

M67 – 1-Channel Digital Oscilloscope

- 1 analog voltage input 40 MS/s
- 12 bits resolution
- 25 ns acquisition/conversion time
- ± 1 V DC measuring range
- 4 MB SDRAM
- Complex trigger logic
- Oversampling technology
- Flexible onboard signal conditioning
- Optical isolation



The mezzanine card M67 is a board for acquisition of analog signals with a bandwidth of up to 10 MHz at a maximum resolution of 12 bits and a sampling frequency of up to 40 MHz. Variable trigger functions allow application of the M67 as a "digital storage oscilloscope" for measurement and analysis applications.

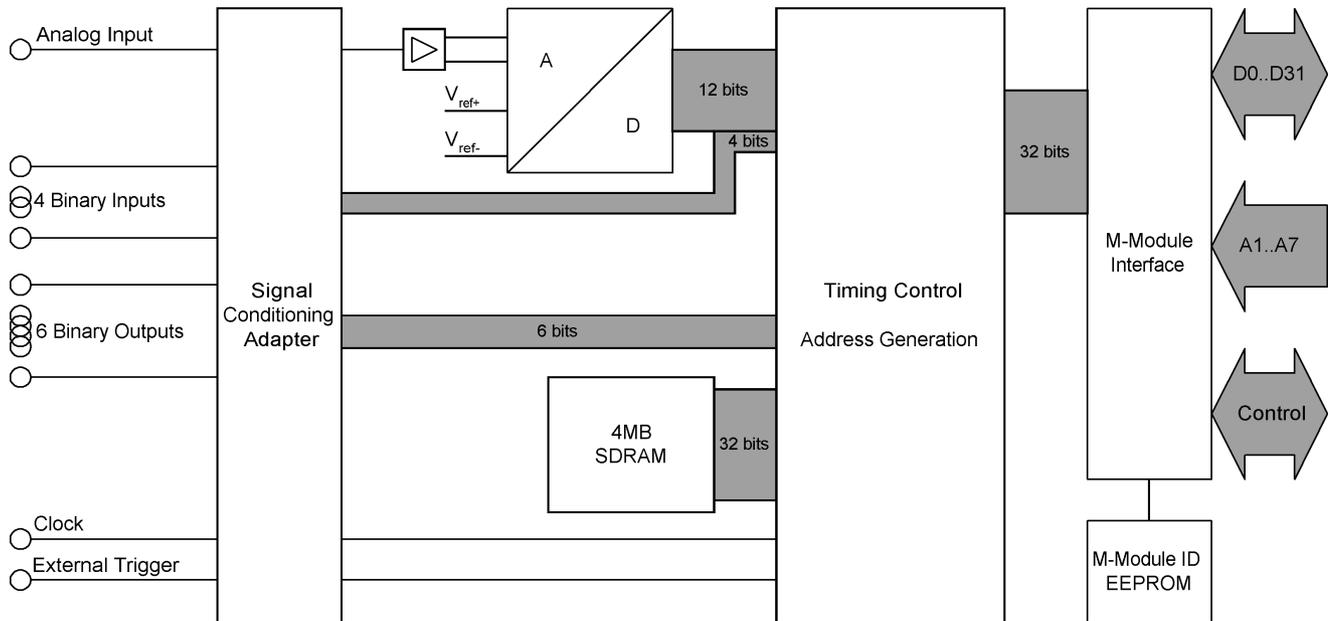
The sampling data is stored in an onboard memory buffer. After the sampling procedure this buffer can be

processed by an external host.

Individual signal conditioning is made by the customer using a blank prototype PCB that is plugged directly on M67 and must be ordered separately. MEN can produce individual adapters on request.

The M67 is based on the M-Module ANSI mezzanine standard. It can be used as an I/O extension in any type of bus system, i.e. CPCI, VME or on any type of stand-alone SBC. Appropriate M-Module carrier cards in 3U, 6U and other formats are available from MEN or other manufacturers.

