DekTec SDK

REVISION HISTORY

DekTec SDK Revision History

SDK version Aug2015	
Versions	DTAPI: v5.16.0.67 Drivers: Dta v4.14.4.203, DtaNw v3.5.1.29, Dtu v4.8.0.63 DtapiService: v3.0.3.50
Changes	New features: • Support for DTU-315 VHF/UHF/L-band modulator for USB-3 • Support for Visual Studio 2015 • Matrix API 2.0: Support for 4:2:0 (NV12 pixel format) • Matrix API 2.0: Support for parsing WSS from 625i signals • Matrix API 2.0: Support for parsing Line21 data from 525i signals • Matrix API 2.0: Support for parsing/generating Video Index data from SD signals Bug fixes: • Matrix API 2.0: performance improvements for 4K input + output (V210) • Matrix API 2.0: performance improvements for DTU-351 • Matrix API 2.0: Assert was seen for DTU-351 used in debug mode • Matrix API 2.0: SD audio parsing was resulting in a crash • Matrix API 2.0: callback was not called (with DT_FRMSTATUS_NO_SIGNAL) when there was no input present on startup • DTU-236/238: SpectrumScan was failing when start frequency was near the minimum frequency • DTU-236/238: SpectrumScan improvements for duration • DTU-351: DtDevice::DetectVidStd was not implemented • DTA-2131: RfLevel measurement was incorrect caused by latest DtapiService changes • DTA-2135: in some cases DtapiService crash was seen uing T2Xpert • DTA-2138B: RfLevel was having an incorrect offset • DTA-160/2160: SDI over IP transmit was not working • DTA-2162: for Source Specific Multicast only IP address was configurable not the Port number • DTA-2152/2154/2174: Genref port was not configurable when a port has genlock=on configured • DTA-2152/2154/2174: driver was failing when configuration in the registry was invalid • DTA-2174: Genlock was not calibrated (a few lines offset) Linux only bug fixes: • DtaNw driver did not build on Linux kernels >= 3.16 • DtapiService did not install/start correctly on Ubuntu 15.04 • DtapiService was hanging when DtInpChannel:Detach() was called • AttachToPort failure was seen when using old SDK and new drivers

SDK version June2015	
Versions	DTAPI: v5.15.0.60 Drivers: Dta v4.14.0.194, DtaNw v3.5.0.28, Dtu v4.7.0.61 DtapiService: v3.0.1.46
Changes	New features: • Support for 3G level B. NOTE: requires DTA-2174 firmware version 3. • DTU-351 support for Linux • Added DtDevice::DetectVidStd() capable of detecting 4K video standards and link number • Added DtDevice::GetTemperature(), DtDevice::GetFanTemperature() is now deprecated Bug fixes: • Documentation for DtInputChannel::GetConstellationPoints() points ranges were incorrect. • DtInputChannel::SpectrumScan() for DTU-236A/DTU-238 was not working properly • DtDemodEvent DTAPI_EV_TUNE_FREQ_HAS_CHANGED was not triggered in some conditions • Matrix API 2.0: Possible corrupted audio was seen for SD signals • Matrix API 2.0: Wrong audio status bits for DtMxAudioChannelStatus:: GetPcmNumBits() • Matrix API 2.0: Invalid BCH was inserted for HD audio packets

	• Matrix API 2.0: Possible crash when DtMxRowConfig::m_Enable was set to false • DtSdiUtlity Table Of Contents size was too small • DTU-236A did report incorrect levels in some cases • DTU-238 did fail to lock in certain situations • DTA-2131: configuring more than two DTA-2131 units in one PC did result in an error • DTA-2154/DTA-2174: PSF input formats were not detected • DTA-2152/DTA-2154/DTA-2174: No data was received after some fast input switch conditions

SDK version May2015	
Versions	DTAPI: v5.14.0.56 Drivers: Dta v4.13.3.191, DtaNw v3.5.0.28, Dtu v4.6.1.59 DtapiService: v3.0.0.44
Changes	New features: • Support for the DTU-238 • New V3 DtapiService uses statistic caching to significantly improving speed of demodulator related DtInpChannel methods (e.g. GetStatistics or SetTunerFrequency) Bug fixes: • DTA-2115: crossing the 999↔1000Mhz and 1399↔1400Mhz frequency boundaries caused a dis-continuity in the RF signal • DTA-2137: for DVB-S the PRE-VIT-BER was returning invalid • DTA-2154: arrival timestamps were assigned to wrong frame (one frame to late) • DTA-2154: Dta driver v4.13.0.180 introduced a backwards compatibility issue with firmware ≤V4 • DTE-3137: lost signal lock when a second application is monitoring statistics (only in DTAPI mode)

