ADwin

ADwin systems are used by engineers and scientists for data acquisition, automation and Real-Time control applications. **ADwin** always provides a very accurate, precise and deterministic timing, with a high speed process execution.

ADwin-X is the newest member of the **ADwin** Real-Time systems family. It is compact and is designed for OEM applications to be used inside machines and devices. Like all **ADwin** systems it executes a fast, robust and flexible Real-Time code.

There are standard versions of *ADwin-X, as well as* fully customized versions for OEM series applications.

ADwin-X is free programmable by the user. The software of the system can be designed using the **ADbasic** tool chain or Matlab® /Simulink® and it can be adapted just in software for many kinds of applications and solutions. For the data exchange with a PC. all drivers are available for the **ADwin-X**.

In general, **ADwin** offers more than 25 years of experience in automation and deterministic Real-Time applications. With software solutions since 1987, and with **ADwin** hardware systems since 1992, many thousands of users and applications worldwide rely on these precise and robust systems.

ADwin systems are the core of various test stands, machines and scientific experiment controls.

Application Fields

- Test stand control and data acquisition
- Automotive and Aerospace test stands
- Dynamic component testing
- Material endurance tests
- Fast machine control applications
- Scientific and industrial research
- Production line automation systems
- Laboratory and mobile systems
- EOL – End of Line testing

Real-Time Functions

- Intelligent data acquisition
- Fast digital closed loop controller
- Multi axis controller, PID and others
- Online analysis of measurement data
- Complex trigger applications
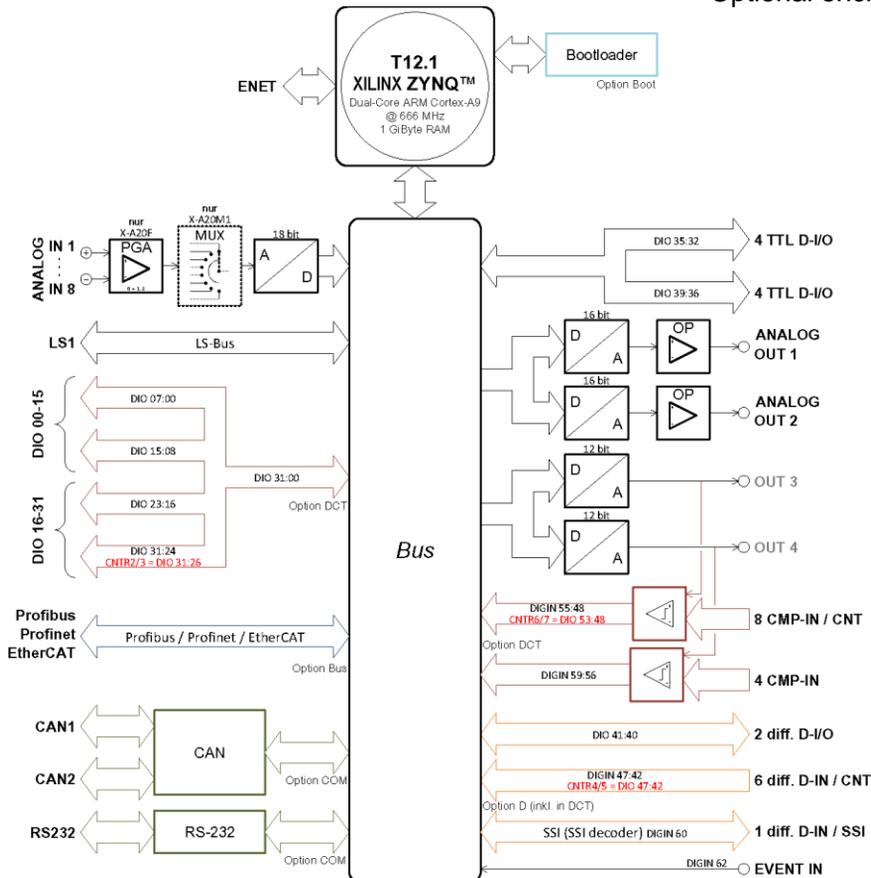- Online data reduction
- Signal generation, arbitrary, adaptive

