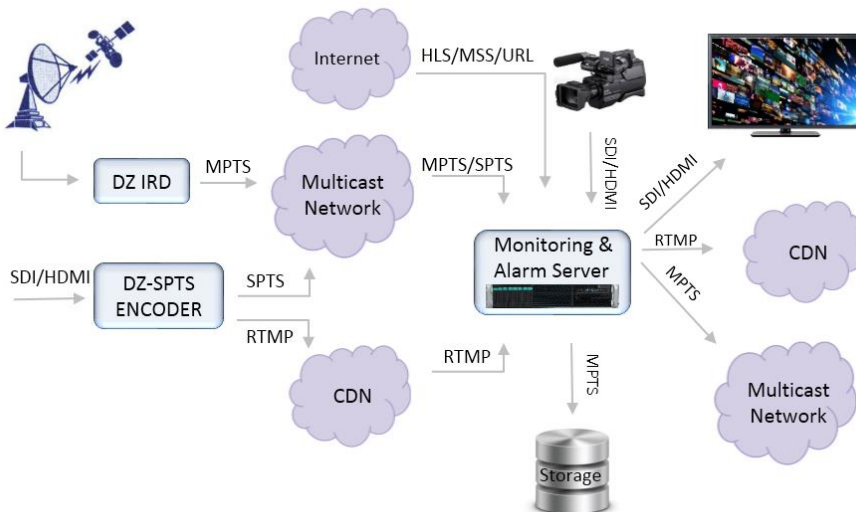# DoğalZeka Monitoring & Alarm Solution

DoğalZeka Alarm & Monitoring System is a stream analyser/multi-viewer which allows the monitoring of the live streams coming from multiple input types such as MPEG-TS over IP (multicast), Adobe RTMP, Apple HLS, Microsoft MSS and RAW (uncompressed) from devices.

Its main purpose is to grab the programs that are carried as **transport stream** and organize these programs by a web-based interface so that a highly customizable monitoring with several alarm detection capabilities of these programs is made possible.

Once the output is streamed, the mosaic videos can be viewed from any location within the network, depending on the network capacity. This can be achieved by simple MPEG Transport Stream or Flash Video over RTMP reading video client programs or dedicated set-top-boxes.



The resulting video can be viewed in several different formats:

- Directly on screen

- Over an external video output card

- Flash Video over RTMP

- MPEG-TS over UDP/RTP

- Divided and recorded as MPEG-TS on file

# DoğalZeka Alarm & Monitoring System Specifications

## INPUT

**Streaming Types**
- MPEG-TS (Over UDP/RTP)
- Adobe RTMP (Over TCP)
- Apple HLS
- MSS
- URL
- DEVICE (Firewire/Composite/HDMI/SDI)

**Supported Video Codecs**
- MPEG-2 (ISO/IEC 11172-1, ISO/IEC 14496-3)
- ITU-T H.264 (ISO/IEC 14496-10)
- ITU-T H.265 (ISO/IEC 23008-2)
- RAW (uncompressed)

**Supported Audio Codecs**
- AAC (ISO/IEC 13818-7, ISO/IEC 14496-3)
- MP3 (ISO/IEC 11172-3, ISO/IEC 13818-3)
- Dolby AC-3

**Other Supported Codecs**
- DVB-Subtitle

**Miscellaneous**
- Capability to get input from different networks over ethernet cards and raw A/V streams over external devices

## PROCESSING

**General Configuration**
- Performance Mode: MORE number of channels in LOW quality
- Moderate Quality Mode
- Higher Quality Mode: LESS number of channels in HIGH quality

**Settings Related To Input**
- Audio/Subtitle PID filtering mechanism for channels with more than one language tracks
- Resetting PCR/PTS synchronization
- Discarding video or/and assigning an image to be used instead of video

**Alarm Types and Settings**
- PID LOSS Alarm
- AUDIO SİLENCE Alarm
- BLACK FRAME Alarm
- FREEZE FRAME Alarm
- Others
- Sensitivity, Alarm raise and clear time limits
- Detailed logging of alarms

**Settings Related To Output**
- Basic Channel Templates: Customization of video, audio, alarm, info and subtitle objects on top of the mosaic
- Personalized mosaic production: Fully customized geometry
- Keeping Aspect Ratio of input and output

## OUTPUT

**Output Streaming Types**
- MPEG-TS (Over UDP/RTP)
- Adobe RTMP (Over TCP)
- Direct viewing on screen
- Direct output over external video cards (Decklink etc. SDI/HDMI)

**Supported Video Codecs**
- MPEG-2 (ISO/IEC 11172-1, ISO/IEC 13818-1)
- ITU-T H.264 (ISO/IEC 14496-10)
- ITU-T H.265 (ISO/IEC 23008-2)

**Different Output Profiles**
- Higher Quality
- High Quality
- Mobile
- Mobile (HQ)
- Performance

**Supported Audio Codecs**
- AAC (ISO/IEC 13818-7, ISO/IEC 14496-3)
- MP3 (ISO/IEC 11172-3, ISO/IEC 13818-3)
- Sampling at the requested sampling frequency

**Other**
- Capability to push output to different networks over ethernet cards
- Customizable audio and video encoding parameters

# DoğalZeka Alarm & Monitoring System Alarm Conditions

| Alarm types/Related Source | AUDIO | VIDEO | SUBTITLE | NETWORK | MPEG TRANSPORT STREAM |
|---|---|---|---|---|---|
| NO VIDEO INPUT | | X | | | X |
| NO AUDIO INPUT | X | | | | X |
| NO SUBTITLE INPUT | | | X | | X |
| BLACK FRAME | | X | | | |
| BLACK FRAME WITH LOGO | | X | | | |
| FREEZE FRAME | | X | | | |
| AUDIO SILENCE | X | | | | |
| HIGH VIDEO PACKET LOSS | | X | | X | |
| HIGH AUDIO PACKET LOSS | X | | | X | |
| HIGH SUBTITLE PACKET LOSS | | | X | X | |
| CHANNEL LOST | | | | | X |
| DECODER ERROR | X | X | X | | |

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