

iControl Edge

Advanced, highly automated Quality of Experience monitoring



iControl Edge offers advanced Quality of Experience (QoE) monitoring for pay TV operators, using highly automated set-top box signal monitoring. The system can incorporate a wide array of advanced electronic supervision technologies, including Monitoring by Exception and macro-block detection. Alarms are configurable on a channel by channel basis, and trigger recording to speed diagnosis.

KEY FEATURES AND BENEFITS

Highly automated monitoring

- › Highly automated Quality of Experience monitoring over IP, with minimal operating costs
- › Based on Monitoring by Exception, with all the channels continuously monitored to assess if they have any errors, or are outside pre-set signal limits
- › Whenever signals breach alarm thresholds, the system immediately directs the operator to the faults, using the intuitive interface, to help reduce the Mean Time to Repair
- › Advanced cycling engine allows a small number of set-top boxes to monitor hundreds of channels.

Advanced probing

- › Comprehensive monitoring capabilities include freeze, black, silence, loudness, and macro-block detection
- › Electronic monitoring is performed without operator intervention, and this allows facilities to address any signal problems at a very early stage

Fast diagnostics

- › iControl Edge simplifies a facility's fault finding process to reduce the Mean Time To Repair (MTTR), and help maintain a high Quality of Experience
- › When a video or audio error is detected, alarms are automatically raised and logged, and the signal is recorded to simplify diagnostics and reduce the MTTR
- › Video/audio streaming also contributes to more effective monitoring and faster fault resolution

Per channel configuration

- › Monitoring capabilities and alarming thresholds for each channel can be adjusted individually to address their specific requirements
- › Overall monitoring costs can be minimized, without compromising monitoring effectiveness where it counts
- › Monitoring can be configured quickly, and this allows rapid adjustments to be made to device IDs, locations, signals and alarm thresholds
- › Simplicity minimizes the installation time, and reduces on-going costs

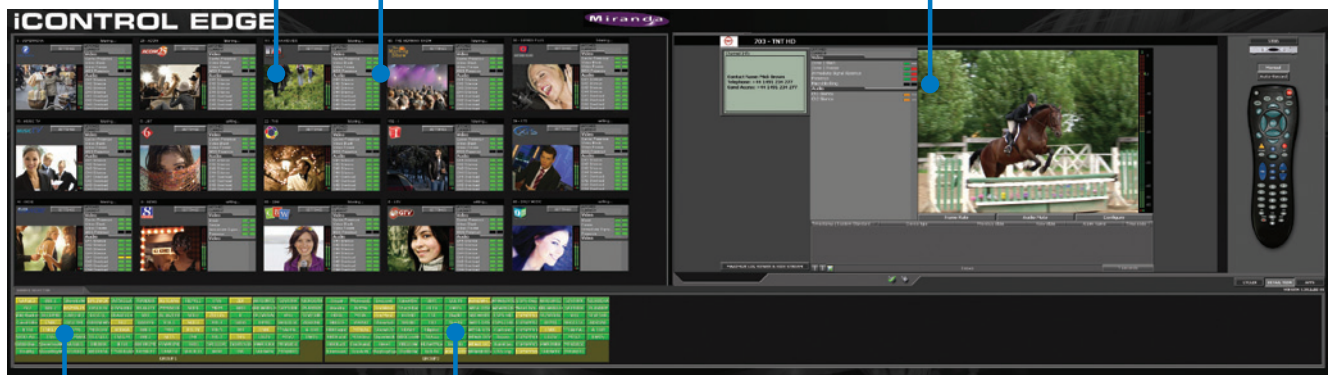
Scales to Network Management System

- › iControl Edge offers quick deployment of highly effective Quality of Experience monitoring
- › System can be easily expanded to cover hundreds of channels across multiple locations
- › System can grow into a fully featured, end-to-end Network Management System

