acontis technologies GmbH

SOFTWARE

EC-Monitor

Release Notes

V3.3.2.01

AT3400 **Edition: July 23, 2026**

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Contents

1 New Features 4

2 Migration 5

3 Enhancements/bug fixes 8

1 New Features

1.1 V3.3

- Update to expat V2.6.4
- Simplified clean IoCtl interface
- Application variables can be mapped to “ENI/Process variables”, now (conversions are possible via callbacks)
- New Ethernet real-time driver XDP and DPDK
- Update RtaccWin V1.0.9
- Update atemsys V1.4.32

1.2 V3.2

- Codesys EtherCAT® Master support
- KPA EtherCAT® Master support

2 Migration

2.1 From V3.2

2.1.1 EC-RtEth Real-Time Ethernet Drivers

- Rename EC_T_LINK_PARMS_EOM::abyIpAddress to abyTargetIpAddress
- Rename EC_T_LINK_PARMS_EOM::abyDstMac to abyTargetMac
- Add EC_T_LINK_PARMS_EOM::eNetworkMode
- Add EC_T_LINK_PARMS_SOCKXDP::eXdpMode
- Remove Dongle licensing via Microchip ATSHA204A for emllGEM (32Bit)

2.1.2 RAS

- Rename EcRasServer.h to EcMonitorRasServer.h
- Rename EcRasClient.h to EcMonitorRasClient.h
- Rename ECMASTERRAS_T_CONNOTIFYDESC to EC_T_RAS_CONNOTIFYDESC
- Rename ECMASTERRAS_T_REGNOTIFYDESC to EC_T_RAS_REGNOTIFYDESC
- Rename ECMASTERRAS_T_MARSHALERRORDESC to EC_T_RAS_MARSHALERRORDESC
- Rename ECMASTERRAS_T_NONOTIFYMEMORYDESC to EC_T_RAS_NONOTIFYMEMORYDESC
- Rename ECMASTERRAS_NOTIFY… to EC_RAS_NOTIFY… .
- Rename ECMASTERRAS_ACCESS_LEVEL… to EC_RAS_ACCESS_LEVEL…
- Add EC_T_MBX_GATEWAY_SRV_PARMS::dwStackSize

2.1.3 EC_IOCTL...

- Refactor emonIoControl() to emonIoCtl() . EC_T_IOCTLPARMS removed as all parameters are passed as flattened parameters to emonIoCtl().

2.1.4 EC_LINKIOCTL...

- Refactor EcLinkIoCtl(). EC_T_LINK_IOCTLPARMS removed as all parameters are passed directly to EcLinkIoCtl.
- Rename EC_LINKIOCTL_PROMISCOUSMODE to EC_LINKIOCTL_PROMISCUOUSMODE
- Change EC_LINKIOCTL_INTERRUPTENABLE: not the pbyInBuf itself is interpreted/evaluated, but the buffer that is pointed to (… == *((EC_T_BOOL)*pbyInBuf)). Affected Ethernet real-time drivers are: emllCCAT, emllCPSW, emllEG20T, emllETSEC, emllGEM, emllI8254x, emllIntelGbe, emllL9218i, emllLAN743x, emllRTL8139, emllRTL8169.
- Change EC_LINKIOCTL_PROMISCUOUSMODE: not the pbyInBuf itself is interpreted/evaluated, but the buffer that is pointed to (… == *((EC_T_BOOL)*pbyInBuf)). Affected Ethernet real-time drivers are: emllCCAT, emllETSEC, emllI8254x, emllIntelGbe, emllL9218i, emllRTL8139.

- Change EC_LINKIOCTL_GETLINKMODE: not the pbyOutBuf itself is written, but the buffer that is pointed to (((*EC_T_LINKMODE*)(pParms->pbyOutBuf)) = …). Affected Ethernet real-time drivers are: emllBPF, emllBcmNetXtreme, emllCCAT, emllEG20T, emllETSEC, emllGEM, emllI8254x, emllIntelGbe, emllL9218i, emllLAN743x, emllRTL8139, emllRTL8169.
- Change EC_LINKIOCTL_FORCELINKMODE: not the pbyInBuf itself is interpreted/evaluated, but the buffer that is pointed to (… == ((*EC_T_DWORD*)pParms->pbyInBuf)). Affected Ethernet real-time drivers are: emllI8254x, emllIntelGbe.
- All Real-Time Ethernet Driver set pdwNumOutData in EC_LINKIOCTL… set the amount of bytes actually written to pbyOutBuf if pdwNumOutData provided by application.
- Add some missing input parameters checks in Real-Time Ethernet Driver for some EC_LINKIOCTL… .

2.1.5 Custom Ethernet real-time drivers

- Refactor PF_EcLinkIoctl pfEcLinkIoctl to PF_EcLinkIoCtl pfEcLinkIoCtl (upper case changed from “Ioctl” to “IoCtl”) with the corresponding flattened parameters.
- All EC_LINKIOCTL… must set the amount of bytes actually written to pbyOutBuf if pdwNumOutData provided by caller.

2.1.6 Renamed structs

EC_CMD_TYPE is renamed to EC_T_CMD and also consequently used on the API instead of EC_T_BYTE. The enum values EC_CMD_TYPE_X are renamed to eCmd_X.

2.1.7 Binary incompatible structs

The following struct types are not binary compatible with previous versions:

- EC_T_CYC_COPY_INFO
- EC_T_MONITOR_INIT_PARMS (dwBusCycleTimeUsec has been removed and completely replace with dwBusCycleTimeNsec)

2.1.8 Preprocessor macros and defines

The following deprecated preprocessor macros got removed

- #define FILTVAL 128
- #define OLD_WEIGHT (FILTVAL-1)
- #define ROUNDINGVAL (FILTVAL/2)
- #define AVG_MULT (FILTVAL/8))

2.1.9 OS Layer

- Linux binaries are now compiled with GCC7 the runtime system must provide the appropriate runtime library versions (e.g. Ubuntu 18.04 or higher)
- Rename SafeOs[Free|DeleteEvent|DeleteLock] to OsSafe[Free|DeleteEvent|DeleteLock]
- Remove OsForceThreadPrioNormal use OsCreateThread with desired thread priority or OsSetThreadPriority instead

- Rename and seperation of concerns using preprocessor definitions from “EC_VERSION_[LINUX|WINDOWS|…]” to “EC_OS == EC_OS_WINDOWS” (and/or “EC_OS_VERSION == [WINVER|_WIN32_WINNT|__GLIBC__|2|3|…]”)
- Remove GO32, RIN32, RTAI, RTXC, XMC
- Remove Windows DotNet2/EcWrapperDotNet.dll (use DotNet4 or DotNetStd instead)

2.1.10 Examples

- T_EC_DEMO_APP_PARMS (dwBusCycleTimeUsec has been removed and completely replace with dwBusCycleTimeNsec)

2.2 From V3.1

- Change EC-Monitor API Prefix from “em” to “emon”
- Update to expat V2.4.9
- Remove obsolete .NET and Python interface classes, enums and methods
- Refactor EC_T_SB_MISMATCH_DESC
- Rename emCoeGetOdList(), emCoeGetObjectDesc() and emCoeGetEntryDesc()to emonCoeGetOdListReq(), emonCoeGetObjectDescReq() and emonCoeGetEntryDescReq()
- Replace emllI8254x with emllIntelGbe and support of TTS for Intel® i210 and i211
- Rename emPerfMeasInternal to emPerfMeas, old deprecated API removed

