

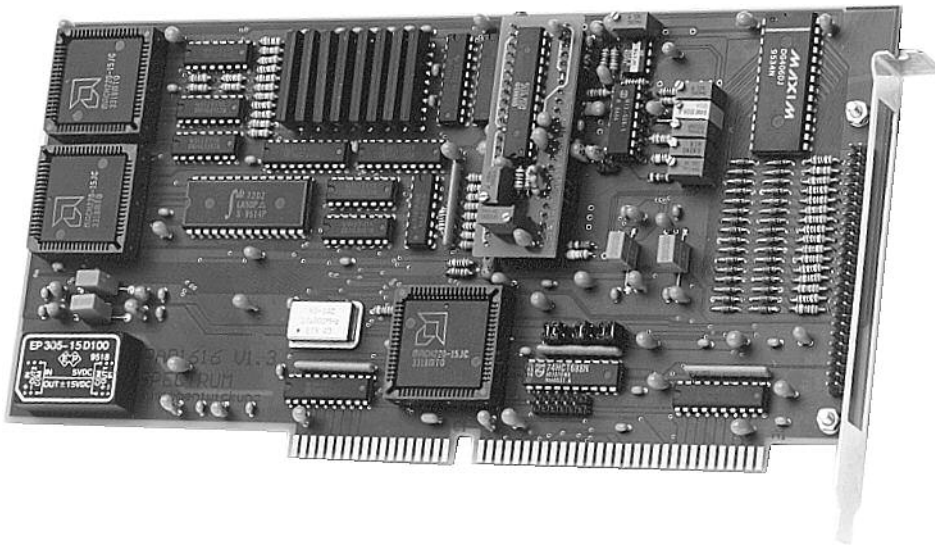


SPECTRUM

SYSTEMENTWICKLUNG MICROELECTRONIC GMBH

PAD1616 300 kHz / 100 kHz ISA transient recorder

- **16 analoge Kanäle**
- **16 Bit Auflösung**
- **2 Versionen mit 100 kHz und 300 kHz**
- **Bis zu 8 MSamples Speicher**
- **Sequenzreihenfolge programmierbar**
- **16 analogue channels**
- **16 bit resolution**
- **2 versions with 100 kHz and 300 kHz**
- **Up to 8 MSamples memory**
- **Sequence programmable**



Allgemeine Information

16 Bit Auflösung auf 16 Kanälen bietet die A/D Wandler Karte PAD1616. Die 16 Kanäle werden über einen Multiplexer auf den A/D Wandler geführt.

Die Reihenfolge der aufgezeichneten Kanäle kann in einem bis zu 1024 Einträgen großen Parameterspeicher angegeben werden. Die PAD1616 tastet die Eingänge immer mit der höchsten Abtastrate ab, auch wenn eine kleinere Abtastrate programmiert ist. Dies minimiert den Phasenfehler zwischen den Kanälen

Anwendungsbeispiele: Laser, Medizintechnik, Prüfwesen, Überwachung

Software

Kostenlos mitgeliefert werden Treiber für Linux, DOS, Windows 3.1x, Windows 9x/ME und Windows NT/2000/XP. Für die einfache Programmierung sind Beispiele in C/C++, Delphi und Visual Basic enthalten. Darüber hinaus steht zur komfortablen Steuerung die Signalverarbeitungssoftware SBench 5.2 kostenlos zur Verfügung. Außerdem sind Treiber für LabVIEW, DASYLab, MATLAB und VEE erhältlich.

General Information

16 bit resolution on 16 channels are offered by the A/D-Converter board PAD1616. The 16 channels are fed through a multiplexer to the A/D-Converter.

The order of the channels to be recorded may be programmed in an up to 1024 entries large parameter buffer. The PAD1616 samples the input with the highest samplerate possible even if a lower samplerate is programmed. This minimises the phase error between the channels.

Application examples: Laser, Medical technology, test systems, Supervising

Software

Drivers for Linux, DOS, Windows 3.1x, Windows 9x/ME and Windows NT/2000/XP as well as programming examples for C/C++, Delphi and Visual Basic are delivered with the board. Comfortable programming, initialising and data display are performed by the free-of-charge Windows program SBench 5.2. Software drivers for LabVIEW, DASYLab, MATLAB and VEE are available.

