

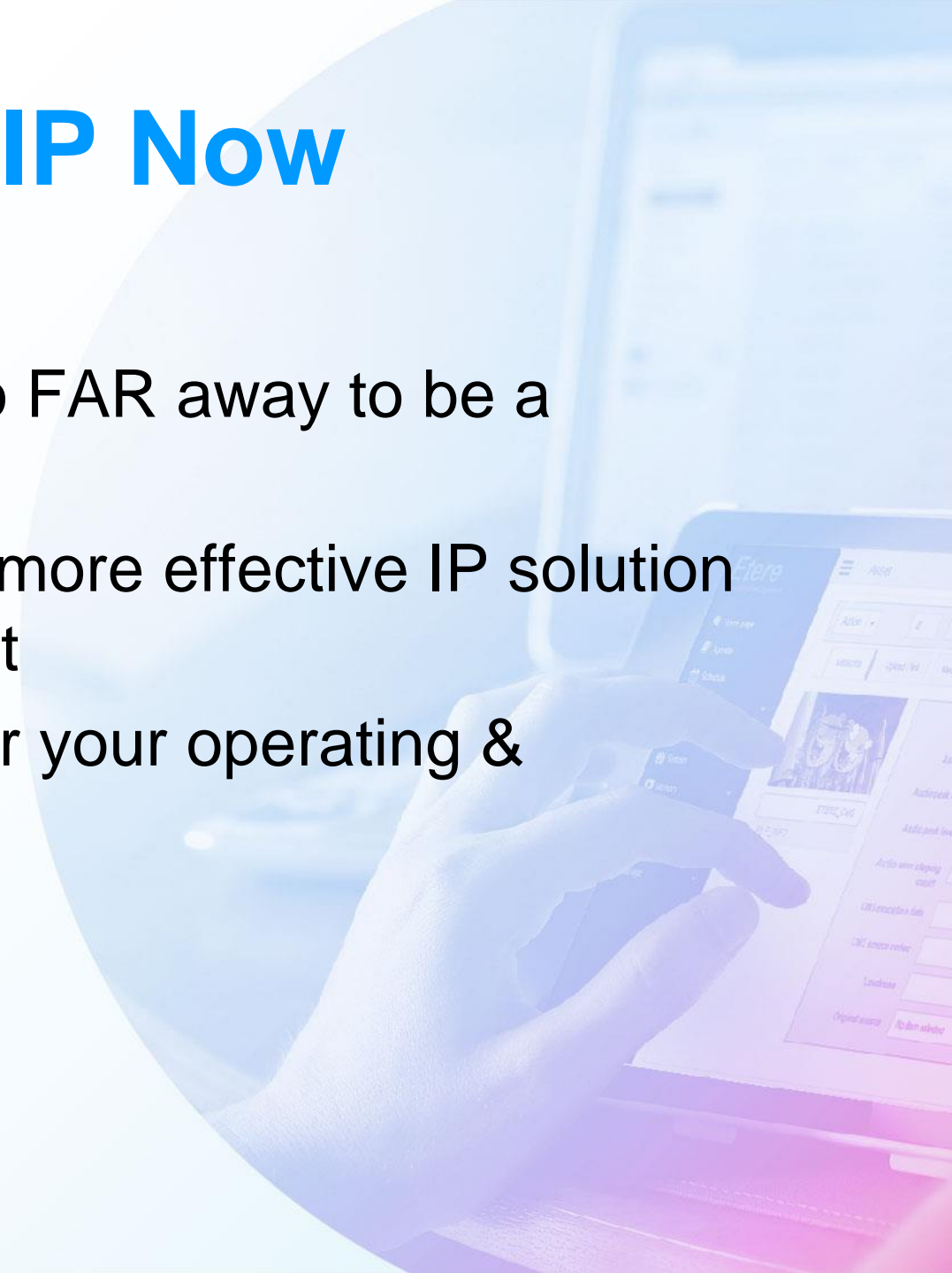
Etere Moves to IP

Planning a Broadcast System
Without SDI



Why Move to IP Now

- IP migration is increasingly a reality
- SMPTE 2110, Aspen & AIMS are too FAR away to be a standard
- So the idea is to create a cheaper & more effective IP solution for playout/Media Asset Management
- Leverage the advantages of IP, lower your operating & maintenance costs NOW



