Version 6.00.34.00:

features of version 6.00.34.00 compared to version 6.00.30.00:

(Release date: 17.08.2023)

- ADbasic 6 user interface V6.4.0.5, TiCoBasic user interface V1.6.4.47
 - new: button for copying Parameter values to clipboard
 - bugfix: messagebox of the IDE cannot be hidden any longer by the help window
- ADbasic T12 and T12.1 compiler V6.0.34.1 :
 - bugfix: occasional problem (gcc error) at generation of libraries with macros
 - bugfix: occasional problem at calculation precedence of several constants
- ADbasic T9 T11 compiler V5.0.50 , TiCoBasic compiler V1.02.42 :
 - bugfix: occasional problem at calculation precedence of several constants
- ADbasic / TiCoBasic include / library files :
 - ADwinGold.inc: bugfix: Run ProfinetIO()
 - ADwinPro2common.inc: bugfix at Profinet
 - ADwinPro2Arm.inc: new: P2 SENT Get Errorbits()
 - GoldIITiCo.inc: bugfix: DAC(), WriteDAC()
- ADwin operating system (ADwin12.BTL, ADwin121.BTL):
 - bugfix: occasional problem "Timeout error on writing ... in Function Load Process"
 - bugfix: occasional problem ("lost events" at process with Eventsource External) if also a High and a Low Priority process is running
- Developer software :
 - LabVIEW driver V3.1: "Sanitize Floating Point Values" can be deactivated now
 - Python driver V 0.18.0 : new mode: useNumpyArrays
 - please see also C:\ADwin\Developer\Python\README.txt
 - dotNET driver V1.0.77: Online Help reworked
- ADtools: TFiFo V5.24: bugfix: 64-Bit Float values have been stored as Integer-values
- ADpro.exe V5.20.1 :
 - bugfix: Pro II-DIO-32/1: configuration of channels 12-16 and 28-32
 - bugfix: Pro II-Aln: (digital) limitation values added for calibration
- Profinet: new file: GSDML-V2.33-HMS-CompactCom-40-PIR-ADwin-20230320.xml
- EthernetIP: new file: 005A000000630200.eds (for Gold-II)
- Linux, MAC OS version : adwin-compiler-6.0.32, adwin-lib-6.2.0 : brought up to date

features of version 6.00.30.00 compared to version 6.00.28.11:

(Release date: 13.12.2021)

- Windows 11: tested and approved for this operating system
- ADbasic 6 user interface V6.3.1.39 , TiCoBasic user interface V1.6.4.39
- ADbasic T12 and T12.1 compiler V6.0.30.1: new: simple calculations can now be made at Dim
- ADbasic T9 T11 compiler V5.0.49, TiCoBasic compiler V1.02.41:
 - bugfix: occasional problem if a constant contains a space
 - bugfix: occasional problem at Command Line Calling: Include file could not be found
- ADwin operating system (ADwin121.BTL): performance improvement
- ADwin driver (ADwin32/64.DLL) V 3.0.481.1 : check for invalid DATA -numbers improved
- Developer software :
 - Python driver V 0.17.2: bugfix File2Data()
 - please see also C:\ADwin\Developer\Python\README.txt
 - Java V1.6.0 beta : ADwin-X support , please see C:\ADwin\Developer\Java\readme.txt
 - Matlab driver V4.09.02 : bugfix
 - dotNET driver V1.0.77: Online Help reworked

features of version 6.00.28.11 compared to version 6.00.28.03:

(Release date: 22.04.2021)

- ADbasic 6 user interface V6.3.1.19, TiCoBasic user interface V1.6.4.19
- ADbasic / TiCoBasic include / library files :
 - new: Calc TicksToNs()
 - new: P2 Comp Set Voltage() (for module "Pro II-Comp-16")

- ADwinPro2TDrv....inc: bugfix: T11/T12 timeout at permanent maximum TiCo DRAM usage
- ADwinGoldII.inc: bugfix at transfer-parameter work arr[] of Run ProfinetIO()
- Libm_T12.a: bugfix: problem at Exp () with particular negative values
- ADwin operating system (ADwin11.BTL): bugfix: occasional problem at starting of processes
- ADwin driver (ADwin32/64.DLL) V 3.0.480.1: diverse improvements
- Developer software :
 - Matlab driver V4.09.02 : bugfix Get_Par_Block()
 - Python driver V 0.17.0: bugfix Data Type() (T12/ADwinX)

please see also C:\ADwin\Developer\Python\README.txt

dotNET driver V1.0.77: Float-QNANs are no longer converted/sanitized

features of version 6.00.28.03 compared to version 6.00.28.02:

(Release date: 01.09.2020)

- Pro II (PDF-) documentation reworked

- TiCoBasic user interface V1.6.4.4: Online Help reworked

- ADlog V1.6.0: Online Help reworked

most important features of version 6.00.28.02 compared to version 6.00.26.07:

(Release date: 27.07.2020)

- ADbasic 6 user interface V6.3.1.4 , TiCoBasic user interface V1.6.4.4 :
 - bugfix: occasional (sporadic) problem at compilation of libraries
 - checking the window position on programstart was improved
- ADbasic T12 and T12.1 compiler V6.0.28.1: improvements at #If ADwin System
- T9 T11 compiler V5.0.48: bugfix: occasional (sporadic) problem at Exit() if in Init:
- ADwin operating system (ADwin9.BTL): bugfix: occasional problem (timeout error 1 or 2) caused by SetData()
- ADbasic include files :
 - ADwinGoldII.inc: bugfix at Run ProfinetIO()
 - ADwinpro2common.inc : bugfix at Profinet
 - ADwinX.inc: bugfix at Profinet and SSI Set Clock()
- Developer software :
 - Java V1.5.2: functions are now "thread safe", please see also C:\ADwin\Developer\Java\readme.txt
- ADlog V1.6.0: support of processor T12.1 / ADwin-X; diverse improvements and bugfixes
- ADtest.exe V5.5 : bugfix: calibration of ADwin-X
- Linux, MAC OS version : adwin-compiler-6.0.26, adwin-lib-6.0.0 :
 - support of the processor T12.1 / ADwin-X
 - build-environment was changed from autotools/automake to cmake
 - USB- and Link-interface are no longer supported

most important features of version 6.00.26.07 compared to version 6.00.26.01:

(Release date: 19.12.2019)

- Processor T12.1:
 - ADwinX.inc: new: DAC32(), Write_DAC32()
 - ADwin121.BTL:
 - Boot- time optimized in some constellations
 - SetData- accesses on startindex < 0 are now prevented
 - bugfix: in context with 100 Mbit/s mode
 - a password-protected ENET interface can only be reconfigured (with a NEW password),
 - if the ADwin-X system is not yet booted
 - or within one minute after the Boot
- ADbasic 6 user interface V6.3.0.9 , TiCoBasic user interface V1.6.3.9 :
 - diverse improvements and bugfixes (among other things at the display of error messages)
- Developer software :
 - Python driver V0.16.3 :
 - additional functions for ADwin-X
 - please see C:\ADwin\Developer\Python\README.txt
 - dotNET driver V1.0.75 : diverse improvements
 - Java V1.5.1: please see C:\ADwin\Developer\Java\readme.txt

most important features of version 6.00.26.01 compared to version 6.00.22.06:

(Release date: 10.09.2019)

- Processor T12.1:
 - ADwinX.inc: may now be used also in libraries
 - ADwin121.BTL: bugfix: occasional problem on configuring the ENET interface fixed
- ADbasic 6 user interface V6.3.0.5, TiCoBasic user interface V1.6.3.5:
 - now runs under dotNet Framework 2.0 as well as 4.0
 - further diverse improvements and bugfixes (among other things at Search in files)
- ADbasic 6 T12 and T12.1 compiler V6.0.26.1 :
 - Selectcase: the value range of the Case constants is no longer restricted to 0...255
 - new: ArcTan2(), Read/Write Data X Long/Float32/64()
 - bugfixes among other things at CPU Sleep() and libraries
- T9 T11 compiler V5.0.47: improved compiler error messages
- Developer software :
 - DASYLab driver :
 - support of DASYLab 2016 (v14.x). Hint: the driver in the directory "Release7_13" must be used for older DASYLab versions
 - now all functions are able to send and receive Double
 - bugfix at "Log errors"
- ADtools: TDigit V5.23: diverse bugfixes
- ADpro.exe V5.19:
 - now runs under dotNet Framework 2.0 as well as 4.0
 - bugfix: program hung if broadcasts are not allowed (e.g. in internet)
- ADcandb V3.1.0 :
 - now runs under dotNet Framework 2.0 as well as 4.0
 - improvements at calculation functions and Transmit Dyn()

most important features of version 6.00.22.06 compared to version 6.00.22.03:

(Release date: 11.06.2019)

- Processor T12.1:
 - documentation and Online Help reworked
 - ADwin121.BTL: bugfixes:
 - occasional problem at Fifos
 - occasional problem at process with Eventsource External
- ADpro.exe V5.18: bugfix: TiCo could not be stopped

most important features of version 6.00.22.03 compared to version 6.00.17.03:

(Release date: 02.04.2019)

