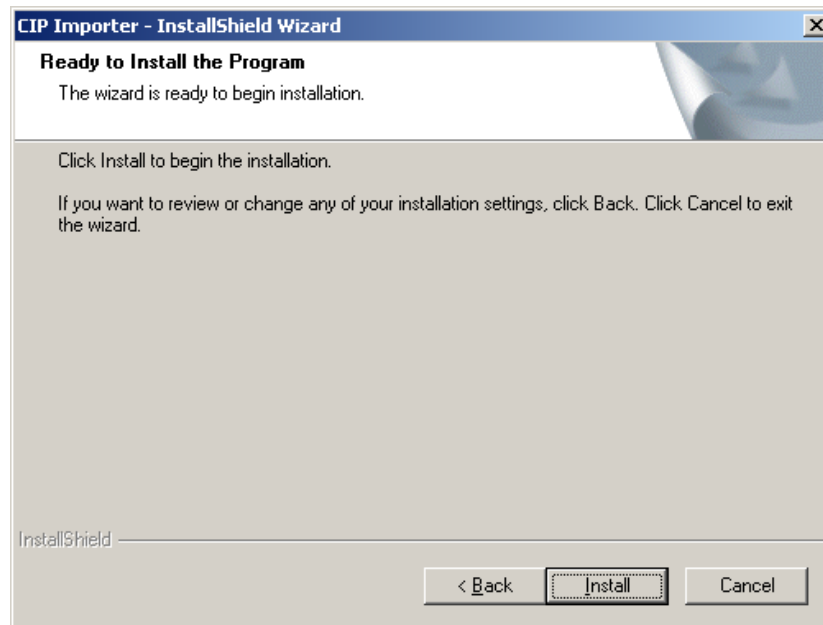


Figure 4: Initiate Installation

Click **Finish** when done.

An ODBC connection to the database will automatically be generated to the database by the CIP Importer Installer.

CIP Importer Usage

Starting CIP Importer

The CIP Importer Application is invoked by either double clicking the executable or from the start menu. (Start > All Programs > EMA > CIP Importer > CIP Importer)

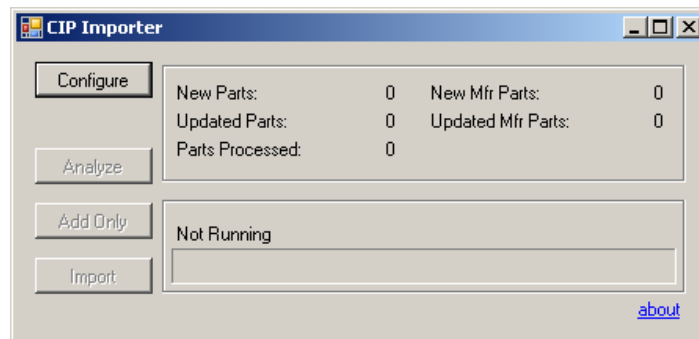


Figure 5 - Initial CIP Importer Screen

Configuring CIP Importer

Click **Configure** to start configuring the import process. The worksheet Wizard will be displayed. This Wizard will guide you through the configuration. You will need to reconfigure CIP Importer each time you run it.

It is very important that you check each of the configuration screens each time you use the CIP Importer. The configuration may change since it is dependent on the content of import files.

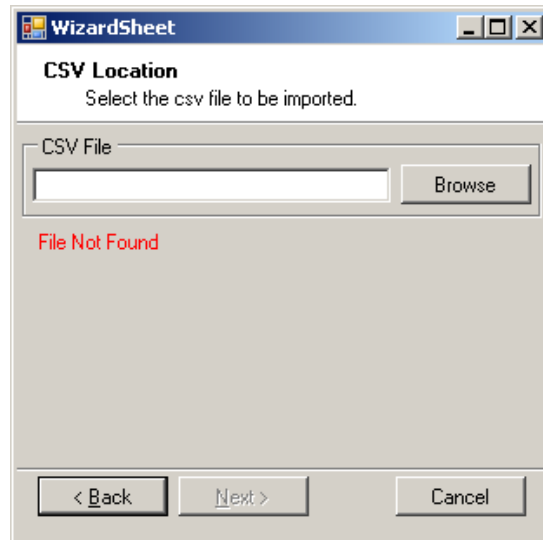


Figure 6: Enter Location of Import file

Navigate to the CSV file you wish to import by clicking the **Browse** button. Sample files have been included. If the import CSV file is well formed, then the **Next** button will appear. Click **Next**. If you received an error after selecting your file, refer to section on Troubleshooting Import Files on page 22.

The **CIP Database Connection** screen will appear. Click **Test** to test the connection to the database. This window is prefilled with the default setting from CIP Importer installation. Once you receive a Connection Successful message, click **Next**.

