DTC-300 StreamXpress

Stream Player Software

Installation

1. Introduction

The *StreamXpress™* is DekTec's Stream-Player application. The type number of this software is **DTC-300**. The *StreamXpress* enables streaming of MPEG-2 Transport Streams, SDI and I/Q samples with a DekTec interface adapter to a number of physical formats. Extensive support is available for several modulation standards, including a hierarchical multiplexer for ISDB-T and a complete channel simulator.

A setup program is available for easy installation or upgrading of the *StreamXpress* software. The installation package includes installation support for the **Dta**, **DtaNw** and **Dtu** device drivers, which are required to run the *StreamXpress*.

1.1. DekTec PCI Cards Supported by StreamXpress

The *StreamXpress* supports the following DekTec PCI/PCI-Express cards, USB-2 and IP adapters for playing out streams:

Type	Description	Output Format
PCI		
`DTA-100`	DVB-ASI output	ASI
`DTA-102`	DVB-SPI (LVDS) output	SPI
`DTA-105`	Dual DVB-ASI output	ASI
`DTA-107`	DVB-S modulator	L band
`DTA-107S2`	DVB-S2 modulator	L band
`DTA-110`	ATSC/QAM modulator	UHF
`DTA-111`	Multi-standard modulator	VHF, UHF
`DTA-112`	ATSC/DVB-T/QAM modulator	VHF, UHF
`DTA-115`	Multi-standard modulator	VHF, UHF
`DTA-116`	Multi-standard modulator	36-MHz I/F, digital I/Q
`DTA-117`	Multi-standard modulator	44-MHz I/F, digital I/Q
`DTA-140`	DVB-ASI input+output	ASI
`DTA-145`	ASI/SDI input+output, low-profile	ASI, SDI
`DTA-160`	Gigabit Ethernet TSoIP + 3 ASI ports	TSoIP, ASI

PCI Express		
DTA-2107	DVB-S2 modulator	L band
DTA-2110	10GbE NIC optimized for SMPTE 2110	TSoIP, SMPTE-2110
DTA-2111	Multi-standard modulator	VHF, UHF
DTA-2111B	Multi-standard modulator	VHF, UHF
DTA-2115	All standard, all-band modulator	VHF, UHF, L band
DTA-2116	All standard 3GHz modulator	VHF, UHF, L band
DTA-2125	25GbE NIC optimized for SMPTE 2110	TSoIP, SMPTE-2110
DTA-2127	Quad S2X receiver with 3G-SDI/ASI port	ASI, SDI, HD-SDI, 3G-SDI
DTA-2136	Dual QAM-A/B/C receiver	ASI
DTA-2137	Dual DVB-S/DVB-S2 receiver	ASI, SDI (loop-through ports)
DTA-2142	Multi-mode serial and parallel port	ASI, SDI, SPI, SPI-SDI
DTA-2144	Quad ASI/SDI ports	ASI, SDI
DTA-2145	ASI/SDI input+output, low-profile	ASI, SDI
DTA-2152	Dual HD-SDI input+output	SDI, HD-SDI
DTA-2154	Quad HD-SDI/ASI input+output	ASI, SDI, HD-SDI
DTA-2160	Gigabit Ethernet TSoIP + 3 ASI ports	TSoIP, ASI, SDI
DTA-2162	2xGigabit Ethernet TSoIP	TSoIP
DTA-2172	Dual 3G-SDI/ASI input+output	ASI, SDI, HD-SDI, 3G-SDI
DTA-2174	Quad 3G-SDI/ASI input+output	ASI, SDI, HD-SDI, 3G-SDI
DTA-2175	ASI/HD-SDI input+output	ASI, SDI, HD-SDI, 3G-SDI
DTA-2178-ASI	Octal ASI Ports	ASI
DTA-2178	Octal 12G-SDI/ASI Ports	ASI SDI, HD-SDI, 3G/12G-SDI
DTA-2179	Twelve HD-SDI/ASI input+output	ASI, SDI, HD-SDI, 3G-SDI
DTA-2195	12G-SDI/ASI input+output	ASI, SDI, HD-SDI, 3G/12G-SDI
USB-2		
DTU-205	FantASI ASI/SDI output	ASI, SDI
DTU-215	Multi-standard VHF+UHF modulator	VHF, UHF
DTU-245	FantASI ASI/SDI input+output	ASI, SDI
USB-3		
DTU-315	All standard, all-band modulator	VHF, UHF, L band

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IP standalone modules		
DTE-3100	Networked ASI output	ASI

1.2. Files

The `StreamXpress.zip` archive contains the following files:

