

Product List

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Technical modifications are subject to change.



JÄGER

Computergesteuerte
Messtechnik GmbH

Rheinstrasse 2-4
64653 Lorsch, Germany

Phone: +49 6251-9632-0
Fax: +49 6251-9632-99
info@ADwin.de
www.ADwin.de

ADwin-Gold III

ADwin-Gold III

ADwin-Gold III	Prozessor ZYNQ 1GHz RAM, 64Bit FPU, 1x Event 16 analoge Eingänge $\pm 10V$, 2x 18Bit ADC (MUX 5 μ s) 2 analoge Ausgänge $\pm 10V$, 16Bit DAC (3 μ s) 16 digitale Eingänge, 16 digitale Ausgänge, 4 Diff IO 1x LS-Bus, Ethernet zum PC, Versorgung 10-28V
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ADwin-Gold III Erweiterungen (Bestelloptionen des Standardsystems, spätere Nachrüstung nicht möglich)

Gold III-F	ADC ZEITSYNCHRON 1,25 μ s für 2 Kanäle (5 μ s für 16 Kanäle)
Gold III-CNT-D	4x Zähler, (4x DIFF, zwei davon auf HTL umschaltbar), 4x SSI
Gold III-CNT-T	4x Zähler, (2x TTL, 2x Comp), 6x PWM Ausgang), FIFO
Gold III-CNT-I	4x OPT 24V (ein OPT Zähler), 4x TRA-Ausgänge
Gold III-CNT-D-T-I	4x Zähler, (4x DIFF, zwei davon auf HTL umschaltbar), 4x SSI 4x Zähler, (2x TTL, 2x Comp), 6x PWM Ausgang), FIFO 4x OPT 24V (ein OPT Zähler), 4x TRA-Ausgänge
Gold III-DA4	Erweiterung auf 4 analoge Ausgänge, 16Bit DAC (3 μ s)
Gold III-DA8	Erweiterung auf 8 analoge Ausgänge, 16Bit DAC (3 μ s)
Gold III-Boot	Bootloader für Ethernet zum Betrieb ohne PC, EEPROM-Parameterspeicher
Gold III-CAN	1x RS232/RS485 und 2x CAN
Gold III-CAN-LS	1x RS232/RS485 und 2x CAN low speed
Gold III-EtherCAT-SL	1x EtherCAT Slave-Schnittstelle Größe Eingang und Ausgang wählbar max. 1280 Byte
Gold III-Profi-SL	1x Profibus-DP Slave-Schnittstelle, 9-pol. Dsub-Buchse, Größe Eingang und Ausgang wählbar max. 244 Byte
Gold III-Profi-IRT-CU	1x Profinet-IRT-Schnittstelle, CU-Kabel Größe Eingang und Ausgang wählbar max. 1280 Byte
Gold III-Profi-IRT-FO	1x Profinet-IRT-Schnittstelle, Lichtwellenleiter Größe Eingang und Ausgang wählbar max. 1280 Byte
Gold III-Ethernet/IP	1x Ethernet/IP Slave-Schnittstelle

Zubehör

Gold III-Pow	Netzteil, 12V DC Spannungsversorgung für ADwin-Gold III
Gold III-Pow-Mount	Netzteil für DIN Montage, 24V DC Spannungsversorgung für Gold III
Gold III-Mount	Hutschienenmontage für das ADwin-Gold III
Gold III-M-Bracket	Montagewinkel für ADwin-Gold III
HSM-24V	32 Digital-I/Os, 24V Pegel, in 8er Gruppen konfigurierbar Hutschienenmodul für LS-Bus-Schnittstelle, Schraubklemmanschluss
ADbasic	Schnelles Echtzeit-Entwicklungstool für die ADwin-Systeme, Version 6

ADwin-X-A20

ADwin-X-A20

ADwin-X-A20-M1	CPU ZYNQ, ARM Dual Cortex-A9, 667MHz, 64-bit FPU, 1GB RAM Ethernet to the PC, 1x Event, 8x TTL-IO, 1x LS-Bus (chassis 215x125x47) 8 analog inputs $\pm 10V$ 18-bit ADC (MUX 5 μs) 2 analog outputs $\pm 10V$ 16-bit DAC (3 μs), supply voltage range 10-28V
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ADwin-X-A20 Options

A20-F	ADC TIME SYNCHRONOUS (5 μs for 8 analog inputs)
A20-D	2x CNT-D counters 32-bit up/down, period, clock, 1x SSI (7x RS422, 2x RS485)
A20-T	32TTL-IO, 2x CNT-T
A20-C	112x IO 30V/2 μs switching threshold 0-5V, 2x CNT-C, FIFO 64-bit
A20-DCT	2x CNT-D counters 32-bit up/down, period, clock, 1x SSI (7x RS422, 2x RS485) 32TTL-IO, 2x CNT-T, FIFO 64-bit 12x IO 30V/2 μs switching threshold 0-5V, 2x CNT-C
A20-COM	2x CAN, 1x RS232
A20-Profibus-SL	1x Profibus-DP slave interface, 9pin DSub
A20-EtherCAT-SL	1x EtherCAT slave interface, RJ45 connector
A20-Profinet-IRT-FO	1x Profinet-IRT interface, fibre optic
A20-Profinet-IRT-CU	1x Profinet-IRT interface, CU-cable
A20-Boot	Bootloader for stand-alone operation without PC

Accessories

A20-Mount	DIN-rail installation kit for the ADwin-A20 system
A20-Pow	External power supply 12V DC for ADwin-A20
A20-Pow-Mount	External power supply 24V DC for mounting on DIN-rail, for ADwin-A20
HSM-24V	32 digital I/Os, 24V level, configurable in groups of 8 DIN-rail module for LS-Bus interface, screw-type connector
ADbasic	Fast real-time development tool for ADwin systems, version 6

