The ATF15xx-DK3 is a third-generation low-cost development/programmer kit for the designer who wishes to begin working with Atmel's ATF15xx family of industry-standard pin-compatible Complex Programmable Logic Devices (CPLDs) with Logic Doubling. Like the ATF15xx-DK2, the ATF15xx-DK3 allows designers to design, synthesize, simulate, program and evaluate their designs using either the free Atmel WinCUPL software or an evaluation version of Atmel's ProChip Designer® as well as the included 44-lead TQFP package adapter.

The leading-edge synthesis and simulation software from Mentor Graphics® and Altium® are included in the ProChip Designer tool. The kit can be extended to be used to program all the different packages of the ATF15xx family by simply adding the package adapter options.

Once the design is completed, the designer can install a sample ATF15xx family device in the provided PCB and program it using the built-in In-System Programmable (ISP) industry-standard 4-pin JTAG interface, the ATMISP software, and the provided PC parallel port cable. The included tutorial takes the designer through the complete CPLD development process. All the software runs on Windows® platforms. LEDs, switches, and expansion headers for all pins are provided to allow comprehensive prototyping and evaluation. The ATF15xx-DK3, includes everything a designer needs to get started with the Atmel Logic Doubling CPLDs.

**CPLD Demo/Programmer Board**
- 44-lead TQFP Adapter
- ISP (JTAG) Port
- Expansion Headers
- 2 MHz Crystal Oscillator
- Four 7-segment LED Displays
- Eight Individual LEDs
- VCC Operation: 1.8V, 3.3V and 5.0V
- Easy Access to CPLD I/O Pins
- Global Clear, Output Enable, I/O and Power Switches

**CPLD Programming Cable**
- 5V, 3.3V and 1.8V ISP Cable for PC Parallel Port

**Logic Doubling CPLDs**
- ATF1502BE-7AU44, 1.8V, 32 Macrocell CPLD with ISP
- ATF1504ASV-15AU44, 3.3V, 64 Macrocell CPLD with ISP
**ATF15xx-DK3 EPLD Software Matrix**

### Ordering Information

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<tr>
<th>Ordering Code</th>
<th>Description</th>
<th>Price (USD)</th>
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<td>ATF15xx-DK3</td>
<td>Development/Programming Kit</td>
<td>$99</td>
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<tr>
<td>ATF15xx-DK3-SAA44</td>
<td>44-lead TQFP Package Adapter</td>
<td>Included in DK3 Kit</td>
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<tr>
<td>ATF15xx-DK3-SAJ44</td>
<td>44-lead PLCC Package Adapter</td>
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<td>ATF15xx-DK3-SAJ84</td>
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<td>ATF15xx-DK3-SAA144</td>
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### Design Entry

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<th>Design Entry</th>
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<th>Atmel WinCupl</th>
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<tr>
<td>Verilog®</td>
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<td>CUPL®</td>
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<tr>
<td>Schematic</td>
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### Synthesis

- Mentor Graphics Precision Synthesis
  - VHDL Synthesis
  - Verilog Synthesis
  - Altium PeakFPGA™
  - VHDL Synthesis
  - Altium Design Explorer 99SE
  - Schematic
  - CUPL

### Simulation

- ModelSIM®
  - VHDL Simulation
  - Verilog Simulation
  - Altium PeakSIM
  - VHDL Simulation

### Fitters & Devices

- Atmel's Fitters with Logic Doubling

### CPLD Devices

- ATF15xxAS/ASL
  - ✓
  - ✓

- ATF15xxASV/ASVL
  - ✓
  - ✓

- ATF15xxBE
  - ✓
  - ✓

- ATF1500A/AL
  - ✓
  - ✓

- ATF2500C
  - ✓

### SPLD Devices

- ✓

Note: 1. The evaluation period for Mentor Graphics Precision Synthesis and ModelSIM is six months.
2. The evaluation period for Altium tools is 30 days.