- ADbasic 6 T12 and T12.1 compiler V6.0.22 , ADwin121.BTL :
 - **support ot the new processor T12.1** (with 666 MHz , 1GByte, more details : see : C:\ADwin\Documents\Hardware\ ADwin-X\german\XA20_eng.pdf)
 - libraries with name *.X.bas (X=0..9) are not longer allowed
 - bugfix: occasional problem, if the installation did not take place in the default path
- ADbasic 6 user interface V6.2.0.9 , TiCoBasic user interface V1.6.2.97 :
 - bugfix: Smart format was executed also in strings
 - · further diverse improvements and bugfixes
- ADbasic T11 compiler V5.0.43 , TiCoBasic compiler V1.02.39 :
 - bugfix: occasional problem at macros (T9 to T11)
 - bugfix: occasional problem at ProcessError (TiCo, only at projects)
 - bugfix: occasional problem in Debug Mode (TiCo, only at projects)
- ADbasic / TiCoBasic include / library files :
 - support of the new module Pro II-CAN-FD-2
- Developer software :
 - dotNET driver V1.0.74 :
 - Boot and LoadProcess do not longer require exclusive read-access on binaryfiles
 - Python driver V0.16.2 : please see C:\ADwin\Developer\Python\README.txt

- JAVA V1.4.0 : support of the processor T12
- ADpro.exe V5.17: diverse improvements
- ADtest.exe V5.4.0: diverse improvements and support of ADwin-X-A20
- Fieldbus: new files:
 - GSDML-V2.33-HMS-CompactCom-40-PIR-ADwin-20180620.xml (for ADwin-X and Pro II, Profinet)
 - HMS CompactCom 40 EtherCAT 2_08.xml

(for ADwin-X and Pro II, EtherCAT)

HMSA1815.gsd

(for ADwin-X and Pro II, Profibus)

most important features of version 6.00.17.03 compared to version 6.00.15.01:

(Release date: 14.03.2018)

- ADbasic 6 user interface V6.2.0.79, TiCoBasic user interface V1.6.2.78:
 - faster start of the ADbasic / TiCoBasic user interface
 - the most important Process Options are now also displayed in the project window
 - · adaption to the various Windows display settings now also for the tool icons
 - Online Help system improved
 - further diverse improvements and bugfixes
- ADbasic T12 compiler V6.0.17.1, T11 compiler V5.0.40, TiCoBasic compiler V1.02.35:
 - new: #Begin Debug Mode Disable , #End Debug Mode Disable
 - new: #If Processor: several processor types can now be set in the same source code line
 - bugfix: generic error at processing of constants (T12)
 - bugfix: passing of String expressions to macros (T12)
 - improvement at Float constants at T11
 - bugfix at TiCo libraries
- ADbasic / TiCoBasic include / library files :
 - FFT functions at T12 : now you can choose between 64 or 32 bit functions
 - bugfix at T12: P2 SSI Set Delay()
 - new at Gold | : Init ProfinetIO(), Run ProfinetIO()
- ADwin operating system (ADwin12.BTL): bugfix at very big Processdelay
- ADwin driver (ADwin32/64.DLL): improved error handling
- Developer software :
 - dotNET driver V1.0.71 :
 - diverse improvements and bugfixes (GetBtlDirectory, GetInstallationDirectory)

 - Python driver V 0.16.0: please see C:\ADwin\Developer\Python\README.txt
 - Matlab driver V4.09.01 : Help-files updated because of ADsim-T12
- ADtools TProcess V5.24: error at the Processdelay/frequency input at T12 fixed
- ADlog V1.4.1 : occasional buffer overflow fixed
- ADtest V5.2.0: bugfix: problem, if a new (Windows) user was added
- ADwin-Speed-Test V7.0.0.7: improved error handling
- ADcandb V3.0.11: bugfix at the bus monitor
- Fieldbus: new: GSDML-V2.25-HMS-ABCC-PRT2P-20110511.xml (für Gold-II- Profinet)

most important features of version 6.00.15.01 compared to version 6.00.08.01:

(Release date: 03.03.2017)

- Windows 10: tested and approved for this operating system
 - bugfix: Device No and IP settings could get lost on major Windows 10 updates
 - bugfix: occasional crash of ADbasic user interface while using the Online Help (bug caused by Windows help system)
- ADbasic 6 user interface V6.2.0.23 , TiCoBasic user interface V1.6.2.23 :
 - new: Prebuild / Postbuild actions
 - new: switching between already used jump targets
 - new Online Help system
 - adaption to the various Windows display settings (e.g.: fontsize 125 and 150 %)
 - maximum line length was increased to 2048 characters
- ADbasic T12 compiler V6.0.15.1
 - decreased compile time for big programs
 - improvements of Stacktest and stack consumption in connection with Debug Mode
- ADbasic compiler V5.00.38 , TiCoBasic compiler V1.02.32 :

- T11: codesize is now displayed split into PM, EM, DX
- bugfix for libraries, among others for relative paths
- ADbasic / TiCoBasic include / library files:
 - bugfix: at Flexray at T12
 - new: P2 LS Reset(), LS Reset()
- ADwin driver (ADwin32/64.DLL):
 - occasional problem fixed at .IsFifo at USB
 - the memory location of the ADconfig-data (e.g. Device No, IP) was changed => an (old) copy of the ADwin32/64.dll must not be located in the application directory!
- Developer software :
 - dotNET driver V1.0.62 :
 - new: Restricted Mode can be queried
 - GetUsedStackSize now provides also values from Finish section
 - GetFreeMem provides values in bytes also at T12
- ADcandb V3.0.10: diverse bugfixes
- Linux, MAC OS Version 5.00.10.03c : adwin-lib-5.0.10 :
 - support of the processor T12
 - adwin-lib driver can be compiled with GCC5 now

most important features of version 6.00.08.01 compared to version 6.00.03.01:

(Release date: 25.05.2016)

- ADbasic 6 T12 compiler V6.0.8.1
 - bugfix at libraries
- TiCoBasic compiler V1.02.29 :
 - new: Debug Mode
- ADbasic 6 user interface V6.1.0.10 :
 - new: Stacktest (only T12)
- ADbasic / TiCoBasic include / library files :
 - bugfix: WriteDAC32(), P2 Wait mux()
 - new: P2_LIN_Ch_Msg_Read_Cnt(), P2_LIN_Msg_Read_Status()
 - new: P2_TiCo_Get_Process_Error(), TiCo_Get_Process_Error()
- ADwin operating system (ADwin12.BTL): changes for Stacktest; bugfix: cache management
- ADwin driver (ADwin32/64.DLL) : bugfix: Workload() (only T12)
- Developer software :
 - dotNET driver V1.0.59.0 : T12 support (double functions)
 - Matlab driver V4.09.00: T12 support (double functions); creation of Standalone EXE now feasible
 - Labview driver V3.1 : adaptions and new functions at T12
 - C-driver V2.01 : bugfix and small corrections
- ADtools TProcess V5.20: bugfix: Processdelay conversion at T12
- ADpro V5.14: bugfixes: Pro II-CNT, Pro-DIO
- ADcandb V3.0.7: now also for T12

most important features of version 6.00.03.01 compared to version 6.00.01.01:

(Release date: 18.09.2015)

- ADbasic 6 T12 compiler V6.0.3.1
 - occasional problem fixed at optimization >= 2
 - bugfix at libraries, whose filename contains a space or a period
- ADwin driver (ADwin32/64.DLL) : USB : memory access violation fixed at Boot () function

most important features of version 6.00.01.01 compared to version 5.00.29.00 :

(Release date: 17.07.2015)

- ADbasic 6 **T12** compiler V6.0.1, ADwin12.BTL: (on the CD-Rom for the first time)
 - support of the new processor T12 (with 1 GHz, 1GByte, more details: see:
 C:\ADwin\Documents\Hardware\ADwin-PRO\english\ProII-HW eng.pdf)
- ADbasic 6 user interface V6.0.0.17, TiCoBasic user interface V1.5.0.17; T12 support
- ADbasic / TiCoBasic include / library files: T12 support
 - ADwinPro2.inc: bugfix: P2_SPI_Master_Set_Clk_Wait()

ADwin driver (ADwin32/64.DLL, ADTCP32/64.DLL): higher ENET data transmission rate

Developer software: T12 support (double – functions)

C - driver V2: now also support of multi-threading applications

• C - driver V1 : still available for compatibility reasons

- ADlog V1.3.0 : T12 support - ADEthFlash V3.11 : T12 support

- ADconfig V3.27: bugfix at the input field of "Network Timeout"

Subnet Mask is checked more strictly

- ADpro V5.12 : rudimental T12 support

- ADwin-Speed-Test V6.0.0.1: more values for "Number of values to be transferred"

- ADcandb V3.0.6.26779

most important features of version 5.00.29.00 compared to version 5.00.28.09:

(Release date: 22.12.2014)

Kallisté for ADwin V2.6.6.42 : (on the CD-Rom for the first time)
 ADcandb V2.1.4.18658 : (now also available on this CD-Rom)

