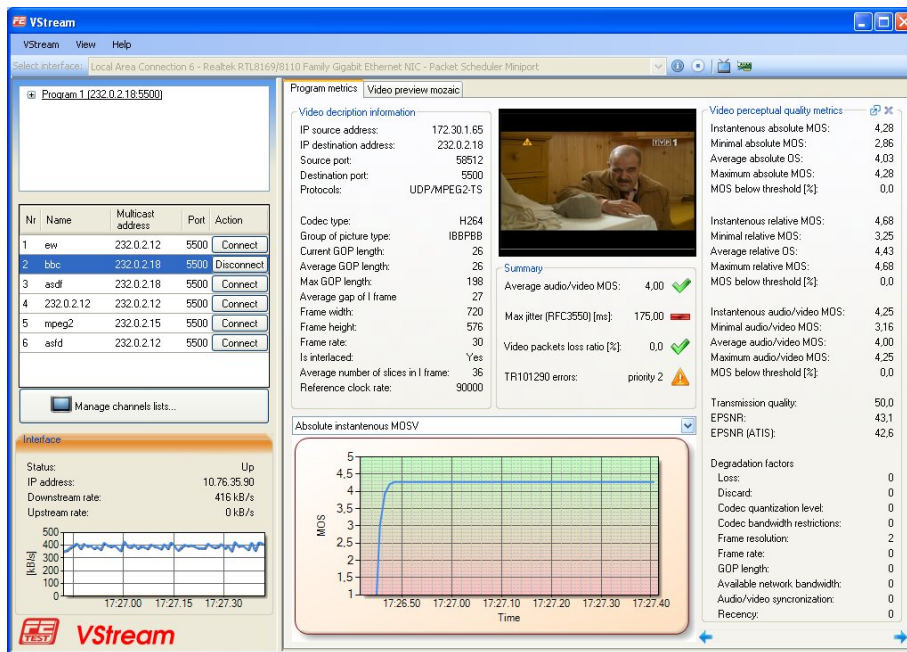# *VStream Analyzer*

The most affordable way to qualify, maintain and troubleshoot IPTV circuits.

Main Features

- Automatically tests all channels and indicates pass/fail results.
- Complete Set Top Box (STB) emulation.
- Full Motion Picture video preview of all analyzed IPTV streams.
- Simultaneously analyzes multiple IPTV streams.
- Accurate audio and video MOS score.
- Comprehensive Video and Transport Stream statistics.
- Advanced Video Perceptual Quality Metrics.
- Operates with Windows XP/Vista/7.

Specifications

Physical Layers Supported -

10/100/1000 Ethernet, Wi-Fi 802.11 b/g/n.

Recognized Video Compression Standards

MPEG2,   MPEG4 part 2&10 (H.264).

Signaling Protocols -

IGMP v 2

STB Emulation -

PID channel list & multicast address
Channel name
Channel auto scan
Active stream source and destination addresses
Video codec
Stream content (PID with bitstream)
IGMP latency (ZAP time)
Video preview (live full frame)
Simultaneous multiple streams operation

Video Description Information -

IP source address
IP destination address
Source port
Destination port
Protocols
Codec type
Group of picture type
Current GOP length
Average GOP length
Max GOP length
Average gap of I frame
Frame width
Frame height
Frame rate
Is interlaced
Average number of slices in I frame
Reference clock rate

Transport Packets Metrics -

Packets received
    Lost
    Discarded
    Corrected
    Out of sequence
    Duplicated
Lost %
Corrected %
Discarded %
Out of sequence %
Duplicated %
    Burst count
    Burst loss rate
    Average burst length [pkts}
Gap count
Gaps loss rate
Average gap length [pkts]

Video Perceptual Quality Metrics -

Instantaneous absolute MOS
Minimal absolute MOS
Average absolute MOS
Maximum absolute MOS
Instantaneous relative MOS
Minimal relative MOS
Average relative MOS
Maximum relative MOS
Instantaneous audio/video MOS
Minimal audio/video MOS
Average audio/video MOS
Maximum audio/video MOS
Transmission quality:
    EPSNR
    EPSNR(ATIS)
Degradation Factors:
    Lost
    Discarded
    Codec quantization level
    Codec bandwidth restrictions
    Frame resolution
    Frame rate
    GOP length
    Available network bandwidth
    Audio/video synchronization
    Recency

Audio Description Information-

IP source address
IP destination address
Source port
Destination port
Type
Transport protocol
Codec Type
Number of channels
Reference clock

Audio Perceptual Quality Metrics -

Minimal MOS
Average MOS
Maximum MOS
Instantaneous MOS
Degradation factors
    Lost
    Discarded
    Codec
    Recency

MPEG2-TS TR101290 Priority 2 -

Last errors
    Transport error count
    CRC error count
    PCR error count
    PCR repetition error count
    PCR discontinuity error count
    PCR accuracy error count
    PTS error count

CAT error count

MPEG2-TS TR101290 Priority 1 -

Last errors
    TS sync loss count
    Sync byte error count
    PAT error count
    PAT2 error count
    Continuity error count
    PMT error count
    PMT2 error count
    PID error count

RTP Packets Metrics (Carrying MPEG2-TS)

Packets received
    Corrected
    Lost
    Discarded
    Out of sequence
    Duplicated
    With timestamp errors

Video Jitter -

Frame inter arrival jitter
I frame inter arrival jitter
Average frame arrival delay
Peak frame arrival delay

Video Scene Analysis Metrics -

Instantaneous detail level
Instantaneous motion level
Instantaneous panning level
Static image proportion
High detail proportion
Low detail proportion
High panning proportion
Low panning proportion
High motion proportion
Low motion proportion

Jitter Metrics (RFC3550) -

Packet to packet delay variation
Max packet to packet delay variation

LAN Port

Interface
    Status
    Type
    Speed
    Support multicast
Details
    Physical address
    IP address
    Subnet mask
    Default Gateway
    DNS server
IPv4 statistics
    Received and Sent
        Bytes
        Packets
        Unicast packets
        Packets with errors
        Packets discarded
        Non unicast packets