3 Enhancements/bug fixes

3.1 V3.3.2.01

Enhancement

- #6966 - Add support for command line flags to EC-Wrapper examples
- #6965 - Add support for EC-Motion to EcWrapperRust examples
- #6964 - Add support for multi-instance to EcWrapperRust examples
- #6963 - Remove unnecessary ref parameters from EC-Wrapper APIs
- #6918 - Add support for emllRemote to EC-Wrapper examples
- #6723 - Remove EcWrapperDotNet2
- #6063 - Fix dependencies for EcMaster, EcSimulator and EcMonitor in EcText.cpp and EcLogging.cpp
- #6699 - Replace T_EC_DEMO_APP_PARMS::dwBusCycleTimeUsec with dwBusCycleTimeNsec
- #6775 - Fix missing refresh of bus topology when fixed addresses change in packet capture mode

Fixes

- #6980 - Fix crash in ecwCoeGetEntryDesc() if name length exceeded
- #6979 - Fix missing debug flags for non-generated Rust enums
- #6958 - Set thread stack size to 8MB in EcWrapperRust examples
- #6957 - Fix performance measurement logging in EC-Wrapper examples
- #6956 - Fix support for arrays in EcWrapperRust (broken since V3.3.0.03)
- #6955 - Fix ecwPerfMeasApp…() in EC-Wrapper (broken since V3.3.0.03)
- #6954 - Fix crash in EC-Wrapper examples if started with “-sp” and without port number
- #6764 - Fix INCLUDE_EMLL_… for Windows
- #6713 - Rebuild bus topology on delayed slave communication
- #6734 - Fix truncated data read of Configured address list Objects 0xF02n and Detected address list Objects 0xF04n in Master OD using complete access
- #6736 - Fix memory leak in examples using emllEom, emllMultiplier, emllVlan
- #6738 - Fix performance measurement not reset when no new values were sampled
- #6750 - Fix truncated strings due to using OsSafeStrncpy() / OsSafeStrncpy2() with nLen instead of nSize at some locations (broken since V3.3.0.02)

Platform

- #6977 - Add connect timeout detection to CEcSocketIp
- #6940 - Add connect timeout to emllRemote
- #6920 - Move bStartTimingTask to DN_EC_T_INIT_PARMS_MASTER in EC-Wrapper
- #6888 - Update atemsys V1.4.39
  - Add PHY management for PCI devices described in the device tree (atemsys_pci)
- #6862 - Add support for TI AM263 to emllTiEnetIcssg
- #6857 - Add ecwOptimizeProcessPerformance() to EC-Wrapper
- #6833 - Add support for Rust on Linux ARM 64Bit

- #6805 - Add emllFslEnetc
- #6800 - Add support for NVIDIA Jetson AGX Thor to emllDwXgmac
- #6772 - Add support for TI AM64x/AM243x to Fingerprint
- #6719 - Add EC_GETINT(), EC_SETINT() for ARM, PPC
- #6093 - Remove emllPcap for Windows
- #5487 - Remove EC_LINKIOCTL_SET_LINKMODE (duplicate of EC_LINKIOCTL_SETLINKMODE)
- #6064 - Include EcDemoTimingTaskPlatform.h through EcDemoApp.h
- #6393 - Add ATEMRAS_NOTIFY_EXCEPTION
- #6447 - Add support for Nvidia AGX Orin to emllDW3504
- #6448 - Add emllDwXgmac for Synopsis DesignWare Cores XGMAC
- #6570 - Add OsSetThreadAffinity() for RTX64
- #6636 - Add support for RTL8221D to Phylib
- #6712 - Add card specific buffer alignment to emllIntelGbe
- #6778 - Update atemsys V1.4.38
  - Fix support gpio phy reset device tree overlays
- #6873 - Add IOMMU support to emllDwXgmac
- #6936 - Fix invalid administrative Client ID in RAS Client after emConfigureNetwork()
- #6921 - Fix ThrowTranslateEvent() in EC-Wrapper Python
- #6919 - Fix jitter on FreeRTOS with TI AM243LP
- #6886 - Fix missing check if instance already opened in emllVlan (broken since V3.2.3.07/V3.3.1.01)
- #6819 - Add support for MSI interrupt on QNX
- #6798 - Fix poor timer resolution on Windows 11 due to process power throttling
- #6706 - Add support for PHY OS Driver to emllBcmGenet (ePHY_OSDRIVER)
- #6016 - Fix thread affinity parameter in OsSetThreadAffinity() on Linux and Xenomai
- #5960 - Fix gcc 13.3 compiler warnings
- #6174 - Increase stack size of RAS Server worker threads for SWIFT
- #6732 - Fix memory leak in CreateLinkParmsFromCmdLine…() with invalid parameters
- #6768 - Fix occasional lock-up in EcLinkRecvFrame() in emllRemote with Cable Redundancy
- #6894 - Fix missing initialization in EcLinkOpen() in emllMultiplier (broken since V3.2.3.07/V3.3.1.01)
- #6967 - Fix frame loss on Ti Am57x with emllIcss when using instance 1 and 3 or 2 and 4 simultaneously

3.2 V3.3.1.01

Enhancement

- #6699 - Replace T_EC_DEMO_APP_PARMS::dwBusCycleTimeUsec with dwBusCycleTimeNsec
- #6690 - Remove obsolete performance measurement defines FILTVAL, OLD_WEIGHT, ROUNDINGVAL, AVG_MULT
- #6581 - Replace EC_T_MONITOR_INIT_PARMS::dwBusCycleTimeUsec with dwBusCycleTimeNsec
- #6339 - Unify optional command line parameters usage

- #6224 - Refactor EC_OS and EC_VERSION… macros
- #5859 - Add pAppContext parameter to EcSelectLinkLayer functions
- #4177 - Add …_MBXSND_WKC_ERROR notifications
- #5757 - Add emonCoeGetEntryDesc(), emonCoeGetObjectDesc(), emonCoeGetODList()
- #6605 - Apply application parameters to linklayer parameters in SetAppParmsFromCommandLine() and SetAppParmsLogging() instead of main()
- #6614 - Add Nvidia Thor support to Fingerprint
- #6682 - Add emllIntelGbe for QNX71 ARM_64Bit

Fixes

- #6724 - Fix missing EcMemoryLog.h in packages (regression since V3.3.0.02)
- #6641 - Fix crash in SetAppParmsFromCommandLine() due to missing null pointer checks
- #6670 - Fix EC-Monitor state flags for device emulation topologies

Platform

- #6623 - Remove Dongle licensing via Microchip ATSHA204A for GEM 32Bit
- #6563 - Add Microchip ATSHA204A support to Fingerprint
- #5235 - Add Software Bill of Materials (SBOM)
- #6064 - Include EcDemoTimingTaskPlatform.h through EcDemoApp.h
- #6393 - Add ATEMRAS_NOTIFY_EXCEPTION
- #6462 - Add support for Link Speed configuration to emllHpe
- #6507 - Update atemsys V1.4.37
  - Fix support for devices with up to 32 clocks to platform / Device Tree Ethernet driver
  - Add support gpio phy reset device tree overlays
  - Fix log level of verbose messages about PCI/PCIe device from INFO to DEBUG
- #6585 - Add i.MX95 support to emllDpdk
- #6591 - Add support for RTOS-32 to emllDW3504
- #6625 - Fix iq-9075 custom parameter in emllDW3504
- #6626 - Add device IDs for I219_V
- #6644 - Fix performance measurement on VxWorks ARM_64Bit
- #6647 - Add support for EC_T_LINK_PARMS_INTELGBE::linkParms.dwIstStackSize setting to emllIntelGbe in Interrupt Mode
- #6482 - Fix missing files in RAS SDK package (Examples\\Common\\…)
- #6559 - Remove deprecated “-lang-c++” compiler flag from QNX build
- #6279 - Release libxdp and libbpf in EcLinkClose() in emllSockXdp
- #6495 - Fix erroneous RAS client disconnection with server <= V2.7 due to API timeout (broken since V3.2.2.01)
- #6542 - Fix missing error message on invalid LinkOpen() parameter
- #6633 - Fix MAC Protection for Rockchip RK3588
- #6648 - Add support for QNX8 to emllBpf
- #6659 - Fix send frame occasionally delayed in emllFslFec
- #6674 - Fix emllDW3504 resource leak causing systematic error on subsequent starts

