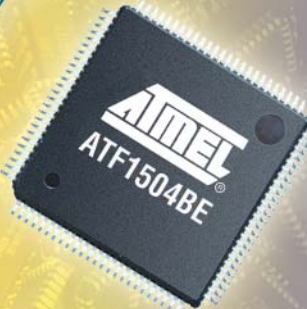


ULTRA LOW POWER



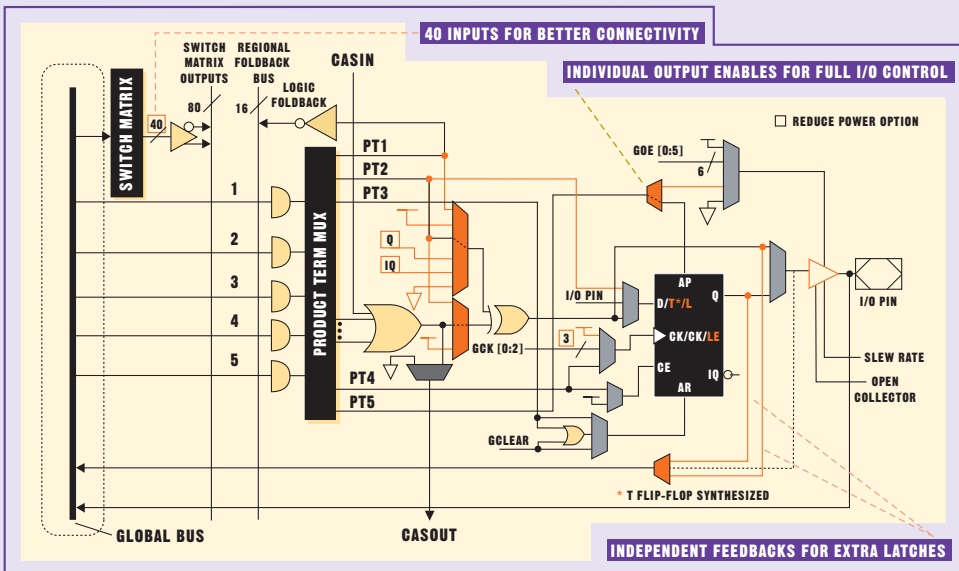
5 μA STANDBY

## ➤ ATF15XXBE Product Brief

### Complex Programmable Logic Devices (CPLDs)

#### Key Features

- **Ultra-low Standby Current** – The Industry’s Lowest Standby Current (5 μA)
- **1.8-volt Device Operation** – I/O Voltages Compatible with 1.5V, 1.8V, 2.5V and 3.3V Logic Levels to Simplify Multi-voltage System Design
- **A Wide Range of Densities** – From 32 to 256 Macrocells
- **Advanced System Features** – Multiple I/O Standards, Unique Programming Methods
- **Easy In-System Programming (ISP)** – Support for IEEE® 1532 In-System Programming and IEEE 1149.1 JTAG Boundary Scan Testing
- **EEPROM CPLDs** – Pin-compatible with Industry-standard Devices, Completely Reprogrammable, 10,000 Program/Erase Cycles, 2000V ESD Protection, 200 mA Latch-up Immunity, 100% Tested, 20-year Data Retention
- **Logic Doubling®** – Bury Either Register or COM while Using the Other for Output, Independent Feedback allows Double Latch Functions per Macrocell, 5 Product Terms per Macrocell (Expandable up to 40 Product Terms), Multiple Global and per Macrocell Clocks, Global and/or per Macrocell Output Enable



## CPLD Product Offering

VCC	Device	Macrocells	Speed (ns)	Power	Standby
1.8V	ATF1502BE	32	5/7	Ultra Low	5 $\mu$ A
	ATF1504BE	64	5/7	Ultra Low	10 $\mu$ A
	ATF1508BE	128	7	Ultra Low	10 $\mu$ A
	ATF1516BE	256	7	Ultra Low	10 $\mu$ A