- ADbasic 5 compiler V5.00.29 , TiCoBasic compiler V1.02.24 : diverse bugfixes :
 - occasional problem, if (Far-)East languages are used in Regional Settings of Windows
 - TiCo libraries
- ADbasic 5 user interface V5.2.0.21, TiCoBasic user interface V1.4.0.21:
 - now also the column widths of the Project Window are memorized
 - new at TiCoBasic: progress bar at programing of the Bootloader
- ADbasic / TiCoBasic include / library files :
 - EEPROM_Support.inc : new: ENET3 / S-ATA / USB-support
 - ADwinPro2.inc: bugfix: P2 SENT Set Serial Message Data()
 - MIO_TiCo.inc, SPI_TiCo.inc: bugfix: MIO Get Digout Long(), Get Digout Long()
- ADwin driver (ADwin32/64.DLL): ENET interference immunity of Boot () function was improved
- Developer software :
 - Matlab driver V4.08.00: bugfixes at ADwin Init (error messages: "winqueryreg" and "wd")
- ADtools TFiFo V5.17: bugfix: the Units of the columns have not been memorized
- ADtools TString V5.17: bugfix: Windows font sizes 125 and 150 % have not been supported
- ADlog V1.2.1 : internal performance improvements
- ADconfig V3.25 : improved error message at wrong password
- ADpro V5.12 : detection of : *Pro II-DIO-8-D12*
- ADwin-Speed-Test V4.20.0.0: improved error messages
- last version with official support for Windows 2000, Windows NT
- Linux, MAC OS Version 5.00.10.03b : adwin-lib-5.0.7 :
 - bugfix: adwin-lib driver was not compilable on some Linux versions

most important features of version 5.00.28.09 compared to version 5.00.28.01 :

(Release date: 02.04.2014)

TiCoBasic include file :

• AOut_TiCo.inc: support of the new module: Pro II-AOut-8/16-TiCo

Developer software :

• SciLab - driver V1.05.00: now also support of the 64-bit SciLab version

• Matlab - driver V4.06.00 : bugfix at Test-License key

ADconfig V3.24: improved errorhandling

- ADpro V5.7: support of : Pro II-AOut-8/16(-TiCo) Rev.E10

most important features of version 5.00.28.01 compared to version 5.00.24.00:

(Release date: 27.11.2013)

- ADbasic 5 compiler V5.00.28 , TiCoBasic compiler V1.02.23 : diverse bugfixes
- ADbasic / TiCoBasic include / library files : support of the new modules :
 - Pro II-AOut-1/16
 - Pro II-LS-2
 - Pro II-SPI-2-T, Pro II-SPI-2-D
 - new:Digout FIFO Write Burst()

- ADbasic sample programs :
 - standard sample programs now also for Pro II: ProII_DMO1.bas, ProII_DMO2.bas, etc.
- ADpro V5.7: support of: Pro II-AOut-1/16; detection of: Pro II-LS-2

most important features of version 5.00.24.00 compared to version 5.00.21.01:

(Release date: 08.05.2013)

- ADbasic 5 compiler V5.00.24 , TiCoBasic compiler V1.02.20 :
 - diverse bugfixes : powerfunction (only T9, T10)
- ADbasic 5 user interface V5.0.8.21 , TiCoBasic user interface V1.2.8.21 :
 - bugfix: occasional problem on programing the TiCo-Bootloader with big binary-files
- ADbasic / TiCoBasic include / library files : support of the new modules :
 - Pro II-COMP-16
 - Pro II-ARINC-429
 - Pro II-MIL-1553
 - Pro II-DIO-32-TiCo2
 - new: P2 ECAT Set Mode() (for Pro II-EtherCAT-SL)
- ADwin operating system (ADwin11.BTL):
 - bugfix: problem at Low Prio processes in combination with Ethernet disruptions
- Developer software :
 - dotNET driver : V1.0.57.0 : :
 - new : examples for WPF (= Windows Presentation Foundation)
 - Online-help reworked
 - Matlab driver V4.05.00: new:File2Data()
- Fieldbus: ADwin-EtherCAT.xml (updated for firmware 2.0 of *Pro-II-EtherCAT*)
- ADpro V5.6.0: support of: Pro II Aln-F8/16 Rev. E04

most important features of version 5.00.21.01 compared to version 5.00.17.01:

(Release date: 17.09.2012)

- ADbasic 5 compiler V5.00.21, TiCoBasic compiler V1.02.19:
 - diverse bugfixes (T9, T10): strings, optimization 2
 - diverse bugfixes (T11):
 Start Process(), Start Process Delayed()
- ADbasic / TiCoBasic include / library files :
 - ADwinPro2.inc : support of the new module Pro II-SENT-4
 - EEPROM Support.inc: bugfix: problem, which occured only with some hardware revisions
 - ADwinGoldII.inc , Fieldbus_TiCo.inc : fieldbus errorhandling / errorcodes update
 - MIO-D12 TiCo.inc : support of the new module *Pro II-MIO-D12*
 - RS_LIN_TiCo.inc : timing optimized
 - GoldITiCo.inc: bugfix: PWM Write Latch()
- Developer software :
 - Matlab driver V4.02.00: EXE-files can now be generated with the Matlab compiler
- ADpro V5.5.0 : improved errorhandling, if hardware is damaged

most important features of version 5.00.17.01 compared to version 5.00.14.00 :

(Release date: 28.11.2011)

- ADbasic 5 user interface V5.0.8.19 , TiCoBasic user interface V1.2.8.19 :
 - new at T9 to T11 : "Call Tree"
 - "Managing Projects" enlarged: files of any type can be added to a project, and diverse settings can be saved in the project file
 - new: "<Region>" (= foldable text range) and "Create Region from Block"
 - new: "documenting self-defined instructions and variables" (i.e.: adding extra information)
 - further diverse improvements and bugfixes
- ADbasic 5 compiler V5.00.17, TiCoBasic compiler V1.02.17:
 - bugfix : occasional problem at MemCpy () at two-dimensioned arrays
 - bugfix: at T11 at Low Prio processes
 - bugfix: at TiCo at big jumps
 - diverse bugfixes among other things at FiFos, libraries (Float-division, TiCo)
- ADbasic / TiCoBasic include / library files :

- new:(P2_)Write_Fifo Full (at: Gold II, Gold II TiCo, Pro II)
- bugfix:P2 Digin FIFO Read Fast()
- bugfix: at T11 at LS-Bus
- EEPROM Support.inc: bugfix in timeout handling
- ADwin driver:
 - USB driver now also for 64 bit Windows operating systems
 - ADwin64.DII: V3.0.464.2: allows the access for 64-bit applications
- Developer software:
 - dotNET driver: V1.0.57.0: completely reworked Online-help
 - Matlab driver V4.01.03: now identical notes are displayed just once
- ADlog V1.2.0.0: new: now also ADsim-processes can be used
- ADpro V5.4.5 : ADtest V5.1.0 : support of: Pro Aln-F-8/16 Rev. B, Pro II Aln-F8/16 (calibration)
- calibration data can be backed up in files and restored

most important features of version 5.00.14.00 compared to version 5.00.10.00 :

(Release date: 21.03.2011)

- ADbasic 5 user interface V5.0.6.78, TiCoBasic user interface V1.2.6.78:
 - new: "Fontsize" can be set for the source code window
 - further diverse improvements and bugfixes
- ADbasic 5 compiler V5.00.14, TiCoBasic compiler V1.02.14:
 - new: Round() (returns the nearest integer of a value of data type Float)
 - the start of the timebase for Low Prio processes was moved from the begin of INIT to the end (T9 to T11)
 - bugfix: occasional problem if the passed parameter of a macro is an addition of strings
 - diverse bugfixes among other things at libraries
- ADbasic / TiCoBasic include / library files :
 - new: support for L16-PWM1 (this add-on has one PWM-output and one SPI-interface)
 - new: support for Pro II-TC-8 ISO (module for thermocouples)
 - new: P2 Wait Mux() (waits for the end of the multiplexer settling)
 - new:P2 Digin Fifo Read Fast() (Fifo values are written into an array)
 - new:P2 Burst CRead Pos Unpacked1,-2,-4,-8 (for Pro II-AIn-F-8/14)
 - new: EEPROM_Support.inc: (see: C:\ADwin\Tools\Ethernet Interface\Bootloader_eng.pdf)
 - diverse include and library functions: optimization (faster and smaller code)
- Developer software:
 - new: dotNET driver: V1.0.52.0 BETA especially developed for Visual Studio .Net; supports 32- and 64-bit
 - Labview driver V3.0:
 - now 32- as well as 64-bit Labview is supported
 - new: File2Data.vi
 - SciLab driver V1.04.01:
 - does now work also with new Scilab versions, e.g. 5.1.1 as well as 5.3.0-beta-4
 - optimized errorcode handling
 - Matlab driver V4.01.01: if necessary, the function ADwin Init is called automatically
 - ADwinActiveX V 4.0.0.0: bugfix: occasional problem on Vista, Windows 7
- V1.0.48.2: bugfix at the processes for Gold II (issue at some analog channels)
- ADEthFlash V3.10: the required firewall configuration is set automatically
- Fieldbus: new: ESI ABCC ECT V 1 04.XML (for Gold-II- EtherCAT)
- Installation routine: all default- registry- settings are now added also on 64-bit operating systems
- Linux, MAC OS Version 5.00.10.03:
 - improvements, bugfixes: ADbasic compiler, library, generic driver, Scilab driver
 - new: Python driver 0.9; 64 bit support for ADconfig

most important features of version 5.00.10.00 compared to version 5.00.08.06:

(Release date: 10.06.2010)

- ADbasic 5 user interface V5.0.6.68, TiCoBasic user interface V1.2.6.68:
 - new: user-defined, external shortcuts can be inserted into the ADtools-bar
 - new: in the context menu of the project window: "Open path in Windows Explorer"
 - new: the results of "Find: All Documents of Project" can be copied into the clipboard
 - "Autocomplete for instruction or variable" was improved
 - "Jump to Declaration" does work now also for user libraries
 - new in TiCobasic : button "R" (= Reset Tico)

