



MDGG - 16 multi functional VME Logic Module

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The MDGG-16 is a single wide 6U VME multi functional FPGA based delay logic and timing module which provides often needed functions as gate generator & pulse generator, logic fan in - fan out, coincidence register and scaler / pre-scaler. The module has 16 LVDS/ECL inputs and 16 ECL outputs on pin headers and 2 NIM inputs as well as 4 NIM outputs (Lemo), which are free configurable in regards to their functionality.

The MDGG-16 is based on a XC3S500E FPGA with 36kB of block RAM. One FPGA configuration file can be stored in the on-board flash memory from which the FPGA can boot at power-on. The flash memory can be reprogrammed via VME for firmware upgrades. The required logic functionality can be programmed in a easy way by the writing configuration data into MDGG-16 registers via VME D32 A24 "write" commands.

MDGG-16 can be readily customized within the constraints set

by the hardware resources. It may be considered an 18-input/20-output/7-diagnostic LED universal logical module for which the user can develop his own firmware using the free XILINX WebPack software.

Main features

- FPGA based VME logic module
- Pre-programmed standard logic functions as delay gate generator, pulser, scaler, coincidence registers selectable via VME registers
- · Interrupt capability
- > single wide 6U A24/D32 VME slave module
- Inputs: 16 ECL/LVDS (pin header) + 2 NIM (LEMO connectors)
- Outputs: 16 ECL / optional LVDS (pin header) + 4 NIM (LEMO connectors)
- > 8 diagnostic LED's
- > IRQ capable, IRQ level selected by a jumper.
- > Firmware upgradable via VME
- > Built-in functions (firmware dependent)
 - programmable delay / gate / pulse generators, start/stop latches or pre-scalers (8 ns steps)
 - gated or latching scalers with 1k x 32 FIFO per channel
 - > 8 bit coincidence register
 - > combinatorial gates (2 fold OR of 8 fold AND)
 - > Flexible configuration and multiplexing of NIM inputs / outputs and logic devices
 - > Programmable Veto inputs
 - > VME triggering of logic devices and reset of scalers
 - > Individually programmable output polarity for all NIM (4) and ECL (16) outputs

Item	Description
MDGG-16	16 Channel MDGG-16 with 32 pin header connector and LEMO I/O

Specifications:

Packaging	single wide 6U VME module
Inputs:	16 channel ECL / LVDS pinheader, 2 NIM (LEMO)
Outputs:	16 channel ECL / LVDS pinheader, 4 NIM (LEMO)
LED's:	8 Diagnostic LED's, driven by signal stretchers
Firmware:	Programmed via VME
Firmware: Interface:	Programmed via VME VME A24 D32, base address via jumpers.

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MDGG - 16 multi functional VME Logic Module:	Print Product Data Sheet		
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Documentation

Manual and Tech-Notes:	MDGG
Introduction:	WIENER VME VXI VXS introduction

Downloads

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