ADwin-Gold II

ADwin-Gold II

ADwin-Gold II	1 processor ADSP, 32-bit, 300MHz, 768KB int./256MB ext. RAM, 1 x event input 16 analog inputs $\pm 10V$ multiplexed to 2x 18-bit ADC (2 μ s) 2 analog outputs $\pm 10V$, 16-bit DAC (3 μ s) 16 digital inputs, 16 digital outputs 1 TiCo processor 50 MHz 56kB RAM, input FIFO 2x LS-Bus, Ethernet interface to the PC supply voltage range 10-28V
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ADwin-Gold II Options (Options for the standard system, later upgrading is not possible)

Gold II-CNT	4x 32-bit up/down counters/period (RS422), 4-edge evaluation, clock/direction, simultaneous period width measurement 4x SSI decoders, 6x PWM outputs
Gold II-CAN	2x CAN-Bus, 2x RS232/485
Gold II-CAN-LS	2x CAN-Bus (Low-Speed), 2x RS232/485
Gold II-DA4	Expansion to a total of 4 analog outputs, 16-bit DAC (3 μ s)
Gold II-DA8	Expansion to a total of 8 analog outputs, 16-bit DAC (3 μ s)
Gold II-Boot	Bootloader option, for Ethernet, for stand-alone operation without PC EEPROM parameter memory, fetch / write support for S7 SPS
Gold II-Storage-16	Memory card 16 GB flash memory, real-time clock
Gold II-Profibus	1x Profibus-DP Slave interface, 9pin D-SUB socket
Gold II-DeviceNet	1x DeviceNet slave interface, 5pin DeviceNet screw-type connector
Gold II-EtherCAT	1x EtherCAT slave interface, RJ45 connector
Gold II-Profinet-IO	1x Profinet-IO slave interface, RJ45 connector
Gold II-Ethernet/IP	1x Ethernet/IP Slave interface

Accessories

Gold II-Pow	External power supply 12V DC for ADwin-Gold II
Gold II-Pow-Mount	External power supply 24V DC for mounting on DIN-rail, for ADwin- Gold II
Gold II-Mount	DIN-rail installation kit for ADwin-Gold II
Gold II-M-Bracket	Mounting brackets for ADwin-Gold II
HSM-24V	32 digital I/Os, 24V level, configurable in groups of 8 DIN-rail module for LS-Bus interface, screw-type connector
ADbasic	Fast real-time development tool for ADwin systems, version 6

ADwin-Gold

ADwin-Gold

	System features ADwin-Gold : 1 processor ADSP21062, 32-bit, 40MHz, 256KB int./16MB ext. RAM, 1x event input 16 analog inputs $\pm 10V$ multiplexed to 2x 16-bit ADC (5 μ s), 2x 14-bit ADC (0.5 μ s), 2 analog outputs $\pm 10V$ 16-bit DAC (3 μ s), 16 digital inputs, 16 digital outputs , supply voltage range 10-28V
ADwin-Gold-ENET	ADwin-Gold with Ethernet interface (10/100 MBit/s) to the PC BNC sockets for analog signals
ADwin-Gold-D-ENET	ADwin-Gold with Ethernet interface (10/100 MBit/s) to the PC D-SUB sockets for analog signals

ADwin-Gold Options (Options for the standard system, later upgrading is not possible)

Gold-CO1	4x 32-bit up/down counters/period (RS422), 4-edge evaluation, clock/direction, period width measurement
Gold-CAN	2x CAN-Bus, 2x RS232/485, 4x SSI decoder (ADwin-Gold-D)
Gold-CAN-LS	2x CAN-Bus Low-Speed, 2x RS232/485, 4x SSI decoder (ADwin-Gold-D)
Gold-DA	Option: 6 additional analog outputs, 16-bit DAC (3 μ s)
Gold-Boot	Bootloader option, for Ethernet, for stand-alone operation without PC EEPROM parameter memory, fetch / write support for S7 SPS
Gold-MEM64	Memory expansion from 16MB ext. memory to 64MB and memory expansion from 256KB int. memory to 512KB

Accessories

Gold-Mount	DIN-rail installation kit for ADwin-Gold
Gold-M-Bracket	Mounting brackets for ADwin-Gold
Gold-Pow	External power supply 12V DC for ADwin-Gold
ADbasic	Fast real-time development tool for ADwin systems, version 6

ADwin-light-16

ADwin-light-16

	System features ADwin-L16: 1 processor ADSP21062, 32-bit, 40MHz, 256KB / 16MB RAM, 1x event input, 8 analog inputs $\pm 10V$ multiplexed to 16-bit ADC (2 μ s), 2 analog outputs $\pm 10V$ 16-bit DAC (3 μ s), 6 (4) digital inputs, 6 digital outputs, 2x 32-bit impulse counters (TTL), 1x LS-Bus
ADwin-L16-EXT-ENET	ADwin-L16 in an external industrial enclosure (226x109x74 mm) Ethernet interface to the PC, supply voltage range 10-28V
ADwin-L16-EURO-ENET	ADwin-L16 as Euro-size board 10HP Ethernet interface to the PC

ADwin-light-16 Options (Options for the standard system, later upgrading is not possible)

L16-DIO1	1x CAN-Bus, 32 TTL-I/Os configurable in groups of 8, 2x 32-bit up/down counters/period (RS422), SSI decoder
L16-DIO1-LS	1x CAN-Bus Low-Speed, 32 TTL-I/Os configurable in groups of 8, 2x 32-bit up/down counters/period (RS422), SSI decoder
L16-DIO2	32 TTL-I/Os configurable in groups of 8, 2x 32-bit up/down counters/period (1x TTL, 1x RS422), SSI decoder
L16-DIO3	32 TTL-I/Os configurable in groups of 8
L16-PWM1	1x PWM output, 1x SPI master
L16-CO1	1x 32-bit up/down counter (TTL), 4-edge evaluation instead of 2x 32-bit impulse counters (TTL), (not with L16-DIO1, L16-DIO2 options)
L16-Boot	Bootloader option for Ethernet, for stand-alone operation without PC EEPROM parameter memory, fetch / write support for S7 SPS
L16-MEM512k	Memory expansion from 256KB int. memory to 512KB

