

## High Speed 5 Volt Byte Alterable Nonvolatile Memory Array

### FEATURES

- High Speed, High Density Memory Module
  - 200ns, 150ns, 120ns Access Times Available
  - 2 Megabit Memory in 1 square inch.
- Flexible Multiplane Architecture
  - Four Separate Chip Selects
  - 32 Separate I/Os
    - User Configurable I/Os—x8, x16, or x32
    - User Configurable Page Size—64 Double-words, 128 Words, or 256 Bytes
  - Concurrent Read/Write Operations
    - Able to Continue Reading During a Nonvolatile Write Cycle.
  - 5 Volt Byte or Page Alterable
    - No Erase Before Write
- Software Data Protection
- Early End of Write Polling
  - DATA Polling
  - Toggle Bit Polling

### High Reliability

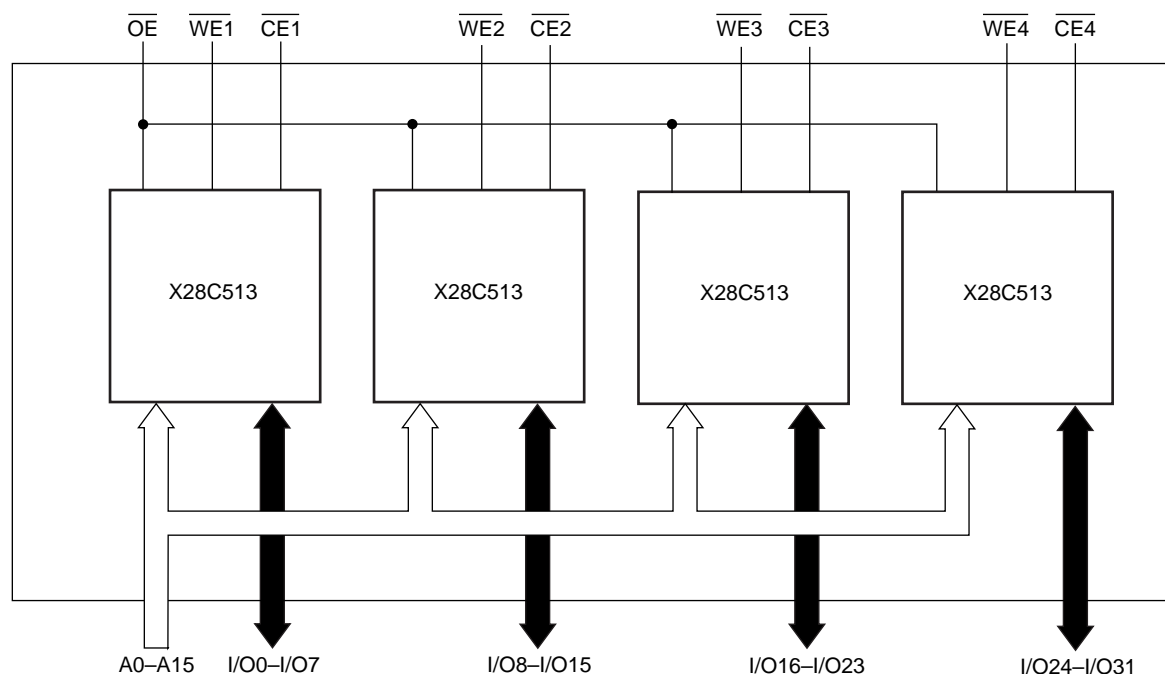
- Endurance: 100,000 Cycles
- Data Retention: 100 Years

### DESCRIPTION

The XM28C020P is a high speed, high density CMOS byte alterable nonvolatile memory array constructed on a co-fired ceramic substrate using Xicor's high speed X28C513 components in 32-pad leadless chip carriers. The substrate is a 66-pin ceramic pin grid array.

The module is configured with four separate chip enable and write enable inputs and 32 separate I/Os. This, along with the small footprint, provides the end user with a large degree of flexibility in board layout and memory configuration. In addition, with the large number of pins and the growth path being implemented, the module will be able to grow to 16 megabits.