- #6676 - Fix IRQ CPU affinity for Interrupt Mode on VxWorks
- #6680 - Fix missing adapter stop in EcLinkClose() of emllDW3504
- #6716 - Fix incremental cmake build for Linux due to EC_C_CXX_FLAGS recursion (regression since V3.3.0.02)
- #6718 - Fix crash in EcLinkOpen(…) in emllEom, emllRemote, emllSimulator, emllVlan due to name clash (S_apLinkDesc)

3.3 V3.3.0.03

Enhancement

- #6506 - Add parameters wMainTapPortIn and wMainTapPortOut to EC_T_MONITOR_INIT_PARMS
- #6493 - Add emGetHcGroupInfo() and emGetHcGroupNumOf()
- #6349 - Add support for SwapData strings in ENI according to ETG.2100 V1.0.3
- #5764 - Add EC_E_VERSION_MISMATCH
- #5052 - Add emonBadConnectionsDetect()
- #4177 - Add …_MBXSND_WKC_ERROR notifications
- #6408 - Enhance master state detection
- #6427 - Enhance emonGetMonitorStatus() to include topology and PDO configuration state
- #6430 - Enable file logging specifically in CEcLogging
- #6505 - Support incomplete topologies

Fixes

- #6492 - Fix missing reset of emonGetMonitorStatus() topology and PDO configuration state flags
- #6508 - Fix missing update of Inputs.BusTime in process data image
- #6532 - Fix acyclic frame detection

Platform

- #6554 - Add support for RISC-V to emllEom on Linux
- #6571 - Bump minimum CMake version to 3.14
- #6502 - Refactor MacOS workspaces to match generic structure
- #6303 - Add fingerprint support to emllLAN743x
- #5832 - Add ROS2 support
- #5576 - Add support for SSL/TLS to RAS
- #6184 - Update emllTiEnetIcssg to TI SDK11
- #6236 - Add support for Microchip PolarFire to emllGEM
- #6238 - Add support for emllTemac
- #6271 - Fix emllCPSWG performance issues on TI Jacinto TDA4VM
- #6301 - Add support for Rockchip RK3506, Allwinner T153 and T527 to emllDW3504
- #6428 - Update RtaccWin V1.1.1
- #6436 - Add Interrupt Mode for emllDW3504
- #6484 - Add emllVlan to Windows
- #6317 - Add support for Qualcomm IQ-9075 to emllDW3504

- #6550 - Fix crash in OsGetLinkLayerRegFunc(EC_T_CHAR* szDriverIdent, EC_NULL)
- #6488 - Remove faulty signature check in emllMultiplier EcLinkIoCtl() (regression since V3.3.0.01)
- #6036 - Add workaround for I210 Errata 25 (Slow System Clock) to emllIntelGbe on VxWorks7
- #6472 - Fix unexpected MAC address when using multiple instances of emllDW3504 simultaneously
- #6483 - Fix crash in emllVlan EcLinkRecvFrame() (regression since V3.2.2.04)
- #6534 - Fix emllDW3504 support for RK3576
- #6546 - Fix sending of frames longer than 768 bytes on emllCPSWG
- #6547 - Fix link reconnect with short cycle time for emllCPSWG

3.4 V3.3.0.02

Enhancement

- #6120 - Rename SafeOs[Free|DeleteEvent|DeleteLock] to OsSafe[Free|DeleteEvent|DeleteLock]
- #6013 - Add emGetProcessVarInfoEx() and emGetProcessVarInfoNumOf()
- #5969 - Generalize Windows project properties
- #5865 - Add emGetLicenseFingerprint()
- #5757 - Add emCoeGetEntryDesc(), emCoeGetObjectDesc(), emCoeGetODList()
- #4079 - Add EcMonitorDemoGuiDotNet
- #5687 - Add emGetCfgSlaveSmInfo()
- #5740 - Add EC-Monitor support for EtherCAT Masters without ENI
- #5913 - Add EcMonitorDemoMqttServer
- #6053 - Add ENI Builder(EBI) export
- #6119 - Improve bus scan compatibility with third party EtherCAT Masters
- #6161 - Add support for packet capture files with LINKTYPE_ETHERNET_MPACKET(IEEE 802.3 mPackets)
- #6205 - Add support for Fingerprint to SetLicenseKey()
- #6247 - Add EC-Monitor CoE support without ENI
- #6256 - Optimize EtherCAT command processing

Fixes

- #6316 - Always use EC_T_MBXTFERDESC::dwMaxDataLen for mailbox uploads
- #6268 - Remove support for Hilscher netANALYZER
- #6122 - Fix truncated lines in log file about skipped/dropped messages in examples
- #6171 - Fix PDO mapping related prints of object dictionary in examples
- #6226 - Fix malformed packet handling
- #6248 - Rename EcMonitorDemoMqttServer to EcMonitorDemoMqtt
- #6253 - Rename CPcapRecorder::InitInstance(…) to CPcapRecorder::StartPcapRecorder(…) (fix overloaded-virtual warning)

Platform

- #6379 - Remove OsForceThreadPrioNormal function and SetPriorityClass() calls from libraries
- #6123 - Add support for Renesas RZ/G2L to emllSHEth

- #5902 - Add connection token to RAS
- #5819 - Remove bpf dependency from emllSockXdp
- #5774 - Add emllHpe for INtime
- #5849 - Add support for AllWinner T536 to emllDW3504
- #5879 - Add support for iMX8 on uC3
- #6048 - Add ZEROCOPY Driver mode to emllSockXdp
- #6139 - Update RtaccWin V1.1.0
- #6144 - Add support for Intel Alder-Lake to emllDW3504
- #6153 - Add EC_LINKIOCTL_GET_INTELGBE_STATISTICS to emllIntelGbe
- #6156 - Add OsPlatformMemoryBarrier() for x86_64Bit and ARM_64Bit
- #6198 - Rename Xilinx GEM to Cadence GEM/MACB
- #6280 - Add support for Ti DP83869 to PhyLib
- #6282 - Add full scan of Mdio bus in PhyLib
- #6352 - Add RTL8126 support to emllRTL8169
- #6404 - Set calling convention for LinkLayerReg functions
- #6324 - Fix build errors with musl toolchain on Linux
- #5960 - Fix gcc 13.3 compiler warnings
- #5791 - Fix card specific control access and configuration for I210-I350 in emllIntelGbe
- #6116 - Add bDisableForceBroadcast to emllHpe
- #6160 - Fix thread priority class setting in OsCreateThread() on Windows
- #6162 - Fix print performance histogram on console for FreeRTOS
- #6169 - Fix occasional wrong link status disconnected in emllETSEC
- #6192 - Fix project files for uC3 on iMX8
- #6239 - Reset adapter if RX or TX disabled on reconnection in emllRTL8169
- #6269 - Fix RtaccDevice driver eval version in protected Real-time Ethernet Driver packages
- #6281 - Fix SGMII support for all instances emllGEM
- #6305 - Add signature check for pvInstance parameter to EcLinkFreeSendFrame() in emllIntelGbe
- #6320 - Add bEalInitDeinitByApp to emllDpdk
- #6358 - Update atemsys V1.4.36
  - Fix PCI MSI interrupt broken since V1.4.35 for Kernel >= 6.0.00
- #6183 - Update atemsys V1.4.35
  - Add driver initialization entry point for Kernel >= 6.6.00
  - Fix Xenomai 3.3
  - Fix CPSWG for Kernel >= 6.12
  - Add RiscV support
  - Fix PCI IO memory resource management Kernel >= 6.0.00
- #6135 - Update atemsys V1.4.34
  - Fix for platform devices without 32-bit DMA
  - Add Device Tree Ethernet driver support for Raspberry Pi 5