Diagram



Technical Data

Analog Input	<ul style="list-style-type: none"> ■ ±1V max. input range, 75 Ohm ■ Input conditioning via adapter PCB
Trigger	<ul style="list-style-type: none"> ■ Trigger at signal level, external signal or via software ■ Rising or falling edge ■ Trigger at start, middle, end
Clock	<ul style="list-style-type: none"> ■ Internal or external clock, max. 40MHz ■ Divider 2ⁿ
Buffer	<ul style="list-style-type: none"> ■ 4MB ■ Random access by the host possible
A/D Conversion	<ul style="list-style-type: none"> ■ 12 bits, 40MSPS ■ 64dB SNR at 3.58MHz ■ Track/hold ■ Oversampling technology
Recording	<ul style="list-style-type: none"> ■ 12 ADC bits and 4 external binary inputs
Binary Inputs/Outputs	<ul style="list-style-type: none"> ■ 4 inputs ■ 6 outputs
Peripheral Connections	<ul style="list-style-type: none"> ■ Via front panel on a shielded combined 15-pin D-Sub receptacle connector
M-Module Characteristics	<ul style="list-style-type: none"> ■ A08, D16, D32, INTA, DMA, IDENT, TRIGI
Electrical Specifications	<ul style="list-style-type: none"> ■ Isolation voltage: 500V DC ■ Supply voltage/power consumption: <ul style="list-style-type: none"> □ +5V (4.85V..5.25V), 700mA typ. (with sample adapter) □ +12V (±5%), +50mA □ -12V (±5%), -40mA ■ MTBF: tbd. (derived from MIL-HDBK-217F)
Mechanical Specifications	<ul style="list-style-type: none"> ■ Dimensions: conforming to M-Module Standard ■ Weight: 112g (incl. adapter)
Environmental Specifications	<ul style="list-style-type: none"> ■ Temperature range (operation): <ul style="list-style-type: none"> □ 0..+60°C □ Industrial temperature range on request □ Airflow: min. 10m³/h ■ Temperature range (storage): -40..+85°C ■ Relative humidity range (operation): max. 95% non-condensing ■ Relative humidity range (storage): max. 95% non-condensing ■ Altitude: -300m to + 3,000m ■ Shock: 15g/11ms ■ Bump: 10g/16ms ■ Vibration (sinusoidal): 2g/10..150Hz ■ Conformal coating on request
Safety	<ul style="list-style-type: none"> ■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers
EMC	<ul style="list-style-type: none"> ■ Tested according to EN 55022 (radio disturbance), IEC1000-4-2 (ESD) and IEC1000-4-4 (burst)
Software Support	<ul style="list-style-type: none"> ■ MEN Driver Interface System (MDIS for Windows®, Linux, VxWorks®, QNX®, OS-9®) ■ For more information on supported operating system versions and drivers see Downloads.

Ordering Information

Standard M67 Models	04M067-00	Digital oscilloscope, 0..+60°C
Miscellaneous Accessories	05M000-17	25 mounting screw sets to fix M-Modules on carrier boards
	08AD55-00	AD55, adapter for M67, DC signal conditioning, input voltage 0..+1V or 0..+10V, impedance 1MΩ, external triggering, 4 inputs, 5 outputs, temperature range: 0..+60°C
Software: Linux	This product is designed to work under Linux. See below for potentially available separate software packages from MEN.	
	13M067-06	MDIS4/2004 low-level driver sources (MEN) for M67
Software: Windows®	This product is designed to work under Windows®. See below for potentially available separate software packages from MEN.	
	13M067-70	MDIS4/2004 Windows® driver (MEN) for M67
Software: VxWorks®	This product is designed to work under VxWorks®. For details regarding supported/unsupported board functions please refer to the corresponding software data sheets.	
	13M067-06	MDIS4/2004 low-level driver sources (MEN) for M67
Software: QNX®	This product is designed to work under QNX®. For details regarding supported/unsupported board functions please refer to the corresponding software data sheets.	
	13M067-06	MDIS4/2004 low-level driver sources (MEN) for M67
Software: OS-9®	This product is designed to work under OS-9®. For details regarding supported/unsupported board functions please refer to the corresponding software data sheets.	
	13M067-06	MDIS4/2004 low-level driver sources (MEN) for M67
For operating systems not mentioned here contact MEN sales.		
Documentation	Compare Chart instrumentation M-Modules » Download	
	20M000-00	M-Module Draft Specification, Rev. 3.0
	20M067-00	M67 User Manual

Contact Information

Germany

MEN Mikro Elektronik GmbH
Neuwieder Straße 3-7
90411 Nuremberg
Phone +49-911-99 33 5-0
Fax +49-911-99 33 5-901

info@men.de
www.men.de

France

MEN Mikro Elektronik SAS
18, rue René Cassin
ZA de la Châtelaine
74240 Gaillard
Phone +33 (0) 450-955-312
Fax +33 (0) 450-955-211

info@men-france.fr
www.men-france.fr

USA

MEN Micro Inc.
860 Penllyn Blue Bell Pike
Blue Bell, PA 19422
Phone (215) 542-9575
Fax (215) 542-9577

sales@menmicro.com
www.menmicro.com

The date of issue stated in this data sheet refers to the Technical Data only. Changes in ordering information given herein do not affect the date of issue. All brand or product names are trademarks or registered trademarks of their respective holders.

MEN is not responsible for the results of any actions taken on the basis of information in the publication, nor for any error in or omission from the publication.

MEN expressly disclaims all and any liability and responsibility to any person, whether a reader of the publication or not, in respect of anything, and of the consequences of anything, done or omitted to be done by any such person in reliance, whether wholly or partially, on the whole or any part of the contents of the publication.

The correct function of MEN products in mission-critical and life-critical applications is limited to the environmental specification given for each product in the technical user manual. The correct function of MEN products under extended environmental conditions is limited to the individual requirement specification and subsequent validation documents for each product for the applicable use case and has to be agreed upon in writing by MEN and the customer. Should the customer purchase or use MEN products for any unintended or unauthorized application, the customer shall indemnify and hold MEN and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim or personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that MEN was negligent regarding the design or manufacture of the part.

In no case is MEN liable for the correct function of the technical installation where MEN products are a part of.

Copyright © 2014 MEN Mikro Elektronik GmbH. All rights reserved.