

# Network Streaming

## Comprehensive A/C Codec Library

Largest video codec libraries on earth, supporting nearly every major format in use today in both consumer and professional markets.



The various MainConcept Network Streaming Packages for Client and Server can be used for streaming and receiving of media data over a network. The Network Renderer component is used for media data network streaming. It supports RTSP, RTCP, RTMP, SDP, UDP, TCP and RTP (announce sending) protocols. It comes with Windows Media Streaming capabilities and provides smooth network bandwidth usage. The Network Source component supports three protocols: HTTP 1.1, RTP (connecting to broadcast servers) and RTSP (video on demand). It offers multicast as well as unicast communication for message delivery. The client component can receive media streams from the network, such as HEVC/H.265 Video, AVC/H.264 Video, SVC, MVC, VC-1 Video, MPEG-4 Part 2 Video, MPEG-1 System Stream, MPEG-2 Transport Stream, MPEG-2 Program Stream, AAC, AMR, MPEG-1 Video, MPEG-1 Audio (incl. MPA-Robust for MPEG-1 Layer-3 Audio according to RFC-3119), MPEG-2 Video, and MPEG-2 Audio.

The DLNA Package includes a complete feature set for working with UPnP and DLNA, resp. It offers a DLNA Media Server, DLNA Control Point as well as a DLNA Media Renderer. It is compliant with Sony PlayStation 3, Microsoft Xbox360, many TV sets and Blu-ray players, etc. The MainConcept Network Streaming components are compatible with most DLNA servers and control points available on the market.

The special SIP Stack Package includes all components for setting up a VoIP (Voice over IP) environment. The module provides the functionality necessary for creating, initializing and controlling SIP sessions over the internet.

## MAINCONCEPT NETWORK STREAMING SDK PACKAGES

### NETWORK SERVER SDK

Complete set of network server components w/o RTSP server sample source code and w/o RTMP support.

### NETWORK SERVER SDK BROADCAST

Complete set of network server components with RTSP server sample source code and with RTMP support.

### NETWORK CLIENT SDK

Complete set of network server components w/o RTMP, HLS and Microsoft Smooth Streaming support.

### NETWORK CLIENT SDK BROADCAST

Complete set of network server components with RTMP, HLS and Microsoft Smooth Streaming support.

### DLNA SDK PACKAGE

Complete set of DLNA components with SIP support on the client side.

### SIP STACK SDK PACKAGE

Complete set of SIP components with support on both the client and server side.

## FEATURES

### NETWORK SERVER / RENDERER:

- Sending announcements with SDP.
- RTMP support for connecting and receiving videos from Flash Media Streaming Server or Wowza Media Server.
- RTSP and interleaving support.
- Filter offers additional Information tab that provides details about the current sending rate.
- Support of audio/video conferences with minimal control standards (such as GSM: G.711) implemented for Network Render.
- Several Rate-Controls (Send-Rate control) implemented.
- RTSP authorization and KeepAlive support.
- RTP/UDP/TCP protocols support.
- SAP support.
- RTCP support.
- Several methods for network errors handling.
- QoS (Quality of Service) – Possibility to change network packet size.
- Windows Media Streaming support (direct streaming using RTSP of WMA / WMV / ASF to WMP).
- Smooth network bandwidth usage.
- Compliant with MainConcept DLNA Media Server.

### NETWORK CLIENT / SOURCE:

- Uses UDP and TCP for transfer of media data using RTP optionally.
- RTMP support for Adobe Flash streaming.
- Provides a push mode interface.
- Compliant with Microsoft Windows Media Player (for URI with mc\_proto prefix, where protocol is: udp, tcp, rtp, rtsp, http, sdp).
- Adjustment using SDP data from file or from SAP announcements broadcasted over the network.
- Supports multicast and unicast.
- Supports Internet Protocol version 4 (IPv4) and 6 (IPv6).
- Network Interface (NIC) selection for streaming if several NICs are presented on the client workstation.
- Audio/video conferences with minimal control standards (such as GSM: G.711) .
- RTP, RTCP, SAP support.
- RTSP and RTSP interleaving support.
- RTSP Different KeepAlive.
- Manual sync adjuster.
- Different Live Streaming and RTSP buffering modes.
- Support for SHOUTcast radios (MP3, AAC). Network Source connects to SHOUTcast and plays back, but does not parse any ICY headers.
- URI usage for initialization.
- UPnP usage enabled for MainConcept DLNA engine.
- RTSP authorization support.
- HTTP 1.1 support in pull / push mode.
- Memory buffering algorithms for HTTP.
- HTTP Redirection & Proxy support, incl. authorization.
- Direct YouTube link support.
- Supports multiple 3rd party servers.
- HTTP Progressive Playback.
- Clients for Apple HLS, Microsoft Smooth Streaming.

