



# 2.1

## Introduction

The VIC64 is a member of the industry-standard VIC family of VMEbus interface products. The VIC64 implements 64-bit wide block transfers, in addition to 32- and 16-bit block transfers and 32-, 16-, and 8-bit single-cycle transfers, all using the same backplane hardware. VIC64 is software and hardware compatible with the VIC068A VMEbus Interface Controller.

This document provides the designer with the information needed to evaluate and develop VIC64-based boards. You should have already read the section on the VIC068A. This document provides information on the enhancements found within the VIC64. Another device, the CY7C964 Bus Interface Logic Chip, is described in Section 4 of this book.

Like the Cypress VIC068A, the VIC64 contains all the circuitry necessary to manage VMEbus transfers, either as a slave or a master. It can also be programmed as the VMEbus system controller. The VIC64 contains circuitry intended to minimize the problems associated with the development of a VMEbus interface such as an interrupt controller, a DMA controller, a DRAM refresh controller, and many other features normally on VMEbus boards. The VIC64 is a logical extension to the capabilities of the VIC068A, the industry-standard VMEbus Interface Controller chip, and it is fully compatible with the VIC068A.

The primary benefit of using the VIC64 is that you can perform 64-bit VMEbus transfers. The VIC64 also contains some enhancements to the VIC068A, including some performance improvements and additional features.

A board that has been designed to use the VIC068A is not likely to implement D64 VMEbus transfers, but there are several reasons why a user may choose to replace the VIC068A with a VIC64. For example, to take advantage of the enhancements of the VIC64, or to evaluate the device and use an existing board to speed the evaluation.