

ScanExpress Flash™ Generator

Flash Programming File Generation

- ❑ Fully compatible with Corelis ScanExpress™ family of boundary-scan products
- ❑ Device Wizard allows users to effortlessly add new Flash devices to the device library
- ❑ SmartChain™ algorithm determines optimal set of components to drive signals to the flash device to be programmed
- ❑ External write strobe support for faster flash programming
- ❑ Individual blocks/sectors of flash memory can be locked after programming or unlocked for reprogramming
- ❑ Windows XP/Vista compatible

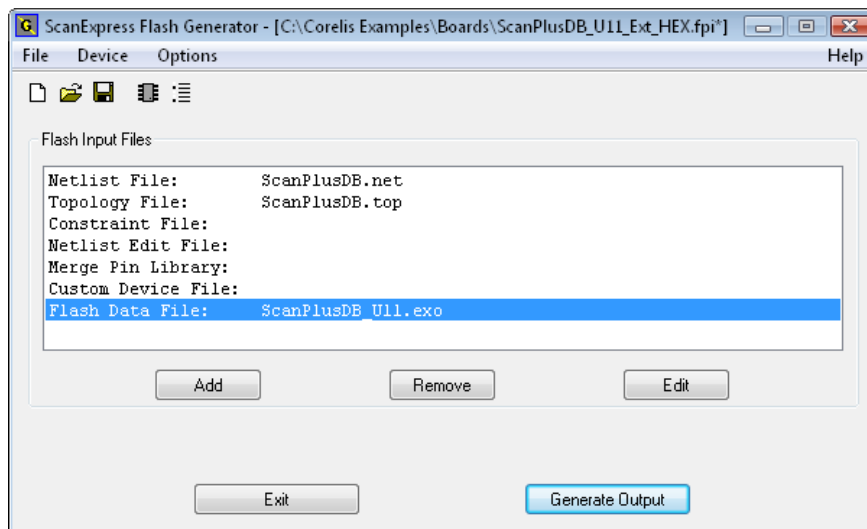


Figure 1. ScanExpress Flash Generator Graphical User Interface

Overview

ScanExpress Flash™ Generator creates a Board File, which is used to provide ScanExpress Programmer™ (or other compatible applications) with the necessary information to program a given target board configuration.

ScanExpress Flash Generator uses the netlist of the printed circuit board, BSDL files for all boundary-scan components on the board assembly, the built-in flash device library, and an optional flash data file for the flash device to be programmed. Using the input files listed above, ScanExpress Flash Generator creates a compact, portable flash programming file that is used by the ScanExpress Flash Programmer or multiple programmers to program the flash device(s).

Utilizing Corelis' SmartChain™ algorithm, the ScanExpress Flash Generator examines the board assemblies' boundary-scan chain to determine the optimal set of components that will be used to drive signals to the flash device to be programmed. Unused components in the chain are automatically placed

in BYPASS mode to reduce the chain size, and thereby reducing programming time.

General Description

To program a flash device, the user must first create a Flash Programming Information file (FPI) using the ScanExpress Flash Generator.

The FPI file is a compact portable file that is used by other applications such as the ScanExpress Flash Programmer. The FPI file includes all the board information, and optionally the flash data image. The flash data image is included in the FPI file if a data file is specified during the FPI file generation. Figure 1 depicts the GUI that generates the FPI file.

The ScanExpress Flash Generator requires a netlist for the target board, component BSDL files, and an optional programming data file for the flash device to be programmed. ScanExpress Flash Generator accepts an industry standard Telesis and Allegro netlist or, utilizing an optional utility, most of

the industry recognized CAE/CAD netlists.

Other optional files can be provided by the user, depending on the specific target requirements. In many cases these files are not required, but ScanExpress Flash is powerful enough to handle special situations should they arise.

The user then specifies the type of device to be programmed from a library of components supported by ScanExpress Flash Generator, as shown in Figure 2. The user only specifies the Manufacturer, Device Type and Package Type. ScanExpress Flash Generator will automatically determine the rest of the information about the device from the component library. From this information, ScanExpress Flash Generator produces the FPI file that describes the target and how to program the flash device through the boundary-scan chain. For devices supporting the use of an external strobe signal, the "Use External Write Strobe" option can be selected. This speeds up flash programming by eliminating the need to perform time-consuming scan operations in order to toggle these signals. The flash device is now ready to be programmed.

Following generation of the FPI file, and if the board hardware design does not change anymore, the user will no longer need to use the ScanExpress Flash Generator. All the necessary operations to program the flash device(s) on the board will be performed by the ScanExpress Flash Programmer.

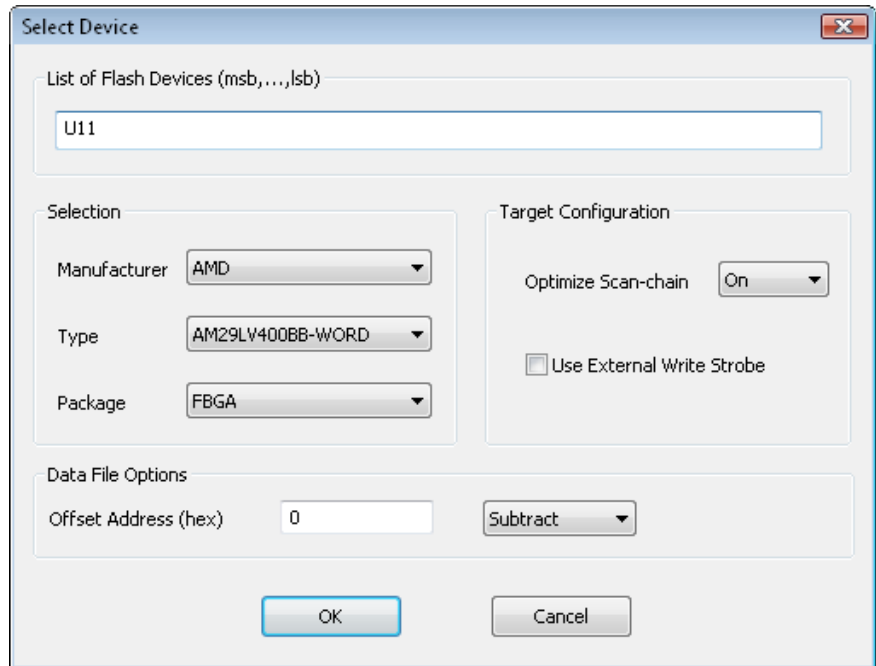


Figure 2. ScanExpress Flash Generator Device Selection

Flash Devices Supported

ScanExpress Flash Generator supports many of the flash devices available today from various manufacturers. Various EEPROM devices are also supported and new devices are constantly being added. A "Custom Device Wizard" allows the user to create immediate support for new flash devices that are not yet listed in the default device library. Check with Corelis regarding current support for your particular device selection.

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