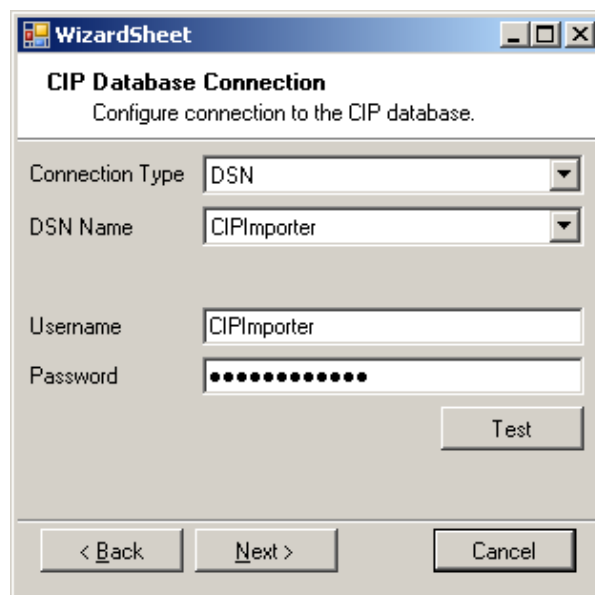


Figure 7: Test CIP Database Connection

The **Key Field Configuration** window will appear. You will need to enter field names in the CSV file that correspond to the following:

- Part Number – This is the company part number field. This field must be filled in.
- Part Category Field – This is the field in your CSV file that identifies the table that the part should be imported into. This field must be filled in.
- Manufacturer Name Field – This is the field in your CSV file that identifies the name of the manufacturer. This is an optional field. If Manufacturer Part Number field is filled in, then this field must also be filled in order to proceed to the next configuration step.
- Manufacturer Part Number Field - This is the field in your CSV file that identifies the name of the manufacturer part number. This is an optional field. If Manufacturer Name field is filled in, then this field must also be filled in order to proceed to the next configuration step.

Values shown in the following figure corresponds to column headings in the sample CSV, sample.csv.

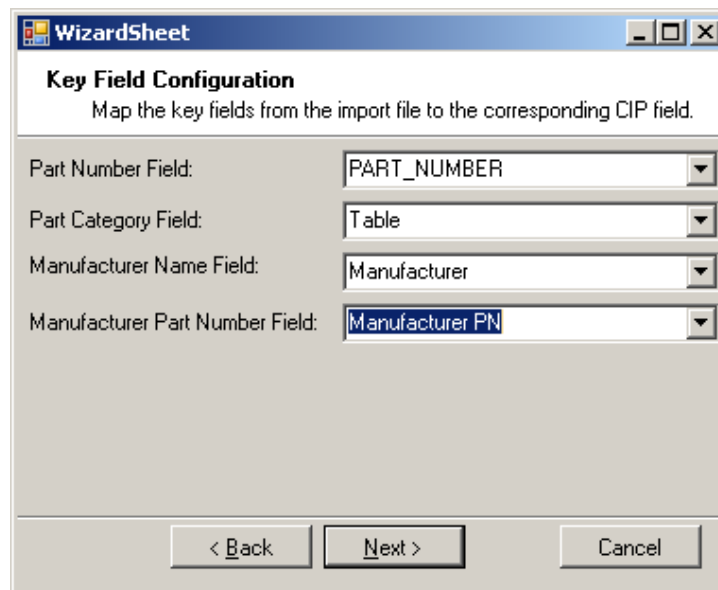
The image shows a screenshot of a software window titled "WizardSheet". Inside the window, there is a section titled "Key Field Configuration" with a subtitle "Map the key fields from the import file to the corresponding CIP field." Below this, there are four rows of configuration options, each with a label and a dropdown menu. The first row is "Part Number Field:" with the dropdown set to "PART_NUMBER". The second row is "Part Category Field:" with the dropdown set to "Table". The third row is "Manufacturer Name Field:" with the dropdown set to "Manufacturer". The fourth row is "Manufacturer Part Number Field:" with the dropdown set to "Manufacturer PN". At the bottom of the window, there are three buttons: "< Back", "Next >", and "Cancel".

Figure 8: Sample Key Field Configuration filled in

Click **Next** to bring up the **Component Fields Mappings** window.