StreamXpress SetUp.exe	Setup program that installs the **DTC-300** *StreamXpress* player software, and the **Dta**, **DtaNw** and **Dtu** device drivers
DTC-300 StreamXpress Installation.pdf	This document
DTC-300-SP StreamXpress Manual.pdf	User manual for DTC-300 StreamXpress software
DabMux Manual.pdf	User manual for DabMux commandline utility
IsdbsMux Manual.pdf	User manual for IsdbxMux commandline utility
L3Mux Manual.pdf	User manual for L3Mux commandline utility

The setup program installs the following files:

StreamXpress.exe	**v3.38.0.791**	Main executable of the Player software
Dta(32/64).cat **Dta(32/64).inf** **Dta(32/64).sys**	**v4.28.12.290**	Device driver for PCI / PCIe cards
DtaNw(32/64).cat **DtaNw(32/64).inf** **DtaNw(32/64).sys**	**v3.5.15.46**	NDIS device driver for PCI / PCIe cards
DtPcie64.cat **DtPcie64.inf** **DtPcie64.sys**	**v3.5.0.389**	Device driver for latest PCIe cards
DtPcieNw64.cat **DtPcieNw64.inf** **DtPcieNw64.sys**	**v1.1.1.59**	NDIS device driver for latest PCIe cards
Dtu(32/64).cat **Dtu(32/64).inf** **Dtu(32/64).sys**	**v4.15.5.93**	Device driver for USB-2 / USB-3 devices

2. Installing the Software

The *StreamXpress* setup program is self-contained. Installing the player software and the device driver is as simple as running the setup executable (`StreamXpress SetUp.exe`) and pressing "Next" a few times.

2.1. Operation of the Setup Program

The setup program copies the *StreamXpress* executable to the `StreamXpress` sub-directory in `C:\Program Files\DekTec\`. A shortcut to "StreamXpress" is created in the Start Menu and optionally on the Desktop.

The **Dta**, **DtPcie** and **Dtu** device-driver files are copied to `C:\Program Files\DekTec\Drivers`. Thereafter, setup instructs the Windows 2k19/2k22/10/11 Plug'n Play manager to install the device driver.

Notes
- You can omit installation of the **Dta**, **DtPcie** and/or **Dtu** device driver by deselecting the check box "Install the Dta device driver" and "Install the Dtu device driver" respectively.
- A Windows 2k19/2k22/10/11 device driver can only be installed by a user account with the privilege to *load and unload device drivers*, e.g. administrator.

The software can be installed *after* the device has been inserted into / connected to the system (§2.2), or *before* the hardware is inserted / connected (Pre-Installation, §2.3). Both approaches are equally valid.

2.2. Hardware Installed Prior To Software Installation

This scenario assumes that:
- The **Dta**, **DtPcie** and **Dtu** device driver software has not been installed before on the PC, and
- A DekTec PCI card has been inserted into the PC or a USB adapter has been connected to the PC.

Some time after booting the PC, the **Found New Hardware Wizard** will show up. As no device-driver software has been installed yet, you should **CANCEL** the wizard.

You can now run `StreamXpress SetUp.exe` to automatically install the player software and the device driver. After the installation completes, the software can be used immediately. No reboot is required.

2.3. Pre-Installation: Software Installed without Hardware Present

This scenario assumes that:
- No previous version of the **Dta**, **DtPcie** or **Dtu** device driver software has been installed on the PC, and
- No DekTec PCI card is present in the PC, and no DekTec USB device is connected to the PC.

You can pre-install the software by running `StreamXpress SetUp.exe`.

Then, shut-down the computer and insert the DekTec PCI card in a free PCI slot, or connect the USB device to the PC. After powering up the computer again, the device driver should install itself just after booting. On Windows the **Welcome to the Found New Hardware Wizard** will show up. Choose **Install the software automatically (Recommended)**. Press **Next** and **Finish**, and the driver installs.

The player software is now ready for use.

2.4. Upgrading

The setup program can also be used to upgrade the *StreamXpress* Player software and the **Dta, DtPcie, Dtu** device driver to a new version in one go. Again, no reboot should be required.

3. Troubleshooting

3.1. Checking Device Status in the Device Manager

The Windows device manager can be used to check whether the Dta, DtPcie or Dtu driver runs properly. To check the device status of a DTA-1XX, DTA-21XX, DTU-2XX or DTU-3XX:

1. Open the Windows device manager: right-click **My Computer**, select **Manage**, and go to **Device Manager** under **System Tools**.

2. Locate the DekTec adapter in the device category **Professional audio/video interfaces**.

3. Right-click **DTA-1XX**, **DTA-21XX**, **DTU-2XX or DTU-3XX**, select **Properties**, and check the **Device status** pane.

The status should be: This device is working properly. If not, don't try the Windows Troubleshooter (it does not know anything about DekTec devices), but inspect the event log (§3.2) and the install log (§3.3). If the computer does not boot, please review §3.4.

