
LOF Format, Code 17

The Link Object Format (LOF) is an extension of the standard JEDEC data translation format and is used to transfer fuse and test vector data between the programmer and a host computer. LOF is designed to support the Quicklogic QL8x12A family of FPGAs. An LOF data file is stored as an imploded ZIP file, which yields data compression approaching 95%.

Note: You must have PKZIP version 1.0 to use this format.

Note: The specification for the ZIP data compression algorithm allows for multiple data files to be compressed into one ZIP file. In addition, the ZIP data compression algorithm allows for multiple types of data compression.

The programmer's implementation of UNZIP supports only imploded data files and will extract only the first file in a ZIP file. All remaining files in the ZIP file will be ignored, as will all files not stored in the imploded format.

The LOF format contains both a subset and a superset of the JEDEC format described in this chapter. This section describes only the fields that are extensions of the JEDEC standard or that are unique to the LOF format. See the section explaining the JEDEC format for information on the standard JEDEC fields. See page 2-32 for information on obtaining a copy of the JEDEC Standard 3A.

LOF Field Syntax

The LOF character set consists of all the characters that are permitted with the JEDEC format: all printable ASCII characters and four control characters. The four allowable control characters are STX, ETX, CR (Return), and LF (line feed). Other control characters, such as Esc or Break, should not be used.

Note: This is Data I/O Corporation's implementation of Quicklogic's Link Object Format. Contact Quicklogic for a more in-depth explanation of the format and its syntax.

LOF Fields

The following fields are included in Data I/O's implementation of the LOF format:

<STX>	*	Start of Data (ASCII Ctrl-B, 0x02 hex)
C	*	Fuse Checksum
K		Fuse data, followed by control words and pulse link cycles
N	*	Notes Field
QB		Number of bits per word
QC		Number of control words at the end of each K field
QF		Number of Fuses in Device (# of K fields)
QM		Number of macro cells in the data file
QP	*	Number of Device Package Pins
QS		Number of Hex-ASCII words in each K field and each control word
QV	*	Maximum Number of Test Vectors
R		Signature Analysis (reserved for future use)
S		SpDE Checksum
T		Signature Analysis (reserved for future use)
V	*	Test Vectors (reserved for future use)
X	*	Default Test Conditions (reserved for future use)
<ETX>	*	End of Data (ASCII Ctrl-C, 0x03 hex)

** These fields are already defined as part of the JEDEC standard and will not be defined in this section.*
