

DPRAM Interface

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1 Introduction

This document aims to elucidate the functionalities of the 7028 - 64k x 16 Dual-Port RAM and its interface with the ISA bus.

2 7028 Dual-Port RAM

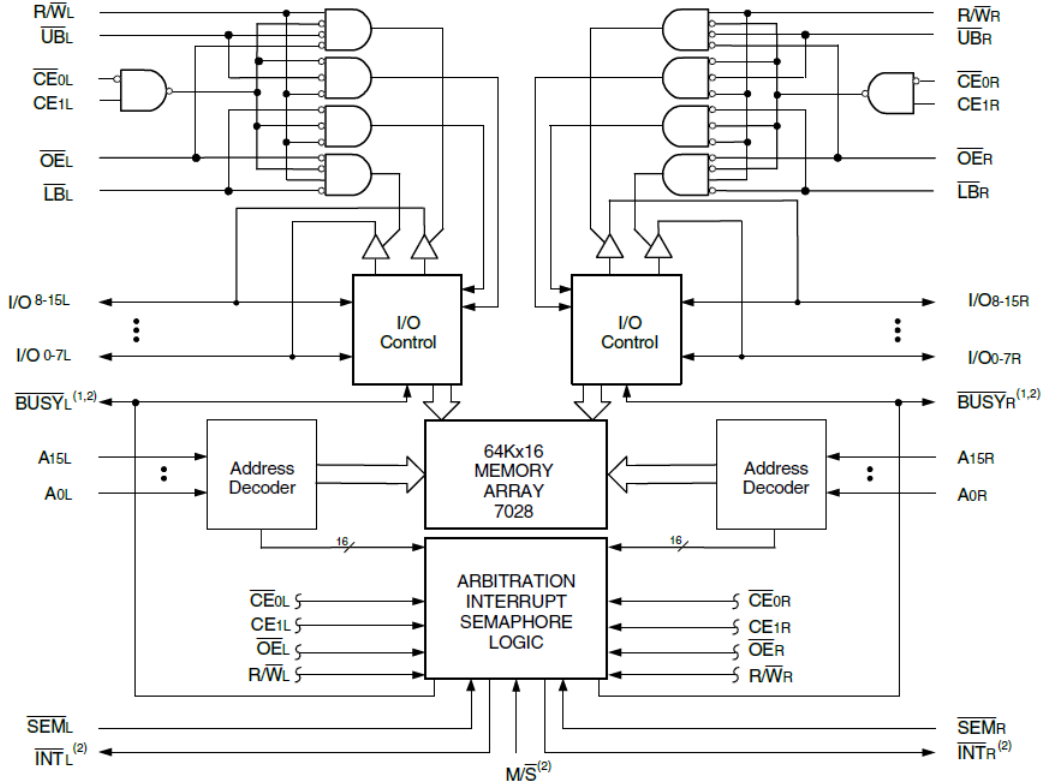


Figure 1: Functional block diagram of 7028 - 64k x 16 Dual-Port RAM

The IDT7028 is a high-speed 64K x 16 Dual-Port Static RAM. The IDT7028 is designed to be used as a stand-alone 1024K-bit Dual-Port RAM or as a combination MASTER/SLAVE Dual-Port RAM for 32-bit-or-more word systems. Using the IDT MASTER/SLAVE Dual-Port RAM approach in 32-bit or wider memory system applications results in fullspeed, error-free operation without the need for additional discrete logic. This device provides two independent ports with separate control, address, and I/O pins that permit independent, asynchronous access for reads or writes to any location in memory. An automatic power down feature controlled by the chip enables ($CE0$ and $\overline{CE1}$) permit the on-chip circuitry of each port to enter a very low standby power mode. Fabricated using CMOS high-performance technology, these devices typically operate on only 1W of power. The IDT7028 is packaged in a 100-pin Thin Quad Flatpack (TQFP) (Fig. 2).

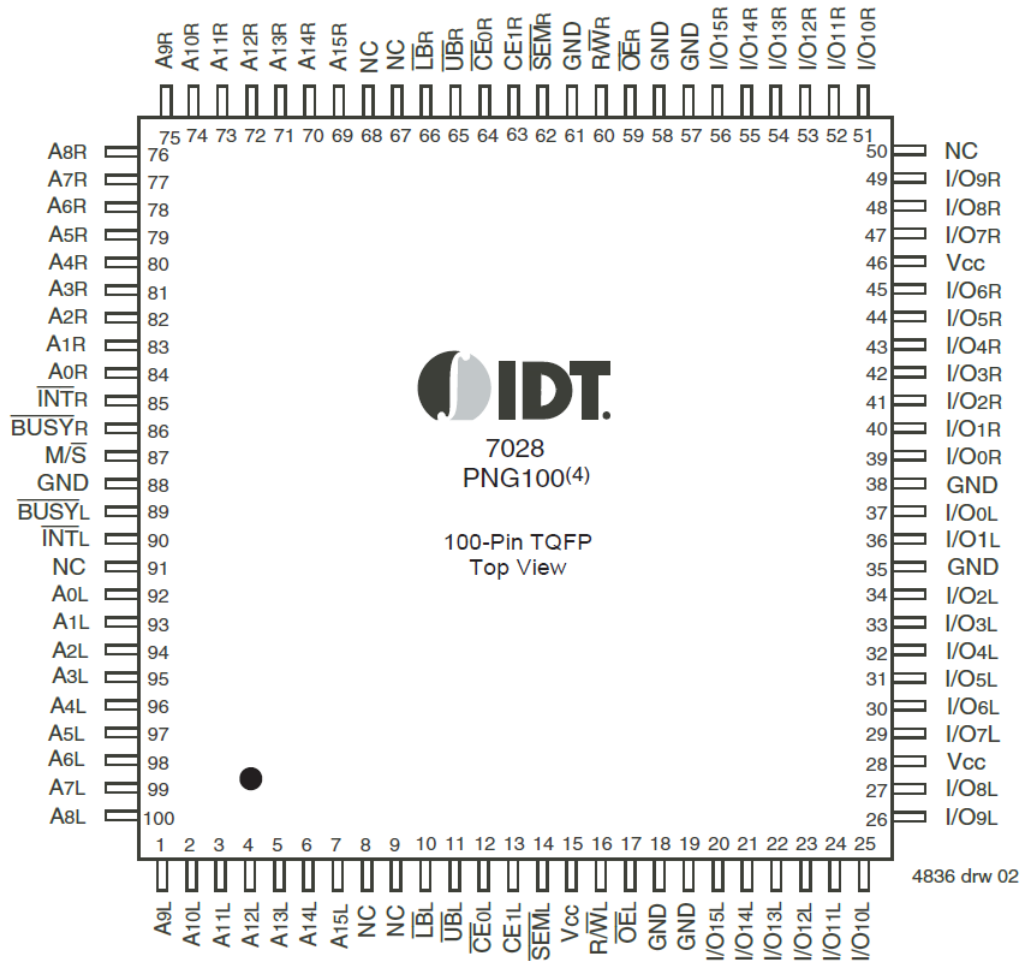


Figure 2: Pin configuration of IDT7028.

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