3.2. Checking the Event Log

The System Event Log can be consulted to check whether the **Dta1xx** and/or Dtu2xx device driver has been loaded and started properly. To open the System Event Log:

1. Right-click **My Computer**, select **Manage**, and open **Event Viewer** under **System Tools**.

2. Select the **System** log.

3. DTA driver messages have `Dta` , `DtPcie` in the **Source** column;
   DekTec NDIS driver messages have `DtaNw,DtPcieNw` in the **Source** column;
   DTU driver messages have `Dtu` in the **Source** column.

If the driver loads successfully, the following event message is logged:

> The Dta driver (Rev <version>) has loaded successfully.
>
> The DtPcie driver (Rev <version>) has loaded successfully.
>
> The DtaNw driver (Rev <version>) has loaded successfully.

Or The Dtu driver (Rev <version>) has loaded successfully.

The device-driver version listed in this message should match the `Dta`/`DtPcie`/`DtaNw`/`Dtu`-version number listed in the file overview in §1.2.

For each DekTec PCI card inserted in the system, a start-up message listing PCI-Card Type, Firmware Version and Slot Number is logged, e.g.:

> The DTA-102 (Firmware Version 8) in PCI Slot 3 has started successfully.

Obviously, if the Dta driver detects an error while trying to start the PCI card, the message above will not occur. Instead, an error message is logged, which may be helpful to find the source of the problem.

For each USB device connected to the system, a start-up message similar to the PCI-card start-up message will be logged.

3.3. Checking the Device-Driver Install Log

The device-driver install log is a text file (`DtDrivInstall.log`) written into `C:\Program Files\DekTec\Drivers` (or a redirected path). In case of installation troubles, please contact DekTec at support@dektec.com, attaching the install log.

3.4. PC Does Not Boot

In some exceptional cases, inserting a DekTec PCI card into a PC may stop that PC from booting. The PC may already be suspended in the BIOS start-up sequence. Assuming that the PC does boot when the DekTec PCI card is not inserted, this may be caused (1) by a broken PCI card, or (2) by a bad contact on the PCI bus.

3.4.1. Broken PCI Card

Whether or not the PCI card is broken can be checked just after powering up the PC, by observing the LED on the PCI bracket of the card[1]. If the LED stays blank (does not flash), the PCI card is probably broken and should be returned to DekTec for repair.

3.4.2. Bad Contact on PCI Bus

From practical experience it is known that the PCI Bus is quite sensitive to dust or grease on the PCI-connector fingers of a PCI card. A single bad contact may lead to system instabilities, including:
- Boot failure;
- Invisibility of a PCI card during installation;
- System crash at the moment that the Dta device driver starts.

If one of these symptoms occurs, DekTec recommends extracting the DekTec PCI card, checking/cleaning the connector fingers and re-inserting the card, if possible in a different PC or in a different PCI slot, and avoiding mechanical strain on the PCI connector. If the problem persists, please contact DekTec at support@dektec.com

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[1]   Most DekTec PCI and PCIe cards have a LED on the PCI bracket. Cards without LED cannot be checked easily.

4. Command-Line Options

The *StreamXpress* provides the following command-line options:

-dte   Include DTE-3100 in device scan

-fnoffs   Loop start time is read from file name
              Example: TS100540.ts → Loop start time is set to 10:05:40

-ftoffs   Loop start time is read from file creation time

-hide   Start StreamXpress with the user interface hidden

-n *d*   Device number to use (default **1**); **1** indicates the first device

-once   Clear wrap-around flag and automatically start playing. When playout is done, the StreamXpress automatically quits. This option can be used to run the StreamXpress from a batch file. In this case the start command should be used:
              start /W StreamXpress –once

-play   Automatically start playing after start-up

-port *p*   Port number to use (default **1**); **1** indicates the first port

-rc *p*   Start listening for remote-control commands on TCP port p. This option requires a Remote-Control license (DTC-302-RC)

-t   Device type number to use (default: any output device[2])

100	for DTA-100
102	for DTA-102
105	for DTA-105
107	for DTA-107
110	for DTA-110, DTA-110T
111	for DTA-111
112	for DTA-112
115	for DTA-115
116	for DTA-116
117	for DTA-117
140	for DTA-140
145	for DTA-145
160	for DTA-160
205	for DTU-205
215	for DTU-215
245	for DTU-245
315	for DTU-315
545	for DTA-545
2107	for DTA-2107
2110	for DTA-2110
2111	for DTA-2111
2115	for DTA-2115

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[2]   Any output device means the *N*th output device found in the system, where *N* is the device number specified with –n.

