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Find the *BioPac MP100A-CE* at our website: ***Click HERE***

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MP100 STARTER SYSTEM



See also: MP100 Specifications

The MP100 system offers USB-ready data acquisition and analysis. Record multiple channels with differing sample rates. Record at speeds up to 70 kHz or 16 kHz (aggregate to disk)

MP100 System includes*:*

Data acquisition unit: MP100A-CE

Universal interface module: UIM100C

USB adapter: USB1W (PC) *or* USB1M (Macintosh)

Transformer: AC100A

Cables: CBLSERA cable, CBLS100 cable set

Acq*Knowledge*® software CD

RECOMMENDED MP100 CONFIGURATION:

For the best possible performance, connect the MP System to the computer's USB port, with no other USB traffic intensive devices (e.g. scanners, hard drives, cameras) running simultaneously. If a computer has no USB port, users need to install an industry standard PCI USB card.

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MP100 SYMBOLOGY

Front panel

POWER	Power status	**On** if MP100 is turned ON. **Off** if MP10 is turned OFF.
BUSY	MP100 acquisition status	**On** during acquisition or during the first 1-5 seconds after the MP100 is powered ON.
CABLE INPUTS	25-pin cable connection	Digital signals
	37-pin cable connection	Analog signals

Back panel

Power switch

On powers up the MP100

Off cuts the flow of power to the MP100

Fuse holder

Next to the power switch is a 2 Amp fast-blow fuse holder.

To remove the fuse, use a screwdriver to remove the fuse cover, which is located below the word **Fuse**.

The maximum capacity of the fuse is 2 Amps.

DC Input

The **DC Input,** located between the fuse holder and the serial cable, is where a battery, AC/DC converter or other power supply connects to the MP100.

The power supply requirements for the MP100 are 12 VDC @ 1 Amp,

The receptacle is configured to accept a "+" (positive) input in the center of the connector and a "–" (negative) input on the connector housing.

Serial port

The MP100 connects to the computer via a serial port, located just below the word **Serial**.

Uses a standard MINI DIN 8 connector.

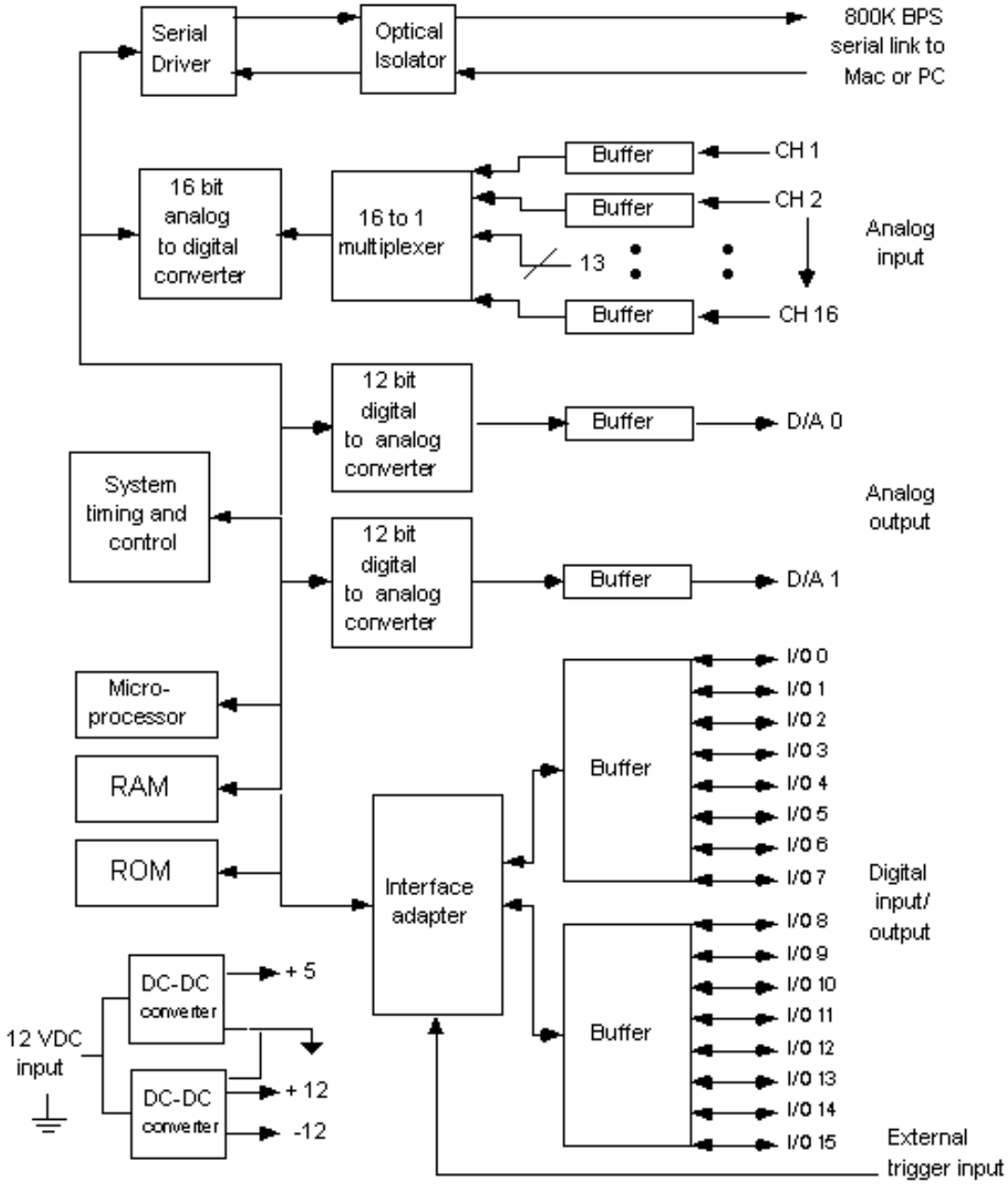
Should only be used to connect the MP100 to a PC or Mac.