SDK version Apr2015	
Versions	DTAPI: v5.13.0.54 Drivers: Dta v4.13.0.180, DtaNw v3.5.0.28, Dtu v4.5.1.57 DtapiService: v2.2.15.39
Changes	New features: • Support for SMPTE ST2022-5/6 and ST2022-7, including support for seamless SDI over IP using DTA-2162 • Full support for SMPTE-2022-1-2007 FEC handling • Support for ISDB-S B15 format • Matrix API 2.0: support for v210 for 10-bit video (DT_PXFMT_V210) • Matrix API 2.0: m_DataFormat is removed in various structs, functionality now part of m_PixelFormat Bug fixes: • Matrix API 2.0: Audio input for 4K was not processed correctly • Matrix API 2.0: Deadlock on DtMxProcess:Stop() was seen in exceptional cases • Matrix API 2.0: Minimum end-to-end delay increased by 1 frame, default end-to-end delay increased by 2 frames. • Matrix API 2.0: Stability improvements especially on systems with a heavy CPU/memory load • IP RTP receive delay seen on switch of input streams • Possible race condition in IoConfig when set from multiple applications, for example on SDI IOSTD • DTA-2111: DVB-C symbolrate < 4MBaud did not work • DTA-2115: Undefined signal for frequency changes 999-1000MHz and 1399-1400MHz Windows only bug fixes: • DTAPINET: DtInpChannel::ReadFrame call was broken Linux only bug fixes: • Enumerating old dta driver was failing with error: DTAPI_E_DRIVER_INCOMP • Makefile order was incorrect Udev rules were not in proper location before module was loaded • Linking to DTAPI now needs the “-ldl” flag besides the already required “-lpthread” flag

SDK version Feb2015r2	
Versions	DTAPI: v5.12.0.51 Drivers: Dta v4.12.1.168, DtaNw v3.5.0.28, Dtu v4.5.0.56 DtapiService: v2.2.15.39
Changes	Hot Fixes: • DTA-2154 Rev 4: Fine-tuned FAN control settings to make sure FAN does not run faster than necessary for lower temperatures • DTA-160/2160/2162: FEC reconstruction logic did not restore all packets it could potentially repair

SDK version Feb2015	
Versions	DTAPI: v5.12.0.51 Drivers: Dta v4.12.0.165, DtaNw v3.5.0.28, Dtu v4.5.0.56 DtapiService: v2.2.15.39
Changes	New features: • Support for dual channel software modulation; new license available for DTA-2111/DTA-2115 • Support for HD-SDI Progressive Segmented Frame (PSF) formats. NOTE: requires latest firmware versions for DTA-2152 (V2) and DTA-2154 (V5) • Matrix API 2.0: RGB support • Support for DTA-2154 hardware revision 4.0 • GENREF IO-config no longer takes a reference video standard as par-extra0 • Matrix API 2.0: added a frame arrival timestamp to DtMxFrame • Support for DTA-2152 firmware version 2 and DTA-2154 firmware versions 4/5 Bug fixes: • Possible crash on older CPU's (that did not support SSE3) • LocalNIC 127.0.0.1 loopback did not work when IP cable was disconnected • Matrix API 2.0: The 3G-outputs in a 4K matrix row were not always in-sync with each other • Matrix API 2.0: Possible corruption of received ancillary data for 3G-SDI signals • Matrix API 2.0: Checksum was missing on DtMxFrame::AncGetPacket • Matrix API 2.0: Assert was seen when starting SDI output as 1080i59.94 • Matrix API 2.0: Improved performance of ancillary data generation • Matrix API 2.0: DtMxFrame::AncGetPacket failed for audio ancillary data • DtFrameBuffer::AncAddAudio/AncCommit was significantly slower for fractional SDI standards • DTAPI.NET was missing previous DTAPI changes, like DVB-S2x and DtDvbCidPars • 204 bytes DVB-S modulation resulted in incorrect TS-rate • DTA-2107: 204 bytes playout was failing (remark: TxMode MIN16 is required) • DTA-2115: DVB-S2X errors were generated for VCM stream with VLSNR and other modcods • DTA-2139: QAM-B tuning was sometimes failing for some high frequency signals • DTA-2152: Fixed genlock alignment, to ensure outputs are aligned within 1.5us of the genlock reference Windows only bug fixes: • On Windows XP, the DTAPI would crash (introduced in Nov2014 SDK release) • Memory usage was increasing slowly on multiple AttachToPort/DetachToPort actions Linux only bug fixes: • All threads in an application linking to the DTAPI were renamed "MX log thread"

SDK version Nov2014	
Versions	DTAPI: v5.11.0.49 Drivers: Dta v4.11.0.148, DtaNw v3.5.0.28, Dtu v4.4.16.55 DtapiService: v2.2.14.38
Changes	New features: • Support for the DTA-2174 (Quad 3G/HD-SDI / ASI Ports with Genlock Adapter) • DTAPI- Matrix 2.0: Matrix API 2.0 further abstracts from SDI interface implementation details and enables your application to concentrate solely on processing the video, audio and ancillary data. For example it can be used to easily build SMPTE-425-5 compliant 4K input/output applications using the DTA-2174. • DTA-2115: Support for DVB carrier identification for satellite using DtOutpChannel::SetModControl(DtDvbCidPars) Bug fixes: • Local NIC did not report errors like DTAPI_NO_LINK • DTAPINET was missing new SMPTE ST 2022-7 functions • DTAPI_RXMODE_IPRAW was failing for non MPEG 192 bytes packets • DtInpChannel::RegisterDemodCallback in some cases failed for slow PC's • Constant audible crack when embedding audio into a XXXp59.94 SDI standard • DTA-160: Windows Sleep/Hibernate for some PC's resulted in a BSOD • DTA-2115: DVB-S2X modulation for 32-APSK 32/45 short frames was incorrect • DTA-2115: DVB-S2X modulation for VLSNR BPSK was incorrect • DTA-2131: DtAdvDemod MER and Impulse Response was incorrect for second MISO channel • DTA-2131: DVB-C2 demodulator tuning to signal with 32MHz was failing • DTA-2131: DVB-C2 reception of a G/I=128 configuration was not error free

