Data Sheet

ES8100

IPTV Gateway Server and Streamer 1U/3U



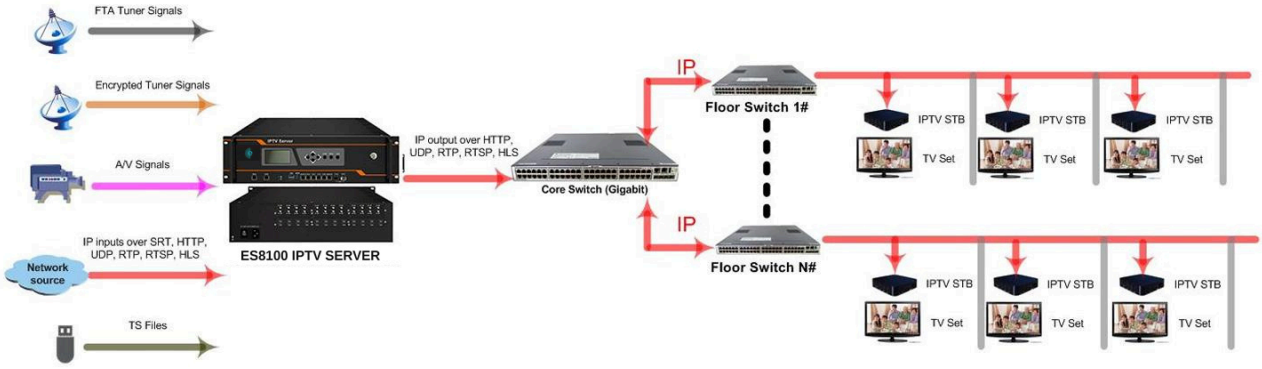
Outline

ES8100 is a flexibly modularized 1U (or 3U) device with the features of Encoder/Receiver, IP Gateway and IPTV Server for the protocol-conversion application and IPTV-system application. It supports max 3 (or 6) pluggable streamer cards embedded, such as encoder card and tuner card to receive the HDMI signals and tuner signals etc. It can also convert the input IP streams from the embedded modules and Ethernet ports over SRT, HTTP,UDP, RTP, RTSP, HLS protocol and TS files into the output IP streams over SRT, HTTP,UDP, RTP, RTSP, HLS and RTMP protocol. It is also integrated with IPTV Middleware and Streamer cards to make it ideal in an IPTV system, such as hotel, hospital and community.

Key Features

- Encoder/Receiver, IP Gateway and IPTV Server in one device
- 2 separate Web GUI, one for Cards and Gateway, the other for IPTV Server
- Support uploading TS files directly in Web GUI to broadcast your own channels
- Support inter-cut feature of a live program, a TS file and a picture
- Support IP anti-jitter feature for the external IP streams
- Support downloading the Android IPTV APK directly in the Web GUI
- Multi-level password control for your system security
- LCD/Key button for Network-Setting checking
- Modularized design, max 3 (or 6) cards embedded, a flexible option as per the actual application

Application



Technical Specifications

Input	IP inputs through ETH 1-4 GE ports & 6-7 SFP+ ports over SRT, HTTP, UDP (SPTS), RTP(SPTS), RTSP (over UDP, payload: mpeg TS) and HLS
	TS files uploading through Web management
	Encoder card and Tuner card etc. (Please refer to the detailed card spec below)
IP output	IP outputs through ETH0, GE port over SRT, HTTP (Unicast), UDP (SPTS, Multicast), RTP, RTSP, HLS and RTMP (Program source should be H.264 and AAC encoding)
System	Channel switching time with Android STB: HTTP (1-3s), HLS (0.4-0.7s)
	It is closely related with the program bitrate and protocol type etc for Max program numbers involved in protocol conversion, and the actual application shall prevail with maximum 80% CPU utilization (Please refer to Test data for reference in the end of the spec)
	It is closely related to the program bitrate and protocol type etc for Max affordable terminal numbers in IPTV application of the STB/Android TV with the Equator IPTV APK, and the actual application shall prevail with maximum 80% CPU utilization (Please refer to Test data for reference in the end of the spec)
	IPTV Features: Live channel, VOD, Hotel intro, Dining, Hotel service, Scenery intro, APPS, Adding, scrolling caption, welcome words, pictures, advertisement, video, music etc (the features are only applicable to IP out application in the STB/Android TV installed with Android IPTV APK)
General	Dimensions: 482mm×464mm×44mm (W×L×H), 1U model Management: 2 separate Web GUI (one for Cards and Gateway, the other for IPTV Server) through ETH3 (3U model through ETH5) Temperature: 0~45℃(operation), -20~80℃(storage) Power Supply: AC100V±10%, 50/60Hz or AC 220V±10%, 50/60Hz

