#### Version 5.00.28.09:

#### 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

• GoldIITiCo.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: support of: Pro Aln-F-8/16 Rev. B, Pro II Aln-F8/16 (calibration)
- ADtest V5.1.0: 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
- ADlog 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
    - "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-Aln-F-8/16

several.inc files: bugfix at: P2\_Read\_Msg\_Con(), Set\_TiCo\_RingBuffer()
 FFT.Li\*: bugfix at: FFT(), FFT\_INIT() (only if several processes, only T11)

- 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
 Agilent VEE: sample programs revised, new: Bas\_Dmo6.vee

- ADtools V5.13: diverse improvements and bugfixes

- 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()
- ADconfig V3.18: bugfix: occasional problem at "Scan AEI"

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 :
  - ADwinGoldII.inc : Profibus support and diverse improvements
  - 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

• AInTiCo.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:

• ADwPDIO.inc, ADwinPRO1.inc : bugfix at PWM\_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 :
  - bugfixes at: libraries, STRINGS, SHIFT\_LEFT, SELECTCASE und 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
 ADwL16.inc: new: support of the module HSM-24V (via LS-Bus)

- 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 :
  - bugfixes at: libraries, strings, MEMCPY, SHIFT\_RIGHT, 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\_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 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: DIGIN\_LONG\_E(), 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)
    - o calling convention of the VI's is no longer "as caller" but "standard", therefore possibly higher speed
    - o from now on the current driver does only support Labview versions >= 6.0
    - o 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:
  - o completely new designed and clearly arranged user interface
  - o scanning of ADwin-systems (Scan\_AEI) is now integrated into ADconfig
  - 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
- ADtools V4.9: diverse buxfixes at TGraph, TDigit, TPoti, TPar Fpar
  - 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
- this is the calibration program for ADwin-Gold-ENET/USB
- GoldCalib V1.0 this is the calibration program fo 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
  - ${\color{red} \textbf{new functions}: \texttt{CAST\_FLOATTOLONG(), CAST\_LONGTOFLOAT()}}$
  - 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</li>
- 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-32/16-RB, Pro-AIN-F-4/14, 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 usingTABs)
  - 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,
  (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