SDK version Oct2014	
Versions	DTAPI: v5.10.0.46 Drivers: Dta v4.10.0.144, DtaNw v3.5.0.28, Dtu v4.4.16.55 DtapiService: v2.2.13.37
Changes	New features: • Support for SMPTE ST 2022-7 'Seamless Protection Switching' using the DTA-2162 • Support for all possible number of FEC rows and FEC columns (before only the SMPTE specified) • Support for block aligned FEC generation using DTAPI_FEC_2D_M1_B and DTAPI_FEC_2D_M2_B • DTA-2138B support; upgraded demodulator includes ISDB-T and T2 lite (DVB-T2 v1.3.1) support • DTA-2144B support Bug fixes: • Fractional SDI video standards did not contain the correct amount of audio samples in their output • DTA-2137: Calling SetTunerFrequency() twice on same frequency in some cases stopped the receiver • DTA-2115: DVB-S2X performance issue was seen on some new PC's Linux only bug fixes: • DTA-2154: Possible driver crash on application exit • DTA-2160: Possible failing network port attach for Ubuntu 3.11

SDK version Sep2014	
Versions	DTAPI: v5.9.0.45 Drivers: Dta v4.9.1.142, DtaNw v3.5.0.28, Dtu v4.4.15.54 DtapiService: v2.2.12.36
Changes	New features: • Support for 20%, 25% roll-off for DVB-S modulation • DTA-2131: DAB Transmitter ID support • AncPacket class extended with m_LineNumber field Note: Line parameter removed from DtFrameBuffer::AncAddPacket old interface of AncAddPacket is marked as deprecated and will be removed in a future release Bug fixes: • Dta crash could occur on application exit • T2-MI input stream was not correctly modulated when IL-Type = 1 • T2-MI output through a virtual port was not working for DTA-2111 and DTU-215 • Registration for DT_EVENT_TYPE_GENLOCK did trigger an assert • DtAdvDemod: For DVB-C2 all opened streams were closed on SetTunerFrequency() • DtAdvDemod: Virtual input support did not work correctly • DtAdvDemod: Did return DTAPI_OK on AttachToPort() when port was already in use • DTU-351: Calling DtFrameBuffer::AncGet* twice with the same frame number caused an DTAPI error • DTA-2115: DVB-T2 single PLP was not working without DVB-T2 (multiPLP) license • DTA-2115: DVB-S, DVB-S2 and QAM levels were not correct • DTA-2152: Genlock was misaligned for several formats (720p50 does still have misalignment) • DTA-2154: Configuring port 4 as double-buffered from port 3 was no possible • DTA-160/2160: A zero in a multicast address was treated as a wildcard Linux only bug fixes: • IP V6 support was not working correctly

SDK version June2014	
Versions	DTAPI: v5.8.0.43 Drivers: Dta v4.9.0.140, DtaNw v3.5.0.28, Dtu v4.4.14.53 DtapiService: v2.2.12.36
Changes	New features: • Initial support for the DTA-2174 (Quad 3G/HD-SDI / ASI Ports with Genlock Adapter) • Support for runtime changes to channel modelling settings (i.e. no need to stop modulation anymore) • Support for extra option to force link IP speed to 1Gbps • Support for DVB-S2 16/32-APSK constellation shape configuration • DTA-2115: Optimized DMA performance, so that card can be used in PCIe gen2 slots at maximum sample rates • DTA-2154: Reduced time needed to achieve genlock • DTA-2154: Support for ancillary data checksum inserter Bug fixes: • HyperV installation did result in a DTAPI_E_NW_DRIVER error for DTA-160/2160/2162 • Spectral inversion was enabled by default for DVB-S2 / ISDB-S (introduced in Apr2014 SDK)) • VLAN for Windows 8.1 did not function correctly due to administrator right changes • Audio control packets were not added for embedded audio in HD SDI streams • DTA-2115: Shoulder attenuation was not according specification for OFDM signals • DTA-2115: Non-default bitrates for ISDB-T were not accepted • DTA-2115: DVB-S2X dummy frames were incorrect • DTA-2115: DVB-S2X 16-APSK-L:5/9,8/15,1/2 did not create a correct signal • DTA-2144: Driver did crash after driver/PC restart when a genref was configured • DTA-2154: GetStatus(AsiLock) did always return 0 Non-backwards compatible API change (a code change might be required!): • Buffers used for DtFrameBuffer and DtSdiMatrix must now have their addresses aligned at a 32-byte boundary (instead of 8-byte boundary) and their sizes must be a multiple of 32 bytes (instead of 8 bytes). • DTE-3137: RF level statistic was incorrectly using dBm unit, now using dBmV. Also statistic for MER was incorrect. Spectral Inversion, Link Margin, Es/N0 and Eb/N0 statistics are added (similar statistic support like DTA-2137) Linux only bug fixes: • Dta driver did not compile for Linux kernel versions >= 3.13 • DTA-2160 network port did not function for a network configurations were only 2 interfaces descriptions were found