Accessories

L16-Mount	DIN-rail installation kit for the ADwin-L16-EXT system
L16-M-Bracket	Mounting brackets for ADwin-L16
L16-Pow	External power supply 12V DC for ADwin-L16
L16-Pow-Mount	External power supply for mounting on DIN-rail, 24V DC for ADwin-L16
HSM-24V	32 digital I/Os, 24V level, configurable in groups of 8 DIN-rail module for LS-Bus interface, screw-type connector
ADbasic	Fast real-time development tool for ADwin systems, version 6

System dimensions with L16-DIO1+DIO2: ADwin-L16-EXT-ENET 226x109x104 mm	ADwin-L16-EURO-ENET 20HP wide		
System dimensions with L16-DIO3 ADwin-L16-EXT-ENET 226x109x104 mm	ADwin-L16-EURO-ENET 15HP wide		

ADwin-Pro II

Processors + Options (Options, later upgrading is not possible)	
Pro-CPU-T12-ENET	Processor ZYNQ, ARM Dual Cortex-A9, 1GHz, 64-bit FPU, 1GB RAM Gigabit Ethernet for communication with the PC, 1x Event, (Pro-II-Bus only)
Pro-CPU-T11-ENET	1 processor ADSP, 32-bit, 300MHz, 768KB int./256MB ext. RAM, 1x event input, 1 Ethernet interface (10/100MBit/s) for communication with the PC
Pro II-Boot	Bootloader option, for Ethernet, for stand-alone operation without PC EEPROM parameter memory, fetch / write support for S7 SPS
Pro II-Boot-USB	USB flash memory, min. 16GB Bootloader option, for Ethernet, for stand-alone operation without PC EEPROM parameter memory, fetch / write support for S7 SPS
Pro II-Boot-SSD	Solid state memory, SSD, min. 240GB Bootloader option, for Ethernet, for stand-alone operation without PC EEPROM parameter memory, fetch / write support for S7 SPS, 10HP
Pro II-Boot-SSD-RMV	Solid state memory, SSD, min. 240GB, removable Bootloader option, for Ethernet, for stand-alone operation without PC EEPROM parameter memory, fetch / write support for S7 SPS, 10HP
Pro II-Boot-HDD	Hard disk memory, HDD, min. 1TB Bootloader option, for Ethernet, for stand-alone operation without PC EEPROM parameter memory, fetch / write support for S7 SPS, 10HP
Pro II-Boot-HDD-RMV	Hard disk memory, HDD, min. 1TB, removable Bootloader option, for Ethernet, for stand-alone operation without PC EEPROM parameter memory, fetch / write support for S7 SPS, 10HP

Enclosures	
ADwin-Pro II	19" enclosure (84 HP, 3U), AC power supply 115/230V 14-16 slots, desktop unit, all modules mounted from the frontside
ADwin-Pro II-BM	19" enclosure (84HP, 3U), AC power supply 115/230V 13-15 slots, desktop unit, all modules mounted from the backside
ADwin-Pro II-DC	19" enclosure (84HP, 3U), DC-DC converter 10-35V 14-16 slots, desktop unit, all modules mounted from the frontside
ADwin-Pro II-light	½ 19" enclosure (42HP, 3U), AC power supply 115/230V 7 slots, desktop unit, all modules mounted from the frontside
ADwin-Pro II-light-DC	½ 19" enclosure(42HP, 3U), DC-DC converter 10-35V 7 slots, desktop unit, all modules mounted from the frontside
ADwin-Pro II-mini	Enclosure (25HP, 3U), DC-DC converter 10-35V 4-5 slots, desktop unit, all modules mounted from the frontside

ADwin-Pro II

Analog Inputs with Multiplexer	
Pro II-Aln-32/18-D	32 SE or 16 diff. analog inputs $\pm 10V$, isolated by optocouplers 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring, DSub
Pro II-Aln-32/18-D-TiCo	32 SE or 16 diff. analog inputs $\pm 10V$, isolated by optocouplers, TiCo , 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring, DSub
Pro II-Aln-8/18	8 analog inputs $\pm 10V$ 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring, LEMO-1pin
Pro II-Aln-8/18-D	8 analog inputs $\pm 10V$ 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring, DSub
Pro-II-Aln-8/18-B	8 analog inputs $\pm 10V$ 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring, BNC, 10HP
Pro II-Aln-8/18-8B	16 analog inputs (8x 8B signal conditioning) 18-bit ADC (2 μ s), block measurement, limit monitoring, DSub, 15HP
Pro II-Aln-16/18-8B	16 analog inputs (16x 8B signal conditioning) 18-bit ADC (2 μ s), block measurement, limit monitoring, DSub, 15HP
Pro II-Aln-16/18-C	16 diff. current inputs $\pm 20mA$, 500 Ω Shunt (0.05%, TK10), 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring, DSub

Analog Inputs with Multiplexer, with Filter, $\pm 10V$ / $\pm 30V$	
Pro II-Aln-8/18-LP5	8 analog inputs, cut-off frequency 5kHz , low-pass 4th order Butterworth 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring measurement range $\pm 10V$, LEMO-1pin, 10HP
Pro II-Aln-8/18-LP5-D	8 analog inputs, cut-off frequency 5kHz , low-pass 4th order Butterworth 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring measurement range $\pm 10V$, Dsub, 10HP
Pro II-Aln-8/18-LP50-TiCo	8 analog inputs, cut-off frequency 50kHz , low-pass 4th order Butterworth 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring measurement range $\pm 10V$, LEMO-1pin, 10HP, TiCo
Pro II-Aln-8/18-LP50-D-TiCo	8 analog inputs, cut-off frequency 50kHz , low-pass 4th order Butterworth 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring measurement range $\pm 10V$, Dsub, 10HP, TiCo
Pro II-Aln-8/18-LP-30V	8 analog inputs, cut-off frequency 10kHz , low-pass 4th order Butterworth 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring measurement range $\pm 30V$, LEMO-1pin, 10HP
Pro II-Aln-8/18-LP-30V-D	8 analog inputs, cut-off frequency 10kHz , low-pass 4th order Butterworth 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring measurement range $\pm 30V$, DSub, 10HP
Pro II-Aln-8/18-LP-30V-TiCo	8 analog inputs, cut-off frequency 10kHz , low-pass 4th order Butterworth 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring measurement range $\pm 30V$, LEMO-1pin, 10HP, TiCo
Pro II-Aln-8/18-LP-30V-D-TiCo	8 analog inputs, cut-off frequency 10kHz , low-pass 4th order Butterworth 18-bit ADC (2 μ s), MUX 2 μ s, block measurement, limit monitoring measurement range $\pm 30V$, DSub, 10HP, TiCo