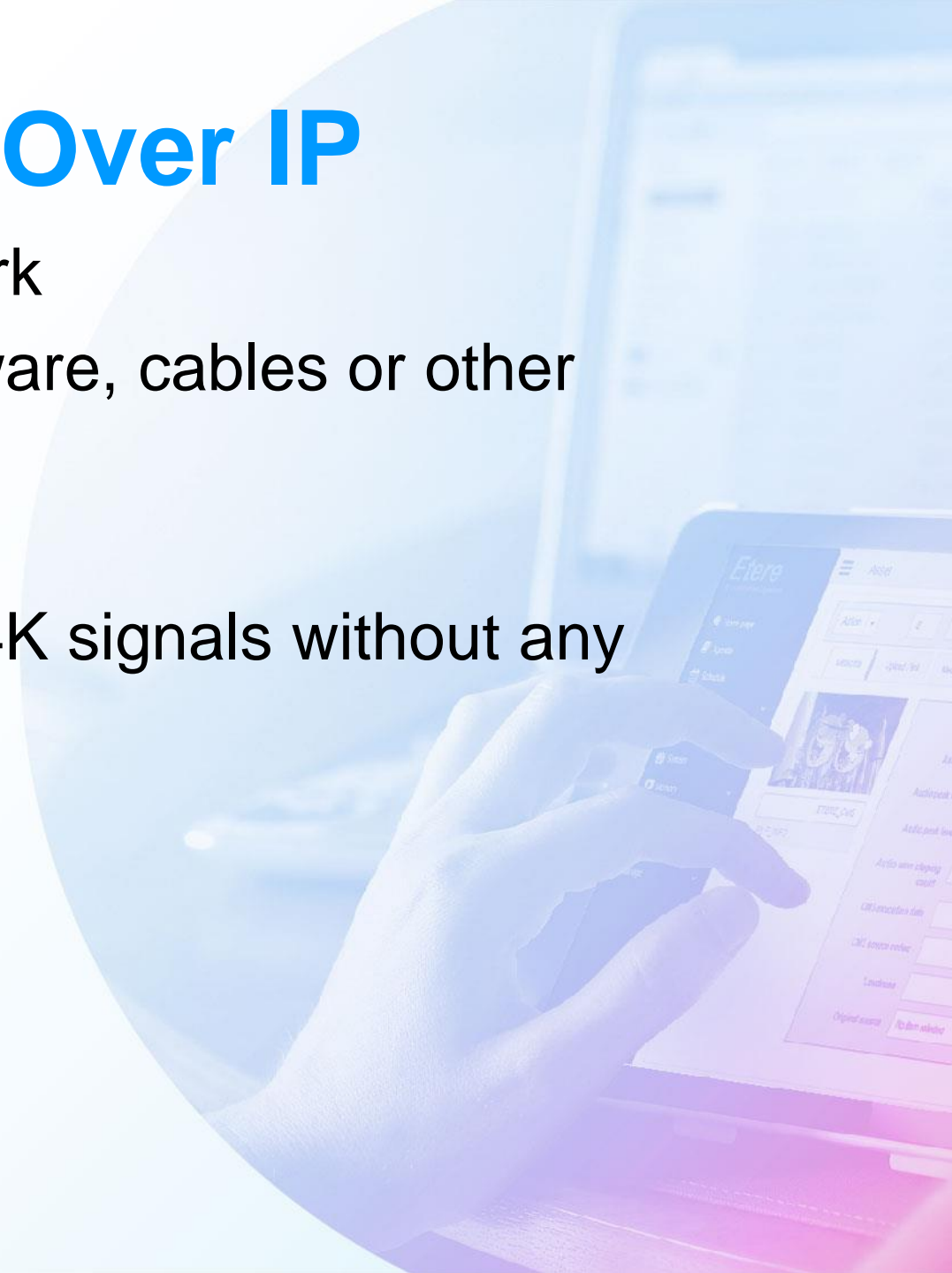
Why Move to IP Now

- Lower costs by up to 50%
- IP infrastructure is easier to build
- Easy to expand
- Easy to connect