- ADbasic 5 compiler V5.00.10, TiCoBasic compiler V1.02.10:
 - the DATA-number is now also displayed in the Debug Mode
 - bugfix : occasional problem at programs with codesize > 131072 bytes
 - diverse improvements and bugfixes among other things at libraries (ADbasic), Min Long, Max Long (TiCo)
- ADbasic / TiCoBasic include / library files :
 - improvements/bugfixes at: CAN, (P2-) Workload
 - new: Wait Mux, Mod (integer remainder of a division)
 - new: EtherCAT support for Gold-II- EtherCAT, Pro-II-EtherCAT, Pro-II-MIO-4-ET1
- ADbasic / TiCoBasic sample programs :
 - FFT sample programs optimized for T11
 - new sample programs for: Pro II-Aln-8/18, Pro II-F8/14,16,18, Pro II-PWM-16, Pro II-Cnt, Pro-CO4
 - new Tico sample programs for Eventsource External
- ADwin driver :
 - new: ADwin64.DII: V3.0.464.2 BETA: allows the access for 64-bit applications
 - new: ADsim32.DII: allows access to internal parameters/signals of a compilied Simulink model
- Developer software :
 - new : Pyhton driver
 - Matlab driver V4.00.00 : now also Matlab 64-bit is supported
 - Delphi driver: support of Delphi 2009 and 2010
- ADtools V5.17 : minor bugfixes (colours, large fonts)
- ADtest V5.0.2: completely new developed testprogram for Light-16, Gold and Gold II, calibration for Gold II
- ADlog V1.0.47.1 : bugfix in Min/Max function
- Fieldbus: new files:

• ADwin-EtherCAT.xml (for *Pro-II-EtherCAT, Pro-II-MIO-4-ET1*)

DDF_ABCC_ECT_V_1_03.XML (for Gold-II- EtherCAT)
 324-8172-EDS_ABCC_DEV_V_2_3.EDS (for Gold-II-DeviceNet)

most important features of version 5.00.08.06 compared to version 5.00.07.02 :

(Release date: 28.09.2009)

- Windows 7: tested and approved for this operating system
- ADbasic 5 compiler V5.00.08 , TiCoBasic compiler V1.02.09 Beta :
 - occasional problem if a THEN follows a FIFO
 - occasional generic error at SEQ READ8, SEQ READ16 and MEDIA READ
- ADwin operating system (ADwin11.BTL) :
 - bugfix : occasional problem on stopping of processes with Eventsource External
- ADbasic / TiCoBasic include / library files: support of the new modules:
 - Pro II-RTD-8
 - Pro II-FlexRay-2
 - Pro II-MIO-4
- ADconfig V3.20 : the configuration of illegal (UDP) ports is now prevented
- ADtools V5.15: improvements and bugfixes (TButton, TMeter, TGraph, ADtools.exe)

ADlog V1.0.46.0 : enhanced ASCII record options
 L16Calib V2.0 : bugfix at calibration of Light-16
 Setup.exe V5.0.0.6 : faster installation procedure

most important features of version 5.00.07.02 compared to version 5.00.05.10:

(Release date: 23.06.2009)

- last version with official support for Windows 98, ME
- ADbasic 5 user interface V5.0.6.27 . TiCoBasic user interface V1.2.6.27 Beta :
 - "Automatic quick info": automatic display of (declaration-) information if mouse is over a source code element (variable, #Define, (Lib-) Sub, (Lib-) Function)
 - when typing a Sub/Function : information on their passed parameters are shown
 - "Scan Global Variables" button in the Parameter Window: now also global arrays are shown in the Info Window
 - Autocomplete now also at:
 - #INCLUDE together with include filenames, which fit to the selected ADwin- system
 - o "Reserved Keywords"
 - o many "Codesnippets"
 - now the Process Window also shows, whether the process code contains Debug- / Timing- information

- printing of a code "selection" is now possible
- further diverse improvements and bugfixes
- ADbasic 5 compiler V5.00.07, TiCoBasic compiler V1.02.06 Beta:
 - diverse improvements and bugfixes among other things at Timing Analyser (T9,T10)
- ADbasic / TiCoBasic include / library files :

ADwinPro2.inc: support of the new module: Pro II-AIn-F-8/16

bugfix at:P2_Read_Msg_Con(),Set_TiCo RingBuffer() several .inc files : bugfix at: FFT(), FFT INIT() (only if several processes, only T11) FFT.Li*:

ADwin driver (ADwin32.DLL): now up to 50 TCP/IP Devices can be used (before: 30)

Developer software:

C - driver : TiCoLoadBin (= sample program for loading TiCo binary files)

DASYLab driver : new help file does work now also on Vista sample programs revised, new: Bas Dmo6.vee Agilent VEE :

V5.13: diverse improvements and bugfixes ADtools

ADEthFlash V3.8: bootloader now also accepts *11c.BTL (= ADsim) files

ADpro V5.4.3: support of: Pro II-Aln-F-8/16

Profibus: V2.16: updated: Generic Station Description file (for Gold II and PRO II): HMSB1811.gsd

most important features of version 5.00.05.10 compared to version 5.00.02.01:

(Release date: 12.01.2009)

- ADbasic 5 user interface V5.0.5.10, TiCoBasic user interface V1.2.5.10 Beta:
 - new: automatic source code formatting (= "Smart format)"
 - new: formatting: "Align comments after source code"
 - new: additional frequency display of the current process
 - further diverse improvements and bugfixes
- ADbasic 5 compiler V5.00.05., TiCoBasic compiler V1.02.03. Beta:
 - better syntax checking at the preprocessor
 - diverse improvements and bugfixes among other things at libraries and in Debug Mode
- ADbasic / TiCoBasic include / library files:

 - ADwinPro2.inc, DIO32TiCo.inc: edge output FIFO for DIO-32-TiCo Rev E03
 ADwinGoldII.inc, GoldIITiCo.inc: new: Digin(); new option: Gold II-Storage-16 (16 GB flash memory)

ADwinGoldII.inc: new: SEQ READ8(), SEQ READ16(); bugfix: Profibus String.Li*: bugfix at function LNGTOSTR: inaccuracies at very big values

ADwin driver (ADwin32.DLL): bugfix at Enet at GetData() (only if network timeout)

- Developer software:
 - ADwinActiveX V 3.0.0.3:
 - improved error handling at diverse functions
 - bugfix:memory problem at GetData String() and at Get FPar Block Double()
- bugfix: occasional problem at "Scan AEI" ADconfig V3.18:

now also 00-22-71-XX-XX-XX is selectable as default MAC addresse range

ADtools V5.10: TButton: new option: "Close all ADtools"

TButton: new option: transfer data from a file to a DATA

TParFPar: bugfix: at importing of comments

- ADpro V5.4.2: minor changes
- ADlog V1.0.45.3:
 - new processes for Pro II-AIN-32/18 (16 and 32 channels)
 - new: "Moving X-Axis" (= softscrolling of the X-Axis at slow sample rates)
 - bugfix at drawing of several windows, bugfix at configuration with several windows
 - diverse improvements
- Profibus: new Generic Station Description file (for Gold II and PRO II): HMSB1811.gsd

most important features of version 5.00.02.01 compared to version 5.00.00.01:

(Release date: 17.06.2008)

- ADbasic 5 user interface V5.0.2.0:
 - improved operator guidance at the useage of libraries
 - bugfix at: Parameter Scan, 64-bit Windows operating systems
- TiCoBasic V1.2.2 Beta: diverse improvements and bugfixes
- ADbasic / TiCoBasic include files:
 - Profibus support and diverse improvements ADwinGoldII.inc :

- GoldIITiCo.inc : Gold II supports now also TiCo
- ADwinPro1.inc, ADwPDIO.inc: bugfix at DIGOUT
- ADwinPro2.inc : the new module Pro II-PROFI-SL is now supported
 - bugfix at P2 BURST INIT
- AlnTiCo.inc : the following new modules are now supported :
 - Pro II AIN 32/18-D-TiCo
 - Pro II AIN 8/18-L2-TiCo
- ADPro V5.4.1 :
 - the TiCo on a module is stopped, and again started on closing of the window
 - support of : PRO II-CNT-D/-T/-I and all Pro I and Pro II-CAN-modules
 - diverse improvements and bugfixes: problem fixed at 64-bit Windows operating systems
- ADlog V1.0.44.0:
 - diverse improvements in the user interface and diverse bugfixes
 - moving average filter: "Values count" now up to 10000
- Setup.exe (V 5.0.0.2) :
 - bugfix : compiler was not found, if ADwin-software was not installed to C:\ADwin
 - faster startup of the ADbasic 5 user interface caused by the useage of NGEN
- JAVA V1.2.2
 - multiple threads can now access the same ADwinDevice-Object ("Thread safety")

most important features of version 5.00.00.01 compared to version 4.20.10.05:

(Release date: 02.04.2008)