  - Fix non-PCI IO Memory for PCI devices
- #6380 - Fix EC_NOTIFY_SB_EEPROM_ACCESS_DENIED is printing Unknown Text instead of the right notification text
- #6392 - Fix CEcMasterDotNet.Init() returns EC_E_NOTSUPPORTED after Init() and Deinit() called several times

3.5 V3.3.0.01

Enhancement

- #5913 - Add EcMonitorDemoMqttServer
- #5802 - Add performance measurement jobs MON_FrameRoundTripTime and MON_MasterCycleTime
- #5690 - Rename libEcMaster.a, … to libEcMasterStatic.a on Linux, Xenomai, …
- #5062 - Add emLinkInputVarByName(),… to map ENI variables to local application variables
- #4684 - Add EC-Monitor QuickStart Guide
- #5687 - Add emGetCfgSlaveSmInfo()
- #5804 - Add support for EtherCAT open mode
- #5870 - Add eCnfType_FileByApp to emConfigureNetwork()
- #5911 - Add instance, mode to command line parameters for emllDpdk
- #5912 - Add T_EC_DEMO_APP_PARMS::dwJobsThreadPrio, dwJobsThreadStackSize
- #5949 - Report missing DLLs in EC-Wrapper
- #5950 - Add histogram export to EC-Wrapper examples
- #6072 - Add support for legacy parameters to emonInitMonitor()

Fixes

- #6086 - Fix emonCoeSdoUpload() return codes for non-existing objects
- #5897 - Fix hot-connect slave detection with SuperSetENI
- #5834 - Fix process data image in case of TAP inside topology
- #5763 - Add support for random periodic frame loss simulation to esSetErrorGenerationAtSlavePort()
- #5886 - Fix EC_TRUE and EC_FALSE macro comments
- #5900 - Fix emCoeGetODList() delivering 0xAnnn objects for unexpected bus slaves
- #5915 - Fix ENI parser error handling
- #5941 - Fix command line parameter “–rxbuffercnt” parsing for emllRemote
- #5995 - Add support for ENIs without Config:ProcessImage element
- #5999 - Fix configured PDO to SyncManager assignment
- #6009 - Add support for ENIs without FMMU init commands
- #6078 - Reject complete access read for non complete access objects
- #6090 - Add support for packet capture files generated by TwinCAT Promiscuous Mode

Platform

- #6094 - Add version and port print to RasSrvStart()
- #6030 - Add support for cable redundancy to emllRemote
- #6026 - Add support for Raspberry Pi 5 to emllGEM

- #6004 - Add Signature and Size to EC_T_RAS_CLIENT_CONDESC
- #5965 - Update RtaccWin V1.0.9
- #5963 - Generate SHA for delivery packages
- #5931 - Add promiscuous mode setting to emllSockRaw (”–promiscuousmode”)
- #5819 - Remove bpf dependency from emllSockXdp
- #5762 - Add bNoPhyAccess parameter to emllFslFec
- #5753 - Add default values for EC_T_RAS_CLIENT_CONDESC::dwCycleTime, dwWDTOLimit for emRasClntAddConnection()
- #5686 - Refactor EcRasClient.h, EcRasServer.h to EcMasterRasClient.h, EcMasterRasServer.h, EcMonitorRasServer.h, EcSimulatorRasClient.h, EcSimulatorRasServer.h
- #5306 - Fix support for MacOS
- #4564 - Add instance identification by PCI location for emllNdis
- #5408 - Add support for WAGO PFC200 and CC100 with Ethernet Switch Chip
- #5427 - Add support for ET2000 to emllMultiplier
- #5470 - Reduce timeout waiting for link connected in emllICSS
- #5659 - Add support for second port to emllCPSWG on Linux (Ti AM64x)
- #5747 - Add RAW mode to emllEom
- #5751 - Fix emllGem bNoPhyAccess
- #5769 - Add support for Xenomai4 ARM 64Bit
- #5809 - Add EC_OS_NAMESPACE
- #5889 - Add support for Intel X700 adapter family to emllDpdk
- #5901 - Add parameters for communication thread of RAS Client
- #5948 - Add armv7-vfp-eabihf to Linux ARM 32Bit
- #5964 - Add emllDpdk for Linux ARM 64Bit
- #5977 - Add support for RK3576 and RK3562 to emllDW3504
- #5993 - Add Wrapper DLLs to RAS for Windows
- #6048 - Add ZEROCOPY Driver mode to emllSockXdp
- #6077 - Add UDP Mailbox Gateway Server to EC-Wrapper
- #6036 - Add workaround for I210 Errata 25 (Slow System Clock) to emllIntelGbe on VxWorks7
- #5929 - Fix LinkIoCtl parameter interpretation of EC_LINKIOCTL_INTERRUPTENABLE, EC_LINKIOCTL_PROMISCOUSMODE, EC_LINKIOCTL_GETLINKMODE, EC_LINKIOCTL_FORCELINKMODE
- #5743 - Merge EcLinkIoctl() in emllXXX
- #5735 - Remove deprecated mutex configuration in EcDemoMain.cpp for Linux
- #5549 - Fix occasional 5ms freeze in emllTiEnetCpswg on FreeRTOS
- #5775 - Fix compiler error due to INVALID_SOCKET defined in EcOsPlatform.h on Linux
- #5805 - Fix emGetCfgSlaveInfo() over RAS on PPC
- #5808 - Fix emllIntelGbe link reconnect
- #5823 - Add support for INtime Distributed RTOS
- #5852 - Fix resource leak from interrupt initialization on VxWorks

- #5854 - Fix CRC error handling of emllDW3504 for GMAC4.x, …
- #5866 - Fix crash in OsDeleteThreadHandle() on Linux with musl libc
- #5871 - Fix performance measurement becoming corrupted after 32Bit wrap on TI-RTOS
- #5882 - Fix access violation during emllCCAT initialization with invalid parameters
- #5899 - Fix GEM_CLK_CTRL handling to emllGEM on Ultrascale
- #5944 - Fix max frame len for emllTap
- #5801 - Update atemsys V1.4.32
  - Add support for dsa driver with Device Tree (insmod atemsys bRegisterDtbNetDevice=1)
  - Fix Device Tree support for Kernel > 6.1.00
  - Add support for TI AM64 CPSWG Second Port
- #5967 - Fix crash in RAS Server receiving malformed data during connection establishment
- #5975 - Fix crash in LinkOsInterruptDisable on VxWorks70 64Bit
- #5982 - Fix emRasGetConnectionInfo() returning wrong SPOC Information
- #5992 - Fix LinkOsUnmapMemory() on SylixOS
- #6029 - Set bind flags to XDP_COPY and remove unneeded structures in emllSockXdp

3.6 V3.2.2.03

Enhancement

- #5716 - Add support for emllDpdk to EC-Wrapper
- #5672 - Increase pcap recorder default buffer size from 50 to 1000 frames and write interval from 1ms to 50ms
- #5643 - Replace OsDbgAssert() with assert() in xmlparse.cpp
- #5532 - Add cmake build files for Linux

Fixes

- #5696 - Use data type identifier 0x000A (DEFTYPE_ARRAY_OF_BYTE) for data type name “ARRAY [0..XXX] OF of USINT” (DEFTYPE_ARRAY_OF_USINT not defined in ETG.1020)
- #5671 - Fix memory leak in pcap recorder re-usage
- #5649 - Fix crash in emonGetSlaveInfo() if auto increment address outside boundaries
- #5481 - Fix missing EcMbxGatewaySrv.h in packages