Software programmable parameters

Samplerate (300 kHz)	2.3 Hz to 300 kHz
Samplerate (100 kHz)	0.6 Hz to 100 kHz
Input range	± 500 mV, ± 1 V, ± 2 V, ± 5 V
Channel sequence	up to 1024 sets
Memory depth	1 Sample up to installed memory in steps of 1 sample

Trigger output	enable / disable
Triggermode	channel x, external, software
Triggerlevel	1/128 .. 127/128 of input range
Triggeredge	rising or falling edge
Posttrigger	2 Samples up to 2 MSamples in steps of 1 sample

Technical data

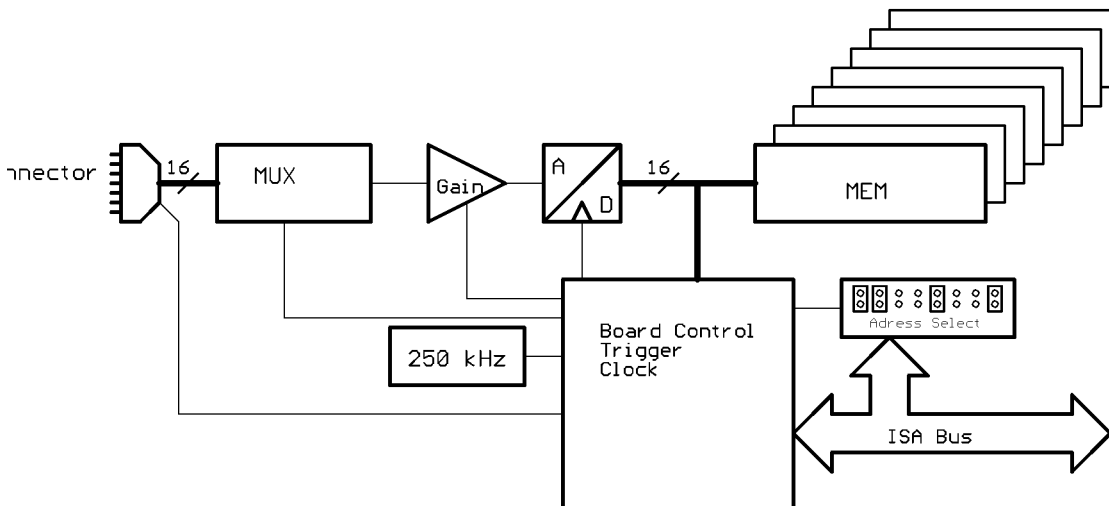
Resolution	16 bit
Accuracy	15 bit
channels	16
sequence memory	1024 settings
Samplerate	0.6/2.3 Hz to 100 kHz / 300 kHz
Bandwidth 100 kHz version -3 dB	0 Hz up to 50 kHz
Bandwidth 300 kHz version -3 dB	0 Hz up to 125 kHz

Input range	± 500 mV	± 1 V	± 2 V	± 5 V
Offset error	≤ 2 LSB	≤ 2 LSB	≤ 2 LSB	≤ 2 LSB
Gain error	≤ 0.1 %	≤ 0.1 %	≤ 0.1 %	≤ 0.1 %
Noise	≤ 6 LSB	≤ 6 LSB	≤ 4 LSB	≤ 4 LSB
Crosstalk	-78 dB	-82 dB	-90 dB	-90 dB

Dimension	243 mm x 113 mm
Connector	flat ribbon
Overvoltage protection	± 20 V
Warm up time	10 minutes
Operating temperature	0°C - 50°C
Storage temperature	-10°C - 70°C
Humidity	10% to 90% non condensing

	-5 V	+5 V	+12 V	-12 V
Power consumption (A)	200 mA	1000 mA	250 mA	250 mA
Power consumption (W)	1.0 W	5.0 W	3.0 W	3.0 W

Hardware block diagram



Order information

PAD1616 300 kHz	PAD1616 300 kHz version with 2 MSample memory including drivers	PAD1616b
PAD1616 100 kHz	PAD1616 100 kHz version with 2 MSample memory including drivers	PAD1616a
Option 8 M	Memory upgrading to 8 MSamples	PAD1616-8
Input range	3 user specific input ranges between ± 100 mV and ± 5 V, bipolar or unipolar	PAD1616-ir
DASYLab driver	Drivers for DASYLab 5.0 for Win 95/98, Win 2000 and Win NT	PAD1616-dl
Agilent VEE driver	Drivers for Agilent VEE 5.0 for Win 95/98, Win 2000 and Win NT	PAD1616-hp
LabVIEW driver	Drivers for LabVIEW 4.0 for Win 3.11, Win 95/98, Win 2000 and Win NT	PAD1616-lv
MatLab driver	Drivers for MatLab 5.0 for Win 95/98, Win 2000 and Win NT	MATLAB

Spectrum reserves the right to make changes at any time to improve design and to supply the best product possible