# Features

- **Edge-Controlled Power Down Pin**
- **Zero Power Equivalent of ATF22V10B**
- **Edge-Sensing Zero Standby power (10 µA Typical)**
- **Industry Standard Architecture**
  Low-Cost, Easy-To-Use Software Tools
- **High Speed Electrically Erasable Programmable Logic Device**
  5 ns Max Propagation Delay
- **CMOS and TTL Compatible Inputs and Outputs**
  Latch Feature Hold Outputs to Previous Logic States
- **Advanced Flash Technology**
  Reprogrammable
  100% Tested
- **High Reliability CMOS Technology**
  20 Year Data Retention
  100 Erase/Write Cycles
  2,000 V ESD Protection
  200 mA Latchup Immunity
- **Full Military, Commercial and Industrial Temperature Ranges**
- **Dual-In-Line and Surface Mount Packages in Standard Pinouts**

High Performance Flash PLD

Advance Information

Logic Diagram
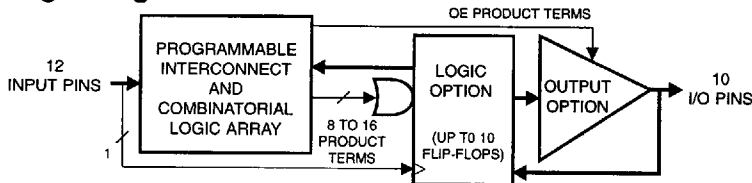
Description

The ATF22V10CZ is a high performance CMOS (electrically erasable) Programmable Logic Device (PLD) that utilizes Atmel's proven electrically erasable Flash memory technology. Speeds down to 10 ns and "zero" standby power dissipation are offered. All speed ranges are specified over the full 5 V ± 10% range for military and industrial temperature ranges, and 5 V ± 5% for commercial ranges.
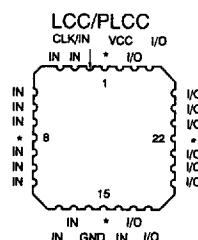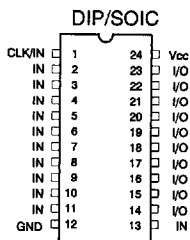
The ATF22V10CZ provides the zero power CMOS PLD solution, with "zero" standby power (10 µA typical). The ATF22V10CZ powers down automatically to the zero power mode though Atmel's patented Input Transition Detection (ITD) circuitry when the device is idle.

The ITD circuitry feature allows the user flexibility to reduce total system power, and enhance reliability all without sacrificing speed. Pin "keeper" circuits on input and output pins hold

(continued)

Pin Configurations

Pin Name	Function
CLK	Clock
IN	Logic Inputs
I/O	Bidirectional Buffers
*	No Internal Connection
VCC	+5 V Supply

DIP/SOIC

CLK/IN	1		24	Vcc
IN	2		23	I/O
IN	3		22	I/O
IN	4		21	I/O
IN	5		20	I/O
IN	6		19	I/O
IN	7		18	I/O
IN	8		17	I/O
IN	9		16	I/O
IN	10		15	I/O
IN	11		14	I/O
GND	12		13	IN

LCC/PLCC

0420A

Description (Continued)

pins to their previous logic levels when idle. This can reduce static power consumed by pull-up resistors.

The ATF22V10CZ macrocell incorporates a variable product term architecture each output is allocated from eight to 16 product terms, which allows highly complex logic functions to be realized.
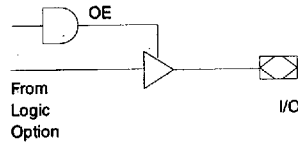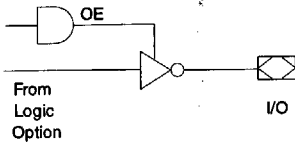
Two additional product terms are included to provide synchronous preset and asynchronous reset. These terms are common to all 10 registers. All registers are automatically cleared upon power up.

Register Preload simplifies testing. A Security Fuse prevents unauthorized copying of programmed fuse patterns.

Logic Options
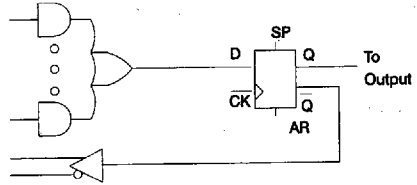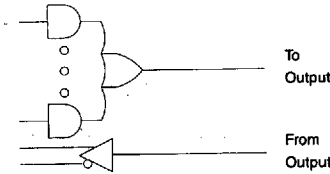
Output Options

D.C. and A.C. Operating Conditions

	Commercial	Industrial	Military
Operating Temperature (Case)	0°C - 70°C	-40°C - 85°C	-55°C - 125°C
V$_{CC}$ Power Supply	5 V ± 5%	5 V ± 10%	5 V ± 10%

ATF22V10CZ