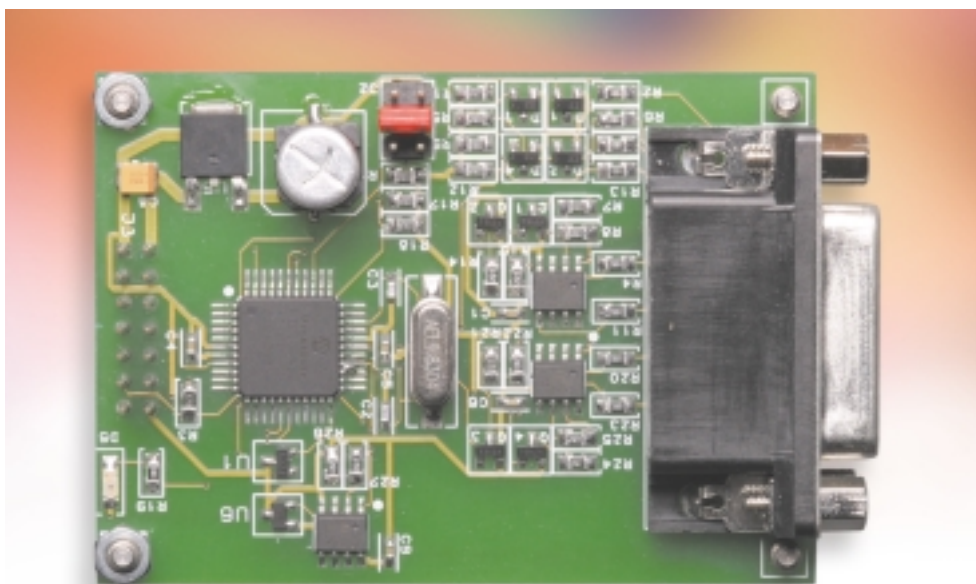


PICOSERV

Analogue I/O Interface Module

Analogue IO expansion module for the PICOSERV system

Part of the family of IO expansion modules for the PICOSERV miniature web server system, the Analogue IO Expansion Module provides a simple means of interfacing 4 Analogue inputs, 4 digital outputs, 4 digital inputs and an ambient temperature sensor to the web server or SMS modules. Real world input or output signals connected to the expansion module are easily displayed or changed in any web browser using only simple HTML commands.



The analogue IO module stacks directly onto the PICOSERV server module to provide a 'no development' route to providing four analogue input signals, four logic level digital inputs, four logic level digital outputs and an on-board ambient temperature sensor. Additionally all inputs can be assigned to a time-qualified, adjustable threshold alarm status. Up to eight analogue IO modules can be configured in one system, providing up to 32 analogue inputs.

Analogue Inputs

Four analogue input ports which can be software (browser) configured to operate in one of three different modes.

Mode1

0-4V input with a 4mV resolution.

Mode2

0-2V input with a 2mV resolution.

Mode3

Temperature input with a 0.2°C resolution when using a 10mV/°C sensor.

All analogue inputs have a programmable offset of +/- 9.999V or +/-999.9°C, depending on the input mode selected.

Digital Outputs

Four logic level output signals, capable of sinking or sourcing 25mA per output.

Digital Inputs

Four logic level digital inputs protected to +/- 30VDC

Alarm Status

All input ports have a programmable alarm status with optional time qualification from 1 to 9999 seconds. Analogue ports have separate high and low alarm thresholds programmable between +9.999V and 9.999V or +999.9°C and -999.9°C, depending on the input mode selected.

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PICO SERV Analogue I/O Interface Module

Specifications

Interfaces

I ² C Serial bus interface	Used for parameter and data exchange between analogue IO module and PicoServ server module or SMS gateway module.
Speed	Conforms to Philips I ² C bus specification.
Addresses	750Kbps.
Connector	up to 8. 14 pin 0.1" stackable header.

Analogue Inputs

Number	4.
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Input Levels

Mode 1	0-4 VDC, 4mV resolution. -9.999V to +9.999V.
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Mode 2	0-2 VDC, 2mV resolution.
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Modes 1 and 2

User Offset	-9.999V to +9.999V.
Basic accuracy	1%.
High Alarm Threshold	-9.999V to +9.999V.
Low Alarm Threshold	-9.999V to +9.999V.
Alarm Delay	0-9999 seconds.

Mode 3	-40 to +125°C, 0.2°C resolution using LM50 or similar 10mV/°C sensor with 500mV or 750mV offset.
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User Offset	-999.9°C to +999.9°C.
Basic Accuracy	Depends on sensor used.
High Alarm Threshold	-999.9°C to +999.9°C.
Low Alarm Threshold	-999.9°C to +999.9°C.
Alarm Delay	0-9999 seconds.
Input Impedence	>10Mohm, all modes.
Maximum Input Level	+/- 12VDC, all modes.

Digital Inputs

Number	4.
Input Levels	Logic 1 = >2V. Logic 0 = <1V.
Input Impedance	10Kohm.
Maximum Input Level	+/- 30VDC.
Alarm Level	Configurable Hi or Lo.
Alarm Delay	0-9999 seconds.

Digital Outputs

Number	4.
Output Levels	Logic 1 = +5V. Logic 0 = 0V.
Maximum Source Current	25mA.
Maximum Sink Current	25mA.

Ambient Temperature

Sensor

Number	1. An on-board temperature sensor provides an ambient temperature reading direct from the module.
Range	-40 to +125°C, 0.2°C resolution.
Basic Accuracy	+/- 3°C.
User Offset	-99.9°C to +99.9°C.

Electrical

Power requirements	6-18 VDC, 20mA.
Power consumption	140mW.

Environmental

Operating Temperature	0 to +70°C
Storage Temperature	-40 to +100°C.
Humidity	0-95% non-condensing.

Dimensions

	70mm x 50mm x 16mm (2.75" x 2" x .625")
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