ADwin-Pro II

Analog Inputs, Parallel Acquisition, 16-bit

Pro II-AIn-F-8/16	8 analog inputs $\pm 10V$, 8x 16-bit ADC (250 ns) , 256MB RAM averaging, min-/max, limit monitoring, LEMO-1pin
Pro II-AIn-F-8/16-D	8 analog inputs $\pm 10V$, 8x 16-bit ADC (250 ns) , 256MB RAM averaging, min-/max, limit monitoring, DSub
Pro II-AIn-F-8/16-B	8 analog inputs $\pm 10V$, 8x 16-bit ADC (250 ns) , 256MB RAM averaging, min-/max, limit monitoring, BNC, 10HP
Pro II-AIn-F-8/16-L2	8 analog inputs $\pm 10V$, 8x 16-bit ADC (250 ns) , 256MB RAM averaging, min-/max, limit monitoring, LEMO-2pin

Analog Inputs, Parallel Acquisition, 16-bit, with Filter, $\pm 10V$ / $\pm 30V$

Pro II-AIn-F-8/16-LP50	8 analog inputs, cut-off frequency 50kHz , low-pass 4th order Butterworth 8x 16-bit ADC (250ns), averaging, min-/max, limit monitoring, 256MB RAM measurement range $\pm 10V$, LEMO-1pin, 10HP
Pro II-AIn-F-8/16-LP50-D	8 analog inputs, cut-off frequency 50kHz , low-pass 4th order Butterworth 8x 16-bit ADC (250ns), averaging, min-/max, limit monitoring, 256MB RAM measurement range $\pm 10V$, DSub, 10HP
Pro II-AIn-F-8/16-LP50-B	8 analog inputs, cut-off frequency 50kHz , low-pass 4th order Butterworth 8x 16-bit ADC (250ns), averaging, min-/max, limit monitoring, 256MB RAM measurement range $\pm 10V$, BNC, 10HP
Pro II-AIn-F-8/16-LP50-L2	8 analog inputs, cut-off frequency 50kHz , low-pass 4th order Butterworth 8x 16-bit ADC (250ns), averaging, min-/max, limit monitoring, 256MB RAM measurement range $\pm 10V$, LEMO-2pin, 10HP
Pro II-AIn-F-8/16-LP-30V	8 analog inputs, cut-off frequency 10kHz , low-pass 4th order Butterworth 8x 16-bit ADC (250ns), averaging, min-/max, limit monitoring, 256MB RAM measurement range $\pm 30V$, LEMO-1pin, 10HP
Pro II-AIn-F-8/16-LP-30V-D	8 analog inputs, cut-off frequency 10kHz , low-pass 4th order Butterworth 8x 16-bit ADC (250ns), averaging, min-/max, limit monitoring, 256MB RAM measurement range $\pm 30V$, DSub, 10HP
Pro II-AIn-F-8/16-LP-30V-B	8 analog inputs, cut-off frequency 10kHz , low-pass 4th order Butterworth 8x 16-bit ADC (250ns), averaging, min-/max, limit monitoring, 256MB RAM measurement range $\pm 30V$, BNC, 10HP
Pro II-AIn-F-8/16-LP-30V-L2	8 analog inputs, cut-off frequency 10kHz , low-pass 4th order Butterworth 8x 16-bit ADC (250ns), averaging, min-/max, limit monitoring, 256MB RAM measurement range $\pm 30V$, LEMO-2pin, 10HP

ADwin-Pro II

Analog Inputs, Parallel Acquisition, 14-bit

Pro II-AIn-F-4/14	4 analog inputs $\pm 10V$, 4x 14-bit ADC , 4x50MHz , 256MB RAM averaging, limit monitoring, LEMO-1pin
Pro II-AIn-F-4/14-D	4 analog inputs $\pm 10V$, 4x 14-bit ADC , 4x50MHz , 256MB RAM averaging, limit monitoring, DSub
Pro II-AIn-F-4/14-B	4 analog inputs $\pm 10V$, 4x 14-bit ADC , 4x50MHz , 256MB RAM averaging, limit monitoring, BNC
Pro II-AIn-F-4/14-L2	4 analog inputs $\pm 10V$, 4x 14-bit ADC , 4x50MHz , 256MB RAM averaging, limit monitoring, LEMO-2pin
Pro II-AIn-F-8/14	8 analog inputs $\pm 10V$, 8x 14-bit ADC , 8x25MHz , 256MB RAM averaging, limit monitoring, LEMO-1pin, 10HP
Pro II-AIn-F-8/14-D	8 analog inputs $\pm 10V$, 8x 14-bit ADC , 8x25MHz , 256MB RAM averaging, limit monitoring, DSub, 10HP
Pro II-AIn-F-8/14-B	8 analog inputs $\pm 10V$, 8x 14-bit ADC , 8x25MHz , 256MB RAM averaging, limit monitoring, BNC, 10HP
Pro II-AIn-F-8/14-L2	8 analog inputs $\pm 10V$, 8x 14-bit ADC , 8x25MHz , 256MB RAM averaging, limit monitoring, LEMO-2pin, 10HP

