

Custom Configuration Module (CCM)

Overview

You can make a standard SD card or USB drive into a **Custom Configuration Module (CCM)** that can be used to configure an unlimited number of printers one at a time. The programmed CCM can contain any combination of printer firmware (program file), a feature file, a CST, downloadable fonts and forms, NIC configurations, customer files, and PTX_SETUP config files.

The CCM is made using the PSA File Utility to create a set of configuration files (CCMLOAD.xxx, CCMHOST.000) that are copied onto an SD card or USB drive. Once the **CCM Package** of files is copied, the SD card or USB drive can be used to identically configure an unlimited number of printers (one by one). The list files that can be loaded on to a CCM are shown in the table below:

Content	Max Files	Headers	File Origin
Program File *	1	Y	Printronix Firmware (e.g., P300768.exe)
Feature File	1	Y	Printronix Feature File (e.g., P300774.exe)
CST File	1	Y	PNE Suite CST Manager
GPIO File	1	Y	PNE Suite GPIO Manager
Fonts	25	Y	TrueTypes or Intellifonts
File System	25	Y	Any file you want loaded into Flash
Network Config	1	N	Telnet Commands to setup Network
Emulation Setup	25	N	Emulation Commands for Initialization
Printer Config	1	N	PTX_SETUP config file via PNE Suite

* A program file is always required for a valid CCM. See CCM Content Description for complete details.

CCM Content Description

Program File and Feature File

Program Files and Feature Files are created by Printronix and have part numbers starting with **P3** (e.g., **P300998**). These files are provided as a zipped (.exe) file that can be executed on a Windows Command shell or linux shell (unzip XXXXX.exe). This will extract either a program file (.prg) or a feature file (.fls, .dwn) which contains the headers necessary to store the information into the printer when in download mode.

The **PSA File Utility** will accept either the extracted file or the (.exe) directly as input. If the (.exe) is provided, the CCM feature will perform the extraction for the user.

The most recent printer firmware releases can be found on our web site at:

<https://printronixautoid.com/support/downloads/>

CST and GPIO Files

CST and GPIO files are created within the PNE Suite program found on the Printronix website at <https://printronixautoid.com/support/downloads/printcart-printnet-enterprise-sv-series-sdk-download-andale-font/>. The PNE Suite has two utilities called the CST Manager and GPIO Manager, respectively that can save the files with all the necessary headers. The CST Manager saves files as (.bnd) and the

GPIO Manager as (.gpf).

Fonts and File System

As the table shows, these files also require headers. The headers are a 256-byte prefix with information on how/where to store the data within the printer file system. For Font and File System selections the 256-byte header (if not already present) can be added separately with the **PSA File Utility** or at the time when the raw files are added during the CCM Creation process. Users will be prompted to create the headers automatically if the files supplied do not have headers. Up to 25 (each) files can be added.

PGL Forms and Logos

Storing PGL forms or logos using this method can be tricky because the data stored in the File System for a PGL logo or form is not the same content as when these items were originally sent to the printer using the **;DISK** parameter. Forms and Logos loaded using this method must have 256-byte headers that apply *.frm (forms) or *.lgo (logos). Furthermore, the content cannot include the **;DISK** parameter. The recommended method of loading PGL forms and logos are using the **Emulation Setup** section.

NIC Config File

The Network Config is a series of PrintNet internal command shell (npsh) commands explained in the PrintNet Ethernet User's Manual on the Printronix www.PrintronixAutoID.com website. The internal commands must be wrapped within a **PTX_SETUP** construct as shown below:

```
!PTX_SETUP
NIC_SETUP
store net tcp opts -zeroiparp
store ifc from default
store ifc 2 wlan ssid ap1231_vl1_open
store pping opts enable
store pping packet 2
store pping period 2
END_NIC_SETUP
PTX_END
```

This file is created manually by the user and typically stored with an extension (.ncg) to easily identify its purpose. It is the responsibility of the user to verify the content is correct.

WARNING: Be sure the NIC Config File does not contain a “reset” command. This would prematurely force a reboot and the CCM functionality may not work properly.