- TiCoBasic V1.2.1 Beta: diverse improvements and bugfixes
- ADbasic 5 V5.0.0.0:
 - totally new user interface (see chapter "News in ADbasic 5" in the ADbasic help)
 - bugfix at : MEMCPY, calculations with the constant 0, libraries
 - .NET-Framework 2.0 is now required
- ADbasic include files :
 - ADwinGoldII.inc : Gold II is supported
 - ADwinPRO2.inc : the following new modules are now supported :
 - PRO II-CAN-2, PRO II-CAN-2-LS
 - -.PRO II-LIN-2
 - PRO II-RSx-2, PRO II-RSx-4
 - PRO II-PWM 16, PRO II-PWM-16-I
 - PRO II-CNT-D, PRO II-CNT-T, PRO II-CNT-I
 - PRO II-TRA-16
- ADwin driver (ADwin32.DLL): bugfix at T11 at GetData () (only if count > 22.000.000)
- Developer software :
 - Matlab driver: now Matlab version 7.6 (R2008a) is supported; Processor Type now also for T10, T11
- ADconfig V3.16: bugfix: visible / invisible window at "Configure AEI"
- ADPro V5.4.0 :
 - support of: PRO II-DIO-32, PRO II-TRA-16, PRO II-OPT-16, PRO II-RSx-2, PRO II-RSx-4
 - .NET-Framework 2.0 is now required
- Pro-Storage V1.13: bugfixes; the firmware version number is now displayed
- ADlog V1.0.42.0 :
 - Gold II is supported
 - · setting of the Samplerate was improved
- Fieldbus / Profibus: new file: 321-2932-HMS 1811.gsd
- Setup.exe (V 5.0.0.1) :
 - automatic deinstallation of an already installed ADwin-software
 - check if the Microsoft (R) .NET Framework 2.0 is installed
- One-Click-Install.bat (V1.0 Beta): alternative installation of the ADwin Software via command line

most important features of version 4.20.10.05 compared to version 4.20.10.00:

(Release date: 27.07.2007)

- TiCoBasic V1.1.02 Beta: diverse bugfixes; new:RINGBUFFER
- ADtools V5.7: new:TGraphTiCo
- ADbasic include files :
 - ADwinL16.inc: bugfix: SEQ_INIT(); new (for CAN): READ_MSG_CON()

- ADwinPRO1.inc, ADwPEXT.inc, ADwGCAN.inc: new (for CAN): READ MSG CON()
- ADwinPRO2.inc: Pro II-DIO-32 Rev. E is now supported
- Developer software :

Matlab driver: now also Matlab version 7.4 (R2007a) is supported;
 "Standalone Applications" (EXE) can be created

DASYLab driver: new: support of DASYLab (version 7, 8 and 9)
 Testpoint driver: Realtime Object 1.4.2: new action: Fifo Full

- ADlog V1.0.41.0 :
 - measurement processes for Pro, Pro II, Gold and Light-16 were optimized; L16 MODE for Light-16 Rev.B

most important features of version 4.20.10.00 compared to version 4.20.08.02:

(Release date: 20.03.2007)

- TiCobasic V1.1.01: Real-Time development tool for TiCo processors (The TiCo-processor is a standalone, free programmable add-on processor,

which is currently used in certain *ADwin-Pro II*-modules)

- ADbasic V4.20.10 :
 - Windows Vista is supported (new HTML Help system)
 - bugfix at : CASEELSE
- ADwin operating system (ADwin11.BTL) :
 - bugfix: occasional problem caused by PC communication
 - bugfix: occasional problem on starting several processes
- ADbasic include files :
 - $\bullet \quad \text{ADwPDIO.inc, ADwinPRO1.inc}: \quad \text{bugfix at } \texttt{PWM}_\texttt{ENABLE}$
 - ADwPEXT.inc, ADwinPRO1.inc : bugfix at Profibus, Interbus
- Developer software :
 - Delphi driver : bugfix at Process Status()
- ADconfig V3.13: support of Windows Vista
- ADtools V5.7::
 - Windows Vista is supported (new HTML Help system)
 - bugfix at TButton, TGraph, TLed
- ADEthFlash V3.7: support of Windows Vista
- ADPro V5.3.2 :
 - SSI-Interface of CO4-D modules is supported
 - the four counters of CO4 modules are supported
 - backup and restore of calibriation data (modules Aln-F8/18, Aln-F8/14, Aln-8/18 and Aln-32/18)
- ADlog V1.0.40.2 :
 - Windows Vista is supported (new HTML Help system)
 - bugfix : occasional problem on recording in Diadem-format
- Setup.exe V4.7: installs current versions of the "Adobe Reader"
- Linux, MAC OS: SciLab is now supported

most important features of version 4.20.08.02 compared to version 4.20.05.07:

(Release date: 16.11.2006)

- ADbasic V4.20.08 :
 - $\bullet \quad \text{bugfixes at: libraries, $\tt STRINGs, SHIFT_LEFT, SELECTCASE} \quad \text{und } \texttt{MEMCPY}\\$
 - bugfix at access to Pro-II bus
 - bugfix at programcode located in DRAM EXTERN (only T11)
 - bugfix (at T9 and T10) on calculation of constants (1 / const.)
- ADwin operating system (ADwin11.BTL) :
 - bugfix: occasional damage of low prioritized processes caused by PC communication
- ADwin operating system (ADwin10.BTL):
 - bugfix at the PC communication functions Fifo_Full, Fifo_Empty, Fifo_Clear
 - bugfix at code in LOWINIT at externally controlled processes
 - bugfix at : TAN
- ADbasic include files :
 - ADwinPRO1.inc: LS-Bus support (T11)
 ADwPEXT.inc: LS-Bus support (T9 und T10)
 ADwL16.inc: LS-Bus bugfix and optimized
- Developer software:

- Labview driver V2.2 :
 - changes because compatibility to Windows / Linux / Mac OS
- ADconfig V3.9:
 - Web Interface can be started from the Scan- window
 - · "Ping" can be executed
 - bugfix: it was possible to create a duplicate Device No (at Edit: USB/Link)
- ADPro V5.2.2510 :
 - LS-Bus- module is supported
 - calibriation of the modules Aln-F8/18, Aln-8/18 and Aln-32/18
 - diverse improvements and bugfixes
- ADlog V1.0.37.1 :
 - number of points per line increased from 10000 to 20000
 - higher performance at lower CPU-load
- Linux, MAC OS :
 - ADbasic- compiler V4.20.07.00 (only for Linux)
 - Linux / Mac-library (= shared library) V3.0.449 :
 - support of Mac OS X 10.4 for ADwin-systems with Ethernet-interface
 - Labview driver V2.2 (Linux and MAC)
 - numerous functional improvements

most important features of version 4.20.05.07 compared to version 4.20.04.04:

(Release date: 06.09.2006)

- ADbasic V4.20.05 :
 - bugfixes at: MEMCPY, SELECTCASE (only at CASE 0)
 - bugfix on opening of ADbasic project files (*.ABP)
 - bugfix at instructions for the modules Pro-II-AOut- 8/16 and Pro-II-AIn-F-8/14
 - occasional problem with access to Pro-II bus
- ADbasic include files:
 - ADwinPRO2.inc : bugfix at the modules Aln-8/18 and Aln-32/18

(concerns the instructions: P2 SEQ INIT and P2 BURST READ INDEX)

ADwinPRO1.inc: new:TC_READ_BADwPEXT.inc: new:TC READ_B

• ADwPAD.inc: bugfix for T10 at: READ ADCF8, READ ADCF8 PACKED

- Developer software:
 - examples for Excel driver (ActiveX and Visual Basic)
 - SciLab V1.03.00 : (on the CD-Rom for the first time)
 - Matlab: warning "... case-sensitive match for 'adlab' ... " fixed
- ADPro V5.2.2406 : diverse improvements
- ADlog V1.0.36:
 - new: processes and configurations for Pro-II modules
 - diverse improvements

most important features of version 4.20.04.04 compared to version 4.20.03.07:

(Release date: 17.05.2006)

- ADbasic V4.20.04 :
 - $\bullet \quad \text{bugfixes at:libraries, strings, } \quad \texttt{MEMCPY, } \quad \texttt{SHIFT_RIGHT, } \quad \texttt{SHIFT_LEFT}$
 - bugfix at programcode located in DRAM EXTERN (only T11)
 - bugfix at optimization level 2 (only T9 and T10)
 - bugfix at powerfunction (only at ^2 or ^3)
- ADwin11.BTL :
 - bugfix at SetData at certain values of Startindex and Count
 - bugfix at GetFifo (only at high prioritized processes with long lasting EVENT section)
- ADbasic include files :
 - ADwinPRO2.inc: new: support of the modules Aln-8/18, Aln-32/18 and AOut-8/16 (Rev. E) (new instructions: P2_ADC..., P2_SEQ..., P2_DAC..., P2_DAC4_PACKED,...)
 - ADwinPRO1.inc as well as ADwPEXT.inc: new instr.: TCJ_DIG_TO_TEMP, TCK_DIG_TO_TEMP, PT100 DIG TO TEMP, PT100 DIG TO R
- ADwin driver (ADwin32.DLL): bugfix at Get Digout() and Set Digout()

- ADtools: V5.5::
 - TGraph: new:FFT
 - now each tool can be moved by ADtools.exe and brought "on top" of the screen
 - new: ADstartpanel.exe
 - diverse bugfixes and improvements
- ADEthFlash V3.4: new: button for Bootloader dis-/enable (from ENET firmware 2.66 on)
- ADlog V1.0.33:
 - Start/Stop Communication Buttons are now located in the toolbar of the main window
 - math. functions improved
 - diverse improvements

most important features of version 4.20.03.07 compared to version 4.20.03.00:

(Release date: 30.03.2006)

- ADbasic include files :
 - ADwinPRO2.inc: new: support of the module Pro-Ain-F-8/14 (Rev. E)

 bugfix et CDIL EVENUE CONTT.

bugfix at CPU_EVENT_CONFIG()