2116   for DTA-2116
2125   for DTA-2125
2136   for DTA-2136
2137   for DTA-2137
2142   for DTA-2142
2144   for DTA-2144
2145   for DTA-2145
2152   for DTA-2152
2154   for DTA-2154
2160   for DTA-2160
2162   for DTA-2162
2172   for DTA-2172
2174   for DTA-2174
2175   for DTA-2175
2178   for DTA-2178
2179   for DTA-2179
2195   for DTA-2195
3100   for DTE-3100
840   for local NIC

5. DTC-300 StreamXpress Revision History

Revision	Date	Changes
v3.38.0.791	2024.11.25	• Support for [DTA-2125 25G SmartNIC Optimized for SMPTE 2110](#) • Added support for SMPTE RP-198 and RP-219-1 HD colour bar test patterns • DTA-2115B/2116/DTU-315: Playout of an ATSC 3.0 STLTP file where the PLP-ID's and PLP-indexes are not equal resulted in an invalid signal • IsdbS3Mux generated output file without TMCC basic information • Fix for AC-4 Audio label not shown
v3.37.0.787	2024.05.31	• UI now shows the SPRC remote control port and number of open sessions • Add support for JST time in Loop and TDT/TOT adaption • Added SPRC function to get/set TDT adaption mode • Added SPRC functions for SFN control • Fix for CW option shown in DTA-2115B 8-channel mode
v3.36.0.785	2024.03.04	• Fix for error on playout of DAB file • Fix for start and stop error via remote control API • Support for DTC-300-NICP: StreamXpress for local NIC; soft license, can be put on any DekTec adapter or USB Dongle
v3.35.0.783	2023.10.26	• Several improvements and fixes for DTA-2110 IP playout • Support for MPEG-H audio indication in treeview • IsdbMux tool improved error logging • Fix for missing -t command line arguments 2178 and 2116 • Fix for potential hang on specific TS stream
v3.34.0.781	2023.09.01	• Support for [DTA-2111B Multi-Standard Cable/Terrestrial Modulator for PCIe](#) • Added extra info about the configured port number for the DTA-2110 SMPTE-2110 audio test stream generator (configured video stream port number + 2) • Support for extra TS test-signal generator pattern, where the first 4 bytes of the data payload contains a packet counter, using 7bits per byte. • Added support for ISDB-T 5 and 7 MHz • Fix for DVB-T playout stop after specific CW and RF level configuration • Fix for DtPcieNw driver required for DTA-2110 not being installed. • *NOTE: The latest driver supporting DTA-2111B is not available for Windows 7, Windows 8 and Server 2012*
v3.33.0.778	2023.06.28	• Support for [DTA-2110 10GbE NIC optimized for SMPTE 2110](#); initial release has SMPTE-2110 test stream generator support and TS-over-IP support • Improvement for support of ATSC3.0 STLTP files containing UDP-packets without IP-checksum (DHCP SSDP packets) • Fix for SDI signal generator -"psf" standards not correctly saved • Fix for "red" IP address when switching from RTP to UDP when FEC is enabled • Fix for potential crash when switching between adapters when using the Audio/Video test signal generator • Fix for StreamXpress not starting on Windows 7/Server 2012, this issue was introduced in v3.32.0
v3.32.0.773	2023.03.06	• Support for DTA-2116 DVB-T2 SPLP (single PLP) • Fix for IP parameters like UDP/RTP not set correctly (introduced in v3.30.0)
v3.31.0.772	2022.12.20	• Support for [DTA-2127 Quad S2X Receiver with 3G-SDI/ASI Port for PCIe](#) • Support for [DTA-2116 All-Standard 3GHz Modulator for PCIe](#) • Fix for ISDB-S3 modulation not working in v3.30.0