SDK version Apr2014	
Versions	DTAPI: v5.7.0.41 Drivers: Dta v4.8.0.121, DtaNw v3.4.6.27, Dtu v4.4.13.52 DtapiService: v2.2.11.35
Changes	New features: • Support for DTA-2115 (All-Standard, All-Band Modulator) including DVB-S2x modulation • SDK support for Visual Studio 2013 (VC12) • Support for non-exclusive attaching to input channels, to allow read-only access to port status parameters. NOTE: this is not supported for all input types • Support for DTAPI_STAT_SPECTRUMINV statistic for DTA-2136 Bug fixes: • In some cases invalid DVB-T2 GSE packets were sent • Matrix API did not embed audio ANC packets in switching lines • DtInpChannel::SetIpPars crashed when unicast addresses were specified in combination with seamless protection mode • DTA-2152/2154: Driver did crash when IO Standard for GenRef port was set to SD-SDI • DTA-2154: Analog genlock did not work • DTA-2162: On high network transmit load the non real-time transmit stalled Linux only bug fixes: • DTA-2154 ASI input did not work • DtapiGetDeviceDriverVersion(DTU) did return DTAPI_OK when no DTUs were present

SDK version Feb2014	
Versions	DTAPI: v5.6.0.40 Drivers: Dta v4.7.4.107, DtaNw v3.4.5.26, Dtu v4.4.11.50 DtapiService: v2.2.10.34
Changes	New features: • DTA-2131: added Advanced demodulation API support for DVB-T2/DVB-C2 BBframes • DTA-2131: added Advanced demodulation API support for GSE using DVB-T2 • GSE support added for DVB-T2 modulation • ISDB-Tmm support added for DTA-115,116, DTU-215 (only < 13 segments, DTA-2111 can do all) • Matrix API support for 24 and 32 bit PCM SDI audio added • Matrix API support for timestamps in DtFrameBuffer::GetFrameInfo added • Device temperature and fan-speed support added in DtDevice for DTA-2139, DTA-2154 • Now making use of Visual Studio generated _WIN64 and _WIN32 defines for DTAPI.H Bug fixes: • For Windows 8.1 adding a VLAN did not succeed • DVB-T/H was not correctly modulated/demodulated when using 2k in-depth interleaving • DtapDeviceScan order of devices returned was changed in Oct2013 release, changes reverted and optional parameter added for serial number sorting • DTU-351: SD SDI reception did result in lost frames • DTA-2131: Possible crash on detach of DVB-C2/T2 demodulator; introduced in Dec2013 release • DTA-2136: Packet loss on Port 2 when tuning port 1 and shared antenna mode was active • DTA-2137: VCM lock issue on low SNR; mute mechanism introduced using DtDemodParsDvbS2Adv • DTA-2154: Auto detect failed to detect standard of HD signals when port was configured for SD-SDI operation New Linux features: • Added ini file mechanism which specifies the default IO-configuration values for a card

SDK version Dec2013	
Versions	DTAPI: v5.5.0.38 Drivers: Dta v4.7.1.104, DtaNw v3.4.3.24, Dtu v4.4.7.46 DtapiService: v2.2.9.33
Changes	New features: • DTU-236: Added support for GetTunerFrequency() and GetDemodControl() • DTA-160/2160/2162: Support for specifying the source port for IP transmission • DTA-2131: Support for new statistic DTAPI_STAT_FER_POSTBCH Bug fixes: • QAM-B modulation produced inverted spectrum when channel modelling was enabled • DTU-351: Frames were dropped on high CPU load • DTU-351: Some PC's did have incidentally a frame drop • DTA-2131: BER_PRELDPC and PER DVB-T2 statistics were not valid after DTAPI_STAT_LDPC_STATS call • DTA-2131: DtAdvDemod port attach was failing introduced in SDK Oct2013 • DTA-2137: Re-attach could have failed with error DTAPI_E_INVALID_FREQ • DTA-2154: Dta driver did sometimes crash on RS422 simultaneously read/write • DTA-2154: Switching from fractional SDI standard to ASI resulted in an incorrect ASI stream Linux only bug fixes: • Dta driver did not build for 32 bit linux, introduced by SDK Nov2013 changes • DtapiService could have crashed when long filenames processes were running • DTU-236A: driver communication could have failed during initialization

SDK version Nov2013	
Versions	DTAPI: v5.4.0.36 Drivers: Dta v4.7.0.102, DtaNw v3.4.2.21, Dtu v4.4.3.41 DtapiService: v2.2.8.31
Changes	New features: • DTA-2154 official release including RS422 support • DTA-2131: Support for demodulation of complete DAB ETI using DtDabEtiStreamSelPars • DTAPI_STAT_DVBT2_L1DATA statistic extended with extra fields Bug fixes: • Possible not supported error when SetIoConfig() was called on DtInputChannel/DtOutputChannel • DtaNw network driver was stalling when network stack was too busy • Dta driver crash could have incidentally happen at startup up due to I2C register remap • DtInpChannel::SetRxMode() for IPRAW and STTRP was not working since Aug2013 release • DTU-351: FrmBufInputChannel:GetStatus() ClkDet return parameter was always -1 • DTA-107: For some PC's DVB-S2 playout was failing in combination with DTA-2111 boards • DTA-2138: DVB-T2 L1 data modulation type was incorrectly set • DTA-2154: Invalid eeprom content could result in crash • DTA-2154: The reported ASI input rate was incorrect • DTA-2154: ASI read with NumBytesToRead not a multiple of 32 was failing • DTA-2154: ASI fifo was not cleared when going from RCV to IDLE and back • DTA-2154: The reported TS-rate for ASI input was not corrected to 188 bytes for 204 bytes packets • DTA-2154: Port was not (re-)configured when switching between ASI and SDI

