



**FS-ATG**  
**Automatic Test Vector**  
**Generation Software for**  
**PLDs, CPLDs and FPGAs**

**v4.18 Update**  
**November 2003**

**Release Notes**  
Incorporating changes from  
Version 4.11 to 4.18

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## Installing FS-ATG v4.18

### Step 1 Uninstall current FS-ATG

To Uninstall, **click on the FS-ATG Uninstall icon**, or use the Add/Remove Programs utility from the Control Panel within Windows.

This removes the older FS-ATG program items. Files you created, such as test results and project history logs will not be removed.

### Step 2 - Install FS-ATG v4.18

From CD-ROM: insert CD and the software will auto-install,

From Download: unzip, and then run `disk1\setup.exe`.

## Equation Translators Added

### Equation translator added for Altera MAX+II® and Quartus® design software

FS-ATG v 4.17 translates Altera .RPT files, providing a vector test solution for Altera devices when EDIF net lists are not available.

## Package Support Added

Support added for Altera's 2.5v package types.

## ATE Translators Modified

### Agilent 3065 / 3070 PCF and VCL Translators

Routines added to better handle alphanumeric pin names.

### GenRad GR 228x DTS Translator

Modifications made to ensure all pins properly pulled from the CKT file where leading commas in a device listing appear.

New routines added to handle CKT files that have no EXT section. Externals information is now extracted directly from net names in the body of the CKT file.

### Teradyne Spectrum TMPL Translator

The Spectrum TMPL format translator introduced in FS-ATG v4.11 used Z1800 style disables. In this release, we have added Spectrum-style DISABLE routines. We also made a few formatting changes within the TMPL file based on feedback from Spectrum test engineers.

## Logic Models Added / Modified

Actel MX Series	DFM6A.UNU, AND4.UNU
Altera 3K	Added line to fslogic.lib
Altera 6k	Edit edif2.cpp to handle BIDIR_PIN member array in .FIT file

Cypress Modified RPT.CPP and RPT2.CPP for .RP translation

Lattice ispLSI 8000 PGDFFRS, PGDLRS, PGAND24 thru PGAND44

Lattice MACH 2 BUFTH (OE pin value changed to positive)

## EDIF Translator added for Xilinx Coolrunners

Xilinx has officially released EDIF output support for the Coolrunner devices, which will replace the .ANN/FIT files as input to FS-ATG for test generation. For all new Coolrunner devices, please obtain the .EDN file that is a standard output from the Xilinx Foundation and Alliance design tools. In this version, FS-ATG will accept the .EDN file, but there is a manual additional temporary step you must take. If you are working with Coolrunner devices, please contact our technical support department for details on this temporary workaround.

## New Devices Added

Library #	Library Description	Device Name	Pins	Package
FS-2505	Cypress Flash370	CY37064	44	PQFP
FS-2505	Cypress Flash370	CY37032	44	PQFP
FS-2505	Cypress Flash370	CY37064	44	TQFP
FS-2505	Cypress Flash370	CY37032	44	TQFP
FS-2505	Cypress Flash370	CY37064	160	TQFP
FS-2505	Cypress Flash370	CY37064	160	TQFP
FS-2505	Cypress Flash370	CY37128	160	TQFP
FS-2505	Cypress Flash370	CY37192	160	TQFP
FS-2505	Cypress Flash370	CY37256	160	TQFP
FS-2505	Cypress Flash370	CY37256	256	BGA
FS-2505	Cypress Flash370	CY37384	256	BGA
FS-2303	Altera Flex 6K	EPF6K256	256	BGA
FS-2304	Altera Flex 10K	EPF10K30	256	BGA
FS-2304	Altera Flex 10K	EPF10K30	256	BGA
FS-2304	Altera Flex 10K	EPF10K100	383	BGA
FS-2304	Altera Flex 10K	EPF10K100	484	BGA
FS-2301	Altera MAX 7000	EPM7128	100	PBGA
FS-2301	Altera MAX 7000	EPM7256AE	100	TQFP
FS-2707	Xilinx CoolRunner	XCR3064XL	44	VQFP
FS-2707	Xilinx CoolRunner	XCR3032XL	44	VQFP
FS-2707	Xilinx CoolRunner	XCR3064XL	44	PLCC
FS-2707	Xilinx CoolRunner	XCR3032XL	44	PLCC
FS-2707	Xilinx CoolRunner	XCR3064XL	100	TQFP
FS-2707	Xilinx CoolRunner	XCR3128XL	100	TQFP
FS-2707	Xilinx CoolRunner	XCR3064XL	208	PQFP
FS-2707	Xilinx CoolRunner	XCR3512XL	208	PQFP
FS-2707	Xilinx CoolRunner	XCR3384XL	208	PQFP
FS-2707	Xilinx CoolRunner	XCR3128XL	144	TQFP
FS-2707	Xilinx CoolRunner	XCR3256XL	144	TQFP
FS-2707	Xilinx CoolRunner	XCR3512XL	256	FBGA
FS-2707	Xilinx CoolRunner	XCR3384XL	256	FBGA
FS-2707	Xilinx CoolRunner	XCR3256XL	256	FBGA
FS-2707	Xilinx CoolRunner	XCR3512XL	324	FBGA