Analog Inputs, Parallel Acquisition, 18-bit

Pro II-AIn-F-8/18	8 analog isolated inputs $\pm 10V$, 8x 18-bit ADC (2 μ s), limit monitoring, LEMO-1pin
Pro II-AIn-F-8/18-D	8 analog isolated inputs $\pm 10V$, 8x 18-bit ADC (2 μ s), limit monitoring, DSub
Pro II-AIn-F-8/18-B	8 analog isolated inputs $\pm 10V$, 8x 18-bit ADC (2 μ s), limit monitoring, BNC, 10HP
Pro II-AIn-F-8/18-L2	8 analog isolated inputs $\pm 10V$, 8x 18-bit ADC (2 μ s), limit monitoring, LEMO-2pin

ADwin-Pro II

Analog Outputs	
Pro II-AOut-4/16	4 analog outputs $\pm 10V$, 16-bit DAC (3 μs), LEMO-1pin
Pro II-AOut-4/16-L2	4 analog outputs $\pm 10V$, 16-bit DAC (3 μs), LEMO-2pin
Pro II-AOut-4/16-D	4 analog outputs $\pm 10V$, 16-bit DAC (3 μs), DSub
Pro II-AOut-4/16-B	4 analog outputs $\pm 10V$, 16-bit DAC (3 μs), BNC
Pro II-AOut-4/16-TiCo	4 analog outputs $\pm 10V$, 16-bit DAC (3 μs), LEMO-1pin, TiCo
Pro II-AOut-4/16-D-TiCo	4 analog outputs $\pm 10V$, 16-bit DAC (3 μs), Dsub, TiCo
Pro II-AOut-8/16	8 analog outputs $\pm 10V$, 16-bit DAC (3 μs), LEMO-1pin
Pro II-AOut-8/16-L2	8 analog outputs $\pm 10V$, 16-bit DAC (3 μs), LEMO-2pin
Pro II-AOut-8/16-D	8 analog outputs $\pm 10V$, 16-bit DAC (3 μs), DSub
Pro II-AOut-8/16-B	8 analog outputs $\pm 10V$, 16-bit DAC (3 μs), BNC, 10HP
Pro II-AOut-8/16-TiCo	8 analog outputs $\pm 10V$, 16-bit DAC (3 μs), LEMO-1pin, TiCo
Pro II-AOut-8/16-D-TiCo	8 analog outputs $\pm 10V$, 16-bit DAC (3 μs), Dsub, TiCo
Pro II-AOut-1/16	1x analog output, 50 MHz, $\pm 2V$ to 50 Ω , isolated 15ns FSR, ramp interpolation TTL I/Os 16+16, TiCo 256MB arbitrary DRAM, 10HP

Multi I/O Modules and Options

Pro II-MIO-4	16 SE or 8 diff. analog inputs $\pm 10V$, 18-bit ADC (2 μs), MUX 5 μs 4 analog outputs, 16-bit DAC (9 μs), 2x4 TTL I/Os TiCo 128KB / 4MB RAM, DSub
Pro II-MIO-4-ET1	16 SE or 8 diff. analog inputs $\pm 10V$, 18-bit ADC (2 μs), MUX 5 μs , 4 analog outputs, 16-bit DAC (9 μs), 2x4 TTL I/Os TiCo 128KB / 4MB RAM 4x transistor outputs, isolated by optocouplers, 4x 200mA 4x optically isolated digital inputs, 5V-12V-24V, 1x GND 1x 32-bit up/down counter/period (RS422), 4-edge evaluation, clock/direction, simultaneous period width measurement 1x SSI decoder, 1x EtherCAT slave, DSub, 10HP

Signal Conditioning Modules

Pro II-RTD-8	8 inputs for Pt100, Pt500, Pt1000, LEMO connector to the sensor, 10 HP
Pro II-RTD-8-D	8 inputs for Pt100, Pt500, Pt1000, Dsub connector to the sensor
Pro II-TC-8-ISO	8x thermocouple inputs, isolated , filter at 5 Hz 8x 16-bit, types -B, -E, -K, -J, -R, -S, -T
Pro II-Aln-8-ISO-mV	8x analog inputs $\pm 75mV$, isolated, filter at 6 Hz-3.5kHz max. common-mode voltage $\pm 25V$, approx. 3 μV resolution, Dsub

ADwin-Pro II

Digital I/Os	
Pro II-DIO-32	32 TTL I/Os configurable in groups of 8, input FIFO
Pro II-DIO-32-TiCo	32 TTL I/Os configurable in groups of 8, TiCo 256MB ext., input/output FIFO
Pro II-DIO-32/1-TiCo	32 TTL-I/Os individually configurable TiCo , input/output FIFO
Pro II-MIO-D12	12 transistor outputs, 12x 200mA, isolated by optocouplers 12 digital inputs, U_{IN} 5V-12V-24V, isolated by optocouplers 2x 32-bit up/down counters, 4-edge evaluation, (1x RS422, 1x 5V-12V-24V) 1x SSI decoder, TiCo , input/output FIFO
Pro II-DIO-32-TiCo-2	32 TTL-I/Os, configurable in groups of 8 TiCo-2 100MHz 640kB int., input/output FIFO 200MHz / 2047 values
Pro II-COMP-16	16 inputs, -1 to 30V (max. -2 to 32V), 50 MHz comparator input 100 MHz input FIFO, 511 value pairs, filter function switching threshold adjustable via 4x DAC
Pro II-OPT-16	16 digital inputs with optocouplers, U_{IN} 5V-12V-24V , 16x GND
Pro II-OPT-32-24V	32 digital inputs with optocouplers, input voltage 24V , 1x GND
Pro II-TRA-16	16 transistor outputs, isolated by optocouplers , 16x 200mA
Pro II-TRA-16-G	16 transistor outputs, isolated by optocouplers , 16x 200mA, low-side
Pro II-REL-16	16 relais outputs, 16x 500mA
Pro II-LS-2	2x LS bus interface, TiCo
HSM-24V	32 digital I/Os, 24V level, configurable in groups of 8 DIN-rail module for LS-Bus interface, screw-type connector

Counters	
Pro II-CNT-D	4x 32-bit up/down counters/period (RS422), 4-edge evaluation, clock/direction, simultaneous period width measurement, 2x SSI decoder, TiCo
Pro II-CNT-T	4x 32-bit up/down counters/period (TTL), 4-edge evaluation, clock/direction, simultaneous period width measurement, TiCo
Pro II-CNT-I	4x 32-bit up/down counters/period (5V-12V-24V, isolated by optocouplers, 4-edge evaluation, clock/direction, simultaneous period width measurement, TiCo