SDK version Oct2013	
Versions	DTAPI: v5.3.0.35 Drivers: Dta v4.6.0.92, DtaNw v3.4.1.18, Dtu v4.4.2.40 DtapiService: v2.2.7.30
Changes	New features: • DTU-351 official release • DTA-2154 initial support Bug fixes: • GetTsRateBps() was incorrect for RxMode STRAW • SetRxMode did not return an error when DTAPI_TXMODE_SDI_16B was not supported • Application restart could fail after application exception situation • Data playout could fail after unclean stop and restart of application • Multicast list was not updated correctly when configuring multiple VLAN's • SDI reception of Huffman compressed active video was not working • SDI DtOutpChannel:Write() could fail for specific frame-alignment • Matrix API audio samples alignment issue for fractional video standards • DTU-236: QAM tuner initialization was not completely correct • DTU-236: limit of tuning frequency is 885MHz not 865MHz • DTA-2131: PCR jitter for ISDB-T demodulation could be out of spec • DTA-2131: ISDB-T emergency flag was not set correctly for IIP and dummy byte • DTA-2131: Transport Error Indicator (TEI) flag was not set (not supported for T2/C2 HEM mode) • DTA-2152: Reading 8-bit SDI data was not done correctly Linux only bug fixes: • DtapiService did not start automatically after unclean stop of DtapiService

SDK version Aug2013	
Versions	DTAPI: v5.2.4.31 Drivers: Dta v4.5.2.46, DtaNw v3.4.0.17, Dtu v4.4.0.38 DtapiService: v2.2.6.29
Changes	New features: • VLAN support using manually installation of protocol driver DtaNwAp • DTU-351 USB-3 HD-SDI input initial support • Support for ISDB-Tmm modulation using DtMpIpOutpChannel::SetModControl(DtIsdbTmmPars&) • DTA-2162 does now have port id included in device description strings • DVB-T demodulation statistic DTAPI_STAT_TPS_INFO including DVB-T Cell-ID information • The number of DtDevice/DtChannel instances is no longer limited to 256 Bug fixes: • DtDevice::GeTGenlockState was missing since DTAPI v4.0 release • Added private copy constructors to DTAPI classes to make sure that a copy will result in compile errors • DtInpChannel::GetIpStat documentation updated; values are not reset after read • DtInpChannel::GetTunerFrequency returned DTAPI_E_NOT_SUPPORTED • DtaNw Promiscuous mode was not working • DtIsdbtPars::RetrievesParsFromTs did not support 1- and 3-segments audio streams • Certain T2-MI streams did not playout • DTA-124: Crash could occur on 64 bit OS • DTA-2111/DTU-215: MER was lower for DVB-C when Channel Simulator was disabled • DTA-2137: DVB-S2 L3 input selection caused a long delay • DTA-2137: DVB-S2 Multi Input Streams did not always lock (due to invalid ModType) • DTA-2142: Calling DtOutpChannel::SetTstRateRatio was failing • DTA-2152: Unsupported mode DTAP_RXMODE_SDI_ACTVID could be configured • DTA-2152: Reading 8-bit SDI data could cause the DtInpChannel::ReadFrame to hang • DTA-2160: DTAPI_E_OUT_OF_RESOURCES did sometimes occur after a lot of application restarts Linux only bug fixes: • Dta driver did not compile on 64-bit CentOS 5

SDK version June2013	
Versions	DTAPI: v5.2.3.29 Drivers: Dta v4.5.1.44, DtaNw v3.3.0.15, Dtu v4.3.1.37 DtapiService: v2.2.5.27
Changes	New features: • Windows SDK is now distributed using an installer containing all drivers, libraries and include files Bug fixes: • DTE board could be reported twice when using multiple network cards and retrieving the available ports • DTE board was not reported when retrieving the available ports and user has no administrator rights • DTAPI documentation was incomplete for SetIoConfig, DtStatitics and DVB-C QAM-128 limitation for DTA-2136 and DTA-2139 • DTAPI_E_DRIVER_INCOMP was not returned on Attach when an incompatible driver was installed • DTAPI_E_NOLINK was not returned when no network connection was available • Visual Studio Express was not able to link DTAPI caused by an ATL dependency • Division by zero exception was thrown when using Huffman compression • DTA-2131: For ISDB-T demodulation a relock was not automatically re-acquired • DTA-2131: Retrieving the RF level statistic resulted in an error • DTA-2135: Demodulation of bad signals could fail caused by a FIFO overflow • DTA-2139: MER/SNR statistics were incorrectly calculated Linux only bug fixes: • Dta driver could crash when aborting the application