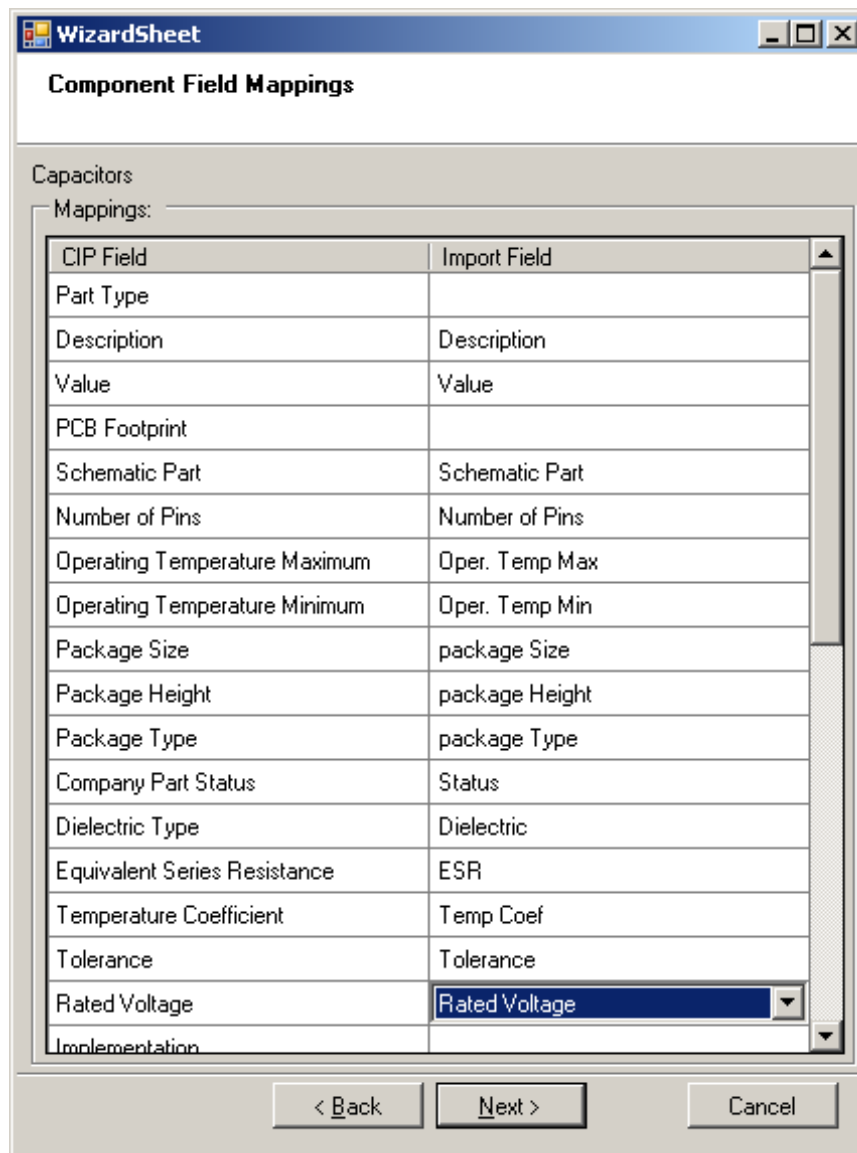


Figure 9: Sample Component Field Mapping

In this window, you will need to map all fields that you would like to transfer into the database. This window may be resized for easier readability. You will need to go through this for each category table in the CIP/CIS database.

For Userfields that have been configured to another name using CIP-E Administrator, you the see the configured name in the mapping screens. However, the log files will show them as UserfieldXX.

Note: You should check all table configurations each time you use the CIP Importer. Changes to the import file will affect your configuration.

After the last table, Transistors, the **Manufacturer Field Mappings** screen will appear. You can map any fields you have specifically for manufacturer part data. If you did not filled in fields for Manufacturer during the **Key Field Configuration** shown in Figure 8, then this window will not appear.

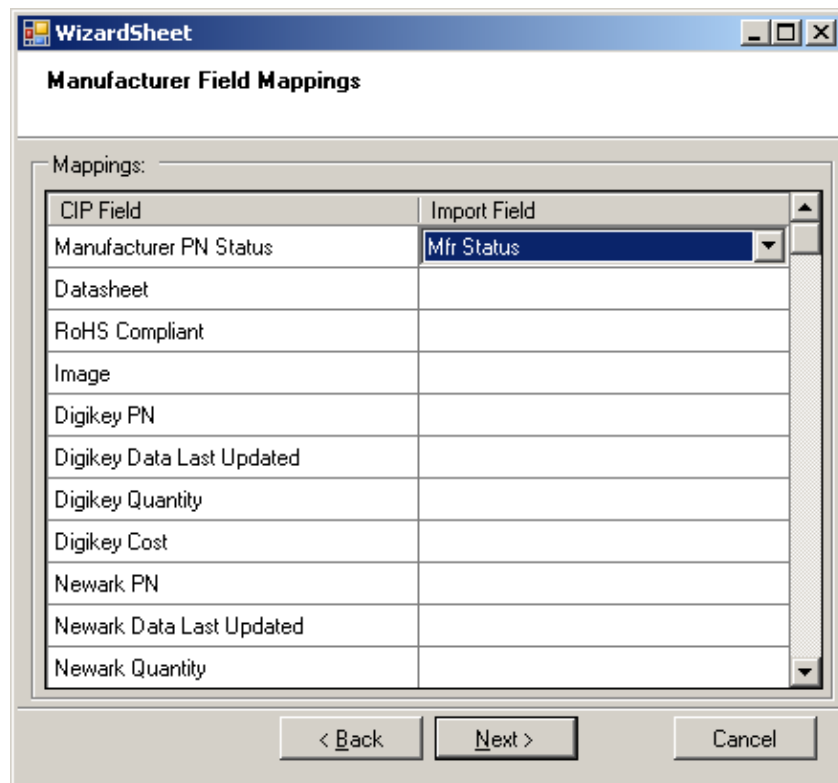


Figure 10: Sample Manufacturer Field Mapping

After you are done mapping manufacturer fields, you can click **Next**. The Configuration Complete window will appear and you can click **Finish**.

Analyzing and Importing Data

The CIP Importer window will appear again with options to **Analyze**, **Add Only** or **Import**.

The **Analyze** button will start the comparison of the data in the CSV import file against the CIS/CIP database. At the end of the analysis, a log file will be created. A log file will be created each time the **Analyze** is run. No updates to the database will be made with **Analyze**. The log file will show all the potential changes that would be made to the

database along with a summary. The summary contains the number of new parts that would be added, the number of existing parts that would be updated, the number of new manufacturer parts that would be added, the number of existing manufacturer parts that would be updated and the total number of parts analyzed.

