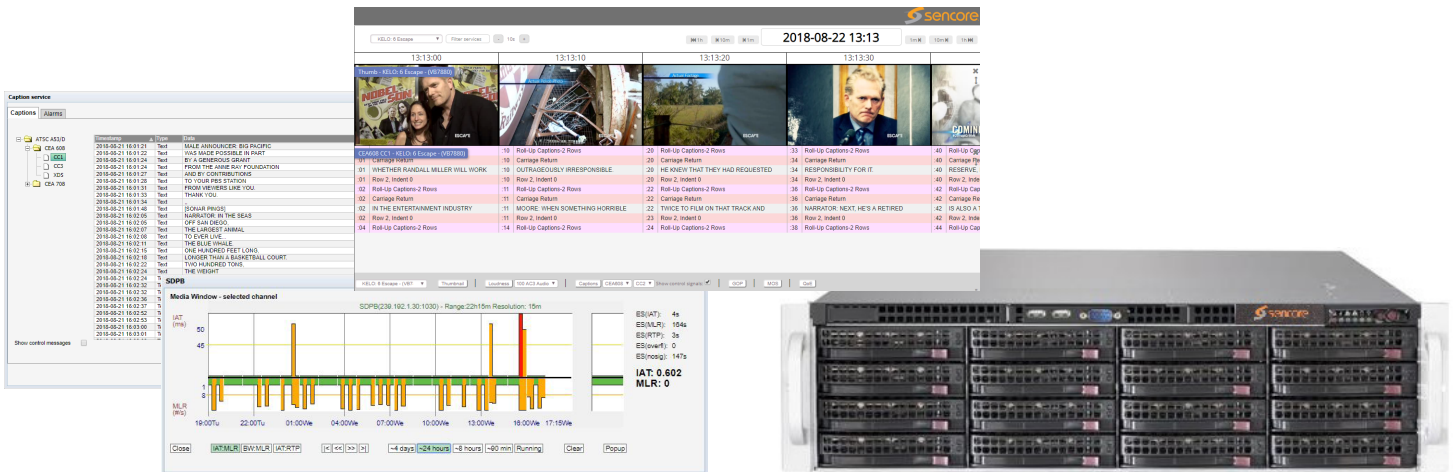# High-Density QoS/QoE Probe with Archiving
VB380

OVERVIEW

The VB380 combines the powerful 10G QoS stream monitoring of Sencore VideoBRIDGE probes with the QoE, caption analysis and thumbnail extraction capabilities of the VideoBRIDGE VB7880. This high-density, all-in-one product with monitoring support for up to 1000 services, is ideally suited for the large stream counts of today's MSOs and other media delivery networks.

The patented MediaWindow™ technology simplifies IP stream QoS monitoring by visualizing IP jitter and packet loss results. Deep ETR 101 290 analysis is performed on all 1000 streams with all priority levels covered (1/2/3) and including continuity count and PCR accuracy.

In addition to IP stream QoS monitoring, the VB380 supports QoE monitoring, video thumbnail generation and closed caption extraction and alarming for all 1000 services. This functionality allows the user to quickly find and identify quality issues within the video, audio and captions.

The massive onboard storage capabilities of the VB380 allow up to 2 years of archiving of the video thumbnails, captions and other QoE/QoS data. The built-in Timeline view allows easy navigation to all archived content and provides proof-positive compliance verification for all government mandates. The monitoring data can also be extracted by 3rd-party systems using the comprehensive API.

KEY FEATURES

- **Full QoS/QoE Monitoring for 1000 Services**
  Full QoS and QoE tests performed on up to 1000 services simultaneously to provide full confidence in video delivery. Tests include IP jitter, packet loss, ETR290, MOS, freeze frame and audio loudness.

- **Caption Extraction and Alarming**
  Validate captions on all monitored services including alarming based on caption errors and viewing of all caption syntax.

- **Two Years of Captions and Analytics Archiving**
  Store video thumbnails, full caption data and QoS/QoE metrics for all services for up to 2 years. View and navigate through archived data using the intuitive Timeline visualization.

- **Web-Based Management and Control with API**
  Intuitive web GUI provides full control and display of all current and past monitoring results. Network-wide oversight and aggregation of all probe data using the VideoBRIDGE controller product. API allows 3rd party systems to access any data.

APPLICATIONS

- **IP Stream Monitoring**
  Monitor streams and be alerted to dropped packets, continuity count errors and other stream issues such as ETR290. Ensure jitter and PCR accuracy are within specifications to avoid delivery issues.

- **Caption Issue Investigation**
  Investigate caption quality and delivery issues. Find problematic captions during certain time periods or on specific programs.

- **Legal Compliance Verification**
  Store caption and loudness history for long periods of time. Retrieve past data to allow responding to consumer/government complaints or other legal inquiries.

SPECIFICATIONS
High-Density QoS/QoE Probe with Archiving VB380

GENERAL

Input Type:	10GbE
IP Connector Type:	SFP+
Input Stream Count:	Up to 1000 Streams/Services
Addressing:	IP Unicasts or Multicasts
Container Formats:	MPEG Transport Stream
Video CODECs:	MPEG-2, H.264, H.265/HEVC

ANALYSIS FEATURES

- IP jitter (inter-arrival time) and packet loss
- ETR 101 290 - layer 1,2,3 performed on all streams including continuity count and PCR accuracy
- Bitrate monitoring for streams/services/PIDs
- Deep MPEG table analysis and viewing
- SCTE35 logging and analysis (Optional)
- Closed caption monitoring for CEA-608/708 and SCTE-20/21 on up to 1000 Services
- Closed caption quality monitoring including tests for missing caption services
- QoE monitoring video loss, video freeze, audio loss and audio loudness (Comming Soon)

CAPTION EXTRACTION

Service Count:	Up to 1000 Services
Extractable Content:	CEA-608/708 and SCTE 20/21 Captions
	Full Caption Control Messages
Extraction Method:	VB380 EII (XML-based API) (External Integration Interface)

ARCHIVING

Service Count:	Up to 1000 Services
Storage Duration:	Up to 2 years
Content Archived:	Video Thumbnails
	Caption Text
	Caption Control Messages
	QoE Metrics (Future)
	SCTE35 Messages (Future)
Archive Retrieval:	Web-Based Timeline View

TIMELINE FEATURES

- Store extracted caption, QoE and SCTE35 (Future) data in a secure database for up to 2 years
- Web-based Timeline UI allows quick navigation through stored data per service
- View archived data intermixed with video thumbnails to help validate accuracy and time alignment
- Expand caption view to see actual caption control data on every service

MANAGEMENT

Connector:	RJ45 10/100/1000
User Interfaces:	Web GUI
Automation Interfaces:	SNMP Status/Control/Traps
	XML-Based API

PHYSICAL

Chassis Size:	1RU to 3RU Rackmount depending on storage requirements
Storage Size:	Up to 120TB with significant redundancy capabilities
Power:	Dual, hot-swappable supplies 100-240V, 50-60Hz

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