Updated: 7.13.2012

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MP100A-CE DATA ACQUISITION UNIT BLOCK DIAGRAM

The MP100 has an internal microprocessor to control the data acquisition and communication with the computer. There are 16 analog input channels, two analog output channels, 16 digital channels that can be used for either input or output, and an external trigger input. The digital lines can be programmed as either inputs or outputs and function in 8 channel blocks. Block 1 (I/O lines 0 through 7) can be programmed as either all inputs or all outputs, independently of block 2 (I/O lines 8 through 15).



MP100 block diagram

See also: MP100 Specifications

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MP SYSTEM SPECIFICATIONS – FOR MP150 AND MP100

Analog Inputs

Number of Channels:	16
Absolute Maximum Input:	±15 V
Operational Input Voltage:	±10 V
A/D Resolution:	16 Bits
Accuracy (% of FSR):	±0.003
Input impedance:	1.0 MΩ

Application Programming Interfaces options:

- Hardware Interface BHAPI
- Software Interface ACKAPI

Analog Outputs

Number of Channels:	2
Max output with acquisition:	MP150: 2 channels, MP100: 1 channel
Output Voltage Range:	±10 V
D/A Resolution:	MP150: 16 bits, MP100: 12 Bits
Accuracy (% of FSR):	MP150: ±0.003, MP100: ±0.02
Output Drive Current:	±5 mA (max)
Output Impedance:	100 Ω

Digital I/O

Number of Channels:	16
Voltage Levels:	TTL, CMOS
Output Drive Current:	±20 mA (max)
External Trigger Input:	TTL, CMOS compatible - See also: External Trigger Inputs

Time Base

Min Sample Rate:	2 samples/hour
Trigger Options:	Internal, External or Signal Level

Power

Amplifier Module Isolation:	Provided by the MP unit, isolated clean power
CE Marking:	EC Low Voltage and EMC Directives
Leakage current:	<8 µA (Normal), <400 µA (Single Fault)
Fuse:	2 A (fast blow)

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Device specific specs	*MP150*	*MP100*
Max Sample Rate MP Internal Memory:	200 K samples/sec (400K aggregate)	70 K samples/sec (70 K aggregate)
PC Memory/Disk:	200 K samples/sec (400K aggregate)	11 K samples/sec (16K aggregate)
Internal Buffer:	6 M samples	16 K samples
Waveform Output Buffer:	500 K samples	4 K samples
Serial Interface Type/Rate:	Ethernet: UDP (10M bits/sec)	Serial: RS422 (800 Kbits/sec)
Transmission Type:	Ethernet	USB only (Windows via USB1W or Mac via USB1M)
Maximum cable length:	100 meters (Ethernet cable)	7 meters (USB + SERIAL cable)
Power Requirements:	12VDC @ 2 amp (uses AC150A)	12 VDC @ 1amp (uses AC100A)
Dimensions:	10cm x 11cm x 19cm	7cm x 29cm x 25cm
Weight:	1.0 kg	1.8 kg
OS Compatibility		
Ethernet Interface		
Windows	Windows XP, Vista, 7	Not supported
Mac	OS X	Not supported
USB Interface		
Windows	Not supported	Windows XP, Vista, 7
Mac	Not supported	OS X

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ISOLATION

Designed to satisfy the following Medical Safety Test Standards affiliated with IEC601-1:

- Creepage and Air Clearance
- Dielectric Strength
- Patient Leakage Current

Contact BIOPAC for additional details.

SIGNAL CONDITIONING MODULE COMPATIBILITY

$CO_2$100C	EGG100C	HLT100C	PPG100C
DA100C	EMG100C	LDF100C	RSP100C
EBI100C	EOG100C	MCE100C	SKT100C
ECG100C	ERS100C	$O_2$100C	STM100C
EEG100C	GSR100C	OXY100C/E	TEL100C

CLEANING PROCEDURES

Be sure to unplug the power supply from the MP150/100 before cleaning. To clean the MP150/100, use a damp, soft cloth. Abrasive cleaners are not recommended as they might damage the housing. Do not immerse the MP150/100 or any of its components, as this can damage the system. Let the unit air-dry until it is safe to reconnect the power supply.

AC150/100A POWER SUPPLIES

The 12-volt in-line switching transformer connects the MP unit to the AC mains wall outlet. One transformer is included with each MP System; replacements can be ordered separately. These transformers are specified to satisfy IEC60601-1 requirements and will accommodate 120-240 VAC (50/60 Hz) mains input.

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