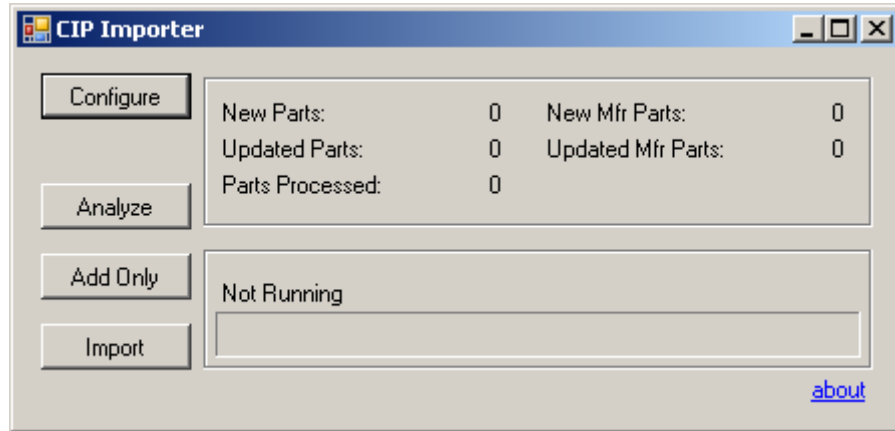


Figure 11: Analyze, Add or Import of Data

The **Add Only** button will only add the new parts and new manufacturer parts shown in the **Analyze** log file. Parts that already exist in the database will remain untouched. For example if the database contains PN0001 and the import file also has PN0001, regardless of whether the change is in the part data or manufacturer, running **Add Only** will not update PN0001 in anyway. A log file with a date-time code along with the text “Import” will be created to show what has been changed in the database.

The **Import** button will perform the same comparison as with Analyze and the database will be updated per log file generated. No deletions will be made by the CIP Importer. A log file with a date-time code along with the text “Import” will be created to show what has been changed in the database.

The log file will automatically open once the **Analyze**, **Add Only** or **Import** has run to completion.

Import Files

Import File Format

The import files must be in .CSV format. Excel can be used to generate .CSV files. After creating your file, you will need to save the file as a .CSV file.

The first line of the file must contain the field names for each column. If a title is in the first few lines of the file, you will need to remove those lines first. The field names for each column must be unique.

There must be a column for the part number and a column for the part category. Each part in the file must have a part number and a part category. Parts without part number or part category will not be imported. Manufacturer and Manufacturer PN are optional columns.

Import File Data

Required Values

The PART NUMBER can be in any format. However, values for the part category field must match the CIP-E table names with the same case as shown in the following list.

- o Capacitors
- o Connectors
- o Crystals and Oscillators
- o Diodes
- o ICs
- o Inductors
- o Misc
- o Relays
- o Resistors
- o Switches
- o Transformers
- o Transistors

Duplicate Parts

If a part is duplicated in the import file but with different values in each occurrence, only 1 set of the data will be imported. If the duplicate part has different manufacture or manufacturer part number, each manufacturer part will be added. For the example in Table 1, part PN0001 will be added to the database once, with one of the 2 descriptions shown. Both manufacturer part will be added and will be associated to PN0001.

Part Number	Category	Manufacturer	Manufacturer PN	Description
PN0001	Capacitors	VISHAY	293D336X9016B2TE3	CAP, 33 uF 10% 16 V 3528 SMD Tantalum
PN0001	Capacitors	AVX Corporation	TAJA336K006RNJ	CAP 33 UF 10% 6.3V 3216-18 SMD Tantalum

Table 1: Sample Import Data with Duplicate Part Number

If a part in the import file is a duplicate of a part in the database but has a Part Category that is different from the part in the database, a warning will be added to the log file and the part will not be updated.

Different Manufacturer Name or Part Number from database

If a manufacturer part exists in the database when you run an import but has a manufacturer name that is slightly different from the import file, the manufacturer part will be added instead of being updated. For example if you already have PN0001 as shown in Table 1 and your import file has the information for this part as described in Table 2. After an **Import**, PN0001 will have 3 manufacturer parts, Vishay, AVX, and AVX Corporation.

Part Number	Category	Manufacturer	Manufacturer PN	Description
PN0001	Capacitors	VISHAY	293D336X9016B2TE3	CAP, 33 uF 10% 16 V 3528 SMD Tantalum
PN0001	Capacitors	AVX	TAJA336K006RNJ	CAP 33 UF 10% 6.3V 3216-18 SMD Tantalum

Table 2: Sample Import Data with Change in Manufacturer Name

Warning about using Excel

If you use Excel to create or edit your .csv file before the actual import, you should open the file using another editor such as notepad to check the data. Although you are saving as .CSV, Excel sometimes changes format of the data. For example, text with leading

zeros (e.g. 0603, 0805) may lose the first zero in the .CSV file. If the last column(s) of the Excel file has null for data for more than 25 rows, Excel will not insert the correct number of commas as placeholders.

Log files

A Logs directory will be created the first time that you click **Analyze**, **Add Only** or **Import**. Two types of log files can be generated. The filename will consist of the date, separated by a “T” with the time following it and then followed by Analyze or Import. For example, it will be either

YYYYMMDDTHHMMSS_**Analyze.txt**
or YYYYMMDDTHHMMSS_**Import.txt**.

