

ATSC 3.0 Signal Generator

Installation



1. Introduction

The *Atsc3Xpress*[™] is DekTec's ATSC 3.0 Signal Generator application.

The DTC-386 *Atsc3Xpress* software package is designed to create ATSC 3.0 test signals in the form of I/Q sample files and ATSC 3.0 RF output. *Atsc3Xpress* allows you to set the ATSC 3.0 parameters, preamble parameters, subframe parameters, parameters per PLP, select the PLP sources, add noise, add multiple channel simulation paths and to generate the ATSC 3.0 test signals.

The I/Q samples file can be processed by your application or it can be played out through the *StreamXpress*.

A setup program is available for easy installation or upgrading of the *Atsc3Xpress* software.

The *Atsc3Xpress* application requires a valid **license code** that is stored in non-volatile memory on one of the DekTec devices or on a dongle. Optionally the *Atsc3Xpress* license will be delivered within a separate license file, which has to be installed through *DtInfo*.

2. System Requirements

Platform	Windows 2k12/2k16/2k19, 7,8,10,11
Processor*	Core i5 minimum Core i7 recommended
RAM	8 GB

* Or equivalent AMD processor

3. Files

The [Atsc3Xpress.zip](#) archive contains the following files:

DTC-386 Atsc3Xpress Installation.pdf	This document
DTC-386 Atsc3Xpress Manual.pdf	The user manual
Atsc3Xpress Configs.zip	Archive containing <i>Atsc3Xpress</i> configuration files
Atsc3Xpress Setup.exe	Setup program for <i>Atsc3Xpress</i>

4. Installing the Software

The following install steps should be executed:

1. Extract [Atsc3Xpress.zip](#) into a temporary folder.
2. Run [Atsc3Xpress Setup.exe](#) to install *Atsc3Xpress*.
3. Optionally install appropriate license(s) through *DtInfo*. The *DtInfo* utility can be downloaded [here](#).

Atsc3Xpress can now be started using the desktop shortcut.

5. Limitations and Known Issues

6. Revision History

Revision	Date	Change Description
v1.20.0.44	2025.04.10	<ul style="list-style-type: none"> Added MIMO Cross-Polarization Interference simulation Added option to output SISO subframes to first output channel or to both Increased maximum PRBS bitrate to 160Mbps Show warning during playout if PCAP bitrate is higher than PLP capacity Fixed number of TI cells shown in Frame Info for HTI configurations Fixed MIMO stream combining for theta=0 Fixed MIMO null pilot pattern (MP32_4) encoding
v1.19.1.43	2025.02.20	<ul style="list-style-type: none"> Fixed MIMO Pilot parameter setting MIMO configurations output bootstrap and SISO PLPs on both channels
v1.19.0.42	2025.01.27	<ul style="list-style-type: none"> Added MIMO support
v1.18.0.40	2024.11.21	<ul style="list-style-type: none"> Enhanced frame information in GUI Improved tooltips in GUI Added no-GUI commandline option
v1.17.1.39	2024.03.04	<ul style="list-style-type: none"> Increased DTA-2116 power level range to -3dBm .. -135dBm Improved Source Selection dialog for small screens
v1.17.0.38	2023.07.06	<ul style="list-style-type: none"> Added DTA-2116 support Added support for Big-Endian PCAP files Added Source-specific multicast source address selection
v1.16.1.37	2022.02.24	<ul style="list-style-type: none"> Fixed out of band spurs of the DTU-315 modulator Fixed TxID selection
v1.16.0.36	2022.01.10	<ul style="list-style-type: none"> Increased the number of ROUTE/MMT IP-Addresses in PLP Source Selection Added check on the number of data cells per subframe
v1.15.0.34	2020.06.30	<ul style="list-style-type: none"> Added IP-filtering option for ROUTE/MMT file input
v1.14.0.33	2019.11.14	<ul style="list-style-type: none"> Added support for large ALP-packets Removed LLS reference (224.0.23.60:4937) from LMT-table generation
v1.13.0.31	2019.05.22	<ul style="list-style-type: none"> Added support for PCAP-files with fragmented IP packets
v1.12.1.30	2019.02.22	<ul style="list-style-type: none"> Improved indication of parameter errors
v1.12.0.29	2019.02.04	<ul style="list-style-type: none"> Added option to reset time-info generation on input-file wrap. Improved PLP parameter error checking Increased AWGN SNR range to +30dB .. -60dB Fixed MISO signal generation Fixed display of milliseconds component of PTP-time in GUI
v1.11.0.26	2018.07.23	<ul style="list-style-type: none"> Added support for the "Korean Mode" option, which will generate a LMT (if enabled) according the 2016 specification
v1.10.0.25	2018.05.30	<ul style="list-style-type: none"> Added support for L1-Detail version 1 Fixed random cell generation with LDM PLPs Fixed LMT-table generation Added new V&V configurations

v1.9.0.23	2018.01.16	<ul style="list-style-type: none"> • Added generation of LMT-table • Added support for different types of ALP-packets • Extended parameter error checking
v1.7.0.16	2017.09.01	<ul style="list-style-type: none"> • Added support for PCAP-files containing ALP-packets • Added MISO support • Added display of PCAP-file's first timestamp in PTP time • Fixed UTC to PTP time conversion, which caused 10 seconds L1Detail-timestamp difference • Fixed PRBS packet length that was not saved
v1.6.0.14	2017.05.22	<ul style="list-style-type: none"> • Added TxID support • Added PCAP bitrate estimation • Added IP-input adapter selection • Reversed AES wakeup bits • Improved tolerance against PCAP timestamp jitter • Fixed crash with L1 detail mode 1 repetition • Fixed buffer overflow in LDPC encoder
v1.5.1.11	2017.03.22	<ul style="list-style-type: none"> • Fixed ROUTE/MMT IP input
v1.5.0.10	2017.03.02	<ul style="list-style-type: none"> • Added ALP-over-IP input • Support for PCAP with nanosecond timestamp format • Fixed I/Q Float32 output format • Fixed Doppler simulation
v1.4.0.9	2016.12.22	<ul style="list-style-type: none"> • Incorporated latest specification updates • Added bitrate information • Increased the number of IP-inputs per PLP • Added IQ over ASI option
v1.3.0.8	2016.10.06	<ul style="list-style-type: none"> • Fixed generation of CTI with LDM • Enabled changing parameters without restart
v1.0.0.3	2016.08.22	<ul style="list-style-type: none"> • Initial version

7. Contact Information

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