Platform

- #5707 - Add ATEMRAS_T_SRVPARMS::dwMaxQueuedNotificationSize
- #5694 - Add emllIntelGbe for QNX71 ARM_32Bit
- #5670 - Add support for EC_NOTIFY_SLAVE_STATECHANGED, EC_NOTIFY_SLAVE_ERROR_STATUS_INFO to RAS Client on PPC
- #5635 - Update RtaccWin V1.0.8
- #5166 - Reduce Socket timeout if IP address is not available
- #4942 - Add emllEom supporting EtherCAT Open Mode
- #4590 - Add support for Xenomai4
- #5633 - Update atemsys V1.4.31
  - Set license to “SPDX-License-Identifier: GPL-2.0+ WITH Linux-syscall-note”

- #5688 - Add protocol version negotiation to emllRemote
- #5693 - Add device IDs for I219LM and I219V
- #5754 - Replace OsPrintf() with EcLogMsg() in EcSocket
- #5744 - Fix handling of EC_T_LINK_PARMS_DW3504::dwRxDmaDesCnt, dwTxDmaDesCnt in emllDW3504
- #5702 - Reduce large memory allocations in RAS Server
- #5588 - Fix EcLinkOpen() sporadically returning EC_E_TIMEOUT in emllBcmGenet

3.7 V3.2.2.02

Enhancement

- #5610 - Add mailbox error type processing
- #4198 - Add support for SuperSetEni

Fixes

- #5609 - Fix bus scan detection in packet capture processing
- #5603 - Fix missing string termination in GetCfgSlaveEoeInfo(), GetSlaveProp() and CoeReadObjectDictionary() if string length equals buffer size
- #5582 - Support ENI with missing DataLength field of cyclic command

Platform

- #5622 - Add EC-Master shared library for QNX
- #5577 - Add EC_LINKIOCTL_GET_PCI_INFO to emllIntelGbe for Windows and Linux
- #5562 - Add support for Semidrive D9 to emllDW3504
- #5548 - Add support for emllDW3504 on Intel Tiger-Lake
- #5639 - Fix CPU affinity for up to 64 cores
- #5626 - Fix link open failed in emllCCAT for some Beckhoff CX
- #5612 - Add RtaccDevice_DmaFree() to Windows LinkOsFreeDmaBuffer()
- #5597 - Fix ecatGetSrcMacAddress() returns wrong MAC address if link down for emllCmsisEth
- #5412 - Update atemsys V1.4.30
  - Fix for Kernel > 6.4.00
  - Fix for systems without 32-bit DMA

3.8 V3.2.2.01

Enhancement

- #5539 - Add EC_IOCTL_MONITOR_SET_COESDO_CLEAR_ON_READ
- #5138 - Add “-readod …”, “-readvars …” to examples

Fixes

- #5557 - Fix performance measurement: JOB_Total was sometimes bigger than Task Duration (JOB_Total + App)
- #5544 - Consider frame index in frame direction detection

- #5533 - Fix memory corruption if ENI file contains more than 64 cyclic frames
- #5522 - Fix unexpected MSU WKC state errors
- #5521 - Fix crash in emonBacktracePacketCapture if job task paused
- #5519 - Fix packet capture processing for frames bigger than 1536 bytes
- #5512 - Fix crash while monitoring fragmented CoE SDO info transfer

Platform

- #5543 - Add support for EC_NOTIFY_MBSLAVE_COE_SDO_ABORT, EC_NOTIFY_SLAVE_INITCMD_RESPONSE_ERROR, EC_NOTIFY_MBSLAVE_INITCMD_TIMEOUT, EC_NOTIFY_MASTER_INITCMD_RESPONSE_ERROR to RAS on PPC
- #5515 - Add support for PENTIUM4llvm_SMP on VxWorks70
- #5514 - Add support for EC_NOTIFY_SB_MISMATCH, EC_NOTIFY_HC_TOPOCHGDONE, EC_NOTIFY_FRAME_RESPONSE_ERROR, EC_NOTIFY_SLAVE_PRESENCE, EC_NOTIFY_SLAVES_PRESENCE to RAS Client on PPC
- #5498 - Add support for STM32H743 on uC3
- #5494 - Move AtXmlParser.cpp and .h to Sources\Common
- #4072 - Add emllSockXdp (Linux AF_XDP sockets)
- #5555 - Add missing notifications to marshalNotify() switch case that may cause an assertion failure
- #5552 - Fix crash in EC-Wrapper .NET with multiple RAS connections after first connection closed
- #5526 - Fix emllNdis interrupt mode (broken since V3.2.1.05)
- #5482 - Fix RAS Client performance issue
- #5467 - Fix occasional crash in emllCPSWG on Jacinto and AM654x

3.9 V3.2.1.05

Enhancement

- #5511 - Add support for EC_T_UINT64 (“0x%016llX”) to EcSnprintf()
- #5504 - Add EC-Monitor for Linux ARM 64Bit

Fixes

- #5471 - Fix invalid read in emConfigureNetwork() in case of missing InitCmd comments
- #5391 - Fix notification handlers not called after first client deregistered
- #4925 - Replace assert() with OsDbgAssert() in xmlparse.cpp

Platform

- #5442 - Add support for Ti AM243x to emllTiEnetIcssg on FreeRTOS
- #5402 - Add QNX8 support
- #5368 - Update atemsys V1.4.29
  - Add support for TI AM64 CPSWG
  - Fix PCI dma_coherent bit handling for Kernel between 4.15.0 and 5.4.0
- #5365 - Add PCI device IDs for Intel DWMAC 43a2 and 43ac
- #5364 - Add emllDW3504 for VxWorks x86
- #5355 - Add support for emllBcmNetXtreme to EC-Wrapper

- #5267 - Add support for RISC-V on Microchip Polar Fire
- #5266 - Add emllDpdk for Linux x86 64Bit
- #5265 - Add emllVlan
- #5236 - Replace EcatDrv with RtaccDevice
- #5208 - Add emllCPSWG on TI AM64x and TI AM62x
- #4983 - Add support to set frequency using OsMeasCalibrate() multiple times on Linux
- #4202 - Fix PHY initialization for 8168H/8111H in emllRTL8169
- #5347 - Enable bus master and memory space in PCI command register on QNX
- #5406 - Change name of TI Jacinto 7 from “TI J721E” (eCPSWG_J721E) to “TI TDA4x (Jacinto 7)” (eCPSWG_TDA4X) in emllCPSWG
- #5445 - Add EC_T_LINK_PARMS_DW3504::bNoPhyAccess for emllDW3504
- #5452 - Fix MAC Protected License Check in emllBcmGenet
- #5440 - Fix emllIntelGbe returns EC_E_NOMEMORY if cable redundancy and bResetOnDisconnect is used
- #5405 - Fix start with link disconnected for emllBcmNetXtreme
- #5404 - Fix LinkOsAllocDmaBuffer() fails on RtaccWin due to wrong RtaccWin InstanceID in case of multiple RtaccWin devices
- #5400 - Disable OsDbgAssert(…) in EcMonitor.dll on Windows
- #5359 - Fix undefined symbol LinkOsGetPciInfo in emllBcmNetXtreme for Linux
- #5340 - Fix legacy parameters handling in emllIntelGbe
- #5319 - Fix missing PCI info for Real-time Ethernet Drivers on Windows
- #4899 - Add OsReleaseLinkLayerRegFunc to Linux
- #5258 - Fix PHY handling in case of link disconnected for emllCPSW, emllDW3504, emllFslFec, emllGEM, emllICSS, emllRTL8169

3.10 V3.2.1.04

Enhancement

- #5303 - Update Expat V2.6.0

Platform

- #5334 - Add EC_T_LINK_PARMS_INTELGBE::bNoPhyCtrlOnConnect to emllIntelGbe
- #5293 - Fix emllIntelGbe PHY reset blocked handling for I225, I350
- #5116 - Add emllBPF for QNX7.1
- #4920 - Change Real-time Ethernet Driver package nomenclature from “EC-Master-…”, “EC-Simulator-…” to “EC-RtEth-…”
- #5326 - Add EC_COMPAREBITS
- #5340 - Fix legacy parameters handling in emllIntelGbe
- #5315 - Fix RX stucks in emllI8254x in case of frames exceeding buffer size
- #5335 - Fix memory corruption in RAS Server in emNotifyApp if dwInBufSize exceeds LARGEST_NOTIFICATION