FS-2707	Xilinx CoolRunner	XCR3384XL	324	FBGA
FS-2701	Xilinx XC2000, 3000, 4000	XC4000E/X	352	BGA
FS-2701	Xilinx XC2000, 3000, 4000	XC4036XLA	352	BGA
FS-2705	Xilinx XC9500	XC9536XV	44	PLCC
FS-2705	Xilinx XC9500	XC9536XL	44	PLCC
FS-2705	Xilinx XC9500	XC9572XV	44	PLCC
FS-2705	Xilinx XC9500	XC9536XV	44	VQFP
FS-2705	Xilinx XC9500	XC9536XL	44	VQFP
FS-2705	Xilinx XC9500	XC9572XV	44	VQFP
FS-2705	Xilinx XC9500	XC9536XL	64	VQFP
FS-2705	Xilinx XC9500	XC9572XV	100	TQFP
FS-2705	Xilinx XC9500	XC95144XL	100	TQFP
FS-2705	Xilinx XC9500	XC95288XV	144	TQFP
FS-2103	PLD3	ATV750		

## New Device Support

All of the package files for the following list of new devices are incorporated into this version. While full support won't be available until the next release, FS-ATG v4.18 can generate tests for any of the devices on this list. Please contact our technical support department for details.

Library Description	Device Name	Pins	Package
Altera MAX 3000	EPM3032	44	PLCC
Altera MAX 3000	EPM3064	44	PLCC
Altera MAX 3000	EPM3032	44	TQFP
Altera MAX 3000	EPM3064	44	TQFP
Altera MAX 3000	EPM3128	100	TQFP
Altera MAX 3000	EPM3064	100	TQFP
Altera MAX 3000	EPM3128	144	TQFP
Altera MAX 3000	EPM3256	144	TQFP
Altera MAX 3000	EPM3128	208	PQFP
Altera Flex 6000	EPM6016	256	
Altera Flex 6000	EPM6024	256	BGA
QuickLogic pASIC3	QL3004	68	PLCC
QuickLogic pASIC3	QL3004	84	PLCC
QuickLogic pASIC3	QL3012	84	PLCC
QuickLogic pASIC3	QL3004	100	TQFP
QuickLogic pASIC3	QL3012	100	TQFP
QuickLogic pASIC3	QL3012	144	TQFP
QuickLogic pASIC3	QL3025	144	TQFP
QuickLogic pASIC3	QL3025	208	PQFP
QuickLogic pASIC3	QL3040	208	PQFP
QuickLogic pASIC3	QL3060	208	PQFP
QuickLogic pASIC3	QL3025	256	PBGA
QuickLogic pASIC3	QL3040	456	PBGA
QuickLogic pASIC3	QL3060	456	PBGA
Lattice ispLSI5000	IspLSI5128VE	128	TQFP
Lattice ispLSI5000	IspLSI5256VE	128	TQFP
Lattice ispLSI5000	IspLSI5256VA	208	TQFP
Lattice ispLSI5000	IspLSI5384VA	208	TQFP
Lattice ispLSI5000	IspLSI5512VA	208	TQFP

Lattice ispLSI5000	IspLSI5256VE	256	BGA
Lattice ispLSI5000	IspLSI5384VE	256	BGA
Lattice ispLSI5000	IspLSI5512VE	256	BGA
Lattice ispLSI5000	IspLSI5256VE	272	BGA
Lattice ispLSI5000	IspLSI5384VE	272	BGA
Lattice ispLSI5000	IspLSI5256VA	272	BGA
Lattice ispLSI5000	IspLSI5384VA	388	BGA
Lattice ispLSI5000	IspLSI5512VE	388	BGA
Lattice ispLSI5000	IspLSI5512VA	388	BGA
Lattice ispLSI8000	IspLSI8180V	272	BGA
Lattice ispLSI8000	IspLSI8600V	272	BGA
Lattice ispLSI8000	IspLSI8840V	272	BGA
Lattice ispLSI8000	IspLSI8840V	432	BGA
Lattice ispLSI8000	IspLSI8180V	492	BGA
Lattice ispLSI8000	IspLSI8600V	492	BGA