		NOTE: this version might require a new version of SpRc due to a change in SpRcTsoIpPars
v3.30.0.770	2022.10.11	• Support added for the SRT protocol • Addition of the CEF GUI framework, allowing for a more modern GUI in the future • StreamXpress is now distributed as a 64-bit application • Experimental support for DVB-S2X GSE-lite HEM for DVB-NIP • Support added for detecting MPEG-H PIDs • Fix for possible crash when opening a JPEG-2000 file • Fix for possible missing output in case of quad link 4k video • Fix for possible crash when using packet size option "188+16" • Fix in format detection when loading data from an IQ-file
v3.29.0.766	2021.12.17	• Support added for I/Q float and I/Q Hex formats • Support for SpRc API v1.10.0 with support for configuring a subloop • Improved error reporting when selecting an invalid DVB-S2X ModCod • Fix for playout rate set to -1 after reading a configuration file
v3.28.1.764	2021.07.27	• Fixed DVB-T2 output rate computation when opening a configuration file
v3.28.0.763	2021.03.16	• Improved support for high DPI displays (e.g. 4K resolution screen) • Support for configuring of the DVB-T2 version via the SpRcAPI • Improved quad-link SMPTE-425-5 playout synchronisation for the 4 ports • Fixed F1- Help behaviour
v3.27.0.761	2020.11.26	• Show the STLTP destination IP-address used • Ignore non-UDP-packets in STLTP PCAP-file
v3.26.0.760	2020.11.18	• Support for ATSC3.0 STLTP (Studio-to-Transmitter Link Transport Protocol) using DTA-2115B/DTU-315 • Support for DRM/DRM+ (Digital Radio Mondial) using DTA-2115B/DTU-315 • Improved SpRcApi SetPlayoutRate function for TS over IP usage • Fixed potential out of memory error on specific TS file
v3.25.0.757	2020.08.28	• Support for [DTA-2178 Octal 12G-SDI/ASI Ports for PCIe](#) • Fixed support for 16-bit dtsdi file for DTA-2174B • DTU-315 disabled option "RF enabled on stop" for DVB-C mode
v3.24.0.756	2020.05.10	• Support for [DTA-2178-ASI Octal ASI Ports PCIe card](#)
v3.23.0.755	2020.02.27	• Support for [DTA-2174B Quad 3G-SDI Ports PCIe card](#) • Support for audio in SDI test signal generator • Fixed ISDB-T PRBS could not be generated in Layer B or C • Fix for DTA-2115B/DTU-315 crash when setting negative SNR for DVB-S2X QPSK
v3.21.1.747	2019.12.18	• Fixed ISDB-T PRBS generation • Fixed incorrect adapter in use error message
v3.21.0.745	2019.08.01	• DTU-315/DTA-2115B: support for ISDB-S3 playout • DTA-2115B: support for the 2 types of noise generators (requires firmware v2) • Add support for DTA-2172 • Fix for possible invalid PID bitrate in treeview
v3.20.5.742	2019.02.20	• Fix for DtapiService crash seen on older PC's that did not support AVX instruction set
v3.20.4.741	2019.02.01	• DTA-2175: ASI/HD-SDI input+output support; uses new DtPcie64 driver • Support for 4K test stream generator mode and moving test pattern for DTA-

		2174/79/95
v3.19.2.735	2018.08.29	• DVB-S2X modulation was missing coderate 7/15 for 16-APSK • DTA-2115B: 8 channel mode did use inverted QAM-B • DTA-2160/62: playback to IP-port didn't fill hardware-buffer on EOF
v3.19.1.733	2017.04.26	• DTU-315/DTA-2115B: support for DVB-CID configuration • DTU-315/DTA-2115B: support for negative SNR using DTC-305 • Fix for IP output takes broadcast MAC address instead of the default gateway • Fix for DTU-315 doesn't playback ATSC properly after switching from DVB-T
v3.18.1.728	2016.06.20	• Fix for DTU-315 slider proceeds when paused • Fix for DTA-2115B ATSC playout failing using 8x 8Mz HW8CH option
v3.18.0.727	2016.03.18	• Support for DTA-2115B 8x 8MHz VHF/UHF channel modulation (HW8CH)
v3.17.3.726	2016.02.26	• Fix for Audio artefacts when play DAB ETI file containing audio reconfiguration
v3.17.2.724	2015.11.02	• Fix for DVB-S2 L3 parser displaying incorrect information when VL-SNR dummy frames were present in a file • Fix for DVB-S2 playout not working on DTA-2107
v3.17.1.723	2015.09.30	• Add "no interleaving" option for DTMB/ADTB-T modulation • Fix for license not recognized errors • Fix possible crash when clicking "default" after setting very high bitrate • Fix possible modulator output errors on DTU-315
v3.17.0.721	2015.08.12	• Add support for DTU-315
v3.16.2.720	2015.04.16	• Add support for ISDB-S B15 streams • Remove 100Mbps limitation on local NIC • Fix list of supported devices accepted by –t commandline option • Fix possible crash when changing symbolrate in DVB-S2 L3 mode • Fix for DTA-2111: DVB-C symbolrates under 4MBaud didn't work
v3.16.1.719	2015.02.25	• Add support for HD-SDI Progressive Segmented Frame (PSF) formats • Add support for remote-control license for local NIC (licensed via dongle) • Fix crash/invalid signal when playing a HD-SDI file with 1080P50 format • Fix failure to start on Windows XP • Fix possible crash when using a very small sub-loop and changing files • Fix local NIC 127.0.0.1 loopback when IP cable was disconnected
v3.16.0.718	2015.01.08	• Add support for DTA-2174 • Add support for playout over local NIC (licensed via dongle) • Add support for SpRcApi 1.6.0 • Add option to set TOS fields for IP output • Fix for not including null packets during PRBS generation on DTA-2107
v3.15.1.715	2014.09.19	• Add support for 20% and 25% roll-off for DVB-S • Add option to select DVB-S2 16APSK and 32APSK constellation shape • Fix for crash on some files with E-AC3 content • Fix for output problem when switching between DVB-S2X constellations • Fix for crash on some DTSDI files • Improved error message when opening .xml files that don't have correct settings • Silently ignore .xml files with the same base name as the opened file if they don't have valid configuration settings
v3.15.0.712	2014.06.25	• Add support for realtime changes to channel modelling settings without interruption in the output signal

