VideoFlow

Broadcast with CONFIDENCE.

DVP

Digital Video Protection Datasheet

DVP is an all-in-one software platform that enables to broadcast with confidence over any IP network, including over the Internet.

The DVP offers the four essential ingredients for broadcasting with confidence over IP networks.

RELIABILITY

Make sure your broadcast is always connected, on air, and reliable by adapting the bit rate in realtime, adding backup links and disaster recovery to ensure no single point of failure video delivery network.

CONFIDENCE

Monitor the streams and network behavior everywhere - from any device with stream health analysis (QoE), network statistics (QoS), and visual video quality assurance.

SIMPLICITY

Save time and reduce the number of truck rolls with remote configuration, analysis, and statistics by connecting in-band to any device in any site.

EFFICIENCY

All the tools you need to broadcast with confidence in one compact solution

SOFTWARE, APPLIANCE, or BOTH

The DVP can run on any hardware platform as a virtual machine, or a downloadable ISO. Also, the DVP can be pre-loaded on any VideoFlow's DVX, DVA, and DVS appliance.

Either you need 1 Mb/s or 1 Gb/s, VideoFlow three lines of appliances vary by bit rate capacity, the number of connections, and the number of streams.

TECHNICAL SPECIFICATIONS

Software
Virtual Machine
ESXi, Virtual Box, VMWare, KVM
ISO
Software Licenses
Locked to a hardware platform
Locked to a dongle
Floating
Capacity*
Max bit rate: 1,600 Mb/s (1.6 Gb/s)
Max number of streams: 200
Max number of VPN tunnels: 200
Max bit rate per stream/flow: 200 Mb/s
Video
Interface Types*
Ethernet
ASI IN/OUT (DekTec)
SDI/HDMI IN (Blackmagic DeckLink)
Encoding Formats
MPEG2, H.264, H.265/HEVC
Resolutions
SD, HD, 4K, 8K
Encapsulations
TS over IP
MPEG over IP
188/204 Bytes per MPEG packet
1-7 MPEG packets per IP packet
CBR/VBR
Transport Protocols
SPTS/MPTS
Multicast/Unicast
UDP, RTP/UDP
RTSP, RTMP, HLS, DASH, (push or pull)
Video Quality Protection
Reliable Delivery Protocols
VideoFlow's DVP
RIST Basic Simple profile (TR-06-01)
SMPTE 2022-1/2 (transmit/receive)

Jitter Elimination
Configurable buffer (default: 500 msec)
Min configurable delay: 10 msec
Max configurable delay: 10 min
Transit delay (stream switching): 5 msec
Lock to PCR mode (CBR)
Lock to packet rate mode (VBR/CBR)
Lock to RTP timestamps (VBR/CBR)
Capped CBR delivery
Lost Packets Recovery
Automatic Repeat Request (ARQ)
Forward Error Correction (FEC)
Hybrid ARQ/FEC
Advanced
Null packet deletion/reconstruction (NPD)
Service nullification
ARQ Prioritized Protection Flow (PPF)
Out-of-band quality protection
Reliability
Bit rate adaptation
Controlled Adaptive Rate (CAR)
Multi-Profile Distribution (MPD)
External multi-profile
Integrated multi-profile
MPTS Dynamic Rate (MDR)
Redundancy/Diversity
Stream redundancy
Connection/link redundancy
SMPTE 2022-7
Input failover
Output failover
High Availability
1:1 Device redundancy
Disaster recovery
Stream Activation Trigger
Dynamic Loadshare
Service Priority Delivery (SPD)
Multi-ISP connections
Multi-DHCP clients
Multiple Default Gateways

** Note: Hardware platform dependent*

- **Connectivity**
  - Architecture
    - Point-to-point
    - Point-to-multipoint
    - Multipoint-to-point
    - Multipoint-to-multipoint (video over IP switching)
    - Bi-directional
  - Tunnel/Virtual Private Network
    - Generic Routing Encapsulation (GRE)
    - IPSec
    - UDP VPN (UDP optimized)
  - NAT Traversal
    - Unicast
    - UDP VPN
    - EasyLink
      - Address-restricted cone NAT
      - Port-restricted cone NAT
      - Symmetric NAT
  - IP Header Conversion / Remapping
    - DST/SRC IP address remapping
    - UDP DST port number remapping
  - Network Operations
    - VLAN Tagging
    - Virtual IP address (per interface)
    - DHCP clients
    - Default Gateways
    - Static route
    - Port forwarding
    - IGMP Listener
    - DNS client
    - NTP client
- **Security**
  - Cybersecurity EBU R-143 compatible
  - Integrated Firewall
  - Encryption
    - AES128 encrypted VPN Tunnel
    - AES256 encrypted VPN Tunnel
    - DTLS
    - IPSec
  - HTTPS SSL
  - Endpoint authentication
  - Identity-based protection (Username/Password)
- **Operational Efficiency**
  - Remote site configuration and management
    - In-band configuration and management
    - Remote site (peer) statistics
  - Confidence monitoring
    - Analysis and Statistics in realtime
      - PID, CC, PMT, PAT information
      - PCR bit rate information
      - ETR290 Stream Monitor (QoE) priority 1, 2, 3
      - Network Statistics (QoS)
        - Number of lost packets
        - Number of recovered packets
        - Number of unrecovered packets
        - Number of sync losses/disconnects
        - Input TS bit rate
        - Input TS Packet rate
        - Input TS packet loss ratio
    - Graphical Network Statistics
      - Live Network (QoS) Statistics
    - Integrated FFMPEG Encoder/Transcoder
      - Encoding Format Conversions
        - MPEG2 ⇨ H.264, H.264 ⇨ MPEG2
        - MPEG2 ⇨ H.265, H.265 ⇨ MPEG2
        - H.264 ⇨ H.265, H.265 ⇨ H.264
      - Other Conversions
        - Video resolution
        - Frame rate
        - GOP structure
        - Audio format
        - Audio sample rate
      - File playout
      - Publisher (HLS, RTMP)
      - HTTP Media Server
    - Integrated Network Test Tools
      - Live bit rate monitoring
      - Live packet loss ratio monitoring
      - Speed test
      - Traffic capture (network sniffer)
      - Stream detection
      - Ping
    - Demux
      - TS Service Demux per stream
      - TS PID Demux per stream
    - Control and Monitoring
      - Email alerts
      - Alarms, Syslog, Event Logger
      - Network Configuration Protocol (NETCONF)
      - REST
      - HTTP/HTTPS, Telnet/SSH
      - SNMP (v1, v2)
      - CLI

ORDERING INFORMATION

DVP Software

VFS10101	DVP Software
VFS99025	DVP Protected bitrate (PB), Min 1 Mb/s, Max 25 Mb/s
VFS99050	DVP Protected bitrate (PB), Min 26 Mb/s, Max 50 Mb/s
VFS99100	DVP Protected bitrate (PB), Min 51 Mb/s, Max 100 Mb/s
VFS99200	DVP Protected bitrate (PB), Min 101 Mb/s, Max 200 Mb/s
VFS99800	DVP Protected bitrate (PB), Min 201 Mb/s, Max 800 Mb/s
VFS99924	DVP Protected bitrate (PB), Min 801 Mb/s, Max 2,400 Mb/s
VFS97001	RIST protected bitrate (PB), Min 1 Mb/s, Max 2,400 Mb/s
VFS91002	DVP/DVG hot backup license

DVP License Server

VFL60001	License server
VFL70001	10 DVP clients handling for a license server

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