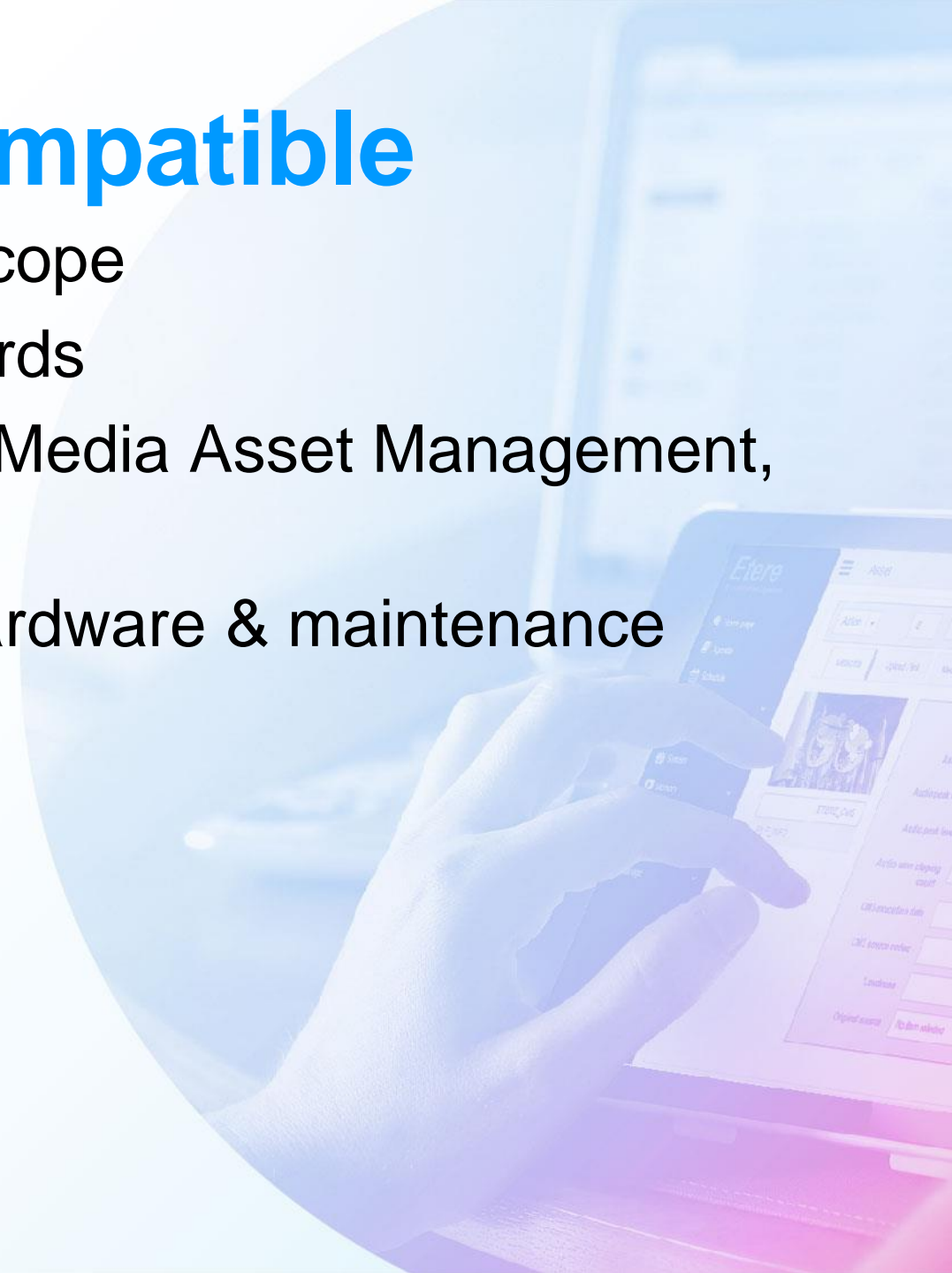
Etere For SDI Over IP

- Requires only standard Gigabit network
- Does not require traditional SDI hardware, cables or other accessories
- Inexpensive and low TCO
- Open to the future, manages SD/HD/4K signals without any changes



