Data File Formats

The debugger reads and writes data using the following file formats:

Common Object File Format (COFF)	Binary
Code Composer Studio data file format	Text

Common Object File Format (COFF)

A binary file that uses the Common Object File Format (COFF). This is the most compact way of storing large blocks of data on the PC.

Code Composer Studio data file

A text file that contains one line of header information and stores the data as one sample per line. The data can be in any of the following formats:

- Hexadecimal
- Integer
- Long
- Float

The header information for data files uses the following syntax:

```
MagicNumber Format StartingAddress PageNum Length
```

`MagicNumber`	Fixed at 1651.
`Format`	A number from 1 to 4, indicating the format of the samples in the file. This number represents a data format: hexadecimal, integer, long, or float.
`StartingAddress`	The starting address of the block that was saved.
`PageNum`	The page number the block was taken from.
`Length`	The number of samples in the block.

All header values are assumed to be TI-style hexadecimal values.

The following is an example of a Code Composer Studio data file:

```
1651 1 800 1 10
0x0000
0x0000
0x0000
0x0000
0x0000
0x0000
0x0000
0x0000
0x0000
0x0000
0x0000
0x0000
0x0000
```

Note that CCS expects 5 digit numbers of information to read in 4-digit values. While the data is known to be hexadecimal, CCS expects the first digit to be a zero. CCS does this so that hex numbers beginning with letters (ie. F800) are not misread as labels. For example: when reading data in hexadecimal format from a data file, the first digit may be truncated. Look at this input data:

```
0022
0022
0033
8AC
FC94
13
895
AB9 ...
```

When reading this data, CCS will actually read it as:

0022
0033
08AC
0C94
0003
0095
00B9 ...

But if you test Code Composer Studio with five-digit data input, (by adding zeroes at the beginning where necessary), the output will be consistent with the input:

00022
00033
018AC
0FC94
00013
00895
00AB9

Note: Header values specify only the default address and length. When you use the File→Data→Load command to load a file into memory, the Code Composer Studio debugger gives you a chance to override these values. When using the Code Composer Studio data file format with file I/O capabilities, any information you enter in the File I/O dialog box (Address and Length) automatically overrides the Code Composer Studio data file header information. You do not need to set the header information for each file as long as the header includes the following value: 1651 1 0 0 0.