3.11 V3.2.1.03

Enhancement

- #5274 - Set calling convention at callback function types
- #5270 - Add support for SylixOS on ARM64
- #5094 - Add emonGetSlaveInpVarByObjectEx(), emonGetSlaveOutpVarByObjectEx()
- #4844 - Add support for Codesys EtherCAT Master
- #5189 - Improve hash table performance

Fixes

- #5307 - Fix Kunbus TAP Curious support
- #5295 - Fix invalid read in EC_COPYBITS at end of pbySrc
- #5177 - Fix missing update of MonitorOD after slave address change

Platform

- #5238 - Add support for emGetSlaveInpVarByObjectEx() and emGetSlaveOutVarByObjectEx() to RAS
- #5225 - Add support for TI J721E to emllCPSWG
- #5195 - Add emRasSrvSetLogParms()
- #5070 - Add emllTap
- #4964 - Add support for TI CPSWG AM6x and Jacinto 7 (j784s4) based on Enet LLD on FreeRTOS (emll-TiEnetCpswg)
- #4927 - Add support for AMD Xilinx Vitis on FreeRTOS
- #4846 - Add support for TI AM65x to emllCPSWG on Linux
- #5176 - Add EC_LINKIOCTL_SET_MSECCOUNTERPTR to emllGEM
- #5183 - Add emllDW3504 for Xenomai3 ARM_64Bit
- #5193 - Add support for EC_NOTIFY_CLIENTREGISTRATION_DROPPED, EC_NOTIFY_CYCCMD_WKC_ERROR, EC_NOTIFY_*_INITCMD_WKC_ERROR, EC_NOTIFY_COE_MBXSND_WKC_ERROR, EC_NOTIFY_SLAVE_NOT_ADDRESSABLE, EC_NOTIFY*_ALL_DEVICES_OPERATIONAL to RAS client on PPC
- #5199 - Add device IDs for I219LM and I219V
- #5242 - Add support for emUnregisterClient(), EC_IOCTL_UNREGISTERCLIENT to RAS Client on PPC
- #5252 - Update atemsys V1.4.28
  - Fix PCIe compatibility for atemsys < V1.3.5
  - Fix support for Kernel > 6.05.00
  - Fix ATEMSYS_IOCTL_CPSWG_CMD Kernel version
  - Add support for Device Tree Ethernet driver to CPSWG
  - Fix support for arm/aarch64 Kernel >= 6.00.00
  - Fix of_dma_configure version
  - Add ATEMSYS_IOCTL_IOMEM_CMD for Kernel mode access to protected registers
  - Add ATEMSYS_IOCTL_CPSWG_CMD to configure K3_UDMA_CPSWG channels, flows and rings
- #5256 - Add emllRemote for Linux, Windows
- #5314 - Fix OsWaitForEvent(…, dwTimeout) on RTOS-32

- #5259 - Fix missing DLLs in EC-STA packages
- #5239 - Fix dependency of compiled OsLayer to Sources/OsLayer on Windows
- #5223 - Deactivate Filters in the NDIS driver
- #5108 - Fix emCoeGetODList(), emCoeGetObjectDesc(), emCoeGetEntryDesc() for RAS Client on PPC
- #5181 - Remove duplicate warning of missing PREEMPT RT patch on Linux
- #5200 - Fix long timeout at RAS Client disconnection after socket shutdown
- #5201 - Fix emNotifyApp() over RAS without emRegisterClient() at RAS Client
- #5229 - Fix EcMbxGatewayClnt uploads not existing object for internal config slave cache
- #5230 - Fix EcMbxGatewayClnt logging (EC_T_MBX_GATEWAY_CLNT_CONDESC::LogParms)
- #5240 - Fix erroneously deregister client in RAS Server for previously dropped client
- #5243 - Fix RAS Client EC_LOG_LEVEL_INFO_API logging

3.12 V3.2.1.02

Enhancement

- #5133 - Add eEthTap_PortMirror
- #5064 - Add emonTferSingleRawCmd to support register read via RAS
- #4146 - Add swap data support
- #5088 - Add application performance measurements to CSV output

Fixes

- #5136 - Fix emonGetSlaveFixedAddr() for MASTER_SLAVE_ID
- #5120 - Fix timing task CPU affinity
- #5099 - Fix potential naming conflict of Expat library
- #5077 - Fix crash if ENI contains no logical commands
- #5066 - Fix missing refresh of EC_T_SLVSTATISTICS_DESC::wAlStatusCode
- #5006 - Fix erroneous EC_NOTIFY_FRAME_RESPONSE_ERROR in case of mailbox repeating
- #5059 - Fix emonBacktracePacketCapture in case of packet capture processing and job task paused
- #5076 - Fix console logging freeze on RTOS-32 (regression since V3.1.4.05)
- #5093 - Fix cycle time performance measurement is implemented in eUsrJob_SendAllCycFrames instead of eUsrJob_StartTask (regression since V3.1.2.03)
- #5125 - Fix registered client lookup on notification
- #5127 - Fix missing string termination in SDO value log message of DEFTYPE_VISIBLESTRING in CoeReadObjectDictionary() in examples
- #5128 - Fix Master OD reading canceled at RX PDO mapping and TX PDO mapping in CoeReadObjectDictionary() in examples

Platform

- #5051 - Remove support for T-Kernel and eT-Kernel
- #4985 - Add FP Real-time Accelerator for Windows
- #4641 - Add support for Broadcom BCM5719 (emllBcmNetXtreme)

- #4245 - Remove obsolete EC_LINKIOCTL_REGISTER_FRAME_CLBK, EC_LINKIOCTL_UNREGISTER_FRAME_CLBK
- #4909 - Add MAC Protection for Rockchip RK3588 and RK3568
- #4937 - Use poll() or epoll() instead of select() for sockets
- #4943 - Add support for i.MX93 to emllFslFec
- #4965 - Fix support for KSZ9131 (disable EEE in Phylib)
- #5042 - Add EC_T_LINK_PARMS_GEM::bNotUseCacheSync to fix performance issue with emllGEM e.g. on older systems by disabling internal LinkOsCacheDataSync() (default: enabled)
- #5053 - Add support for MAC protection to emllDW3504 on Rockchip RK3399
- #5097 - Fix crash in rt_task_inquire due to bug in Xenomai3 API
- #4972 - Fix emllIntelGbe EcLinkGetSpeed()
- #4872 - Fix DW3504 Altera Cyclone Performance issue by turn off cache sync
- #4967 - Fix memory leak in emllAlteraTSE
- #4984 - Fix emRasSrvStop hangs on EC-Win(RTOS-32)
- #4995 - Configure TTS interrupt only if EC_T_LINK_PARMS_ICSS::TtsParms::pfnStartCycle set
- #5001 - Fix emllRZT1 MAC address reset
- #5014 - Fix RAS server on RTX64 (broken since V3.1.4.01)
- #5065 - Fix threading on TI-RTOS AM65x (e.g. RAS server starved)

3.13 V3.2.1.01

Enhancement

- #4894 - Add CopyInfo to EC_T_PROCESS_VAR_INFO
- #4805 - Change IPv4 parameter variables type from EC_T_DWORD to EC_T_IPADDR
- #4612 - Remove legacy performance measurement APIs
- #4946 - Add pdwVersionType parameter to emonGetVersion()
- #4891 - Add EC_T_MONITOR_STATUS::eEthTapType
- #4525 - Rename RAS client and server to EcMonitorRasClient and EcMonitorRasServer
- #4017 - Rename emPerfMeasInternalXxx to emPerfMeasXxx