Emulation Setup

Emulation Setup files do not require headers. They are optional and interpreted by the emulations when the CCM Package is installed. The order of these files added determines the order by which the emulations will receive and interpret them. This type of file might be useful in order to run a job that stores emulation forms and logos into the flash file system, so they are available at power-up.

For example, a PCX or TIFF logo could be converted to a PGL logo to be stored in Flash using the **Actions > PGL Logo Header** function in the PSA File Utility. That resulting file could then be added to this section to download the logo to Flash memory. Similarly, a PGL form with the **CREATE** command and **;DISK** parameter could be added to store that PGL form into Flash memory.

This emulation commands should not include anything that prints data because this is specifically for setup purposes. Furthermore, because the printer configuration has not yet been configured, the

emulation commands **MUST** be consistent with the Factory default configuration (e.g., PGL as the Active IGP Emulation).

PTX_SETUP Printer Config

The **Printer Config** is an optional part of the CCM Package to be used to store configuration and setup the power-up configuration setting. The configuration is in the form of a PTX_SETUP file that is best generated by PNE Suite to accurately represent the entire configuration, using internal menu identifiers.

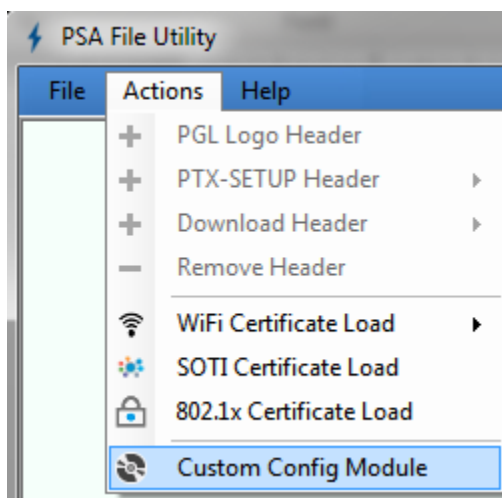
If the configuration setup is consistent with the Factory, then this content can be omitted. The steps to create a Printer Config are the following:

1. Load a target printer with the Program File firmware to be used with the CCM.
2. Start PNE Suite.
3. Use the Configuration Editor to upload the configuration from the printer.
4. Modify the Configuration as needed with the Configuration Editor.
5. Save the Configuration as a PTX_SETUP file (.ptx).

Creating a CCM Package

Creating a **CCM Package** is easy using the **PSA File Utility** which is available at the Printronix website <https://printronixautoid.com/support/downloads/utilities-download/>.

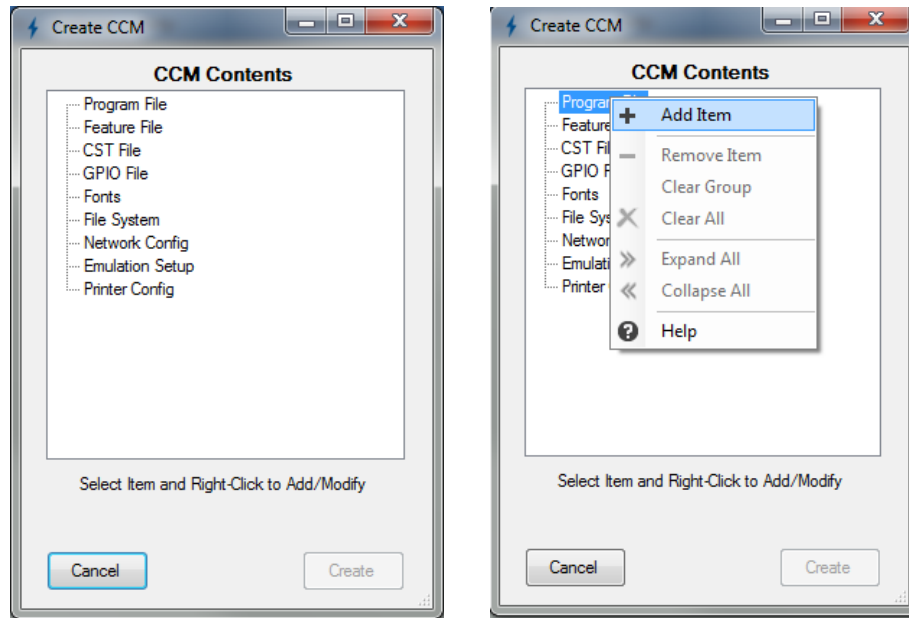
Run the **PSA File Utility** and then execute the Custom Config Module section as follows:



This will bring up a **Create CCM** dialog window. From there, highlight items in the list with the *left* mouse button and use the *right* mouse button to choose an option.

