Enhancement Cards
IPC/AIO4 Series
Industrial analog I/O module

I2C

USB

IPC/AI4VD-101E

I2C

USB

IPC/AI4VT-101E

10-pin Weidmüller Plug
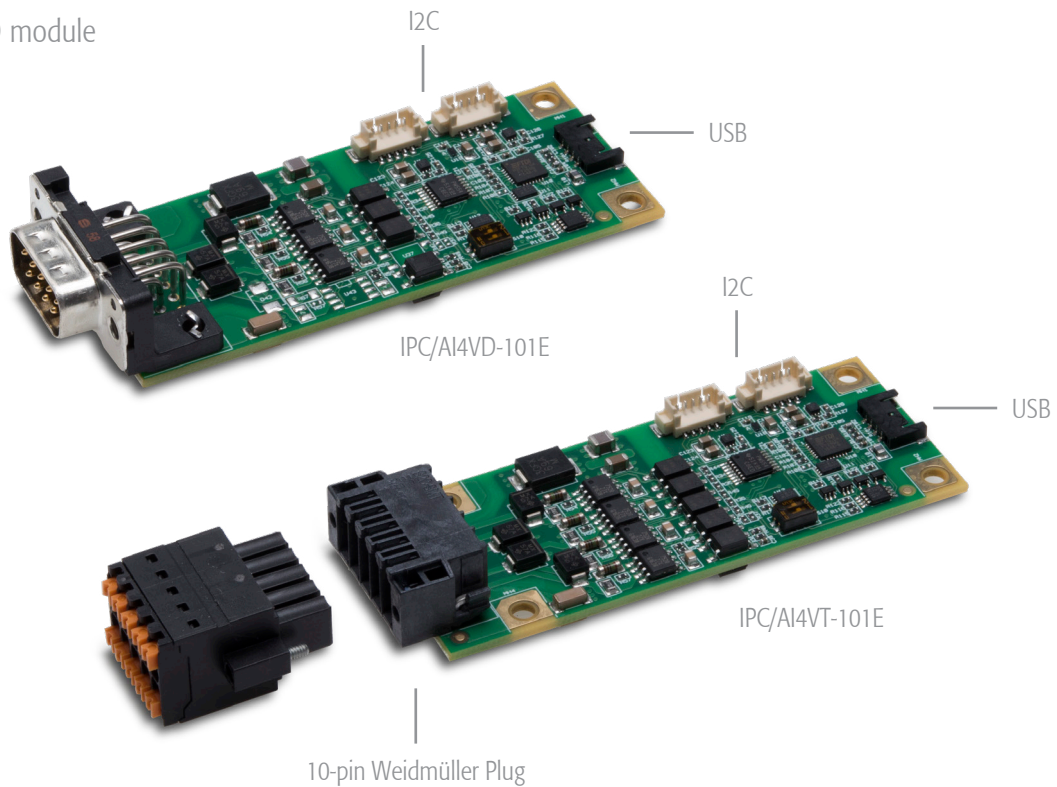
IPC/AIO4

The IPC/AIO4 Series brings analog inputs to Syslogic embedded products.
Depending on customer requirements, isolated analog inputs or outputs can be used standalone with this card, or directly be included into a Syslogic embedded system. Together this offers a flexible, low-cost, low-power I/O extension.

- Extended temperature range
- 24/7 continuous operation
- 4 analog inputs
- 16 bit resolution
- Galvanic isolation

Windows 10

CE

Product Highlights

Low Power
Fanless design
Industrial electronics design
Operating temperature -40°C to +85°C
Galvanic Isolation
Long term availability

Product Feature

4 analog inputs
Bipolar and Unipolar input range
USB or I2C data interface
Compact dimensions
DSUB9 or Terminal Block connection

Markets / Applications

Industrial automation
Railway industry
Transportation and vehicle construction
PLC replacement
Cleantech
Maritime

Reliable embedded computer and display solutions.

Order Code	IPC/AI4VD-101E[1]	IPC/AI4VT-101E[1]	PC/AI4ID-101E[1]	IPC/AI4IT-101E[1]
Analog inputs				
Analog input channels	4	4	4	4
Ranges unipolar (software selectable), common ground	0-10.24VDC | 0-5.12VDC | 0-2.56VDC	0-10.24VDC | 0-5.12VDC | 0-2.56VDC	0-25.6mA | 0-12.8mA	0-25.6mA | 0-12.8mA
Ranges bipolar (software selectable), common ground	±10.24VDC | ±5.12VDC | ±2.56VDC	±10.24VDC | ±5.12VDC | ±2.56VDC	±25.6mA | ±12.8mA | ±6.4mA	±25.6mA | ±12.8mA | ±6.4mA
Resolution	16 bit	16 bit	16 bit	16 bit
Sampling Rate	max. 500 ksps	max. 500 ksps	max. 500 ksps	max. 500 ksps
Differential nonlinearity	±1.5 LSB	±1.5 LSB	±1.5 LSB	±1.5 LSB
Gain Error	±0.05%FSR	±0.05%FSR	±0.1%FSR	±0.1%FSR
Overvoltage protection	12VDC	12VDC	12VDC	12VDC
Input impedance	1 Mohm	1 Mohm	1 Mohm	1 Mohm
Galvanic isolation (process to Logic)	1000Vrms	1000Vrms	1000Vrms	1000Vrms
Analog outputs				
up to 4 analog outputs on request	–[1]	–[1]	–[1]	–[1]
Communication Interfaces				
Process Interface Connection	DSUB9 male	2x5 Pin Terminal Block	DSUB9 male	2x5 Pin Terminal Block
Mating plug type for process interface connection	any DSUB9 female	Weidmüller B2CF 3.5/10/180F SN BK	any DSUB9 female	Weidmüller B2CF 3.5/10/180F SN BK
USB 2.0 interface (to host computer) [2]	•	•	•	•
I2C interface (to additional Syslogic I/O extensions) [3]	•	•	•	•
Technical Data				
Dimensions W x D x H [mm]	89 x 32 x 15	89 x 32 x 15	89 x 32 x 15	89 x 32 x 15
Net weight [gram]	42	42	42	42
Input voltage non-isolated (over USB or I2C)	5VDC	5VDC	5VDC	5VDC
Power consumption typ. in Watt @ 5V	0.5	0.5	0.5	0.5
Software support				
Linux Kernel 2.4.x or higher	•	•	•	•
Windows Embedded Standard 7	•	•	•	•
Windows 10 IoT	•	•	•	•
Environmental Conditions				
Operating temperature (ambient)	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Storage temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Conformal coating	optional	optional	optional	optional
Shock: designed to meet EN60068-2-27	•	•	•	•
Vibration: designed to meet EN60068-2-6	•	•	•	•
EMI conformity EN55032/55035/61000-6-2/61000-6-4	•	•	•	•
MTBF ~200 000h @ 25°C (22.8 years)	•	•	•	•

[1] Please contact factory for minimum order quantities

[2] on internal connector | Mating plug type: Molex Pico-Lock 504051-0401 with AWG24 contacts 504052-0098

[3] on internal connector | Mating plug type: Molex Pico-Blade 51021-500 with AWG26 contacts 50079-8100

syslogic
industrial computing