YYYYMMDDTHHMMSS_**Analyze.txt** is generated each time you click **Analyze**.
YYYYMMDDTHHMMSS_**Import.txt** is generated each time you click **Add Only** or **Import**.

The log files will log information for potential or actual changes. It will also log warnings and errors. The difference between potential and actual changes is in the file in which the information is stored. Warnings are generated for parts not processed due to the part not meeting configurations define for the import processes. Errors are generated when processing can not be started either due to data in the import file or in the configuration. No information will be logged for parts without a Part Number.

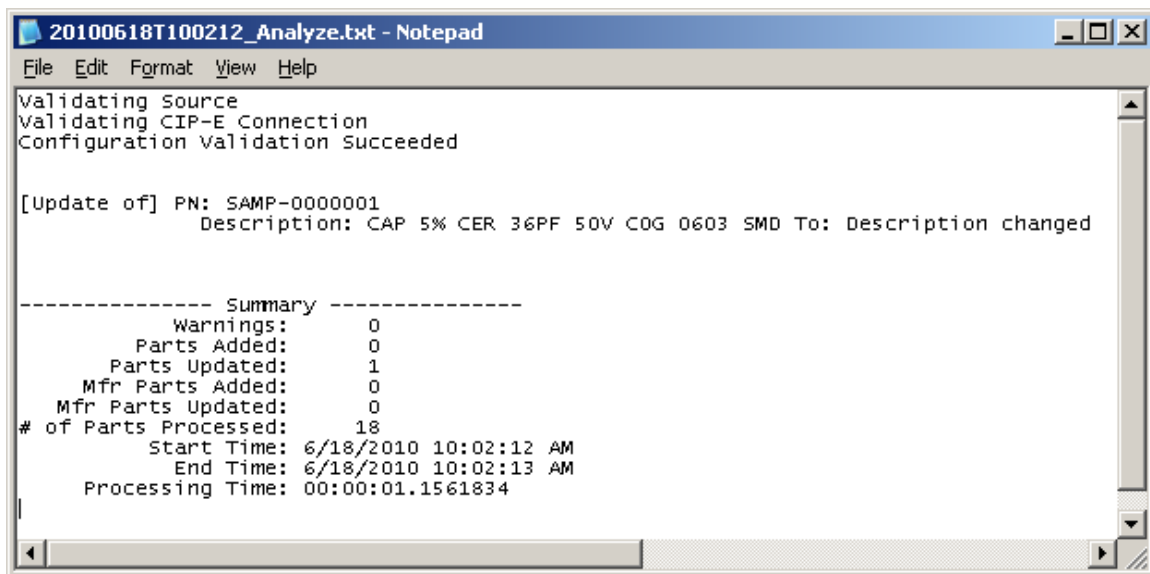


Figure 12: Sample Log file

At the bottom of each log file, a summary is provided with the number of parts affected by the import. Figure 1Figure 12 shows a sample log file with the summary.

Appearance of UserfieldXX in Log files

For data import that has been mapped to Userfields, configured with another field name, the log will be show the field as UserfieldXX.

Sample Error

The following is a sample error message. This error indicates that the CIP-E is not a compatible version for the CIP Importer.

```
Validating Source
Validating CIP-E Connection
This software version is not compatible with the configured CIP-E
database version.

***** ERROR OCURRED *****
Configuration is not valid
```

Sample Warning

The follow log file shows two warnings found. Categories must be named the same as the CIP Tables as described in the section on *Required Values* on page13.

```
Validating Source
Validating CIP-E Connection
Configuration Validation Succeeded

[Update of] PN: SAMP-0000001
      Description: CAP 5% CER 36PF 50V C0G 0603 SMD To:
Description change

[Part Processing] Warning: Part Number 'SAMP-0000016' could not
be processed. No mapping found for category 'Cap'.
[Part Processing] Warning: Part Number 'SAMP-0000017' could not
be processed. No mapping found for category 'Cap'.

----- Summary -----
      Warnings:      2
      Parts Added:   0
      Parts Updated: 1
      Mfr Parts Added: 0
      Mfr Parts Updated: 0
# of Parts Processed: 18
      Start Time: 6/18/2010 9:52:33 AM
      End Time: 6/18/2010 9:52:35 AM
      Processing Time: 00:00:01.6875432
```

CIP Importer Tutorial

This tutorial leads you through basic data import into CIP-E using sample import files. The tutorial contains the following modules:

- Module 1 Configuring and mapping an import file
- Module 2 Importing Parts into the Capacitors Table
- Module 3 Adding new parts to all other tables without changes to Capacitors
- Module 4 Updating Capacitors

Module 1 - Configuring and mapping an import file

- Step 1: Create a backup of your database.
- Step 2: Run CIP Importer by going to Start->All Programs -> EMA -> CIP Importer -> CIP Importer
- Step 3: When the CIP Importer window opens, click the **Configure** button to start mapping fields in the import file to the database.
- Step 4: At the WizardSheet window for **CSV Location**, click the **Browse** button. At the **Select csv to import** window, navigate to the location of capacitors.csv file that came with the installation zip file and click **Open**. The **Next** button should be enabled at this point. Click **Next**.
- Step 5: At the WizardSheet window for **CIP Database Connection**, click the **Test** button. After a successful test, the **Next** button will be enabled. Click **Next**.
- Step 6: At the top pull-down of the WizardSheet window for **Key Field Configuration**, select the following:
 - o Select *Item No.* for the Part Number Field
 - o Select *Component Type* for the Part Category Field
 - o Select *Mfr* for the Manufacturer Name Field
 - o Select *MPN* for the Manufacturer Part Number Field
- Step 7: Click **Next** after making the four selections. At the WizardSheet, **Component Field Mappings** for Capacitors, map the following fields:
 - o Description - select *Short Description*
 - o Value – select *Value*

