4 Megabit Puma Module XM28C040P 512K x 8 Bit

High Density 5 Volt Byte Alterable Nonvolatile Memory Array

FEATURES

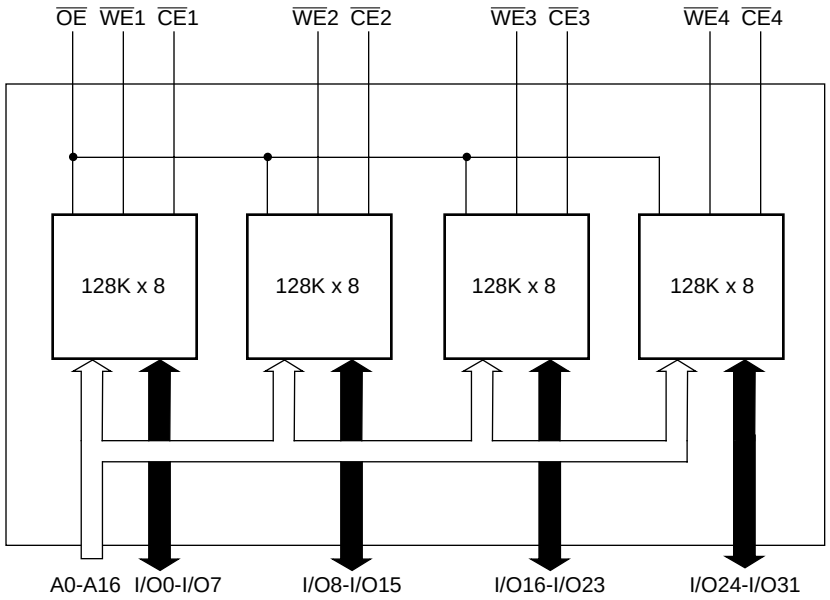
- **High Density Memory Module**
  - **—150ns, 200ns, and 250ns Access Times Available**
  - **—4 Megabit Memory in 1 square inch.**
- **Flexible Multiplane Architecture**
  - **—Four Separate Chip Selects**
  - **—32 Separate I/Os**
    - **User Configurable I/Os—x8, x16, or x32**
    - **User Configurable 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**
  - **—$\overline{\text{DATA}}$ Polling**
  - **—Toggle Bit Polling**
- **High Reliability**
  - **—Endurance: 100,000 Cycles**
  - **—Data Retention: 100 Years**

DESCRIPTION

The XM28C040P is a high density CMOS byte alterable nonvolatile memory array constructed on a co-fired ceramic substrate using Xicor's 128K x 8 components in 32-pad leadless chip carriers. The Substrate is a 66-pin ceramic pin grid array.

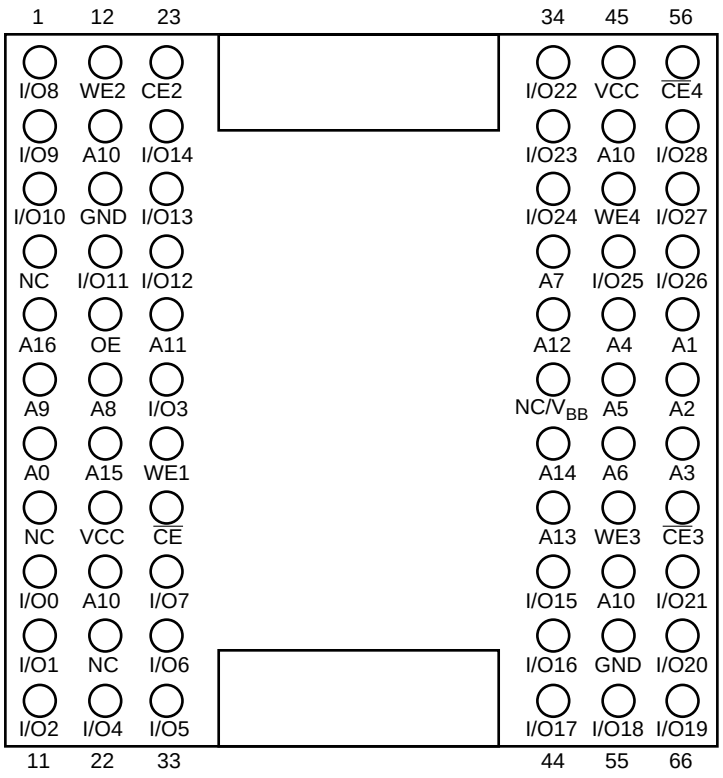
The module is configured with four separate chip enable and write enable inputs and 32 separate I/Os. This, along with the small footprint, provides the end user with a large degree of flexibility in board layout and memory configuration. In addition, with the large number of pins and the growth path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