Etere is VM Compatible

- Uses Virtual Machine (VM) for any scope
- Only Multiviewer requires the SDI cards
- Virtual environment to manage your Media Asset Management, Ingest, Transcoding and Playout
- Cost savings of more than 50% in hardware & maintenance



Network Device Interface

- Etere is compatible with NDI technology since 2014
- NDI is a royalty-free standard by NewTek
- Multiple video systems to identify & communicate with one another over IP
- Encode, transmit, receive video & audio in real-time



NDI Characteristics

- The receiver connects to sender
- It is capable of auto reconnection
- It can have a failover
- It is point-to-point
- It allows 2 HD signals in 1 Gbit network port
- It has a very low CPU impact

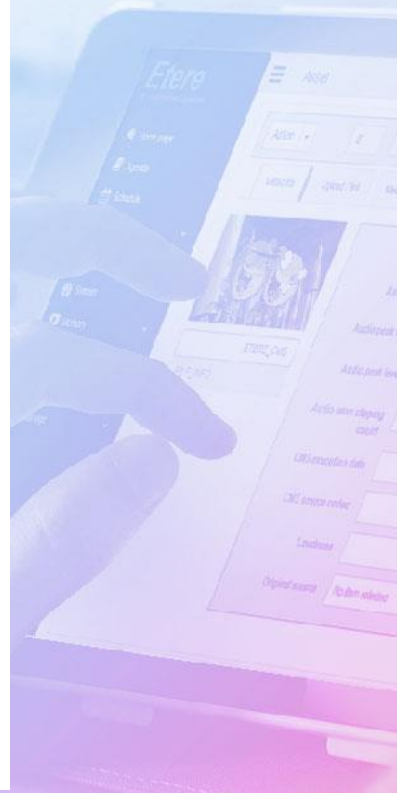
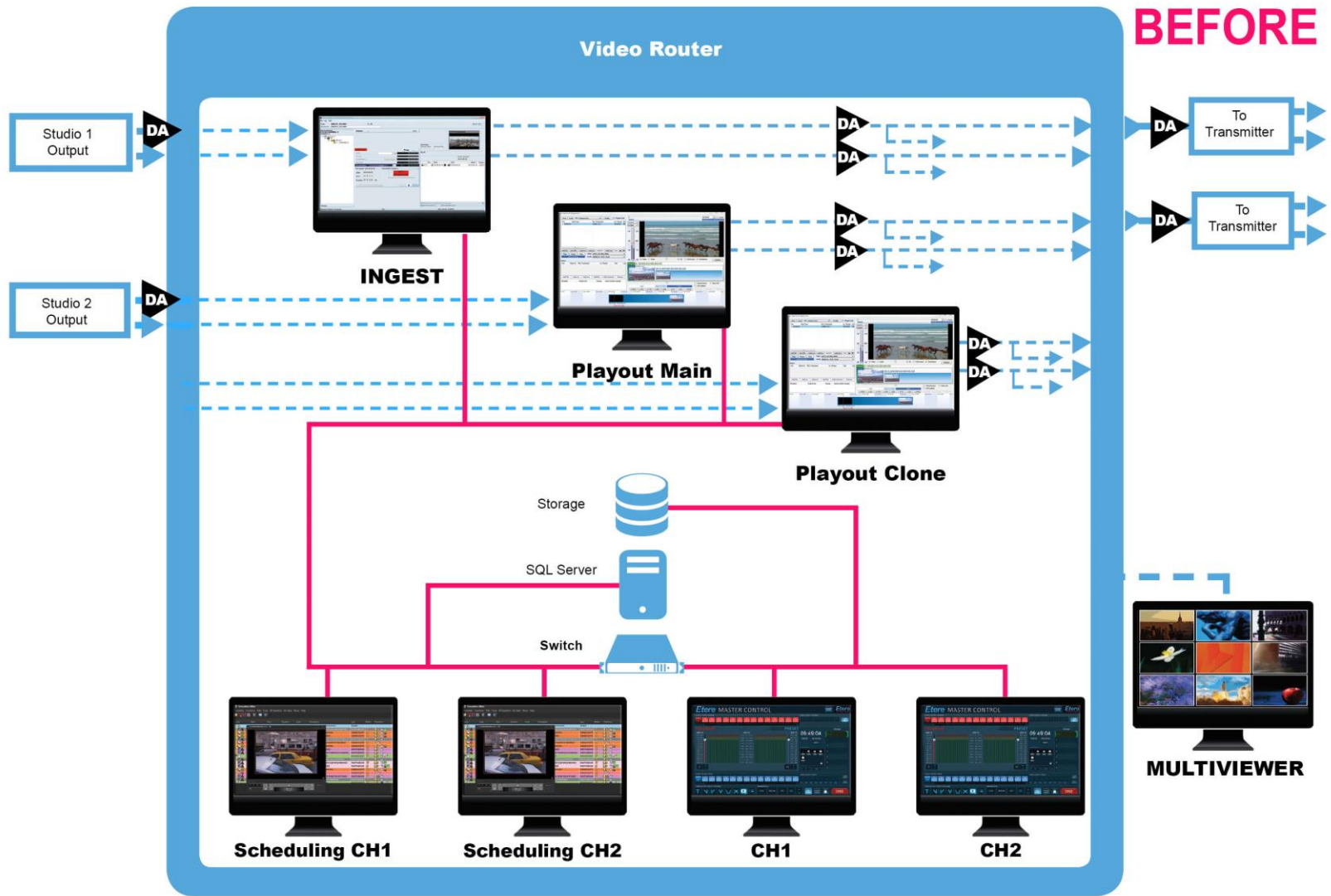


