PROGRAMMABLE LOGIC DEVICES (PLDs)

PROM  Programmable Read-Only Memory
  Fixed "AND" array with $2^{\text{(\# Inputs)}}$ minterms
  Programmable "OR" array with $m$ output bits

EPROM  Erasable PROM
  Erase with ultraviolet light, and program again

EEPROM  Electrically Erasable PROM
  Erase addressed byte with 20 volts

Flash Memory  High density, low cost EEPROM
  Non-selective complete erase with 20 volts

PAL  Programmable Array Logic
  Programmable "AND" array with $n$ product terms
  Fixed "OR" array, each of $m$ outputs has $n/m$ terms

PLA  Programmable Logic Array
  Programmable "AND" array with $n$ product terms
  Programmable "OR" array with $m$ output bits

PLS  Programmable Logic Sequencer
  PLA plus Flip-Flops and extra combinational logic

FPGA  Field Programmable Gate Array
  Dynamically configurable logic and I/O blocks
PROM with 8 Words X 4 Bits
PAL with 3 Inputs, 4 Outputs and 8 Products
PLA with 3 Inputs, 4 Outputs and 8 Products
Programmable "AND" Array

Programmable "OR" Array

Flip-Flops and Combinational Logic

PLS with 2 Inputs and 3 Outputs
Layout of Xilinx 3020 Field Programmable Gate Array