

CCX File Format

First Line: File Version

CME 2 uses this to determine the file format. CME 2 will not open a ccx file that contains a version greater than the version it writes, because the format is unknown. Custom programs that parse the ccx file should follow this practice, because the file format may change in the future. The file version only changes when the format of the file changes (i.e. the way CME 2 parses the contents of the file). New parameters will not cause the file rev to change unless the parameter is a different data type than the types describes below.

CME Version	ccx Version
5.1 to 7.1	14
5.0	13
4.2	13

There was only one change made to the file format between version 13 and 14. Starting with version 14, CME 2 includes both the motor type (rotary/linear) and motor family (brushless, brush, etc.) for parameter 0x40. This change only affects how CME 2 interprets the value; therefore any custom program that parses the ccx file will not be affected, since the entire value is sent to the amplifier.

Second Line: Axis count

This value will be 1 for all amplifiers except the multi-axis amplifiers, in which case the value will be 2 or 3, depending on the amplifier's model number. This should not be confused with the node id in a multi-drop network configuration.

Remaining Lines:

The remainder of the file contains values for each of the parameters needed to configure the amplifier for operation. Each line contains four fields, each separated by a comma:

<param id>,<axis number>,<name>,<value>

param id: This field contains the parameter id in hex.

axis number: Used to specify the axis on a multi-axis amplifier. For single axis amplifiers, this number is zero. This should not be confused with the node id for multi-drop network configuration.

name: A text string containing the name of the parameter. This is provided for readability only and is not used when configuring an amplifier; therefore, it should be discarded when parsing the file.

value: There are three data types used in the ccx files: decimal, string, and multi-word values. The majority of parameters have a single decimal value which is sent directly to the amplifier. There are a few string type parameters, like amp model number, which also get sent directly to the amplifier. Some parameters however, take multiple words of data. The format for these parameters is the same as described above, except that the multiple values are separated by colons:

<param id>,<axis number>,<name>,<value>:<value>:<value>...

- 1) Parameter ids 5f, 6b, and EC, the filter parameters: Each of these parameters requires 9 words (16 bits each) of data.
- 2) Parameter ids 70 thru 77, programmable outputs: Each of these parameters now requires three data values separated by a colon. The first value is 16 bits, and the second and third values are 32 bits. **All three values are in hex.**
- 3) Parameter id 95 is the Host Config State. This parameter is only used by CME 2 to store some housekeeping information, but it still need to be set.