SDK version May2013	
Versions	DTAPI: v5.2.2.26 Drivers: Dta v4.5.0.43, DtaNw v3.3.0.15, Dtu v4.3.0.36 DtapiService: v2.2.4.26
Changes	New features: • Support for DTA-2162 • Support for L3 input for DVB-S2 modulation • Support for DAB+/ T-DMB software demodulation • Support for ISDB-T software demodulation of all layers using TMCC • Support for extra Error statistics for DVB-T and ISDB-T software demodulation • Support for new DTA-2137 statistics: Link Margin, Es/N0, Eb/N0, Pre-LDBC BER, Occupied bandwidth and Roll-off factor • DTU-236A: Support for individually tuning of both tuners Non-backwards compatible API change (a code change might be required!) • Statistics like SNR, MER and RF LVL that did support double and integer values now only support integer values Bug fixes: • DtaNw driver installation was not executed when network port was active • Dta driver could hang during shutdown or disable • Unicast IP receive address in March release did only accept 0.0.0.0 and did not accept IP address of adapter • DtInpChannel:ReadFrame blocked on SDI frame when no valid input signal was attached • AdvDemod constellation points data stopped in case of a unlock-lock scenario • Driver did not check if firmware reboot was allowed • Visual Studio 2005 projects could fail building because of missing ATL reference • DTE license file programming failed since SDK version Mar2013 • DTA-2136 and DTA-2139: Sometimes a value of -1 was returned for SNR • DTA-2136: MER/SNR statistics were incorrectly calculated • DTA-2137: 32-APSK performance was decreased since SDK version Aug2012 • DTA-2152: Video standard capabilities were not set for port 3 (GENLOCK reference port) Linux only bug fixes: • DtapiService installation did not work for CentOS 6.3/6.4 • DTA-2160: CentOS 5.9 possible crash on IP port • DTA-2160: Ethtool didn't work

SDK version Mar2013	
Versions	DTAPI: v5.2.1.24 Drivers: Dta v4.4.0.37, DtaNw v3.2.1.14, Dtu v4.2.3.35 DtapiService: v2.2.2.25
Changes	New features: • Support for DtTsIpPars *Differentiated Services* field (formerly *Type Of Service*) in the IP v4 header or *Traffic Class* field in the IP v6 header • Support for DTE-3120 polarity control • Support for DTE-3100 transmit on timestamp mode Bug fixes: • Some DVB-T2 modulation settings did not run on a Core Duo anymore (CPU load to high) • DTE attach speed was slow • IP packets were in some cases discarded because the packets were incorrectly recognized as VLAN packets • DVB-T2 modulator was not ignoring the IN_BAND_B_FLAG for DVB-T2 version V.1.1.1 • SetTxControl was failing when using QAM-B and channel modeling • FrmBufInpChannel:SetRxControl call could have resulted in deadlock • Source Specific Multicast was limited to the IANA's SSM range for DTA-(2)160 • Added missing DtInpChannel ISDB-T and T2MI functions in DTAPI core documentation • Uncorrected blocks was not reset between calls to GetStatistics() using DTAPI_STAT_BADPCKCN for DTA-2136 and DTA-2139 • DTU-234: For some firmware versions a signal lock problem did occur • DTU-234: Added missing statistics DTAPI_STAT_BER_PREVIT, DTAPI_STAT_BER_POSTVIT, DTAPI_STAT_BER_PRERS • DTA-2131: Support for missing Rx modes: DTAPI_RXMODE_STMP2, DTAPI_RXMODE_STRAW, DTAPI_RXMODE_STTRP, DTAPI_RXMODE_TIMESTAMP32 • DTA-2131: DTAPI_FULL_RESET resulted in no data received anymore • DTA-2131: ISDB-T SetDemodControl failed in some cases • DTA-2131: DVB-T bandwidth 5MHz was not supported • DTA-2137: Transport Error Indicator (TEI) bit was not set on packets with uncorrectable errors • DTA-2138: DtInpChannel:Tune() returned timeout error when there was no input signal • DTE-3114: Device was not found on DtapiDeviceScan Linux only bug fixes: • DtaNw driver is now installed and loaded automatically • DTU-236: RF level readings were unstable