PWM	
Pro II-PWM-16	16x PWM, 32-bit, pulse-width modulated outputs (TTL)
Pro II-PWM-16-I	16x PWM, 32-bit, pulse-width modulated outputs transistor outputs, 16x 200mA, isolated by optocouplers

ADwin-Pro II

Serial and Fieldbus Modules	
Pro II-RSx-2	2x RS232/485 interface, software-selectable 9pin D-SUB connector, TiCo
Pro II-RSx-4	4x RS232/485 interface, software-selectable 9pin D-SUB connector, TiCo , 10 HP
Pro II-RS422-4	4x RS422 interface, 37pin DSub connector, TiCo
Pro II-LIN-2	2x LIN-Bus, 9pin DSub connector
Pro II-SENT-4	4x SENSOR inputs with comparator / filter according to SENT spec. sensor power supply 5V, TiCoBasic program for reading of 4x SENT sensors (in) (fast channel, serial messages, error, sensor frequency, pause pulse)
Pro II-SENT-6	6x SENSOR inputs with comparator / filter according to SENT spec., $U_{\text{vers}} 5V$, ADbasic program for reading of 6x SENT sensors, (3 μ s fast channel, serial message, error, sensor frequency, pause pulse)
Pro II-SENT-4-Out	4x SENSOR outputs according to SENT spec. TiCoBasic program for output of 4x SENT sensors (out) (fast channel, serial messages, error, sensor frequency, pause pulse)
Pro II-SPI-2-T	2x SPI interface (TTL), Master / Slave, max. 12.5MHz 8 (32) TTL I/Os, 37-pin DSub connector, TiCo
Pro II-SPI-2-D	2x SPI interface (RS422), Master / Slave, max. 12.5MHz 8 TTL I/Os, 4 (12) IOs (RS422), 37-pin DSub connector, TiCo
Pro II-CAN-2	2x CAN-Bus, High-Speed, 9pin DSub connector, TiCo
Pro II-CAN-2-LS	2x CAN-Bus, Low-Speed, 9pin DSub connector, TiCo
Pro II-CAN-FD-2	2x CAN-/CAN-FD-Bus, 9pin DSub connector, TiCo
Pro II-Flex-2	FlexRay interface, 2 controllers with 2 channels each, 9pin DSub socket
Pro II-EtherCAT-SL	EtherCAT slave interface, 16x input channels and 16x output channels, sample rate 32x10 kHz
Pro II-EtherCAT-SL-40 new	1x EtherCAT slave interface TiCo Size input and output selectable max. 1280 Bytes
Pro II-PROFI-SL	1x Profibus-DP slave interface, 9pin DSub socket
Pro II-PROFI-SL-40	1x Profibus-DP slave interface, 9pin DSub socket, TiCo Size input and output selectable max. 244 Bytes
Pro II-PROFI-IRT-CU-40	1x Profinet-IRT interface, CU-cable, TiCo Size input and output selectable max. 1280 Bytes
Pro II-PROFI-IRT-FO-40	1x Profinet-IRT interface, fibre optic, TiCo Size input and output selectable max. 1280 Bytes
Pro II-MIL-1553	1x MIL-STD-1553 interface, 1 MBit/s 2 bus connections, supports bus monitor 16-bit SMT
Pro II-ARINC-429	1x ARINC-429 interface, 1 transmitter, 2 receivers, high speed 100kHz / low speed 12.5 kHz, 25-pin Dsub connector, TiCo

Software, Service

Software	
ADbasic	Fast real-time development tool for ADwin systems, version 6
TiCoBasic	Fast real-time development tool for ADwin - TiCo
ADcandb	Software for the conversion of CANdb signal forms into ADbasic real-time functions. (Bus monitoring, editor, CANdb viewer)
ADlab	Driver for MATLAB [®] (under Windows) for operation and visualisation of ADwin -systems
ADsim	ADsim-T11 - Simulink [®] -Modelle in Echtzeit auf ADwin ADsim-Desk, ADwin-Blockset, ADwin-C-Library <i>Required: VisualDSP++ Environment 5.0 TigerSHARC[®], Real-Time Workshop Embedded Coder[®]</i>
ADsim-T12	ADsim-T12 - Simulink [®] models in real-time under ADwin ADsim-Desk, ADwin-Blockset, ADwin-C-Library
ADsim-T121	ADsim-T121 - Simulink [®] models in real-time under ADwin ADsim-Desk, ADwin-Blockset, ADwin-C-Library

Training and Customized Software Development

AD-int	1 day of engineer services at our company
AD-ext	1 day of on-site engineer services
AD-Schulung INT 1	1 day of workshop / training / service at our company for 1-3 persons
AD-Schulung INT 2	2 days of workshop / training / service at our company for 1-3 persons
AD-Schulung INT 3	3 days of workshop / training / service at our company for 1-3 persons
AD-Schulung EU 1	1 day on-site training / service for 1-3 persons (arrival/departure max. 1 day, accommodation etc. included)
AD-Schulung EU 2	(arrival/departure max. 1 day, accommodation etc. included)
AD-Schulung EU 3	3 days of on-site training / service for 1-3 persons (arrival/departure max. 1 day, accommodation etc. included)

Cable and Adapter Sets

LEMO 1pin		
Pro-CS-1	4 x 20cm (7.8 inch)	LEMO connector ↔ cable ↔ LEMO connector
	4 x 40cm (15.7 inch)	LEMO connector ↔ cable ↔ LEMO connector
Pro-CS-2	4 x 40cm (15.7 inch)	LEMO connector ↔ cable ↔ LEMO connector
	4 x 80cm (31.5 inch)	LEMO connector ↔ cable ↔ LEMO connector
Pro-CS-3	4 x 100cm (39.4 inch)	LEMO connector ↔ cable ↔ LEMO connector
	4 x 150cm (59 inch)	LEMO connector ↔ cable ↔ LEMO connector
Pro-CS-4	4 x 500cm (196.8 inch)	LEMO connector ↔ cable ↔ LEMO connector
Pro-CS-5	8 x 40cm (7.8 inch)	LEMO connector ↔ cable ↔ LEMO connector
Pro-CS-6	8 x 100cm (39.4 inch)	LEMO connector ↔ cable ↔ LEMO connector
Pro-CS-7	8 x 200cm (78.8 inch)	LEMO connector ↔ cable ↔ LEMO connector