Streamer Cards

ES8522 8HDMI to IP Encoder Card



Input: 8*HDMI
Output: 8*SPTS output over UDP/RTP/RTSP, Unicast/Multicast
Video Encoding:
Video format: HEVC/H.265, MPEG-4 AVC/H.264
Input resolution: 1920×1080_60P, 1920×1080_60i, 1920×1080_50P, 1920×1080_50i,1280×720_60P, 1280×720_50P, 720×576_50i, 720×480_60i,
Output resolution: 1920×1080_30P, 1920×1080_25P, 1280×720_30P, 1280×720_25P, 720×576_25P,720×480_30P,
GOP structure: IP…P (P Frame adjustment, without B Frame) Video Bit-rate: 1Mbps~13Mbps each channel
Rate Control: CBR/VBR
Audio Encoding:
Audio format: MPEG1 Layer II, LC-AAC, HE-AAC and AC3 Pass through, support audio gain adjustment
Sampling rate: 48 KHz
Audio Bit-rate:
MPEG-1 Layer 2: 48/56/64/80/96/112/128/160/192/224/256/320/384 kbps LC-AAC: 48/56/64/80/96/112/128/160/192/224/256/320/384 kbps
HE-AAC: 48/56/64/80/96/112/128 kbps Support Logo, Caption, QR Code insertion

ES3380-A 8 FTA DVB-S/S2/S2X Tuner Card



Stream in: 8 Tuner input, F Type,
Stream out: 512 SPTS out over UDP/RTP/RTSP, Unicast/Multicast Tuner input: DVB-S/S2/S2X
Symbol rate: QPSK/8PSK/16APSK 0.5~45 Msps; 8APSK/32APSK: 0.5~40Msps Input Frequency: 950-2150MHz

DVB-S: Constellation: QPSK

FEC Demodulation: 1/2, 2/3, 3/4, 5/6, 7/8

DVB-S2: Constellation:
QPSK/8PSK/16APSK/32APSK FEC
Demodulation:

QPSK: 1/2, 2/3, 3/4, 5/6, 3/5, 4/5,
8/9, 9/10 8PSK: 3/5, 2/3, 3/4,
5/6, 8/9, 9/10
16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10

32APSK: 3/4, 4/5, 5/6, 8/9, 9/10

DVB-S2X: Constellation:
QPSK/8PSK/8APSK/16APSK/32APSK FEC
Demodulation:
QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9,
9/10, 13/45, 9/20, 11/20 8PSK: 3/5, 2/3,
3/4, 5/6, 8/9, 9/10, 23/36, 25/36, 13/18
8APSK: 5/9-L, 26/45-L
16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10,1/2-
L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45,
23/36, 2/3-L,
25/36, 13/18, 7/9, 77/90
32APSK: 3/4, 4/5, 5/6, 8/9, 2/3-L, 32/45,
11/15, 7/9, 9/10

Support **Diseqc** function

Multiplexing:

Maximum PID Remapping: 256 output PIDs
Function: PID remapping (automatically or manually), Accurate PCR adjusting, generate PSI/ SI table automatically

Descrambling:

BISS Mode: Mode 1, Mode E; up to 120Mbps, 32 BISS Key