Fixes

- #4881 - Fix erroneous detection of RX frames as TX for Wireshark traces containing only RX frames.
- #4987 - Fix crash in emonCoeSdoUpload if CoE storage and notification disabled
- #4919 - Fix reentrancy of emInitMonitor() after emInitMonitor() was called with bad parameters
- #4913 - Fix crash in EcLinkFreeRecvFrame for some Real-time Ethernet Drivers

Platform

- #4972 - Fix emllIntelGbe EcLinkGetSpeed()
- #4971 - Add pdwSpeed parameter to EcLinkGetSpeed
- #4950 - Add support for 64Bit DMA physical address on INtime6
- #4855 - Add szLoadPath to EC_T_LINK_PARMS
- #4837 - Add QNX SMMUMAN support

- #4726 - Add support for Rockchip DW3504
- #4718 - Add support for IRQ CPU affinity on Linux
- #4626 - Add device IDs for Intel Pro/1000 (i8254x) I226
- #4611 - Add support for Xilinx KR260 SGMII Port
- #4956 - Fix INVALID_STATE in CEcWrapperDotNet::DeinitInstance() if started with MbxGatewaySrv
- #4882 - Add support for SGMII on Marvell 88E1510 for Intel DW3504
- #4859 - Fix DW3504 Rockchip Clocks and second Instance
- #4784 - Fix EcatDrv to support KeTimer period < 16ms

3.14 V3.2.0.03

Enhancement

- #4848 - Use default TaskId 0 if eUsrJob_StartTask called with EC_NULL
- #4833 - EC_COPYBITS_INLINE declare EC_T_BYTE* pbySrc as const
- #4879 - Add EC-Monitor QNX71 support
- #4188 - Add emonReadSlaveRegister

Fixes

- #4877 - Fix IntelGbe EclinkOpen() faulty log messages
- #1899 - Fix RAS protocol corruption in case of concurrent send requests at server
- #4810 - Fix crash in EC-Wrapper .NET if variable size exceeds 512 bytes
- #4875 - Fix text translation crash in EC-Wrapper
- #4774 - Fix bit offset of process variables Inputs.DevicesState and Inputs.BusTime
- #4810 - Fix crash in EC-Wrapper .NET if variable size exceeds 512 bytes
- #4875 - Fix text translation crash in EC-Wrapper EtherCAT Network Monitoring

Platform

- #4804 - Add Device ID for Intel Pro/1000 I82545EM Copper
- #4820 - Update atemsys V1.4.25
  - Add IOCTL_INT_CPU_AFFINITY
  - Add Device Tree Ethernet driver support for RockChip

3.15 V3.2.0.02

Enhancement

- #4605 - Add “-maxbusslaves” parameter to examples
- #4724 - Prolong Eval time limit from 10 to 30 minutes
- #4703 - Enhance frame direction detection
- #4685 - Add pcap file name support to EcMonitorDemo

Fixes

- #4737 - Fix value distribution for min and max bin in performance measurement histogram

- #4708 - Remove systematic delay of 250ms within emConfigLoad(), emConfigureMaster(), emConfigExtend(), emDeinitMaster(), emRescueScan(), emSelfTestScan()
- #4768 - Fix frame processing in case of all RX frames missing
- #4754 - Fix incomplete wireshark trace recordings
- #4702 - Fix crash in case of multiple cyclic entry ENI

Platform

- Microsoft ® Windows ® Visual Studio ® project files updated to VS2015
- #4704 - Add EC_T_LINK_PARMS::dwLinkSpeed
- #4709 - Add support for STM32MP135 to DW3504
- #4691 - Add support for ecatNotifyApp() from RAS Server application to RAS Client application
- #4690 - Change connection type from UDP to TCP for emllProxy
- #4764 - Fix memory leak in RAS Client if connection lost while EoE-Endpoint active
- #4755 - Fix EC_COPYBITS out-of-bounds read from pbySrc
- #4731 - Update atemsys V1.4.24
  - Fix PCI bars
  - Add Device Tree Ethernet driver support for STM32mp135

3.16 V3.2.0.01

Enhancement

- #4434 - Change EC-Monitor API Prefix from “em” to “emon”

Platform

- #4338 - Add IstStackSize to all Linklayers parameters
- #4331 - Change Mutex default setting for Linux
- #4665 - Update atemsys V1.4.22
  - Fix Build Warnings
  - Fix kernel config depending irq structures
  - Fix kernel version 4.12 to 4.15 for handle of dma_coherent bit
  - Add IOMMU support, new mapping to userspace active and tested for kernel > 5.4, use old mapping with ATEMSYS_LEGACY_DMA=1 define or activate new mapping with ATEMSYS_LEGACY_DMA=0 define for older kernel

3.17 V3.1.4.06

- Add emStartLivePacketCapture to EcMonitorDemo
- Add support for fragmented CoE SDO Info mailbox transfers
- Fix read multiple *.pcap files
- Fix frame type (cyclic/acyclic) detection if cyclic frame contains NOP commands
- Fix rebuild topology from bus scan failed in packet capture processing mode
- Add emNotify - eMbxTferType_COE_GETODLIST

- Add slave station address to EC_T_COE_ENTRYDESC, EC_T_COE_OBDESC and EC_T_COE_ODLIST
- Add frame response error type eRspErr_CRC
- Remove BlockNode handling from CEmNotification
- Fix slave information prints contain “ERROR: Not found” in examples
- Fix crash in case of invalid ENI containing a hot connect group head slave with physical address equal to zero
- Increase log buffer in examples

Platform

- Force disconnection using PHY loopback for emllI8254x if ResetOnDisconnect not set
- Add support for emllTiEnetIcssg on AM64xEVM with FreeRTOS
- Add emllDW3504 for Xenomai
- Select ‘ECAT Protocol Driver’ installation on Windows by default if not currently installed
- Fix PCI link layer support for QNX ARM 32 Bit
- Add DCM MasterShift for QNX
- Add support for emllGEM on Xilinx Kria KR260
- Fix missing ATEMRAS_NOTIFY_CONNECTION EMRAS_EVT_SERVERSTOPPED on connection termination by server
- Fix TX hang in emllI8254x for I219 after uncontrolled termination
- Fix lock-up in EC-Wrapper RAS connection on termination by server
- Set default stack size to 0x8000 for 64 Bit architectures

3.18 V3.1.4.05

- Add histogram export to examples
- Fix no messages in error log if NOPRINTF defined

Platform

- Add emllBcmGenet for Raspberry PI 4 (BCM2711)
- Fix reset MAC address at DW3504
- Fix memory leak in OsCreateEvent() on Linux, Xenomai, RTEMS and SylixOs in case of semaphor initialization error

3.19 V3.1.4.04

- Add Hilscher netANALYZER Ethernet TAP support
- Enhance Live Packet Capture
- Add emNotify - eMbxTferType_COE_GETENTRYDESC

Platform

- Add support for VxWorks70

3.20 V3.1.4.03

- Add packet capture processing command line option “-play”
- Add “-oem” command line parameter to examples
- Fix FoE monitoring in Bootstrap
- Extend pcap file format support (nanosecond pcap)
- Add FoE monitoring support
- Add interrupt support

Platform

- Increase resolution for OsSystemTimeGet() on Windows
- Add bDisablePromiscuousMode and bDisableForceBroadcast parameters to emllNdis
- Add absolute path support alternative to OsGetLinkLayerRegFunc for VxWork70
- Fix counter overrun in OsQueryMsecCount on VxWorks69 PENTIUM4
- Fix RTOS-32 is not supporting cycle times below 1000us (broken since V3.1.1.06)
- Fix occasional crash in RAS Server on EC_IOCTL_UNREGISTERCLIENT
- Fix occasional crash on emRasClntRemoveConnection after emRasSrvStop
- Fix Interrupt Mode support for emllProxy
- Fix Multi Tasks Configuration doesn’t work with emllNdis Linklayer
- Fix memory leak on RAS socket disconnect while API call pending
- Fix to block emRasClntRemoveConnection, emRasSrvStop until all worker threads terminated