- o Schematic Part – select *Schematic Part*
- o Number of Pins – select *No. of Pins*
- o Operating Temperature Maximum – select *TempMax*
- o Operating Temperature Minimum – select *TempMin*
- o Package Size – select *pSize*
- o Package Height – select *pHeight*
- o Package Type – select *pType*
- o Company Part Status – select *Status*
- o Dielectric Type – select *Dielectric*
- o Equivalent Series Resistance – select *ESR*
- o Temperature Coefficient – select *TempCoef*
- o Tolerance – select *Tolerance*
- o Rated Voltage – select *Rated Voltage*

Step 8: After completing the mappings in step 7, click **Next** several more time until you reach the mapping for **Manufacturer Field Mappings**. If you go beyond the *Manufacturer Field Mappings* screen, click **Back** to get back to that screen. At this point, for Manufacturer PN Status, select *Mfr Status*. Click **Next** and then click **Finish**.

You have now completed the configuration for capacitors importation.

Module 2 - Importing Parts into the Capacitors Table

- Step 1: If you have not created a backup as part of the last module you should create a backup of your database now.
- Step 2: Click **Analyze**. Once Analysis is completed, the log file will pop open. The summary will show that there are 18 parts in the import file but only 16 parts and 16 manufacturer parts will actually get imported with 2 warnings for the 2 parts that have incorrect Categories.
- Step 3: Close CIP Importer.
- Step 4: Open up the capacitors.csv file with Notepad, find the two parts with the category of “Cap” and change “Cap” to “Capacitors”. Save the file. If you opened the file in Excel, you will notice that Package Sizes which were originally 0603 have all been altered to 603 when saved.
- Step 5: Launch CIP Importer again. Click **Configure**. Since only two categories have been changed, you can continue to click **Next** until the **Analyze** button is enabled. Click **Analyze** again. This time all 18 parts with 18 manufacturer parts show as potential additions to the database.
- Step 6: Click **Add Only**. Inspect the log file to see that 18 parts, each with 1 manufacturer part, have been added.

Step 7: Close CIP Importer

Step 8: Open CIP-E from a browser. Search for parts with PART_NUMBER containing “SAMP”. 18 parts should show in the search results.

Module 3 - Adding new parts to all other tables without changes to Capacitors

Step 1: Launch CIP Importer.

Step 2: Click **Configure** to select the import file and change mappings.

Step 3: Select Sample2.csv import file this time and click **Next**. Click **Next** at the **CIP Database Connection** screen.

Step 4: For the **Key Field Configuration**, map Part Num to Part Number Field and Table to Part Category Field. Leave Manufacturer Name and Manufacturer Part Number fields blank. Click **Next**.

Step 5: For each of the **Component Field Mapping** screens, map Description to Description. Click **Finish**.

Step 6: Click **Analyze**. The log file and summary will show that there will potentially be 11 new parts added and 18 parts updated.

Step 7: For this module we will only add parts. Click **Add Only**. This time, the log file and summary will only show the 11 parts added to the database.

Step 8: Close CIP Importer. Bring CIP-E up with a Browser. Search for parts contain SAMP in the PART_NUMBER and add description in the search result.

Step 9: You will see 29 parts in the search results. The descriptions for the capacitors have not been changed.

Module 4 - Updating Capacitors

Step 1: Launch CIP Importer again.

Step 2: Click **Configure**. We will not be changing the import file or any configurations this time. Continue to click **Next** through to **Finish**.

