Version **4.20.10.00** :

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 AIn-F8/18, AIn-F8/14, AIn-8/18 and AIn-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 : `STRING`s, `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 AIn-F8/18, AIn-8/18 and AIn-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 AIn-8/18 and AIn-32/18
                                       (concerns the instructions : `P2_SEQ_INIT` and `P2_BURST_READ_INDEX`)
  • ADwinPRO1.inc :   new : `TC_READ_B`
  • ADwPEXT.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 AIn-8/18, AIn-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 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-AIn8-14_Seq.BAS, Pro-AIn8-14.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
    - o bugfix at Set_Language()
  - • Labview driver :
    - o improved error handling now supports also Labviews Multi-Threading
    - o 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 :

- o new : Get_Last_Error_Text, String_Length, Get/SetData_String, Get_DeviceNo, Show_Errors
  - o Online-help : 'help ADwin' can now be called in the 'Command Window'
  - • Testpoint driver : Realtime Object 1.4.1 :
    - o new action : Read Fifo Int32 : necessary for integer numbers greater than 16777215 (= 24-bit)
    - o 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
  - 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
- 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
- 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-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,   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