		• Add support for SpRcApi 1.5.0 • Add parsing elementary stream info from HEVC streams • Add support for additional character sets in DAB ETI streams • Hide all windows when requested via SpRcApi, not only the main window • Fix for spectral inversion for DVB-S2 / ISDB-S • Fix for DVB-T modulation if IL_TYPE=1 is used
v3.14.0.711	2014.04.24	• Add support for DTA-2115 • Add support for DVB-S2X • Fix crash when changing from a modulation type with channel modelling enabled to DVB-S2 • Fix crash when changing from ASI to IP port on DTA-2160 while burst mode was enabled
v3.13.0.710	2013.12.11	• Allow powerlevel to be changed in 0.1dB steps for DTA-2111 • Add 3 new PRBS modes • Fix memory buffer underflow when DTA-107 is selected during startup • Allow negative frequency shift for constant Doppler channel fading • Allow DAB ETI stream with changing number of sub-channels
v3.12.0.709	2013.10.15	• Add support for DTA-2154 • Fix for invalid ISDB-T signal generation • Fix for crash when playing out certain very large HD-SDI files
v3.11.1.707	2013.08.29	• Add support for double-buffering on DTA-2162 • Add support for packetsize selection on IP outputs • Add support for single-PLP DVB-T2 license • Fix for out-of-memory error when opening a file with DVB-T2 descriptors • Fix for failing to properly playout some T2MI files • Fix for not recognizing 1 and 3 segment TMCC files • Fix for strange behavior when changing the modulation standard from DVB-S2 to L3
v3.11.0.706	2013.06.06	• Add support for DVB-S2 L3 modulation • Add support for DTA-2162 • Disable failsafe if it was enabled so playout works • Disable more of the interface if CW is enabled • Support for 10Mhz DVB-T2/T2MI output on DTA-2111 with firmware>=2 • Fix for crash when opening transport-stream files on DTA-2152 or HD-SDI files on a non-HD-SDI capable port • Fix for wrong playout rate when toggling "Use TMCC info" for ISDB-T.
v3.10.4.705	2013.04.02	• Fix for crash if a non-existing adapter is selected via the remote control API. • Fix for low DVB-T2 performance • Fix for incorrect SDI playout on the DTA-2152 after recovering from an underflow situation (only fixed for dtsdi v2 files). • Fix for crash when enabling channel modelling for QAM-B
v3.10.3.703	2013.03.01	• Fix for incomplete ISDB-T / ISDB-S / DAB analysis when loading a configuration file with an ISDB-T / ISDB-S / DAB modulator but currently using another mod type. • Do not show DTEs in SMPTE mode as playout devices. • Allow enabling spectral inversion on DTA-111, DTA-116 and DTA-117 • Change default symbol rate for QAM-C to 5274000 • Fix support for SPISDI mode • Detect DMA underflows and restart playout in case this happens. • Detect T2MI rate from file • Prevent crash when selecting 10Mhz bandwidth for T2MI on DTU-215 and

		DTA-2111 since it's not supported.
v3.10.2.700	2012.12.14	• Fix for crash when playing out invalid files with table sections between 4093 and 4096 bytes long • Allow QAM symbol rates above 7Mbd • Fix for problem when wrapping file in ATSC-MH mode • Display ts rate / symbol rate in test generator mode even when no file has been opened before.
v3.10.1.696	2012.11.14	• Fix for DVB-T2 / DVB-C2 modulation that was broken • Fix for failure to playout to DTE-3100 • Deriving playout parameters from NIT didn't work in some edge cases for DVB-T / DVB-H. • Fix for crash when DTA-102 was configured for external clock mode • Fix for crash when playout rate was (temporary) set to 0 • Fix for ISDB-T playout when switching between modified ISDB-T parameters and the TMCC information from the file. • Fix for inverted spectrum of DTA-2107 in DVB-S mode • Fix for DTA-2107: actual SNR level did not match applied level
v3.10.0.692	2012.10.02	• Support for PCR/PTS/DTS adaption for PIDs added half-way the file • Support for DTA-plus devices • Support for Remote-Control API V1.4.0.7 • Support for setting the bandwidth when playing out a T2MI stream • Enable capture stream again for ISDB-T for files without TMCC information • Fix for crash when playing an SDI file on a DTA-2152 port for which the fractional mode has to be changed. • Fix for PRBS generation with ISDB-T modulation • Fix for saving channel-modeling parameters • Fix for possible crash when loading a stream with AES audio • Enable windows file cache when playing out to solve some issues with high-bitrate files (on SSDs which should support those bitrates) • Fix table decoding, most noticeable the PAT wasn't found in digicypher streams • Fix for CMMB playout when switching to a new file with different bitrate. • Fix for DTA-2152 to enable 720p50 playout
v3.9.1.683	2012.08.03	• Fix for TPS length indicator in DVB-T mode • Fix for wrongly compiled user interface, leading a.o. to unreadable dropdowns in the DVB-T2 parameter window. • Save/load DVB-T2 version from configuration file • Fix for ISDB-T TMCC analysis on scrambled TS files • Support to specify number of AUX streams in DVB-T2 signal • Fix for freeze when loading certain ISDBS files
v3.9.0.679	2012.07.04	• Improved file analysis • Option to specify T2-version when modulating DVB-T2 • Fix for playout could only be started when the start time of a sub-loop was 0:00. • Fix for HD-SDI playout on DTA-2152 • Fix for crash when end time of sub-loop was set to 0:00 • Fix for incorrect minimum/maximum RF level which sometimes even caused crashes • ISDB-T analysis always set guard mode to 1/8 regardless of the actual file contents
v3.8.0.678	2012.05.16	• Support for DTA-2107