Step 3: Click **Finish**

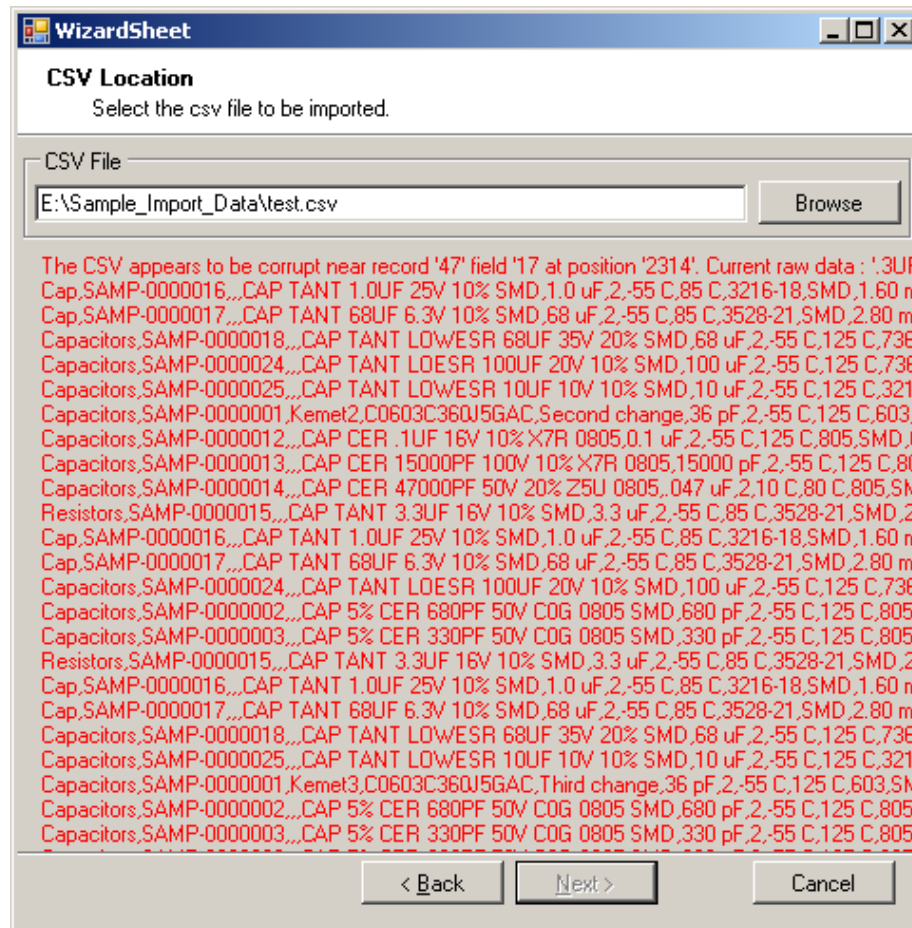
Step 4: Click **Analyze**. The log will show 18 capacitors to be updated.

Step 5: Click **Import**. The log file from the import will look exactly the same as the Analyze.

- Step 6: Close CIP Importer. Bring CIP-E up with a Browser. Search for parts contain SAMP in the PART_NUMBER and add description in the search result.
- Step 9: You will see 29 parts in the search results. The descriptions for the capacitors have been changed, CER has been changed to Ceramic and TANT has been changed to Tantalum.
- Step 10: You may restore the backup of the database to remove all changed made during the exercises in this tutorial.

Troubleshooting Import Files

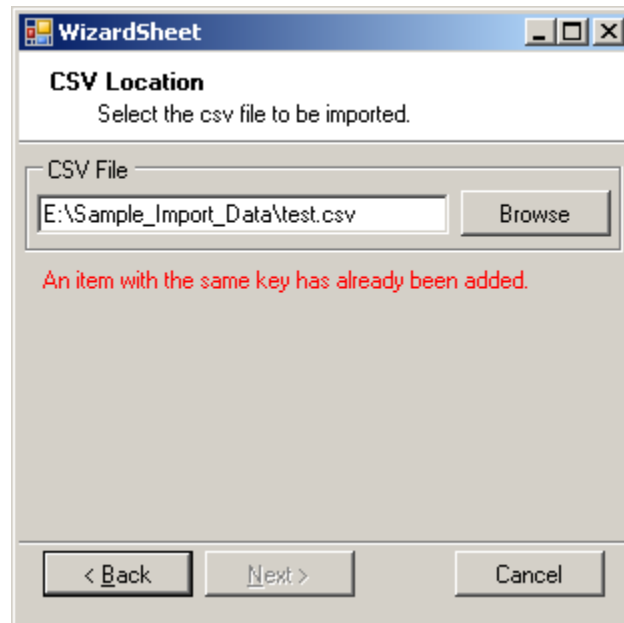
Problem: You are receiving an error message that starts with “The CSV appears to be corrupt near record...”



Cause: Your .CSV file has somehow been corrupted. This could happen if you manually edited a .CSV file and deleted a comma accidentally or fields with values that have commas were not put in quotes. Another way this can happen is when you use Excel to create a .csv file. Excel creates the output file in block. When there are many consecutive lines of data with nulls in the last few columns, Excel will not pad those line with the appropriate number of commas.

Resolution: If you are using Excel, you can move a column of data that has values mostly filled in to be the rightmost column. If you did not user Excel, use the line number display to help you narrow in on the problem.

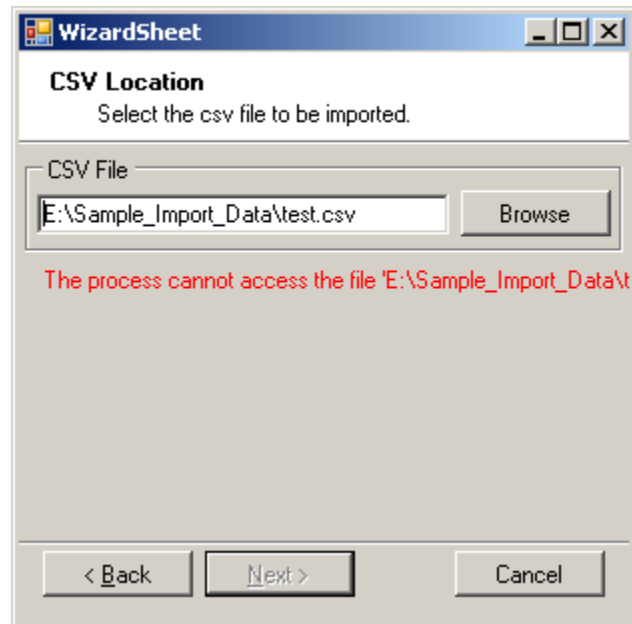
Problem: You are receiving an error stating that “An item with the same key has already been added”.