Etere is VM Compatible

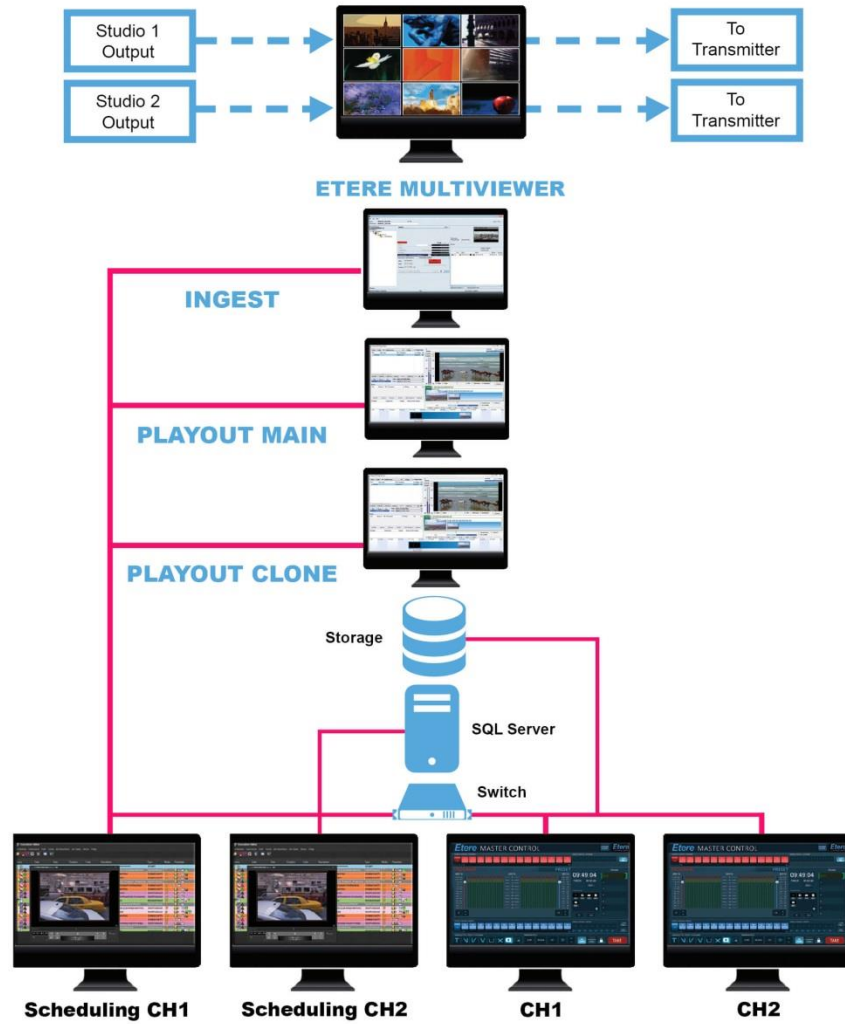
Example ETX with NDI video stream	Approximate Bandwidth Required
1 x UHDp60 video stream	250 Mbps
1 x UHDp30 video stream	200 Mbps
1 x 1080p60 video stream	125 Mbps
1 x 1080i60 video stream	100 Mbps
1 x 720p60 video stream	90 Mbps
1 x SD video stream	20 Mbps