SDK version Feb2013	
Versions	DTAPI: v5.2.0.21 Drivers: Dta v4.3.0.35, DtaNw v3.2.0.13, Dtu v4.2.2.34 DtapiService: v2.2.1.22
Changes	New features: • Advanced Demodulator API: support for DVB-T,-T2,-C2 and ISDB-T including measurements Please refer to *DTAPI Manual* and *DTAPI Reference – Advanced Demodulator API documentation* • Changed Modulation capabilities and new Receiver capabilities and licenses: RXA (Advanced Demodulator), IQ, T2MI and GOLD RX Please refer to *DTAPI 5.2 Releases Notes* explaining how to adapt your application for these changes. • Support for ATSC-MH modulation • SDK support for Visual Studio 2012 (VC11) • DtDvbT2Pars::RetrieveT2miRateFromTs calculates required TS rate for a given buffer with T2MI data • New Statistics BER_PREBCH and BER_PRELDPC, renamed BER_BCH and BER_LDPC to BER_POSTBCH and BER_POSTLDPC • DTA-160/2160: support for IPv6 • Support for DAB modulation Bug fixes: • IP header identification field value was not incremented for IP outputs • DVB-C2 modulator inserted invalid ISSY in case of HEM and NPD=1 • Invalid DVB-C2 signal when using ACM + plp_header_counter=1 + odd number of XFEC-frames • DVB-T2-MI FEF sub-part not correctly encoded • Possible error when calling DtOutpChannel::GetFlags before DtOutpChannel:SetTxControl • SetIoConfig was not thread safe • GetFifoLoad returned wrong value for DVB-S2 when symbol rate was changed • DtapiDeviceScan returned DTE device's that were not in DTAPI mode • DtapiService crash when using incompatible driver • DTAPINET DtapiDtDeviceDesc2String() returned incorrect string • DTAPINET added missing functions: DtapiModPars2Bandwidth(), DtapiModPars2SymRate() and DtapiModPars2TsRate() • DtInpChannel::GetTsRateBps() doesn't normalize rate to 188byte packets • Reading data from USB device failed after warm reboot • DTA-107 produced incorrect SNR level for DVB-S2 • DTU-215: boot time was slow • DTU-236: RF level was always returning around 396 • DTU-245: port 2 could not be set in loop-through mode • DTA-2137: MER statistic for 16APSK and 32APSK was incorrect • DTA-2137: Not all BER statistics were correct • DTA-2137: FEC lock statistic was incorrect • DTA-2138: DVB-C, interleaving parameter was not ignored by SetDemodControl • DTA-2152: field length error on 525i59.94 signal • DTE-3120: Cannot attach to the DTE in DTAPI mode Linux only bug fixes: • Compile warnings for DTA/DTU drivers • Dtu0 symlink was not created for some Linux distributions • Dtu driver failed on udev version before v98 • Possible system freeze when using IP port on CentOS 5.8 • On 64-bit linux not all license were recognized • DtapiService installer didn't work when /tmp was not executable • IP multicast receive only worked for 1 multicast address(-range) • Driver hangs on unloading driver (Red hat 5.4) • DTA-2131: AttachToPort was failing

SDK version Dec2012	
Versions	DTAPI: v5.1.0.19 Drivers: Dta v4.2.0.33, DtaNw v3.1.0.12, Dtu v4.2.0.30 DtapiService: v2.2.0.18
Changes	New features: • DTU-236: Support for enabling/disabling equalizer • DTA-2137: removed FrameId from L3 header (firmware V7) • Added support for subtype field in DtDeviceDesc Bug fixes: • DTAPI_TX_CPU_UFL reported but should be DTAPI_TX_DMA_UFL • IPAT was very large for RTP stream including FEC and lost packets • Local NIC: the data was corrupted every time the RTP sequence number wraps • Linker warnings regarding missing .pdb files when linking to DTAPI debug version • DVB-C2 modulation: stopped when type 1 and type 2 data slices are mixed • DVB-C2 modulation: crashed when header_counter=1 and modulation <= 64qam • DVB-C2 modulation: the order of the ISSY fields generated for the first frame was not correct • DtFrameBuffer::AncAddPacket returns DTAPI_OK but AncCommit did not add the packet to the output • DtFrameBuffer::AncGetPackets never returns DTAPI_E_BUF_TOO_SMALL • DtInpChannel::GetStatus incorrectly reported -1 for AsiLock parameter • DtInpChannel::RegisterDemodCallback: possible fail on tuner event-register • DtInpChannel::SetDemodControl did not accept -1 for ParXtra1 for QAM-B • DtOutputChannel:Write(buf,0) caused a DTAPI crash • DTA-115: on certain PC's DMA performance caused OFDM modulation to stop working • DTU-215: device was not started on a "warm" reboot • DTA-2137: tuning to some DVB-S modulated streams was failing • DTA-2144: double-buffered output was not supported anymore • DTA-2152: bottom of frame showed a green line • DTA-2152: BSOD after enabling GENREF mode for one of the ports Linux only bug fixes: • Multi-threading DTAPI usage could result in a crash • Dtu0 symlink was not created for some Linux distributions

SDK version Oct2012	
Versions	DTAPI: v5.0.11.17 Drivers: Dta v4.1.1.30, DtaNw v3.1.0.12, Dtu v4.1.2.26 DtapiService: v2.1.2.17
Changes	New features: • Support for DTA-2138 • Optimized performance of Matrix-API audio and ancillary data embedding and de-embedding code • Added support for add/removal event for USB devices Bug fixes: • DVB-T2/C2 modulation did not work • Failure to read licenses from DTE devices • DtapiHwFuncScan did not return a DTAPI_E_DRIVER_INCOMPATIBLE when an old driver is used • DtDeviceAttachToSerial did not return a DTAPI_E_DRIVER_INCOMPATIBLE when an old driver is used • DTA-160/2160: exception in Dta driver on system with 64GB ofRAM • DTU-236: DTAPI crash when DTU-236 is disconnected from USB bus • DTU-236a: DtInpChannel::SetTunerFrequency failed when try to tune to frequencies above 862 MHz • DTA-2107: spectrum of DVB-S output was inverted • DTA-2107: actual SNR level did not match applied level • DTA-2139: first call to AttachToPort was very slow • DTA-2152: error in audio embedding when embedding less than 4 channels in an audio group Linux only bug fixes: • Stack corruption when reading data from a DTU device • SDK could still not be built on Red Hat Enterprise Linux 5 with kernel version 2.6.18