Cause: Your .CSV file either has duplicate fieldnames (column headings) or additional columns might have been inserted by Excel with no fieldnames.

Resolution: If you are using Excel, you will need to make sure that all columns of data have a unique column heading. If you see that each of the column heading is unique, you should delete all columns that look like that are not supposed to have data.

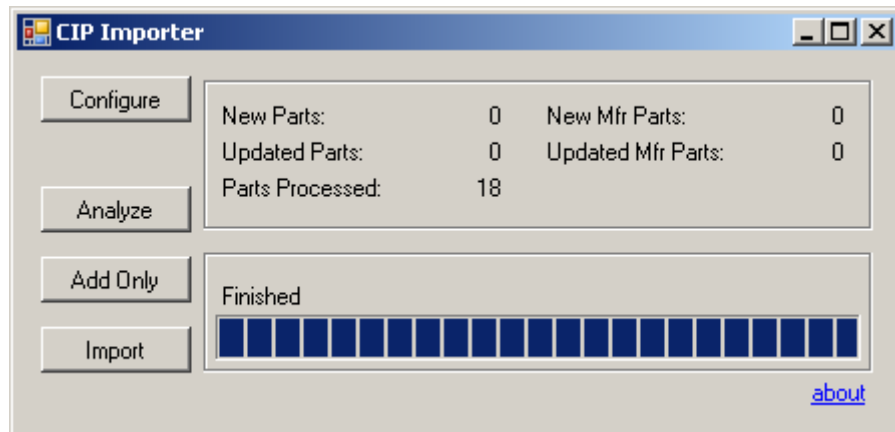
Problem: You are receiving an error starting with “The process cannot access the file ...”.



Cause: If you have the .CSV file opened with Excel when you click the **Configure** button, the file is locked by Excel.

Resolution: Save and close the file first before starting CIP Importer again.

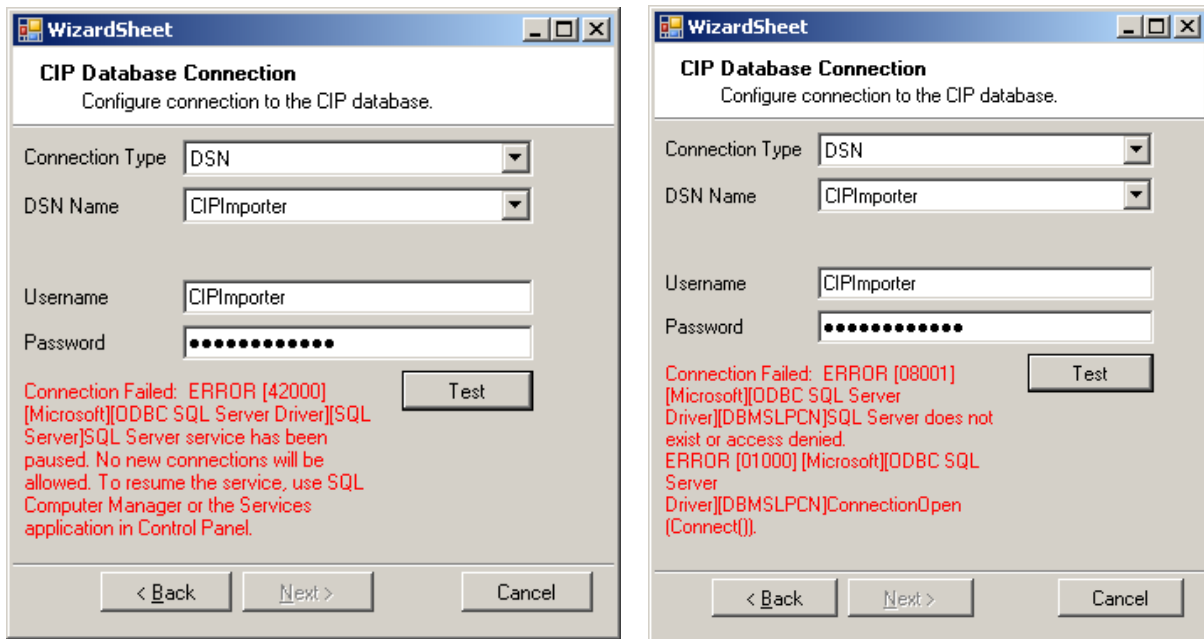
Problem: After running Analyze, it shows the total number of parts but no potential parts to be updated.



Cause: Any number of reasons can cause this. Possible causes are incorrect mappings or rerunning an import file that has been imported previously.

Resolution: You will need to review the log file to determine why CIP Importer is not finding any changes. You should also check your configuration thoroughly. After correcting the problem, you can restart the CIP Importer again.

Problem: When Testing the CIP connection, you received a Connection Failed error. Two examples of connection failures are shown.



Cause: You will need to resize the window to see the exact cause of the connection failure error. If the SQL server is paused or shut down temporary, then you will get this error.

Resolution: You can run **Test** again in case it is a temporary occurrence. If this is a persistent problem, you will need to contact your database administrator to why you are not able to access the database.

Technical Support

If you need to contact EMA with any questions or issues, you may send emails to:

Techsupport@ema-eda.com

Or call the Hotline at: 1-585-334-6001 option 5.