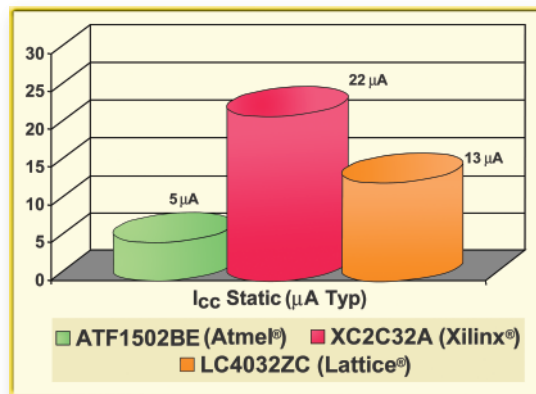
## Advanced System Features

### I/Os Support

- LVTTTL and LVC MOS for Standard Chip-to-Chip Interfacing
- SSTL for Standard Chip-to-Memory Interfacing
- Individually-programmable Pin-keeper Option on Inputs and I/Os
- Individually-programmable Schmitt Trigger Option on Inputs and I/Os
- Individually-programmable Input and I/O Pull-up Option
- 2 Independent I/O Banks

### Configuration Mode

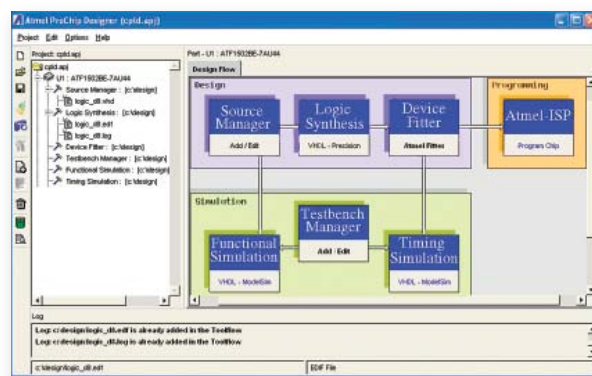
- OTF (On-the-Fly) Configuration Mode
- DRA (Direct Reconfiguration Access)



➤ Ultra-low Static Power

## Software Tools: ProChip Designer Features

- **Precision RTL Synthesis** – VHDL and Verilog® Synthesis Supports from Mentor Graphics®
- **ModelSim®** – VHDL and Verilog Simulation Supports from Mentor Graphics
- **FIT15XX** – Fitters for the ATF15XX CPLDs from Atmel
- **HDL Planner** – VHDL and Verilog Design Entry and Text Editing Supports from Atmel
- **Atmel ISP** – JTAG In-System Programmable (ISP) Support from Atmel



➤ ProChip Designer® Environment

## Getting Started

- **ATF15XX-DK3 CPLD Development Kit** – Kickstart your next design by ordering your development kit from one of our Atmel sales representative or distributor. Suggested resale price is \$99. To find a sales representative or distributor in your area, visit our sales contact web page at: <http://www.atmel.com/dyn/general/contact.asp>

### Headquarters

**Atmel Corporation**  
2325 Orchard Parkway  
San Jose, CA 95131, **USA**  
Tel: (408) 441-0311  
Fax: (408) 487-2600

### International

**Atmel Asia**  
Room 1219  
Chinachem Golden Plaza  
77 Mody Road Tsimshatsui  
East Kowloon, **Hong Kong**  
Tel: (852) 2721-9778  
Fax: (852) 2722-1369

### Atmel Europe

Le Krebs 8, Rue Jean-Pierre  
Timbaud BP 309  
78054 Saint-Quentin-en-  
Yvelines Cedex, **France**  
Tel: (33) 1-30-60-70-00  
Fax: (33) 1-30-60-71-11

### Atmel Japan

9F, Tonetsu Shinkawa Bldg.  
1-24-8 Shinkawa  
Chuo-ku, Tokyo 104-0033,  
**Japan**  
Tel: (81) 3-3523-3551  
Fax: (81) 3-3523-7581

### Product Contact

**CPLD Programmable Logic**  
2325 Orchard Parkway  
San Jose, CA 95131, **USA**  
Tel: (408) 441-0311  
Fax: (408) 487-2600  
[www.atmel.com/products/PLD](http://www.atmel.com/products/PLD)

### Literature Requests

[www.atmel.com/literature](http://www.atmel.com/literature)

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[www.atmel.com](http://www.atmel.com)

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