• ADwL16.inc: new instructions for Rev. B: SEQ READ(), SEQ INIT(), L16 MODE()

only DIO_02: SSI ...()

only DIO_02 or DIO_03: $\mbox{DIGIN_LONG_E()}$, $\mbox{DIGOUT_LONG_E()}$

- ADwinTCPIPserver V1.7.0: optimisation of data throughput
- Pro-Storage: Pro-Storage_MP.BAS: bugfix at writing into a file
- L16Calib.exe V2.0: now also suitable for calibration of the new L16 Rev. B
- ADconfig V3.5: bugfixes at DHCP
- ADlog V1.0.32:
 - new : math. functions : Addtion, Substraction
 - new : two configurations with 16 channels for ADwin Gold
 - improved Zoom at several Y-axis
 - Recording mode : enhanced triggermodes
 - Recording mode : now also header line (with the names of the channels)

most important features of version 4.20.03.00 compared to version 4.20.01.08:

- ADbasic V4.20.01, ADwin11.BTL:
 - Conditional compilation with ADWIN SYTEM (= ADWIN GOLD, ADWIN L16, ADWIN PRO)
 - names of variables and #DEFINE may not contain special characters (+-*/^.;&/%\$\$#) any longer
 - bugfix at libraries at T11
 - bugfix at programcode located in DRAM EXTERN (only T11)
 - bugfix at concatenation of strings
 - bugfix at setting of the Low Priority Level
 - bugfix at #DEFINE, which is used in a SUB or a FUNCTION
- ADbasic include files :
 - ADwpAD.inc: new: READ_ADCF4/8, READ_ADCF4/8_PACKED
 - ADwinPRO2.inc : new : support of the module Pro-Ain-F-8/18
- ADbasic libraries :
 - String.Li*: bugfix at function VALF: Exponent was ignored, if it contained a "+" character
- ADtools: TProcess V5.3 supports the new Debug- Mode messages of the Pro-II-Bus
- ADPro V5.1.2153 : diverse improvements
- ADlog V1.0.27: diverse improvements

most important features of version 4.20.01.08 compared to version 4.01.19.00:

- ADbasic version 4.20.01, ADwin11.BTL:
 - **support of the new processor T11** (with 300 MHz, more details: see document: C:\ADwin\Documents\Hardware\ADwin-PRO\english\Pro T11 eng.pdf)
 - new instructions (only T11): -START_PROCESS_DELAYED, RESTART_PROCESS, MEMCPY, CPU SLEEP, P1 SLEEP, P2 SLEEP
 - maximum codesize (per process) is 1.000.000 Byte when using T11 processor
 - bugfix at Shift_Left
 - bugfix at string assignment and string addition (only when using a T10 processor)

- Parameter Scan did not work for Par 80, FPar 80
- now a warning is generated, if the operator " " is directly following after the operators " / " or " ^ ".
- ADbasic include files :
 - ADwinPRO1.inc : new file for processor T11 (for well-known bus Pro I)
 - ADwinPRO2.inc : new file for processor T11 (for new Bus Pro II)
 - new instructions: CPU EVENT CONFIG, CPU DIGIN, CPU DIG IO CONFIG, CPU DIGOUT
 - ADwinPRO ALL.inc: new universal include file for all processors T4 to T11
- ADbasic libraries :
 - String.Li*: bugfix at functions LNGTOSTR and FLOTOSTR
 - FFT.Li*: optimized version for T11, bugfix at function FFT Phase()
- ADbasic sample programs :
 - new sample programs: Pro-Aln8-14_Seq.BAS, Pro-Aln8-14.BAS
- ADwin driver bugfixes:
 - occasional problem with SetData function (ENET)
 - occasional loss of PC physical memory on useage of function SetFifo (ENET)
- Developer software :
 - Agilent VEE: sample programs revised, new: Bas Dmo7.vee
 - Matlab: ADlab.dll is now located in the directory "C:\ADwin\Developer\Matlab\ADwin"
- ADPro version 5.0.2077 :
 - support of processor T11; improved user interface
 - hint: ADpro Old has to be used for processors T4 to T8
- ADlog V1.0.24: diverse improvements; reworked Online-help
- ADEthFlash V3.3: new: button for Bootloader dis-/enable (from ENET firmware 2.66 on)
- Setup.exe (version 4.3.0.0):
 - there is no more check, whether the user is a so-called "Administrator", but only, whether the user is a member of the Administrators' group
 - check if Microsoft (R) .NET Framework 1.1 is installed
- JAVA V1.2 :
 - support of processor T11
 - new methods: Set Processdelay, Get Processdelay
 - the max. data transmission rate at GetData was increased (from ENET firmware 2.66 on)

most important features of version 4.01.19.00 compared to version 4.01.17.01:

- ADbasic version 4.01.19:
 - bugfix at: "Compiler Options" -> "System" -> "ADwin-GOLD"
- ADlog V1.0.21: diverse improvements; reworked Online-help

most important features of version 4.01.17.01 compared to version 4.01.15.00 :

- ADbasic version 4.01.17 :
 - display of line and column number in the "Status Bar"
 - new ADbasic systemvariable PROCESSDELAY (identical with GLOBALDELAY)
 - bugfixes at #defines, #endif and optimization level 2
 - bugfix at : SIN, COS, EXP, LOG, LN, SQRT, TAN, ARCSIN, ARCCOS, ARCTAN
 - bugfix at : variable ^ constant ^ constant
 - bugfix : Mark Controlblock did not work under Win XP
- ADbasic include files:
 - ADwpext.inc : support of the new thermocouple- module TC-8 ISO
- ADbasic library files :
 - Sting.Li9 / .LiA: bugfix at STRMID, STRLEFT, STRRIGHT, FLOTOSTR
- ADwin driver (ADwin32.DLL) :
 - max. data transmission rate at GetData was increased from 4.8 to 6 Mbyte/s (from ENET firmware 2.66 on)
 - bugfix: write permissions are no longer needed in the root- directory on the fixed disk (C:\)
 - bugfix : now also dots (= periods) are allowed in the path of the ADwin?.BTL
- Developer software :
 - ADwinActiveX V 3.0.0.1 :
 - o improved error handling now supports also Multi-Threading
 - bugfix at Set_Language()
 - Labview driver :
 - improved error handling now supports also Labviews Multi-Threading

- the DLL-calls were made independent from the user-interface; therefore the user-interface is operable even during long-lasting DLL-calls (e.g. if ADwin-system is not accessible)
- calling convention of the VI's is no longer "as caller" but "standard", therefore possibly higher speed
- from now on the current driver does only support Labview versions >= 6.0
- bugfix : at GetData String
- Matlab driver :
 - new: Get_Last_Error_Text, String_Length, Get/SetData_String, Get_DeviceNo, Show_Errors
 - Online-help: 'help ADwin' can now be called in the 'Command Window'
- Testpoint driver : Realtime Object 1.4.1 :
 - new action: Read Fifo Int32: necessary for integer numbers greater than 16777215 (= 24-bit)
 - Read Parameter All and Read Parameter Block are now returning signed values
- ADconfig V3.0 :
 - completely new designed and clearly arranged user interface
 - scanning of ADwin-systems (Scan_AEI) is now integrated into ADconfig
 - o context- sensitive Online- help
- ADEthFlash V3.2 as well as ADtools V5.1: adaptions for future processors
- ADlog V1.0.19: diverse improvements
- JAVA V1.1: bugfixes

most important features of version 4.01.15.00 compared to version 4.01.13.00 :

- ADbasic version 4.01.15 :
 - new samples: RS232 send string.BAS, RS232 receive string.BAS
- ADwin operating system :
 - ADwin10.BTL: bugfix at ADBasic instruction START PROCESS()
 - ADwin9.BTM: issue with Link- Bootloader fixed
- Developer Software :
 - Delphi driver : bugfix : wrong return values at function ADBoot() (at processors T2, T4, T5, T8) as well as function Processor Type() (at T5 and T9)
 - Matlab driver: bugfix: function 'Get Globaldelay': value was taken from processnumber+1
 - C driver : sample programs revised
 - Testpoint driver: systemobject 1.3.8:
 - new option "Load Standardprocesses" (i.e. loading of ADwins9.btl is possible)
 - ADwinActiveX V 2.0.0.11 :
 - **New:** sample programs for VB.NET and C#.Net
 - Intouch sample programs adapted to Intouch 9.0
 - New: GUI_development.pdf: advice for developers on the drivers and samples of the different development environments
- ADwinTCPIPserver V1.6.3:
 - Bugfix: big data throughput caused a timeout at 'SetData'
 - now several PCs can access an ADwin-system via the ADwinTCPIPserver
 - Help- file completely revised
- ADEthFlash V3.0 : Online info about EEprom Support now also for ADwin Ethernet interface 2
- ADtools V5.0: at all ADtools: buxfix at the DeviceNo (only if last used DeviceNo does not exist any more)
 - TPoti: the Focus-color and the NonFocus-color is now selectable
 - ADtools.exe: the recent used path is remembered on saving and opening *.def files
- ADlog V1.0.11: datalogging software for ADwin systems
 - ADbasic measurement processes reworked
 - higher performance of the graphic display
 - X-axis can be shown in a date / time formatted manner
 - diverse bugfixes and improvements
 - Help- file now also in English
- **Linux**: completely reworked: ADbasic-compiler V4.01.11 and driver V3.0.446 (now also ENET support)

most important features of version 4.01.13.00 compared to version 4.01.10.02:

- ADbasic version 4.01.13 :
 - bugfix: at SHIFT_LEFT, SHIFT_RIGHT, ABS, SIN, COS, EXP, LOG, LN, SQRT, TAN if one of these functions uses itself as a function parameter
 - bugfix : accuracy of calculations at division by a constant
 - bugfix : printing in "landscape"- orientation