		• Support for DAB/DAB+/DMB, including multiplexer command line tool (DAB license required) • Support for Remote-Control API V1.3.0.6 • Option to set DVB-T2 version • Filename is now shown in window title to make it easier to find the right StreamXpress window • Fix for big memory leak when changing DVB-T2 parameters • Fix for impossibility to enter a TS rate when playing a TS file without PCRs
v3.7.1.677	2011.12.13	• Fixed compatibility issue with V2 dtsdi file format
v3.7.0.676	2011.12.06	• Support for DTA-2152
v3.6.2.673	2011.09.27	• Support for DTA-2142 • Support for randomized Null packets payload • Support for Remote-Control API V1.2.05 • Support for modulation carrier only mode (CW-only mode) • Fix for DTA-107 SNR deviation • Fix for possible invalid NIT derived parameters • Fix for possible invalid CRC on TDT/TOT adaptation • Fix for possible error in ISDB-T 188 byte play-out
v3.6.1.670	2011.03.01	• Restored Channel frequency limit for DTA-111/112/115 (999MHz) • Fix for problem with DTA-2160 firmware V1
v3.6.0.669	2011.02.17	• Support for DTA-2111 • Restored sample rate limit for DTA-115 (15MBd) • Fix to make sure end of stream modulation packets are send • Fix for possible ISDB-S loop problem
v3.5.0.668	2010.12.17	• Support for Sub-Loop functionality • Support for new Remote-Control API (WS-I basic profile 1.0a compliant) • Fix for possible invalid rate on 1 segment ISDB-T configuration
v3.4.0.666	2010.11.26	• Support for ISDB-S, including ISDB-S Multiplexer command line tool (ISDB-S license required) • Support for T2-MI (DVB-T2 license required) • Support for 192 bytes TS packets • Support for multi section PAT • Add pre-configured DVB-T2 'Digital TV labs' configurations • Add TS-ID to PSI viewer • Fix for AWGN not operating in IQ mode • Fix for AWGN not operating in 256-QAM DVB-C • Fix for DTU-215 play-out stop on switch between QAM-C and ISDB-T • Fix for DTA-115 changing IQ rate doesn't change spectral bandwidth • Fix for output errors on invalid CMMB streams • Fix for possible wrap around issues on CMMB streams • Fix for "Use current time" TDT adaptation; now uses UTC time • Fix for DTA-160 IP port errors on menu click • Fix for deadlock on selecting an invalid drive for File input • Fix for ATSC output is not changing on symbol rate change • Fix for invalid ISDB-T output rate on 3 Segment and 1 Segment configurations
v3.3.0.661	2010.08.20	• Support for Spectral Inversion • Support for enable/disable RF on stop (only DVB-C/QAM-C/DVB-S) • Add pre-configured DVB-T2 Teracom configurations • DTU-215 support for low (<4.7M) IQ and QAM rates • Fix for possible DVB-S2 crash on 8-PSK