Bandwidth Requirements:

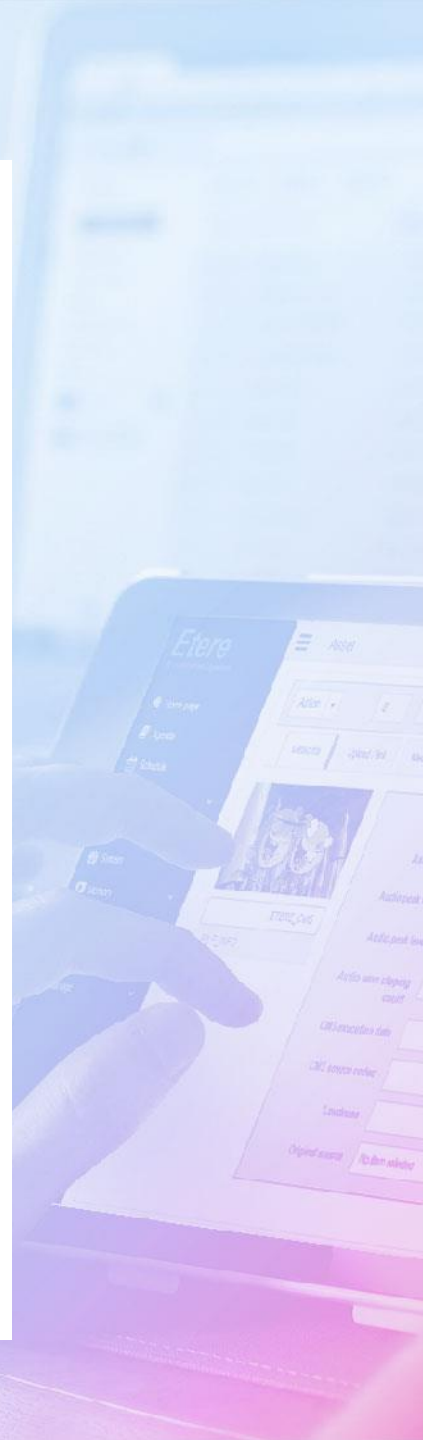
The approximate bandwidth required per NDI video stream for common video resolutions and frame rates