- bugfix: at optimization level 2 on calculation with constant expressions
- new Compiler Option: Remember Device No.
- ADbasic Include files:
 - ADwpdio.inc: new subroutine: RTC GET()
 - ADwpAD.inc: bugfix: BURST CREAD ()
 - ADwpext.inc: bugfixes: RS RESET(), WRITE FIFO(), GET LINE STATUS()
 - ADwGCAN.inc: new file for CAN-expansion at ADwin-GOLD
 - PRO-STORAGE SP.inc: bugfix: MEDIA RD ...
- ADwin driver bugfixes:
 - occasional problem with SetData function on ENET fixed only together with firmware >= 2.53 and 2.64 respectively
 - occasional problem with GetFifo function (ENET)
- Developer Software: Testpoint driver:
 - Realtime Object 1.3.8: bugfix: Read Parameter returned only unsigned values.
 - A/D Object 1.3.5: bugfix: at Sample A/D Action (all 16-bit values < 32768 were miscalculated)
- ADEthFlash V2.9: EEprom Support now also for ADwin Ethernet interface 2
- diverse buxfixes at TGraph, TDigit, TPoti, TPar Fpar ADtools V4.9:
 - TGraph: new: now up to 16 analog channels and 32 digital channels
 - TGraph: new: importing of data from a textfile
 - TGraph: new: timer can be disabled by pressing the SHIFT- key during startup
 - TGraph: new: values can be edited by double-clicking in the Textwindow TProcess: new: ADbasic Debug Errors are displayed

 - TProcess: new: PM, DM, DX and Codesize are displayed
 - TProcess: new: Globaldelay can be set also in frequency units (Hz, kHz, MHz)
 - TPar Fpar: new: comments can be imported from ADbasic #defines.
- ADlog V1.0: datalogging software for ADwin systems. (on the CD-Rom for the first time)
- JAVA V1.0: JAVA- interface for ADwin-systems with Ethernet interface (on the CD-Rom for the first time)

most important features of version 4.01.10.02 compared to version 4.01.01.21:

- ADbasic version 4.01.10:
 - bugfix: if the same Fifo is used several times within an expression
 - diverse bugfixes at optimization level 2 (e.g. at : Digin())
 - bugfix: at integer expression VARIABLE * CONST / CONST or VARIABLE / CONST * CONST
 - now more than 128 characters are allowed for file-/pathname
 - bugfix: occasional problem with libraries
 - bugfix: on task-switch among several low prioritized processes
 - improved checking of the function parameters at : Fifo Full(), Fifo Empty(), Fifo Clear()
 - improved checking of the file, which is passed to the IMPORT instruction
- ADwin operating system (ADwin9.BTL, ADwinS9.BTL, ADwin10.BTL):
 - bugfixes at the communication process and at the process-scheduling of low priority processes
- Developer Software:
 - Matlab driver : new function Data Length()
 - C driver : sample programs revised
 - ADwinActiveX V 2.0.0.10: bugfix at function "Boot": If property Exception_Enable is used, then no exception was initiated.
- Pro-Storage V1.8: bugfixes; now also FLOAT can be stored/loaded

most important features of version 4.01.01.21 compared to version 4.01.0106 :

- ADbasic library files: new: FFT library now also for T10 (FFT.Lia)
- ADbasic include files:
 - ADwpdio.inc: new: instructions for the COMP16 module; bugfix on Pro-Storage (RTC)
 - ADwpext.inc: corrected: SET RS()
 - ADwpda.inc: new instructions for memory option (for example Pro-Aout-4/16-M2)
- ADwin driver bugfixes and optimizations:
 - occasional problem with SetData function on ENET
 - occasional problem with access from several PCs to one ADwin-system (ENET)
 - better usage of the transmission bandwith on simultaneous access from one PC to several ADwin-systems with the same TCP/IP port.

- ENET optimizations at SetFifo function, especially active with Win9X/ME PCs
- ADwin operating system (ADwin9.BTL, ADwinS9.BTL, ADwin10.BTL):
 - Bugfix : on starting a second process
- Developer Software:
 - VisualBasic driver : return value of the function Get_Globaldelay
 - Testpoint driver: A/D Objekt now also for GOLD and L16
 - Labview driver: Acquire.vi now also for GOLD and L16
 - InTouch driver : sample programs are on the CD for the first time
 - Matlab driver: some functions returned a duplicate result
- GoldCalib V1.0 this is the calibration program for ADwin-Gold-ENET/USB
- Pro-Storage V1.6: now also module addresses > 99
 ADEthFlash V2.2: supports now also firmware 2.52

most important features of version 4.01.0106 compared to version 4.00.0600 :

- ADbasic version 4.01.01 :
 - Mark Controlblock now also for SELECTCASE
 - new functions: Cast_floattolong(), Cast_longtofloat()
 - bugfixes:
 - at optimization level 2
 - constant -2147483648 was not accepted
 - problem with Fifo (Float) as LValue
 - Open All Includes did not work in certain cases
 - Debugmode did not work in LowInit section
 - problem on handling with strings
 - on ADC instruction if the first function parameter is not a constant
 - error on nested libraries with T10 if array is in external memory (DX)
- ADbasic include files :
 - ADwinpro.inc : new function : CPU DIGIN()
 - ADwpdio.inc : new: Pro-Storage : PCMCIA- memory and real-time clock
- Developer Software :
 - Testpoint driver: support of the T10 processor
 - Labview driver: paths adapted for Labview 7 and sample programs
 - C driver : reworked
- ADEthFlash V2.1: support of ADwin Ethernet interface 2

most important features of version 4.00.0600 compared to version 4.00.0500 :

- ADbasic version 4.00.06:
 - bugfix : old incompatible libraries are now rejected
 - FFT- library newly generated with ADbasic 4
- ADconfig V2.7:
 - bugfix (problem, if all Device_No have been deleted)
- ADPro Version 4.1:
 - support of the new Pro-AIN 8/14, Pro-AIN-32/14, Pro-AIn-8/16 Rev C, Pro-AIn-32/16 Rev C

most important features of version 4.00.0500 compared to version 3.20.1200 :

- ADbasic version 4.00.05 :
 - T10 Processor (80 MHz) is now supported (*1)
 - Projectmanagement : A projectfile can be created, which is able to open several ADbasic files (*1)
 - new optimisations for T10 : up to 10 % less program memory (PM) needed, compared with the T9
 - support also of the ADwin-Gold-ENET and ADwin-Gold-USB (both Rev. B1 or greater)
 - for ADwin-Gold: multiplexer settling time changed from 1,5 to 2,5 µs for the ADC12 instruction.
 Programs with the ADC12 instruction now need more CPU- time and eventually have to be reworked.
 - Load Standardprocesses: If "No" => approx. 11 kByte bigger free program memory (PM)
 - Default Settings for Directory (BTL, INC, LIB) now also for several Users under NT, W2K, XP
 - commandline functionality
 - improved user interface :

- all 80 PARs/FPARs in Parameter window
- simultaneous control over all 10 processes in the "Processes Window" (*1)
- new button: "Enable cyclic update"
- new button: "Parameter Scan" (*1)
- system (Gold, Pro, Light-16, ..) is now selectable. (= replacement for: "16 bit resolution")
- shortcuts für Boot, Compile, Start, Stop, Parameter Scan, (Un-)Comment Block, In-/Outdent
- permanent display of the options :
 - Process X delay (= former called : (Global-) Delay)
 - Initial Processdelay (= former called : (Global-) Delay)
 - Device No. , Eventsource , Priority , Process number , Optimize Level
- new instructions :
 - Sleep()
 - AT DM_LOCAL, AT DRAM_EXTERN can optionally be specified on BYREF parameters of libraries (for the reason of code optimisation
 - #IF PROZESSOR = T10 THEN
- bugfixes:
 - #DEFINE now also allowed on strings
 - at powerfunction (^) , at optimisation level 2, at IMPORT instruction
- revised editions of ADbasic Manual and Tutorial
- revised edition of context- sensitive ADbasic Online Help
- *1 = a new ADbasic4 license is necessary for this feature
- ADbasic include files :
 - Adapted for processor T10: ADwpAD.inc, ADwpDA.inc, ADwpDIO.inc, ADwinPro.inc, ADwpEXT.inc

ADwpAD.inc: new for Pro-AIN-F-X/14 (Rev B2): BURST_CSTART(), BURST_CREAD(), SYNC_MODE() new instructions for sequence control: SEQ ...()

support of new Pro- AIN 8/14 , Pro- AIN 32/14

• ADwGcnt.inc : new for ADwin-Gold-ENET/-USB (Rev. B1 or greater) with CO1 Option :

CNT_GETSTATUS() , CNT_RESETSTATUS() , CNT_SE_DIFF()

- ADbasic Library files: new: ADwpEXT_lib.Li9, ADwpEXT_lib.LiA
- ADwin driver bugfixes :
 - occasional problem (errorcode 2000) with SetFifo function on ENET
 - occasional problem with path-/filename with function ADwin Debug Mode On
- ADwin operating system (ADwin9.BTL, ADwinS9.BTL):
 - ADwinS9.BTL: approx. 11 kByte bigger free program memory (PM)
- Developer Software:
 - Labview driver: improvements on Stopdac, Startdac, Acquire, Process Status
 - Delphi Treiber: improvements on Get last error text
- ADtools V4.6: TProcess: Processor T10 is now supported; bugfixes at TPoti and TPar_FPar; improvements at TGraph
- ADEthFlash V2.0: Processor T10 is now supported
- ADPro Version 4.0: Processor T10 is now supported
- ADtest V1.7: (settings are now stored in the registry in location "HKEY CURRENT USER")
- ADwinTCPIPserver V1.2 : on errors, now errorcodes are displayed
- ADbootload V3.4: bugfix

most important features of this version compared to version 3.20.0804 :