SDK version Sep2012	
Versions	DTAPI: v5.0.10.16 Drivers: Dta v4.1.0.29, DtaNw v3.1.0.12, Dtu v4.1.0.24 DtapiService: v2.1.0.15
Changes	New features: • Support for DTU-236a (1GHz version) • DTU-236: support for reading BER, SNR, MER and constellation points • Genlock support for DTA-145/2144/2145 • Support for controlling DTA-plus (VHF/UHF Booster/Attenuator for DTA-115) Bug fixes: • DTA-2107: DVB-S spectrum was inverted • DTA-2136/2139: return sensible value for SNRs which are outside of the range that can be measured by demod chip • DTA-2152: failure to set IO-standard to 720p50 • DTA-2152: VANC data was not committed in DtFrameBuffer::AncCommit • TS-rate returned for TS-over-IP streams received via a local-NIC was always ~10% to high • Non-exclusive attach of DtInpChannel object to a demodulator causes re-initialization of the port it is attached too Linux only bug fixes: • DTA-2111: setting the output level had no effect • SDK could not be built on Red Hat Enterprise Linux 5 with kernel version 2.6.18 • Potential DMA data corruption, on 64-bit Linux, for cards that do not natively support 64-bit DMAs • 32-bit DTAPI could not connect with 64-bit driver. NOTE: the fix for this issue breaks backwards compatibility between the DTAPI and previous versions of the Dta, Dtu and DtaNw drivers (on 32-bit Linux configurations only)

SDK version Aug2012	
Versions	DTAPI: v5.0.9.15 Drivers: Dta v4.0.14.27, DtaNw v3.0.7.11, Dtu v4.0.8.23 DtapiService: v2.0.9.12
Changes	New features: • Support for DTA-2139 • DTA-102: implementation for DtOutpChannel::SetPower • DTA-2137: support for firmware version V6 • DTA-2137: support for C-version (with STV0900AAC) • DTA-2137: support for getting the spectral-inversion status • DtapiCheckDeviceDriverVersion now also detects the presence of pre V4 drivers • Added new EULA for Linux SDK Bug fixes: • DtInpChannel::GetRxMode always returned 0 for IP ports • DtInpChannel::GetRxControl always returned DTAPI_RXCTRL_IDLE for IP ports • CPU overload when DtapiService was stopped while used • Crash in SetDemocControl if invalid ISDB-T parameters were passed to this function Linux only bug fixes: • Unknown symbols when loading Dta, Dtu and DtaNw driver • DtapiService.bin installer only contained 64-bit version of DtapiService • DTA-2145: Kernel panic in ISR when Dta driver is loaded during system boot-up • "DMA: Out of SW-IOMMU space" in Dta driver

SDK version Jul2012	
Versions	DTAPI: v5.0.8.12 Drivers: Dta v4.0.13.25, DtaNw v3.0.7.11, Dtu v4.0.8.23 DtapiService: v2.0.8.10
Changes	New features: • Support for DTA-2131 Bug fixes: • DTA-2152: fixed timeout error for WaitFrame • DTA-2136: added missing loop-through capability • DTA-2137: added missing support for DTAPI_STAT_CNR • DTA-2135/2137: added missing support for DTAPI_STAT_BER_PRERS & DTAPI_STAT_CNR • DTA-2152: DtInpChannel::ReadFrame always retuned 10-bit frames, regardless of rx-mode settings • DTA-2152: error in audio embedding when embedding less than 4 channels in an audio group • DtapiHwFuncScan never returns DTAPI_E_BUF_TOO_SMALL when supplied buffer really is too small • DTA-235: added missing support for DTAPI_STAT_BER_PRERS & DTAPI_STAT_CNR • DTU-236: added missing support for DTAPI_STAT_CNR • GetIoConfig for DTAPI_IOCONFIG_LOOPTHR returned incorrect buddy port value • Probe attach to DTE always failed

SDK version Jun2012	
Versions	DTAPI: v5.0.7.10 Drivers: Dta v4.0.12.23, DtaNw v3.0.7.11, Dtu v4.0.8.23 DtapiService: v2.0.7.8
Changes	Bug fixes: • AttachToPort, with the probe flag set, failed for DTEs • Could not set DTAPI_RXMODE_TIMESTAMP32 for DTE devices • Deadlock in DtFrameBuffer::WriteSdiLines • DtInpChannel::SetLnbVoltage always returned DTAPI_E_INVALID_ARG • DtIsdbtPars::RetrieveParsFromTs always sets m_Guard to 1/8 • DVB-S2 capability was missing for DTA-2137 • Exception in DTAPI which occurred when an application using the DTAPI was closed • Link errors due to missing symbols in VC9 version of the DTAPI • Memory leak in modulation code • Using SetIoConfig to set a fractional IOSTD failed for the input of a DTA-2152 • Updated FIFO load algorithm for a DTA-2152 in 'DtOutpChannel-mode'

SDK version May2012	
Versions	DTAPI: v5.0.5.8 Drivers: Dta v4.0.11.20, DtaNw v3.0.7.11, Dtu v4.0.7.22 DtapiService: v2.0.6.7
Changes	Major new release of the entire SDK. Please refer to *DTAPI 5.0 Release Notes* in the SDK documentation for an overview of changes.