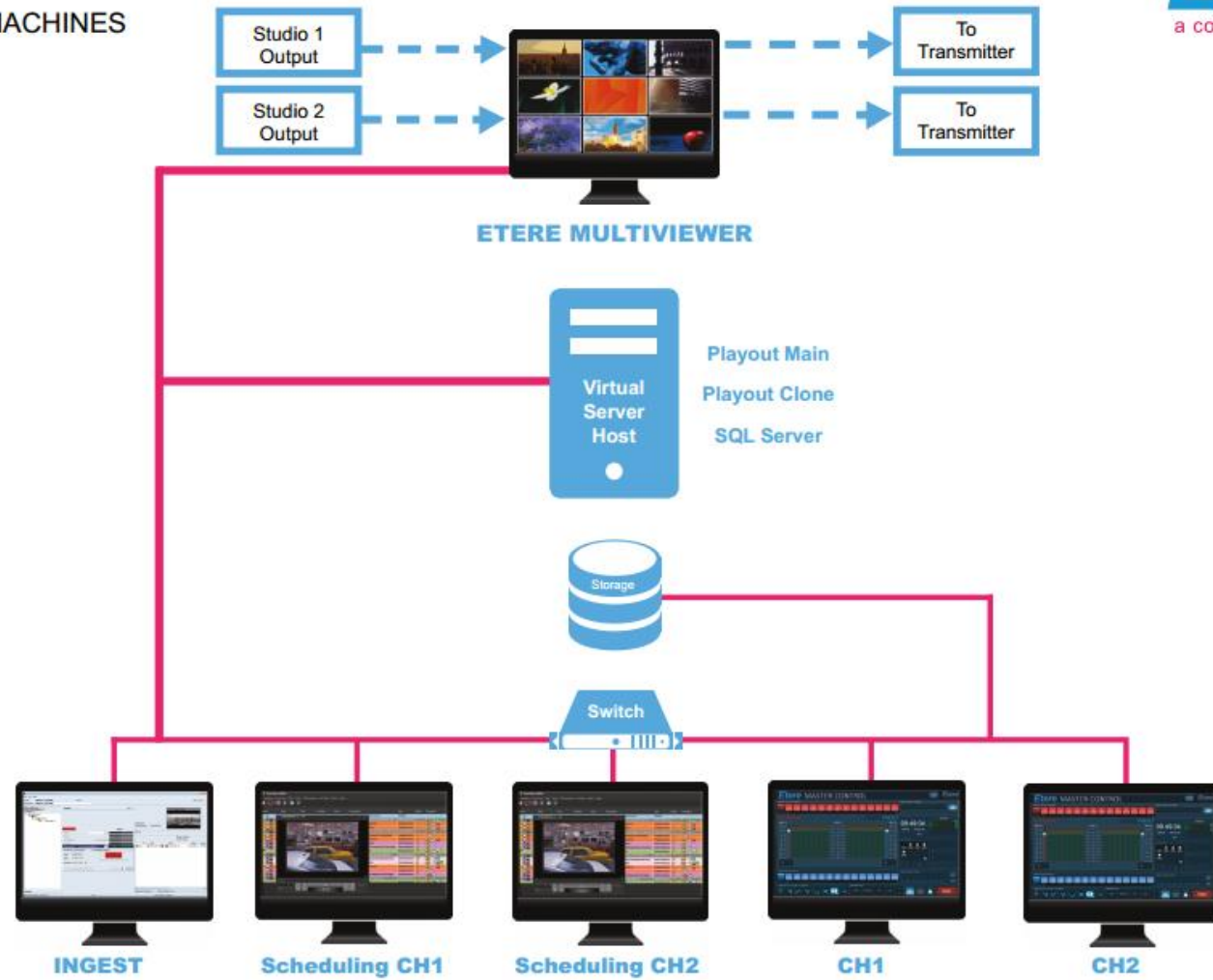
AFTER



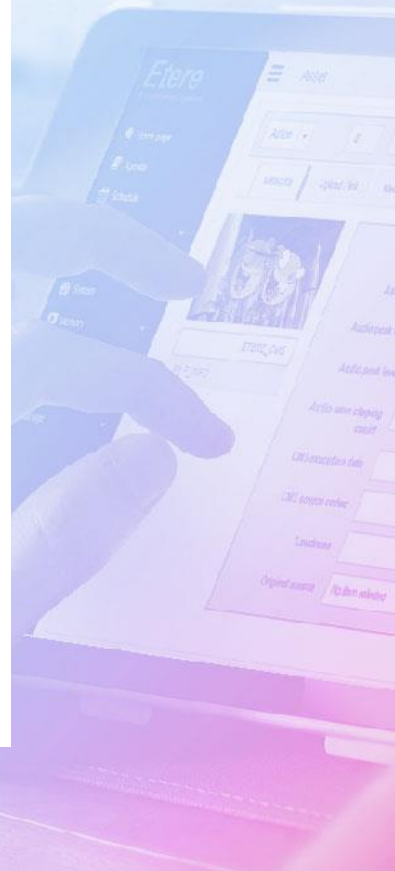
Etere
a consistent system