- ADbasic version 3.20.12 :
 - Bugfixes on libraries and Sleep instruction in optimization level 2
 - Bugfix on sin-, cos- and powerfunction (^) at processes with low priority
- ADwin driver :
 - improved USB driver
- ADwin operating system (ADwin9.BTL) :
 - Bugfix on Booting the ADwin-Pro system (undefined behaviour)
- Developer Software :
 - Matlab driver : (license key for this is required).
- ADtest V1.6: (settings are now stored in the registry in location "HKEY CURRENT USER")
- ADwinTCPIPserver V1.1 : (for the first time on the ADwin-CD)

most important features of this version compared to version 3.20.0703:

- ADbasic version 3.20.08:
 - Bugfixes on libraries and on calculations with signed constants
 - The default setting for "16 Bit resolution" is now "Yes"
- ADbasic include files improved : ADwL16.inc , ADwgcnt.inc , ADwpad.inc

ADwpDIO.inc (new: instructions for Pro-CO4, Pro-DIO-32 (Rev B))

- ADbasic example "Bas Dmo7.bas" improved
- FFT- library available for the first time in : C:\ADwin\ADbasic3\lib
- ADwin driver improvements :
 - On using the functions GetData_Float / GetFifo_Float / GetFPar_All , possibly existing invalid bit patterns (e.g. because of not initialized data) are now set to Q-NAN
- Developer Software:
 - improvements in Labview and C driver
 - **ADwinActiveX V 2.0** available for the first time in : C:\ADwin\Developer\ActiveX Therefore for the first time a driver for the developer environment :
 - Visual Studio .NET: C#, VC++ 7, VB.NET

As well as for the developer environments :

- Visual C++ 6, Visual Basic 6, Borland Delphi, Borland C-Builder, Agilent VEE, etc.
- ADPro Version 2.9: The revision identifier is now displayed for all (i.e. also old) modules
- Windows Installer Engine version 2.0 :
 - The new engine version will be installed automatically, if necessary.
 - Problem on deinstalling older versions (Error 1316) is now fixed
 - Service pack 6 is now required for WinNT (SP6 is available on CD in directory: NT4_SP6a).

most important features of this version compared to version 3.20.0109:

- ADbasic version 3.20.07 :
 - Bugfixes on strings, libraries, ADC12, optimization level 2, power function (^)
 - Escape sequences for strings
 - Constants are now combined/calculated at compile-time, no longer at runtime. This is valid for all optimization-levels. Advantage: programs are executed faster. But ATTENTION: waiting times (e.g. for multiplexer settling time), which have been implemented by program code containing calculations with constants, are now shorter. They have to be reworked respectively.
- ADbasic include files: ADwpEXT.inc (new instruction because CAN-LS: GET_LINE_STATUS ADwL16.inc (for ADwin-L16-DIO1 and ADwin-L16-CO1)
- ADwin driver bugfixes :
 - · improved errorhandling for diverse functions
 - improved USB driver (errorhandling)
- ADwin operating system (ADwin9.BTL):
 - decrease in the influence of the process- timing, which could be caused by :
 - BEGIN_CRITICAL_SECTION (often used in : ADwin-Pro)
 - or division in a process with low priority
- Developer Software :
 - improvements in Visual Basic, Labview and C driver
- ADPro Version 2.7: new: identification/calibration of new module Pro-AIN-F-4/14, Pro-AIN-F-8/14
- L16Calib V1.0 this is the calibration program for ADwin-Light16
- ADconfig V2.2: (configuring of several Devices is more user friendly now)
- ADtools V4.4 :
 - new: TString (for displaying and editing of ADbasic- strings)
 - TPar_FPar : new : individual labelling of each Par / FPar-line
 - Bugfixes
- ADfind_dll V 1.0 searches for all ADwin- DLL and BTL files, which are stored on the PC

most important features of this version compared to version 3.20.0101:

- ADwin driver feature :
 - higher data transfer rates with GetData_Long, ..._Float, ..._String, ..._Double on ENET, if firmware of the ADwin ENET interface >= 2.5 and if <= 1750 data are transferred from the ADwin- system
- ADwin driver bugfixes:

- occasional problem (windows- protection fault) with GetData function on networks, which have a lot of traffic
- occasional problem (wrong errorcode) with SetFifo function on ENET
- ADPro version 2.6: new: identification of new counter module Pro-CO4
- ADbasic include files: ADwpAD.inc (because of new Pro-AIN-8/16-RB, Pro-AIN-52/16-RB, Pro-AIN-F-8/14)

ADwpDIO.inc (new: instructions for Pro-CO4 (and SSI))

- Developer Software :
 - Testpoint driver version 1.3.6 with the following new actions :
 - Get Last Error
 - Read Parameter All, Read Parameter Block
 - Labview driver version 2.0 with the following new functions:
 - errorhandling conformable with Labview (error wiring via Error In, Error Out : based on Get_Last_Error, Get Last Error Text)
 - Get Par Block, Get FPar Block
 - GetData_String, SetData_String, String_Length
 - Process Status, Data Length, Set Globaldelay, Get Globaldelay, Set Language
- ADEthFlash V1.5 (new : EEprom support)
- ScanAEI V1.2 (new: If DIL-switch 1 is present, the version number is displayed with an appended ".1")
- ADtools : bugfixes on Tgraph and TProcess
- ADconfig V2.1: easier user guidance for the configuration of Ethernet

most important features of this version compared to version 3.00.3011:

- Window XP support (new USB driver)
- ADbasic version 3.20.01 : new :
 - Libraries (see : ADbasic3.20-lib eng.pdf)
 - String functions (see : ADbasic manual : ADbasic3 eng.pdf)
 - "Syntax Color" (highlighting of ADbasic keywords, comments, etc.)
 - Autoindent
 - multiple "Undo" and "Redo"
 - "Open All Includes" (opens all files, which are included by the #INCLUDE command)
 - "Tabsize" now adjustable (Default Tabsize = 2, therefore it may be necessary to check the format of those ADbasic programs, which are using TABs)
 - On right mouseclick:
 - (Un-)Comment Block (changing multiple codelines to comments and vice versa)
 - Indent/Outdent
 - Mark Controlblock (on right mouseclick on a line, which contains IF, ELSE or ENDIF, the whole textblock of the IF ELSE ENDIF structure will be highlighted; the same is also valid for: DO.. UNTIL, FOR.. NEXT)
 - Info window (shows several compiler- error messages and warnings)
 - diverse bugfixes (e.g. at **SELECTCASE**)
- ADPro version 2.4 : new : calibration function now has adjustable gain; binary input possible; ability to switch between UNI/BIP voltage ranges; identification of new module AIN32/16RB
- ADtest V1.4 : last used Device No. is now saved
- ADconfig V2.0: diverse improvements, timeout now adjustable with resolution of 100 ms
- ADwin driver :
 - better error handling
 - bugfix at Set_Fifo (error occurred only with Ethernet, if Float Data were converted to Long DATA(s)
)
 - bugfix at process-scheduling of low priority processes
- Developer Software: Visual Basic, Delphi and C driver with the following new functions:
 - Get Last Error, Get Last Error Text
 - Get Par All, Get FPar All
 - GetData_String, SetData_String, String_Length
 - Process Status, Data Length, Set Globaldelay, Get Globaldelay, Set Language
 - etc.
- ADtools V4.1 (new : TFifo and TBin)
- ScanAEI V1.0 (scans all ADwin-Ethernet interfaces, which are located in the same TCP/IP- subnet as the PC)
- Linux : latest driver and (for the first time) XADbasic beta (= ADbasic-GUI)

most important features of this version compared to version 3.00.2735 :

- ADPro version 2.2 : new : calibration function for Rev. B modules
- ADtest V1.3 : now also GOLD and Light-16 is supported ; Info window shows all installed ADwin software packages
- ADconfig version 1.7: now available: 4-digit Linkaddress
- ADbasic : diverse bugfixes on : DAC- instruction, libraries, external event, integer division
- diverse updates and bugfixes on : ethernet, profibus, ADserver.exe, standard processes, Bootloader (Link), process-timing of low priority processes, communication problem on very big blocktransfer of data under WinNT and Win2000 fixed, problem on starting and stopping of processes under Testpoint fixed
- developer software :
 - Labview driver adapted for Labview 6.0
- for the first time on CD : ADbasic development system and drivers for Linux

most important features of version 3.00.2735 compared with version 3.00.2733:

- ADEthFlash V1.2 (for programming the bootloader and updating the firmware of ADwin-systems with Ethernet interface)
- ADTools V 3.6
- Significant improvement of the transfer rate of ADwin-light-16

most important features of version 3.00.2733 compared with version 3.00.2332 :

- support of ADwin-systems with Ethernet interface
- under Win2000 also ADPCMCIA and PCI is now supported.
- under Win2000 the ISA-LINK cards are managed now in the "Device Manager".
- new ADbasic instruction : **SELECTCASE**
- "16 Bit resolution" is now the default setting in the ADbasic Compiler Options
- improvements in the accuracy of calculations with the power- function (^)
- improvements of the functionality and the (transfer rate) performance of USB