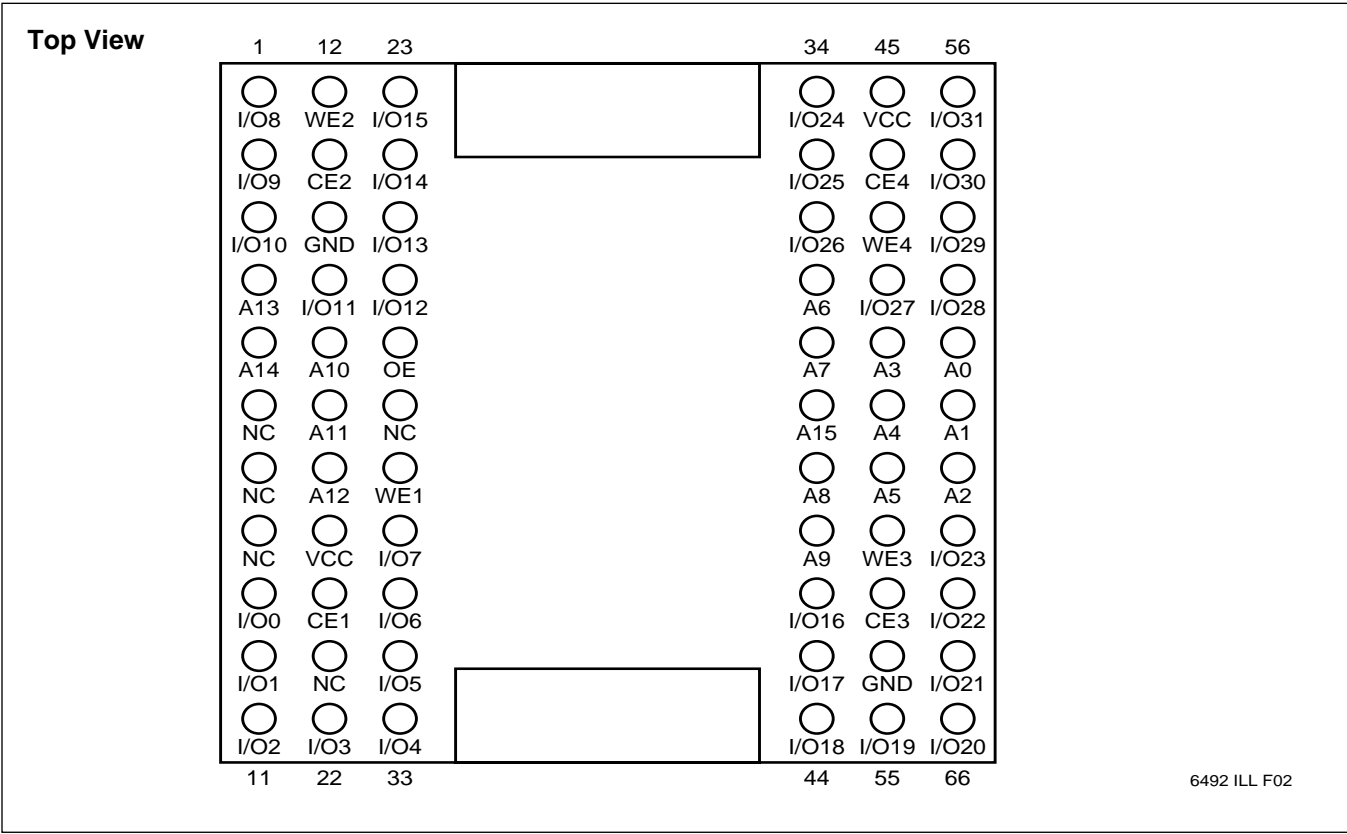
### FUNCTIONAL DIAGRAM



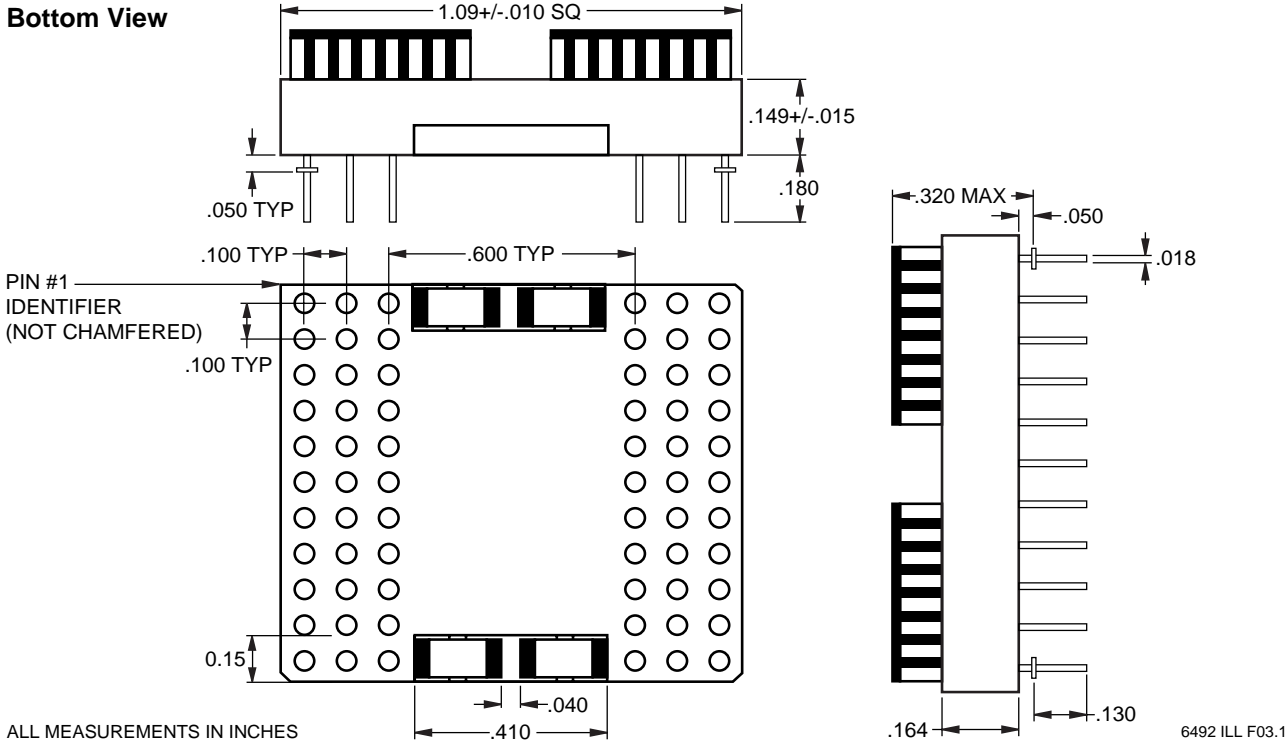
6492 ILL F01

# XM28C020P

## PIN CONFIGURATION



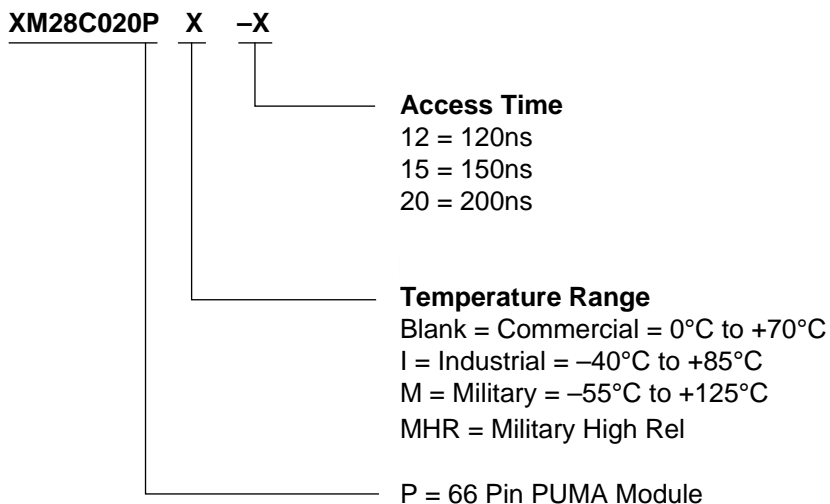
## Bottom View



# XM28C020P

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## ORDERING INFORMATION



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## LIMITED WARRANTY

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## LIFE RELATED POLICY

In situations where semiconductor component failure may endanger life, system designers using this product should design the system with appropriate error detection and correction, redundancy and back-up features to prevent such an occurrence.

Xicor's products are not authorized for use in critical components in life support devices or systems

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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