LEMO 2pin		
Pro-CS-8	4 x 200cm (78.8 inch)	2pin LEMO connector ↔ cable ↔ no connector
Pro-CS-9	4 x 100cm (39.4 inch)	2pin LEMO connector ↔ cable ↔ 2pin LEMO connector, 4x LEMO sockets for front panel assembly included
Pro-CS-10	4 x 50cm (19.7 inch)	2pin LEMO connector ↔ cable ↔ 2pin LEMO connector, 4x LEMO sockets for front panel assembly included
Pro-CS-11	4 x 200cm (78.8 inch)	2pin LEMO connector ↔ cable ↔ 2pin LEMO connector, 4x LEMO sockets for front panel assembly included

LEMO / BNC	
Pro-AS-1	4x LEMO sockets ↔ BNC connector
Pro-AS-3	4x LEMO Y-connector (male to double female)
Pro-AS-4	4x LEMO sockets ↔ LEMO socket
Pro-AS-5	4x LEMO sockets with 50 Ω terminators
Pro-AS-6	4x LEMO connector ↔ cable ↔ BNC socket (length: 15cm/6")
Pro-AS-7	4x LEMO connector ↔ cable ↔ BNC socket (length: 100cm/3'31/2")
Pro-AS-8	4x LEMO connector ↔ cable ↔ BNC socket (length: 200cm/6'63/4")
Pro-AS-9	4x LEMO connector ↔ cable ↔ BNC connector (length: 100cm/3'31/2")
Pro-AS-10	4x LEMO connector ↔ cable ↔ BNC connector (length: 200cm/6'63/4")

Cables / Terminal Blocks for Pro-OPT-16 and Pro-TRA-16	
ADwin-Cable-1	1 m extension cable, shielded, for 37pin ADwin DSub connectors, on one end socket, on the other a connector
ADwin-Cable-2	0.5 m extension cable, shielded, for 37pin ADwin DSub connectors, on one end socket, on the other a connector
ADwin-Cable-3	0.25 m extension cable, shielded, for 37pin ADwin DSub connectors, on one end socket, on the other a connector
ADwin-AT-37M	Terminal block for 37pin male DSub connectors

General Conditions of the Company Jäger Computergesteuerte Messtechnik GmbH

The following General Conditions are contractual requirements for all agreements with the company Jäger Computergesteuerte Messtechnik GmbH (called "Jäger Messtechnik GmbH" hereafter). These terms will also be valid when a customer's order contains divergent conditions and Jäger Messtechnik GmbH does not contradict. Changes, supplementary, and second agreements need to be made in writing. The customer accepts the General Conditions when ordering the goods, at the latest however, with delivery of the goods.

These General Conditions are also valid for all development contracts which are considered accepted by Jäger Messtechnik GmbH, a supplementary agreement will be made in the case of a development contract as described below in "Conditions for Development Contracts".

Furthermore, if software is purchased we refer to the supplementary terms of the license agreement of Jäger Messtechnik GmbH.

1. Confirmation of Order

All offers made by Jäger Messtechnik GmbH are subject to change. All orders, also when accepted by representatives of Jäger Messtechnik GmbH, will only be binding for Jäger Messtechnik GmbH with its written confirmation of order or with delivery of the goods.

2. Terms of Delivery, Prices

- 2.1 Liability passes to the customer at the moment the goods are handed over for delivery.
- 2.2 If Jäger Messtechnik GmbH delivers the goods—at the customer's request—not to the customer himself but to a third party, liability and costs pass to the customer at the moment the goods are handed over to the forwarding agent.
- 2.3 The decision about the method of delivery and the choice of the means of transport is left to Jäger Messtechnik GmbH. Additional costs for a special delivery method, requested by the customer, are charged to the customer. If the customer wishes to delay the delivery, liability passes to him at the moment the goods are announced to be ready for shipment.
- 2.4 Jäger Messtechnik GmbH guarantees that a transport insurance has been settled on its own expenses to insure the goods sufficiently against damages.
- 2.5 Customs duty, V.A.T. and other expenses for import into European or non-European countries are charged to the customer..
- 2.6 Jäger Messtechnik GmbH, even if it has agreed upon keeping schedules and deadlines, cannot be held liable for delays in delivery and performance due to force majeure and events which render delivery essentially more difficult or even impossible for Jäger Messtechnik GmbH—such as subsequently occurring difficulties in providing the material, breakdown in production, strike, lockout, shortage of personnel, shortage of means of transport, official regulations, etc.—even if they occur at suppliers or subcontractors of Jäger Messtechnik GmbH. This applies also to delays in delivery and performance caused by subcontractors of Jäger Messtechnik GmbH. In such cases, the customer as well as Jäger Messtechnik GmbH may cancel the contract fully or partially because of non-performance after an adequate time. In this case Jäger Messtechnik GmbH cannot assume any liability.
- 2.7 If suppliers of Jäger Messtechnik GmbH rise the prices after a contract has been concluded, Jäger Messtechnik GmbH may pass the price increase to the customers.

3. Software

- 3.1 The customer has a single, non-exclusive, and an individual right of use regarding the software of Jäger Messtechnik GmbH. In this regard we refer to the conditions in the license agreement for software.
- 3.2 If Jäger Messtechnik GmbH renders standard software purchased from a third party to the customer, the latter gets a non-exclusive right of use, for whose contents and performance the terms of use, agreed upon with the supplier, are substantial. These terms of use will be disclosed to the customer.

