Micronix PV-2019

12-bit Data acquisition module with Analogue and digital I/O's

Micronix PV-2019 is a highly compact PC/104 board combining 16 voltage and 8 current inputs (0-20mA) with 12-bit resolution plus 8 digital inputs and 8 digital outputs on just one board. Additionally two analogue channels voltage and/or current outputs and two 32-bit counters add to the versatility of the board. Micronix PV-2019 is the ideal solution for data acquisition and machine and process control applications, combining multiple I/Os in very limited space.

Micronix PV-2019 Features

- 12-bit resolution of A/D and D/A
- 16 analogue voltage inputs, single-ended
- 8 analogue 0-20mA inputs
- 2 analogue voltage/current outputs
- 8 opto-isolated digital inputs
- 8 opto-isolated digital outputs
- 2 counter inputs, opto-isolated
- Drivers for Windows NT, 9X and Linux
- Low power
- Industrial grade temperature range (-20°C to +70°C)
- Low cost

Description

Micronix PV-2019 is the most powerful of PC/104 data acquisition modules. The board is a microprocessor based auto calibrating system which needs no potentiometer adjustment. Thus it is ruggedized and resistant to vibrations in the industrial environment. It combines the highest amount of I/O features in a single board and requires +5V only from the system power supply. The board can be configured for 16 different I/O-addresses 200H – 338H.

Rugged design for every industrial and mobile solution

Micronix PV-2019 is designed with real-world applications in mind. The analogue inputs are protected against voltages up to ±35V, even with the power off. The digital outputs reset to 0 on power up or system reset to force the board into a known state and prevent undesirable system behaviour. The board's single-supply and low-power design minimises the cost of the system power supply. And perhaps best of all, Micronix PV-2019 comes as standard in Industrial (-20-70° C) temperature ranges.

Micronix PV-2019 Specifications

Analogue voltage inputs

Number of channels:	16, single ended
Resolution	12 bits
Accuracy	0.25 %
Conversion time	22 µs typical
Ranges	0-1V, 0-2.5V, 0-5V or 0-10V
Max. input voltage	±35V
Input impedance	1 MΩ // 100pF

Analogue current (0-20mA) inputs

Number of channels	8, single ended
Resolution	12 bits
Accuracy	0.25 %
Conversion time	22 µs typical
Ranges	0-20mA
Input impedance	50Ω // 100pF

Analogue outputs

Number of channels	2,
Resolution	12 bits
Accuracy	0.25 %
Speed	25 µs
Ranges, software selectable	0-10V, 0-20mA and 4-20mA,
Output source current	8mA (Voltage outputs)

Digital inputs

Number of channels	8
Max. input voltage	±30V
Logic "1"	Uin > ±10V
Logic "0"	Uin < ±1V
Max. input current (mA)	(Uin – 1.3)/10kΩ
Isolation voltage	1000 Vrms

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Micronix PV-2019 Specifications --- continued---

Digital outputs

Number of channels	8 (Open collector)
Max. output voltage	80V
Max. output current (one ch.)	10 mA
Max. output current (all ch.)	10 mA/ch.
Isolation voltage	1000 Vrms

Counters

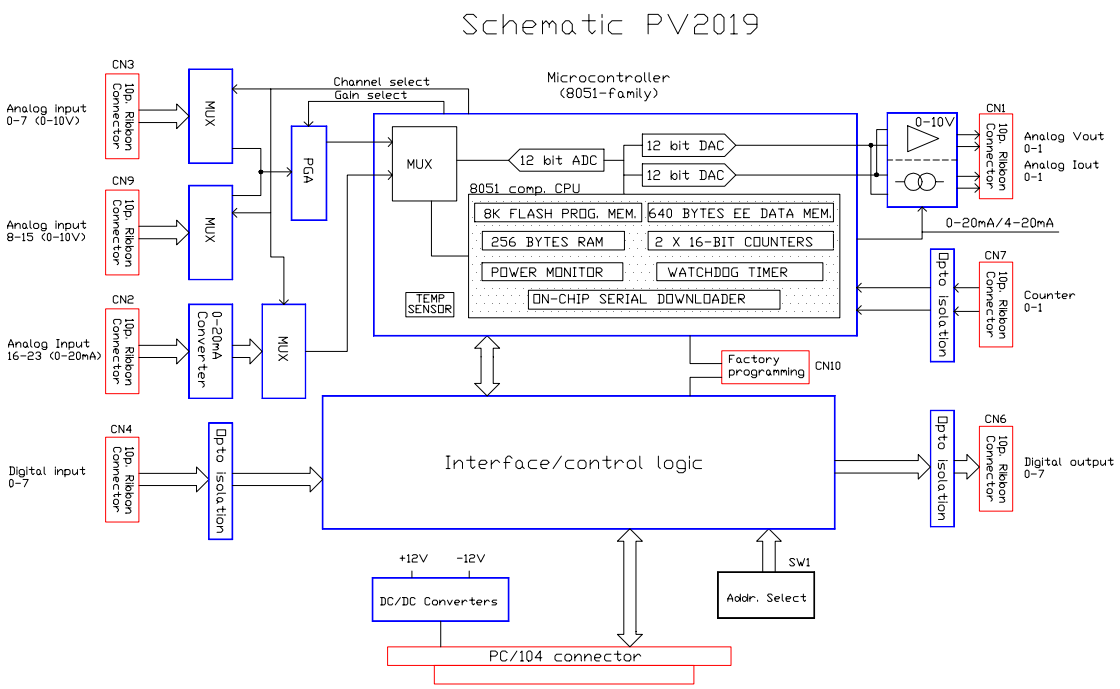
Number of channels	2
Counting frequency	10 kHz
Counting range	32-bit (0-4294967295)
Logic "1"	Uin > +10V
Logic "0"	Uin < +1V
Max. input current (mA)	(Uin – 1.3)/10kΩ
Isolation voltage	1000 Vrms

Power consumption: 5V, 260mA (all outputs off) to 630mA (all outputs on).

Environmental

Operating temperature	-20° to 70°C	Dimensions	96x90x15mm
Storage temperature	-40° to 85°C	Weight (g)	95 g
Humidity	0 to 90% non-condensing		

Drawing:



Ordering codes

Model no.	Description
PV-2019	PC/104 board with 24 AI, 2 AO, 8 DI, 8 DO and 2 Counter inputs
PV-2019A	PC/104 board with 8 AI (voltage), 8 DI, 8 DO and 2 Counter inputs
/-S	PV-2019(A) with stack-through connector

Cables

CDB-9F	Ribbon cable with DB-9 connector (F) for PV-2019, 30 cm
CDB-9-2019	Cable-kit for PV-2019 with DB-connectors: 7 cables with DB-9 connectors (F)

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