### DLNA (UPNP):

- DLNA Media Server.
- DLNA Control Point.
- DLNA Media Renderer.
- Compatible with Sony PS3, Windows, Microsoft Xbox, TV sets, Blu-ray Disc players, and other devices.
- Compliant with every DLNA server and control point.

### SIP STACK:

- SIP stack support for Voice over IP telephony.
- SIP server usage.
- Compatible with many 3rd party clients.
- High a/v quality in combination with our codec components.
- SIP proxy support.

## STREAM TYPES & FORMATS

### NETWORK RENDERER / SERVER STREAM SUPPORT:

- MPEG-1 System Stream
- MPEG-2 Program Stream
- MPEG-2 Transport Stream
- MPEG-4 Part 2 Video
- HEVC/H.265 Video
- AVC/H.264 Video
- H.263 Video
- AMR / AMR-WB Audio
- MPEG-1 Audio (MPA-ROBUST - RFC3119 also supported)
- MPEG-1 Video
- MPEG-2 Audio (MPA-ROBUST - RFC3119 also supported)
- MPEG-2 Video
- AAC
- Dolby® Digital (AC-3)
- Raw data
- VC-1 Elementary Streams
- Raw and GSM audio, e.g. G.711, LPCM, etc.

### NETWORK CLIENT / SOURCE STREAM SUPPORT:

- MPEG-1 System Stream
- MPEG-2 Transport Stream
- MPEG-2 Program Stream
- MPEG-1 Video
- MPEG-1 Audio
- MPEG-2 Video
- MPEG-2 Audio
- HEVC/H.265 Video
- AVC/H.264 Video
- MPEG-4 Part 2 Video
- VC-1 Elementary Stream
- AAC
- Dolby® Digital (AC-3) Audio
- AMR-NB/AMR-WB Audio
- RAW data
- Raw and GSM audio, e.g. G.711, LPCM, etc.

## COMPONENTS

### NETWORK CLIENT SDK STANDARD

Network Source  
Net Tools  
SDP Parser  
Stream Pump  
MPEG Push Demuxer

### NETWORK SERVER SDK STANDARD

Network Renderer  
Net Tools  
SDP Parser

### NETWORK CLIENT SDK BROADCAST

Network Source Broadcast  
Net Tools  
SDP Parser  
Stream Pump  
MPEG Push Demuxer

### NETWORK SERVER SDK BROADCAST

Network Renderer Broadcast  
Net Tools

### DLNA SDK

DLNA Stack Module  
Network Source  
SDP Parser  
Net Tools

### SIP SDK

SIP Stack Module  
Network Renderer  
Network Source  
SDP Parser  
Net Tools

## TECH SPECS

- Microsoft Windows 10 (64-bit, x86 and ARM)
- Apple macOS 10.11 and newer (64-bit x86), macOS 11 and newer (M1)
- Linux Ubuntu 14.04 LTS, CentOS 7.9 (64-bit, x86), Ubuntu 18.04 (64-bit, ARM)

For Windows, macOS and Linux, the network streaming package consists of a Low Level API (in the C programming language). Under Windows, it additionally includes DirectShow® filters for streaming.

**MORE INFORMATION:**  
[MAINCONCEPT.COM](http://MAINCONCEPT.COM)

**EMAIL:**  
[SALES@MAINCONCEPT.COM](mailto:SALES@MAINCONCEPT.COM)

**REQUEST YOUR DEMO SDK:**  
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