4. Warranty

- 4.1 Jäger Messtechnik GmbH assumes warranty for the goods delivered insofar as the goods will be upon its own discretion fully or partially upgraded or repaired, or they will be replaced free of charge.
- 4.2 If two attempts to repair or to replace the goods fail, the customer may choose between either allowance (price reduction) or conversion (rescission of the contract).
- 4.3 Costs for an investigation carried out by Jäger Messtechnik GmbH because of an unfounded complaint are charged to the customer's account.
- 4.4 Warranty for components purchased from a third party in order to carry out an order will be assumed in such manner that Jäger Messtechnik GmbH will only pass the supplier's warranty to the customer.
- 4.5 Jäger Messtechnik GmbH does not assume warranty for the suitability of the goods regarding a certain intended purpose, if the actual purpose cannot be deduced from written instructions, delivered with the goods or if the suitability for an actual purpose has not explicitly been confirmed in written form by Jäger Messtechnik GmbH. In any case the customer himself agrees to check in advance and separately the suitability of the goods for his own intended purpose.
- 4.6 After liability has been passed to the customer, no warranty is assumed for damages, resulting from faulty or negligent treatment, inappropriate changes and repair work by the customer or a third party, or resulting from chemical, electro-chemical or other electrical influences, provided that they are not caused by Jäger Messtechnik GmbH itself.
- 4.7 All warranty or guarantee claims expire 12 months after shipment.

5. Reservation of Title

- 5.1 All title rights for the goods delivered, are reserved for Jäger Messtechnik GmbH, until payment is fully effected and all outstanding balances and accounts payable have been settled, regardless of any legal ground.
- 5.2 The customer may sell, process, or rework the goods upon reserved title rights. But title does not pass to the customer by processing the goods, contrary to § 950 of German Civil Code (so-called "extended" reservation of title). If the goods are processed with other goods belonging to the customer or upon single reservation of title, title for the new product will entirely pass to Jäger Messtechnik GmbH.

If the goods are processed with other goods delivered upon extended reservation of title, Jäger Messtechnik GmbH will obtain the co-ownership for the new product. The invoice value (V.A.T. included) of the goods delivered will be in relation to the invoice value of the processed products (V.A.T. included) at the moment of processing. By the customer's taking charge of the goods, the title for the new products will pass to Jäger Messtechnik GmbH.

5.3 Already at that moment, all the customer's claims with their entire subordinated rights resulting from reselling the goods pass to Jäger Messtechnik GmbH – regardless of their original or reworked state. The terms explained under 4.2 apply correspondingly.

5.4 Goods delivered upon reserved title rights must not be pledged or assigned to someone as a security. The customer is not entitled to pass or to pledge his claims, resulting from reselling the goods in their originate or reworked state, to a third party.

6. Limited Warranty and Claim for Damages

6.1 The customer releases Jäger Messtechnik GmbH from all charges and claims of third parties, which have been caused by violation of copyrights, rights of use, rights of privacy or other protective rights by reworking the goods delivered of Jäger Messtechnik GmbH.

6.2 Deficiencies of the goods delivered by Jäger Messtechnik GmbH have to be announced immediately in written form, at the latest however, within seven days after the deficiencies have been brought to your notice.

6.3 Jäger Messtechnik GmbH and its employees do not assume liability – as far as permitted by applicable law - for injuries to persons, damages in property and assets, especially for indirect and consequential damage, i. e. business interruption, loss of business profits which arise for a customer. This applies to contractual as well as to non-contractual claims of the customer. Liability with regards to the product liability law remains unaffected.

6.4 In the case a customer rescinds a contract or does not keep his commitment to take over delivery, Jäger Messtechnik may claim damages because of non-performance. In addition Jäger Messtechnik GmbH may claim damages to the amount of 25 % of the entire purchase price. A proof of damages is in this case not necessary. If it is a special design made for the customer, he has to pay the entire purchase price.

7. Place of Performance

Place of performance for deliveries and payments is the commercial domicile of Jäger Messtechnik GmbH – Lorsch.

8. Place of Jurisdiction

The only place of jurisdiction for both parties is Bensheim. But Jäger Messtechnik GmbH may also institute legal proceedings at the customer's general place of jurisdiction.

9. Application Law

The relation between the contract partners is governed by the law of the Federal Republic of Germany only, to the exclusion of the UN purchase law agreement.

10. Miscellaneous

10.1 If some terms of these General Conditions will become or are completely or partially void, the remaining terms are legally binding. Jäger Messtechnik GmbH will legally replace them by an appropriate term, which corresponds most of all to the void term.

10.2 With publishing these General Conditions, all General Conditions published earlier by Jäger Messtechnik GmbH will no longer be valid.

Supplementary Conditions for Development Contracts

Object of the Order

The object of the order results from the contents of the corresponding individual order.

Execution of the Order

Jäger Messtechnik GmbH warrants the accurate and appropriate execution of the order, according to the present

state of the art.

The customer will contribute to the successful execution of the order to the best of his abilities and will make available notably all necessary documents, his own knowledge, experience etc.

Success of the Development

Jäger Messtechnik GmbH does not assume liability for the success of a development, if the success has not or not completely been reached because of reasons which have not been discernible at contract conclusion.

Costs of Development /Time of Development

If Jäger Messtechnik GmbH recognizes that the order cannot be executed in the period of time agreed upon and/or at the price agreed upon, a supplementary agreement will be made by the contract partners about how the work will be continued and about the fact of paying the costs. If the contractual partners do not come to an agreement on this subject, Jäger Messtechnik GmbH may cancel the development contract and has the right to claim the charges for the development effort.

Secrecy, Publication

Jäger Messtechnik GmbH will not communicate customers' information - characterized as secret – to third parties, not even so after the development contract has been settled, as far as they are not known in public. The customer has the same obligation toward Jäger Messtechnik GmbH.

The customer may publish development results with mentioning the author and after prior agreement of Jäger Messtechnik GmbH, if there are no conflicting reasons, (e.g. endangering patent rights registration). If publishing is made for the purpose of advertizing, mentioning the author is on the request of Jäger Messtechnik GmbH not permitted.