FUNCTIONAL DIAGRAM

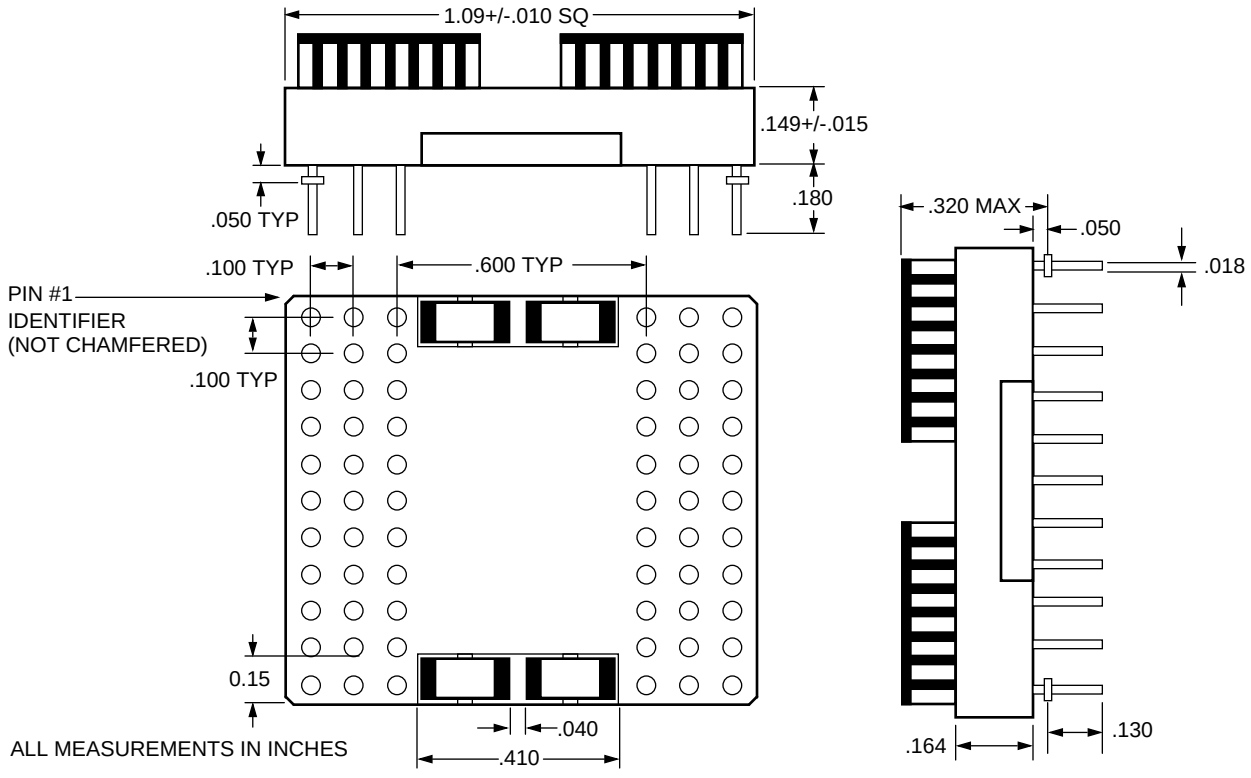


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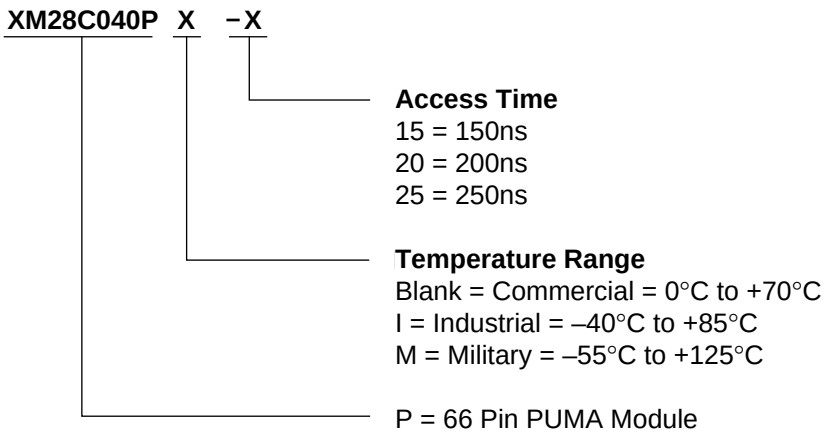
PIN CONFIGURATION



PACKAGE INFORMATION



ORDERING INFORMATION



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U.S. PATENTS

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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.