8 analog in 18bit, +/-10V, MUX alternatively, optional: **8 analog in** 18bit, +/-10V, Parallel	**ADwin-X** CPU T12.1 CPU ZYNQ, ARM Dual Cortex-A9, 667MHz, 64-bit Floating Point Unit, 1GB RAM, Fast RT-OS 1GBit Ethernet to the PC	**32 DIO** TTL	**2 CAN**	**2 Counter** TTL, Up/down, quadrature, PWM, pulse
		1 RS232	**1 ETHERCAT**	**2 Counter** diff TTL, PWM, pulse, Up/down, quadrature,
2 analog out 16bit, +/-10V *1)		**7+2 DIO** diff TTL	**1 PROFIBUS**	**2 Counter** 12V/24V, PWM, pulse, Up/down, quadrature
4+4 TTL DIO **1 EVENT In**	**Bootloader**	**1 PROFINET**		**32+ DIO 24V** Up to 15x32 channel 24V I/O via LS bus
Standard		Optional		

ADwin

ADwin-X-A20

Standard version

- CPU: XILINX ZYNQ™ with Dual-Core ARM Cortex-A9, 64-Bit FPU (double precision), 32 Bit Integer, 667 MHz, 1 Gigabyte main memory for program code and measurement data
- Ethernet interface (1000Mbit/sec) for PC communication
- 8 analog inputs 18 Bit, 5 µs, ±10V
- 2 analog outputs 16 Bit, ±10V
- 2 outputs comp. threshold 10 Bit, low speed
- 8 TTL digital channels inputs/outputs
- 1 trigger input (Event), pos. TTL logic
- serial LS-bus interface for module HSM-24V
- Dimensions: 215 × 125 × 47 mm

Ordering options

- 8 analog inputs wit parallel acquisition @ 5 µs for 8 channels
- Counter blocks, each with up/down counter (A/B, clock/dir), PWM counter or puls counter, 32 bit
    - 2 channels TTL
    - 2 channels differential TTL
    - 2 channels comparator inputs
- 1 SSI interface
- 32 TTL digital channels, inputs/outputs
- 8 digital inputs differential
- 2 digital comparator inputs
- 2 CAN interfaces (high speed)
- 1 RS232 interface
- 1 Profibus / Profinet / EtherCAT
- Bootloader for stand-alone operation
- Optional enclosure version for 19" rack

ADwin-X-A20	
ADwin-X-A20-M1	CPU ZYNQ, ARM Dual Cortex-A9, 667MHz, 64Bit FPU, 1GB RAM Ethernet zum PC, 1x Event , 8x TTL-IO, 1x LS-Bus (Gehäuse 215x125x47) 8 analoge Eingänge ±10V 18Bit ADC (MUX5µs) 2 analoge Ausgänge ±10V 16Bit DAC (3µs), Versorgung 10-28V
ADwin-X-A20 Erweiterungen (Bestelloptionen)	
A20-F	ADC ZEITSYNCHRON (5µs für 8 analoge Eingänge)
A20-D	2x CNT-D Zähler 32Bit V/R, Periode, Takt, 1x SSI (7x RS422, 2x RS485)
A20-DCT	2x CNT-D Zähler 32Bit V/R, Periode, Takt, 1x SSI (7x RS422, 2x RS485) 32TTL-IO, 2x CNT-T, FIFO 64Bit 12x IO 30V/2µs Schaltschwelle 0-5V, 2x CNT-C
A20-COM	2x CAN, 1x RS232
A20-Profibus-SL	1x Profibus-DP Slave-Schnittstelle, 9-pol. DSub
A20-EtherCAT-SL	1x EtherCAT Slave-Schnittstelle, RJ45-Stecker
A20-Boot	Bootloader zum Betrieb ohne PC
Zubehör	
A20-Mount	Hutschienenmontage für das ADwin-A20-System
A20-Pow	Netzteil, 12V DC Spannungsversorgung für ADwin-A20
A20-Pow-Mount	Netzteil für DIN Montage, 12V DC Spannungsversorgung für ADwin-A20
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