Some customizations will only allow one selection, while others will allow multiple selections. In the case that an (.exe) is selected for the Program or Feature File, the user will be prompted to have the files executed (unzipped) prior to adding them to the customization file.

For Fonts and File System, each item requires a download header. If the selected file does not contain a download header and it is required, the user will be prompted to add one. For other cases like the CST and GPIO files, those headers are create **ONLY** by the PNE Suite and any attempt to include files that do not contain proper headers will be rejected. See CCM Content Description below for complete details.



The Network Config (.ncg), Emulation Setup (IGP data), and Printer Config (PTX-SETUP commands) cannot have the 256-byte download header like the other files. They should only consist of the desired content. These files will be combined into a single CCMHOST.000 file and interpreted by the printer as if sent through the host IO during the Configuration process.

WARNING: The Network Config, Emulation Setup, and Printer Config content combined into CCMHOST.000 is not processed by the target printer if configured for TN5250 or IPDS.

Once the CCM content tree is complete, the **Create** button asks the user to choose a directory to store the configuration package. This directory can be the target SD card or USB drive or another directory. The configuration files created (CCMHOST.000 and CCMLOAD.000-CCMLOAD.xxx) must all be copied onto the target SD card or USB drive before use.

IMPORTANT When creating the new CCM Package, any existing CCM files (CCMHOST.000 and CCMLOAD.000-CCMLOAD.xxx) in that same target directory will be deleted.

Configuring Printers

CAUTION You must power off the printer before you install or remove the SD card or USB drive. Do not remove the SD card or USB drive until prompted by the printer when the CCM update has been completed.

1. Set the printer power switch to O (Off).
2. Insert the SD card or USB drive with the CCM file package into the printer.
3. Hold down the **UP** arrow key.
4. Turn the printer power on and release the **UP** arrow key when you hear a beep or see the LEDs flash.
5. After the printer powers-up, the following message will be displayed on the front panel:

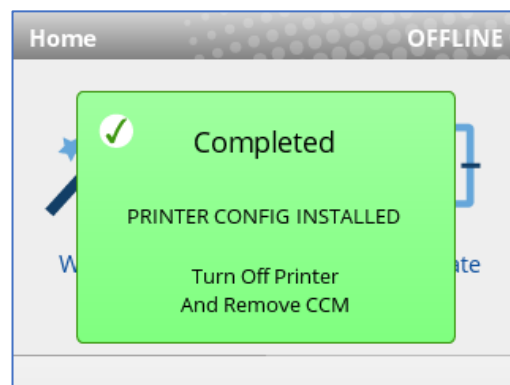


NOTE: If the printer reports the CCM is empty, then it could not find the CCMLOAD.xxx files on the SD card or USB drive. Turn off the printer and check the contents of the SD card or USB drive. Also make sure the SD card or USB drive are properly inserted.

6. When the **ENTER** key is pressed, the printer will start the configuration process.

IMPORTANT Do NOT power off the printer until the process is complete. This may require an additional 1-2 reboots depending on the content.

7. When the process completes the printer will display one of the following messages on the front panel:



NOTE: The printer may reboot during the configuration process, this is normal. Do NOT interrupt the printer until it displays one of the messages above.

8. Turn off the printer and remove the CCM. This process can be repeated on any number of printers.

Printer Firmware Compatibility

A CCM can be created for use on Printronix Auto ID printer models T800, T4000, T6000e and T8000. If you are using older printer code (see list below), you can create a CCM using only an SD card. Newer printer code supports either an SC card or USB CCM.

Firmware revisions below those shown only support SD card – newer revisions support both

FILE,PRGM,PTX,T800,CMB-MGL	V1.20D	P301002
FILE,PRGM,PTX,T4000,CMB-MGL	V1.19C	P301004
FILE,PRGM,PTX,T6e,COMBO	V1.13E	P301008