		• Fix for possible crash on QAM-C and channel modelling • Fix for invalid channel modelling button on DTA-107 • Fix for DTU-215 CMMB playout • Fix for DTU-215 ATSC playout
v3.2.1.660	2010.07.30	• 8 MHz ISDB-T support for DTU-215 • Fix for crash when selecting invalid DVB-C/QAM-C file
v3.2.0.658	2010.07.02	• 8 MHz ISDB-T support (DTU-215 only supports 6 MHz) • Fix for NIT derived BPSK modulation error • Fix for DVB-S2 fixed symbol rate • Add DTU-215 symbol rate range checks • Restore burst mode function for ASI playout • Fix for erroneous PTS/DTS updating in DSM-CC streams
v3.1.0.655	2010.06.04	• Support for Full HW FIFO usage • Fix for DTA-110T no ATSC mode issue • Fix for invalid CMMB Tx ID range • Fix for DTA-160 no IP output on V3.0.10.653 issue • Fix for IQ mode doesn't work above 9.2 MHz issue • Fix for IQ output doesn't work on frequency < 5.2 MHz issue
v3.0.10.653	2010.03.23	• Support for DTU-215 • Add channel modelling for ISDB-T, I/Q and QAM sample mode • IQ mode: Change "Gain" label in main dialog to "IQ Scaling" • Add command-line option –p to select a specific port • Add command-line option –once to quit when playout is done Fixes for: • Crash when switching between DVB-S and DVB-S2 on DTA-107-S2 • RF frequency not adapted when switching between L-band and VHF/UHF • Modulator parameters return to default values when restarting StreamXpress • Loop adaptation settings remain visible in test-generator mode • DTA-160 IP port initializes to D=5, L=5 but generates no FEC • Problem with odd-length FEF in DVB-T2 • Problems with command-line options • Cannot play non-TS files in raw mode
v3.0.9.645	2009.11.12	• Fix initialisation problem for ATSC • Don't reinitialise certain parameter upon opening of a new file • Fix saving/retrieving IP address in XML settings • Add error message when settings file cannot be opened • Add error message if settings file is incompatible with adapter port • Align DTG DVB-T2 parameter sets with latest version • Updated DVB-T2 V&V parameter sets
v3.0.8.638	2009.08.11	• Playout of I/Q samples: Add gain and extended sample rate options • Add DVB-T2 DTG parameter sets • Add remote-control command for setting/getting DVB-T2 parameters • Fix Tx polarity issue for DTU-205s with old hardware revision • Avoid jumping windows when changing parameters • Several other minor UI fixes and improvements
v3.0.4.631	2009.06.09	• Add average TS-rate estimate and initial value for partial Transport Streams • Remove ADTB-T, DMB-T/H restriction for 32-QAM • Support for playout of I/Q samples • DTA-102 support • Fixes a number of general stability issues and a number of issues in the channel simulator

		• ISSY support for DVB-T2
v3.0.1.617	2009.02.18	• Fixes installation troubles with v3.0.0.616
v3.0.0.616	2009.02.16	• Add playout of SDI on SDI-enabled DekTec devices • Add remote control (requires license) • Add support for DVB-T2 modulation (requires license) • Add preliminary support for channel simulator (requires license)
v2.9.1.552	2009.02.06	• Bug fix: Could not set an unicast IP address for the DTA-160 • Improved detection speed for DTE-3100
v2.9.0.551	2009.01.27	• Support for DTA-2144 and DTE-3100 • Changed TTL value for DTA-160 to 64 • Bug Fix: Could not set a RF frequency below 400MHz for DTA-112
v2.8.0.546	2008.06.20	• Support for DTA-112 • Stores RF level setting in registry • Bug Fix: DTA-110/115/116/117 DAC was overdriven for ATSC modulation • Bug Fix: No DVB-T output when using following settings: 8Mhz, 2k, QPSK, code rate=1/2, and G=1/32 • Bug Fix: -t and/or –n command-line options did not select the specified output
v2.7.3.537	2007.09.04	• Support for ADTB-T • Support for DTA-115 with firmware version 2 • Added additional parameters (bandwidth, interleaving mode, frame numbering) for DTMB • Bug fix: QAM-B signal was spectrally inverted • Bug fix: fault in DVB-S2 signal when pilots were enabled in 8-PSK mode
v2.7.2.535	2007.07.17	• Bug Fix: crash when playing a "standard 204-byte" file (i.e. non-TMCC file) in ISDBT mode
v2.7.1.533	2007.06.12	• Support for ATSC (VSB) with DTA-110(T) and DTA-115 • Support for ISDB-T 1/3 segments radio broadcast with DTA-110T and DTA-115 • Support for hierarchical (re-)multiplexing of TMCC files • Option to set QAM-B interleaving
v2.6.4.528	2007.03.30	• Bug fix: ISDB-T initialisation error, resulting invalid output
v2.6.3.527	2007.03.28	• Support for QAM-B with DTA-110(T) and DTA-115 • Support for DTMB with DTA-110T and DTA-115. NOTE: For DTMB a DTC-374-DTMB license is required • Bug fix: crash when started and a DTA-115 is selected • Bug fix: occasional crash when switching between modulation modes • Bug Fix crash when no cards with a StreamXpress license are available
v2.6.0.524	2007.02.14	• Support for DTA-115, DTA-145, DTA-2145 • Support for ISDB-T hierarchical multiplexing • New options –fnoffs and –ftoffs for setting loop start time from file name or file-creation time respectively

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