Signal alarms, video thumbnails and audio meters from Densité Probes

Audio metering and selectable acoustic monitoring

High quality streaming video from EdgeVision encoder/server

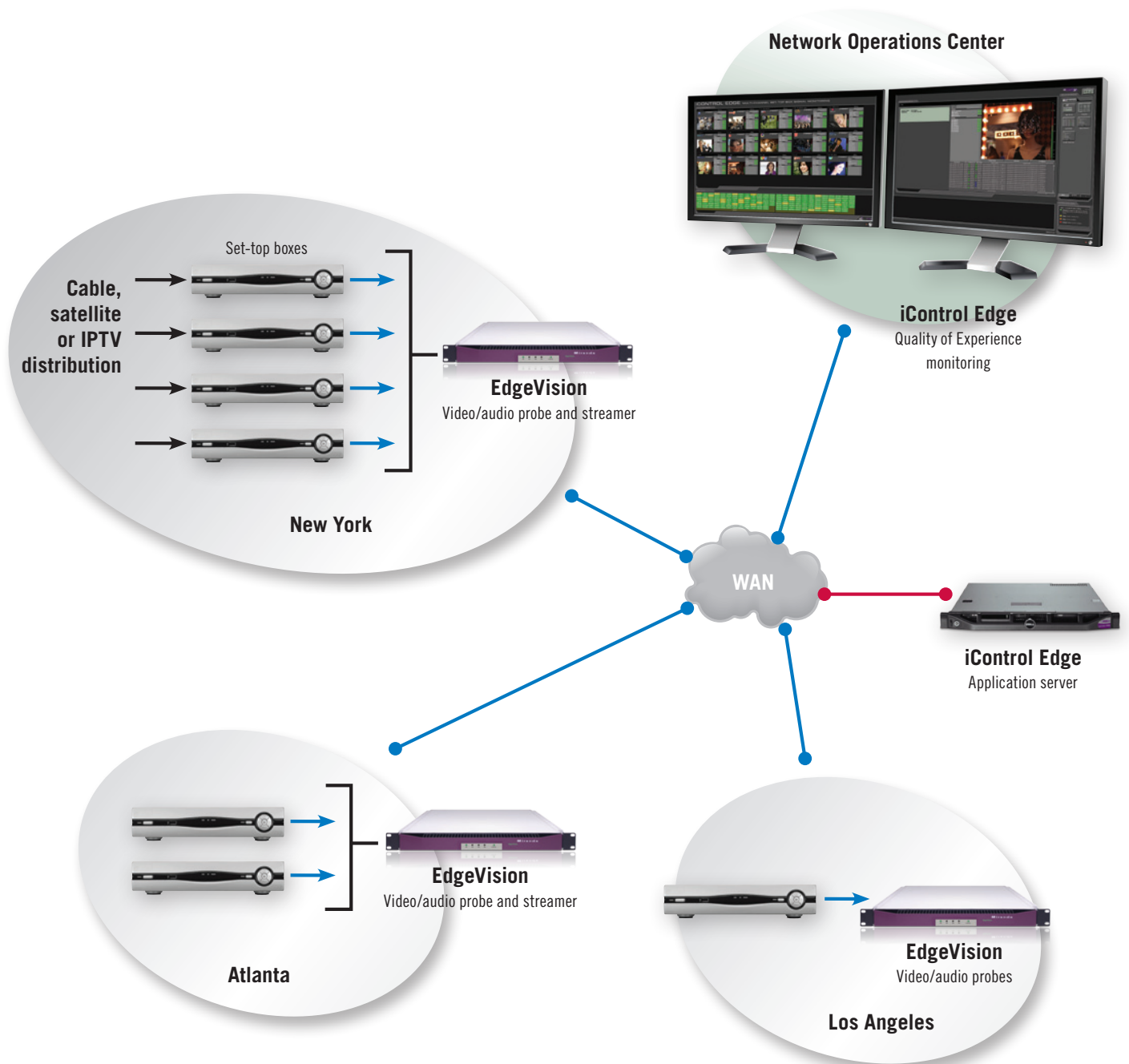


At-a-glance status of every service

Channels in dashboard can be sorted according to several criteria, helping operators correlate alarms

Monitoring hundreds of channels across multiple headends

At each remote headend, the set-top box signals are fed into EdgeVision probes and streamed back to the Network Operations Center's iControl Edge monitoring system. The iControl Edge system can be easily expanded to offer set-top box monitoring of up to 16 headends from a Network Operations Center.



Flexible, multi-channel monitoring with iControl Edge

iControl Edge allows multiple remote video signals to be reviewed simultaneously using streaming video, along with audio metering and acoustic monitoring. A sample of the monitoring views are shown here:



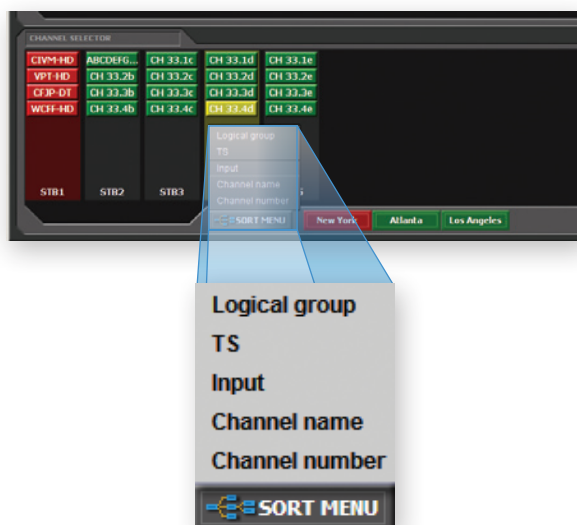
Multi-signal monitoring panel

- Signal alarms, streaming video and audio meters from EdgeVision probes
- Alarming on key video and audio parameters and thresholds
- Error logging with time stamped event and error entries



Full control of remote set-top boxes

- When a video or audio error is detected, the system automatically records using the DVR feature of the set-top box
- Faults are recorded as seen by the viewer, without interrupting cycling of the channels
- Convenient set-top box remote control GUI
- Log of recorded errors



Monitoring across multiple locations

- All channels (HD & SD) from multiple headends can be monitored at all times
- For more effective monitoring, channels can be grouped and displayed according to various criteria
- Status of each channel reflected

iControl Edge leverages the fundamentals of television, images and sounds, to provide pay TV operators with quick and accurate access to remote signals.

Channel-specific information helps operator perform correct reactions to signals faults

Extensive signal quality monitoring, including macro-block, video black, video freeze, silence and loudness detection

Video and audio stream frame rate and settings control

Channel-specific error and event log allows operator to review the history of signal quality

Convenient channel selection using remote set-top box control

Closer evaluation of a single channel

ORDERING INFORMATION

- IC-EDGE-001 iControl Edge Multi-Channel Quality of Experience Monitoring System
Site-configurable iControl package for monitoring of multiple television channels
Includes: iControl base edition with Application Server, 2 serial ports, iControl Navigator application
(Does not include iControl website creator application)
- IC-EDGE-4 4-input set-top box signal monitoring system
- IC-EDGE-8 8-input set-top box signal monitoring system
- EDGEVISION-1 Edge signal monitoring device - single channel*
- EDGEVISION-OPT-AV-PROBE Audio/video signal probing option (1 per input)

* See pages 614 for additional EdgeVision ordering information