3.21 V3.1.4.02

- Add emGetSlaveInfo
- Add performance measurement level to -perf command line parameter
- Add emGetMemoryUsage over RAS
- Fix topology after reconnect/restart/communication timeout
- Fix EC_NOTIFY_TAP_LINK_STATUS in interrupt mode
- Fix CoE response and abort handling
- Fix blocking API handling over RAS

Platform

- Add MAC protection to emllFslFec for i.MX8 and i.MX8m
- Fix CPSW transmit channels to work with acontis CPSW Linux driver patch
- Fix command line contains unexpected application name in RTOS-32 config files

3.22 V3.1.4.01

- Add notifications:
  - EC_NOTIFY_PDIWATCHDOG
  - EC_NOTIFY_STATUS_SLAVE_ERROR
  - EC_NOTIFY_SLAVE_ERROR_STATUS_INFO
  - EC_NOTIFY_SLAVE_STATECHANGED
  - EC_NOTIFY_CYCCMD_WKC_ERROR
- Fix bus load average 0 in case of Monitor and Master run with different cycle times
- Fix unfilled MbxData after emCoeGetODList
- Don't call OsMeasCalibrate() if performance measurement is disabled
- Rename PerfMeas distances to offsets

Platform

- Fix i8254x interrupt mode on ARM/AARCH64
- Updated to ECAT NDIS Protocol Driver Setup V3.1.3.4. Hide command window during driver installation
- Updated to atemsys V1.4.20
  - Fix support for CMA (Contiguous Memory Allocator) for kernel > 4.9.00

3.23 V3.1.3.03

- Add EC_T_MASTER_INFO::dwMasterStateSummary
- EC_T_MASTER_INFO::BusDiagnosisInfo data available even if compiled with EXCLUDE_MASTER_OBD
- Add EC_IOCTL_SET_NOTIFICATION_ENABLED and EC_IOCTL_GET_NOTIFICATION_ENABLED
- Add MasterSyncUnit support
- Fix interrupt mode support
- Add EC_T_PACKETCAPTURE_PARMS::bReadMultipleFiles for emOpenPacketCapture()
- Cycle time and JOB_Total timer missing in EcSimulator since V3.1.2.10

Platform

- Updated to atemsys V1.4.18
  Remove obsolete ARM cycle count register(CCNT)
  Fix PCI driver do registration for all Ethernet network adapters
  Add modul parameter AllowedPciDevices to adjust PCI driver
- Add CPU affinity support to Link Layers supporting interrupt mode

3.24 V3.1.3.02

- Support ENI file with CU2508 only
- Add support for emCoeGetODList
- Add EC_T_MONITOR_STATUS::bNextCyclicEntryReceived, rename EC_T_MONITOR_STATUS::bFramesInLinkLayerPen to bNextFramesReceived
- Add EC_NOTIFY_SB_STATUS, EC_NOTIFY_SB_MISMATCH
- Fix build topology immediately in packet capture processing mode
- Add process data input mapping for Inputs.BusTime and Inputs.DevicesState

Platform

- Add RTL8168H support to emllRTL8169
- Fix DMA buffer alignment in emllRTL8169 (regression since V3.1.3.01)
- Fix DMA allocation, requesting memory below 4GB for AARCH64/ARM64 on QNX
- Updated to ECAT NDIS Protocol Driver V3.1.3.2
  Move promiscuous mode setting from NDIS Link-Layer to NDIS protocol driver
  Add an entry “DontSetPromiscuousMode” in the Windows registry to avoid setting promiscuous mode in ECAT NDIS Protocol Driver
  Rename Setup to “ECAT NDIS Protocol Driver”
- Fix EcatDrvGetDrvVersion on Windows (regression since V3.1.3.01)
- Add RTL8125 support to emllRTL8169
- Updated to atemsys V1.4.17.
  Fix atemsys dma_set_mask_and_coherent() missing in kernels under 3.12.55
- NDIS fix start-up with link disconnected

3.25 V3.1.3.01

- Add the InitMonitor parameter dwMbxRecordBufferSize to specify a buffer size for Mailbox recordings
- Fix crash on Xenomai when recording a Coe Object dictionary

3.26 V3.1.2.11

- Fix unset eMbxTferType in COE SDO upload notfication when using emCoeSdoUploadReq
- Add EC_NOTIFY_COMMUNICATION_TIMEOUT and EC_NOTIFY_TAP_LINK_STATUS
- Add EC_T_MONITOR_INIT_PARMS::bApiLockByApp
- Add WKC State Support

3.27 V3.1.2.10

- Extend EC_T_FRAME_RSPERR_DESC with wCycFrameNum and dwTaskId
- Fix emGetBusSlaveInfo returns EC_E_NOTFOUND if called with autoinc addressing for some hot-connect configurations

3.28 V3.1.2.09

- Fix CoE Emergency notification
- Fix high CPU load in eUsrJob_MasterTimer
- Fix emGetSlaveState in case of slave is not present

3.29 V3.1.2.08

- Enhance Hot-Connect support to detect groups on master start-up
- Add EC_NOTIFY_MBOXRCV notification for emCoeSdoUploadReq
- Add API emHCGetSlaveIdsOfGroup and emHCGetNumGroupMembers
- Store eMbxTferType_COE_SDO_DOWNLOAD and eMbxTferType_COE_SDO_UPLOAD in object dictionary accessible through emCoeSdoUpload

3.30 V3.1.2.07

- Add EC_NOTIFY_MBOXRCV for eMbxTferType_COE_SDO_DOWNLOAD and eMbxTferType_COE_SDO_UPLOAD
- Enable jumbo frame support for i8254x by default
- Enhance Hot-Connect support to detect connection and disconnection of Hot-Connect groups
- Enhance cycle/frame loss detection in states INIT, PREOP and during transitions

3.31 V3.1.2.06

- Fix cycle/frame loss detection for cyclic tasks with more than one frame
- emGetSlaveState returns the current and requested state accordingly to AL-Control, AL-Status respectively

3.32 V3.1.2.05

- Add PCAP file format support for “Nokia tcpdump” and “Modified tcpdump”
- Fix Object 0x2001 “Master State Summary”, Bit 10: Bus Scan Match and Bit 16: Link Up
- Add PCAPNG file format support
- Add position independent ethernet tap support
- Fix link status after emInitMonitor

3.33 V3.1.2.04

- Fix emGetMonitorParms

3.34 V3.1.2.03

- Add EC_IOCTL_GET_CYCLIC_CONFIG_INFO, EC_IOCTL_IS_SLAVETOSLAVE_COMM_CONFIGURED, EC_IOCTL_CLR_SLVSTATISTICS
- Fix emGetSlaveInpVarInfoEx, emGetSlaveOutpVarInfoEx
- Add QNX7 support
- Add basic hot connect topologies support

3.35 V3.1.2.02

- Add emIsSlavePresent, EC_IOCTL_ISLINK_CONNECTED, EC_IOCTL_GET_LINKLAYER_MODE
- Fix performance measurement in EcMonitorDemo
- Fix invisible slave handling
- Add Xenomai3 support
- Add emGetMonitorStatus
- Add emBacktracePacketCapture

3.36 V3.1.2.01

- Change emOpenPacketCapture parameter set
- Add emStartLivePacketCapture, emStopLivePacketCapture
- EcMonitorDemo exclude EcDaq dependency
- Add Object 0x2200 “Bus Load” support
- Fix Object 0x2002:03 “Bus Diagnosis”

3.37 V3.1.1.07

- Add Object 0x2001 “Master State Summary”, Bit 8: Slaves in requested State

3.38 V3.1.1.06

- Initial release of EC-Monitor