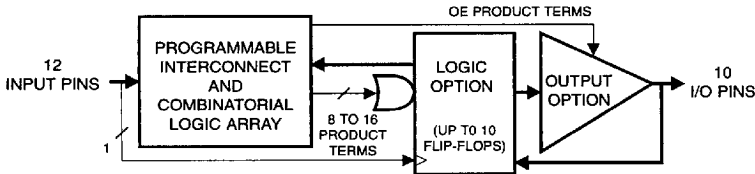## Features

- **Quarter Power Equivalent of ATF22V10B - 55 mA Maximum**
- **Low Power ATF22V10BQL - 10 mA Maximum Standby**
- **Industry Standard Architecture**
     Low-Cost, Easy-To-Use Software Tools
- **High Speed Electrically Erasable Programmable Logic Device**
     15 ns Max Propagation Delay
- **CMOS and TTL Compatible Inputs and Outputs**
     Input and I/O Pull-Up Resistors
- **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

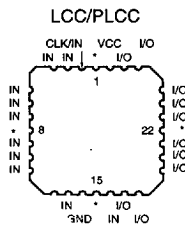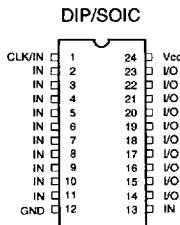# Advanced Information

## Logic Diagram



## Description

The ATF22V10BQs are high performance CMOS (electrically erasable) Programmable Logic Devices (PLDs) that utilize Atmel's proven electrically erasable Flash memory technology. Speeds down to 15 ns and power dissipation as low as 10 mA 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 ATF22V10BQL provides the fastest low power CMOS PLD solution, with low DC power (5.0 mA typical). The ATF22V10BQL significantly reduces total system power and enhances system reliability. *(continued)*

## Pin Configurations

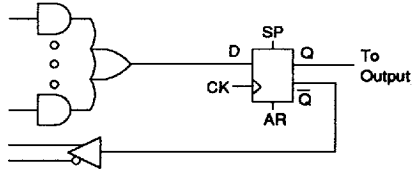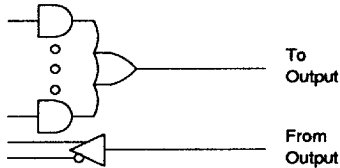| Pin Name | Function |
|----------|----------|
| CLK | Clock |
| IN | Logic Inputs |
| I/O | Bidirectional Buffers |
| * | No Internal Connection |
| VCC | +5 V Supply |

## Description (Continued)

The ATF22V10BQs incorporate a variable product term architecture. Each output is allocated from eight to 16 product terms, which allows highly complex logic functions to be realized.

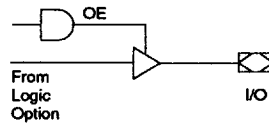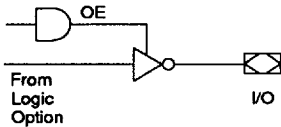Two additional product terms are included to provide synchronous preset and asynchronous reset. These terms are common to all 10 registers. All registers are automatically cleared upon power up.

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 |
| Vcc Power Supply | 5 V ± 5% | 5 V ± 10% | 5 V ± 10% |