NOW
VIRTUAL MACHINES



Etere
a consistent system

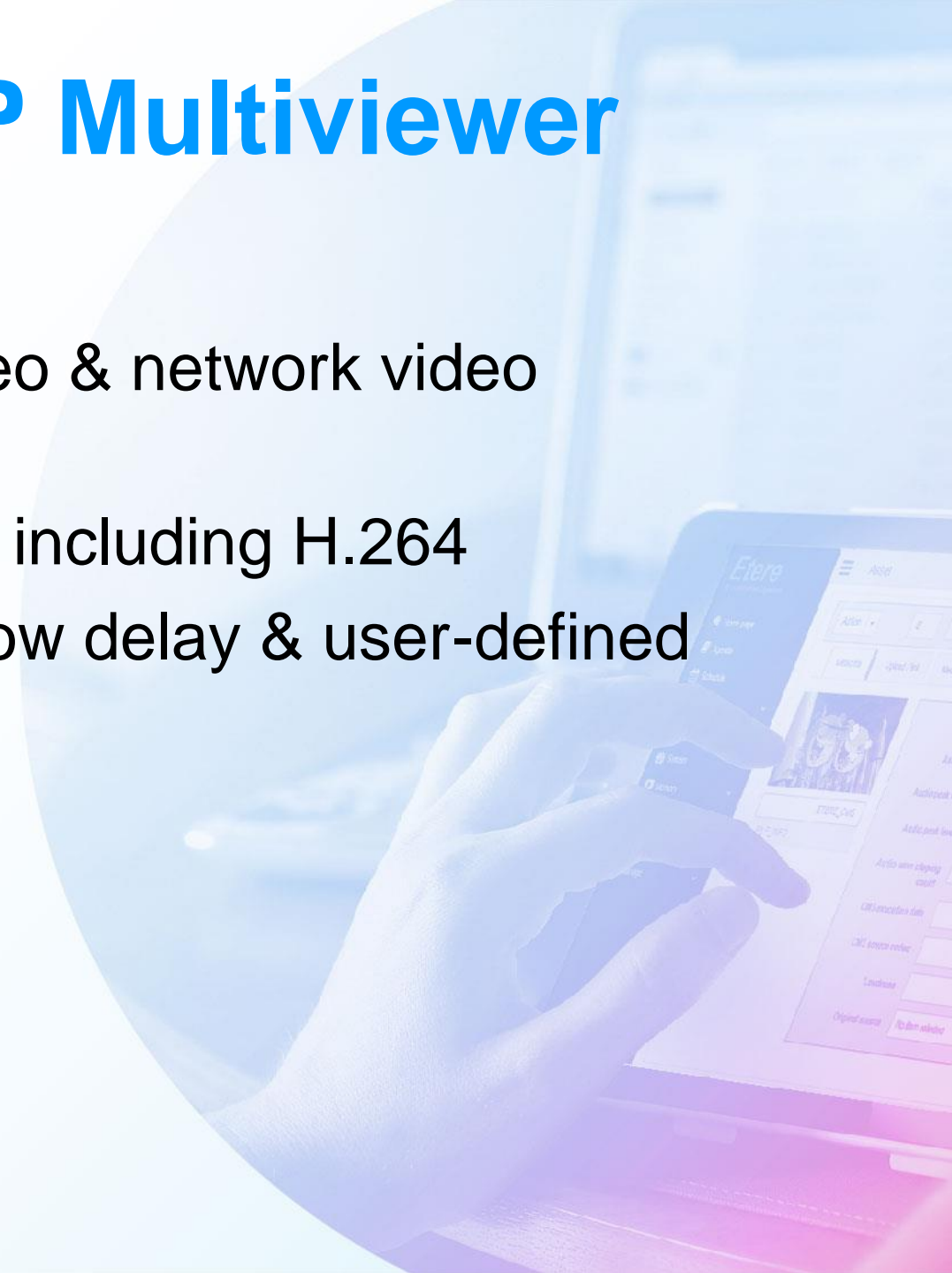


Etere ETX-M IP Multiviewer



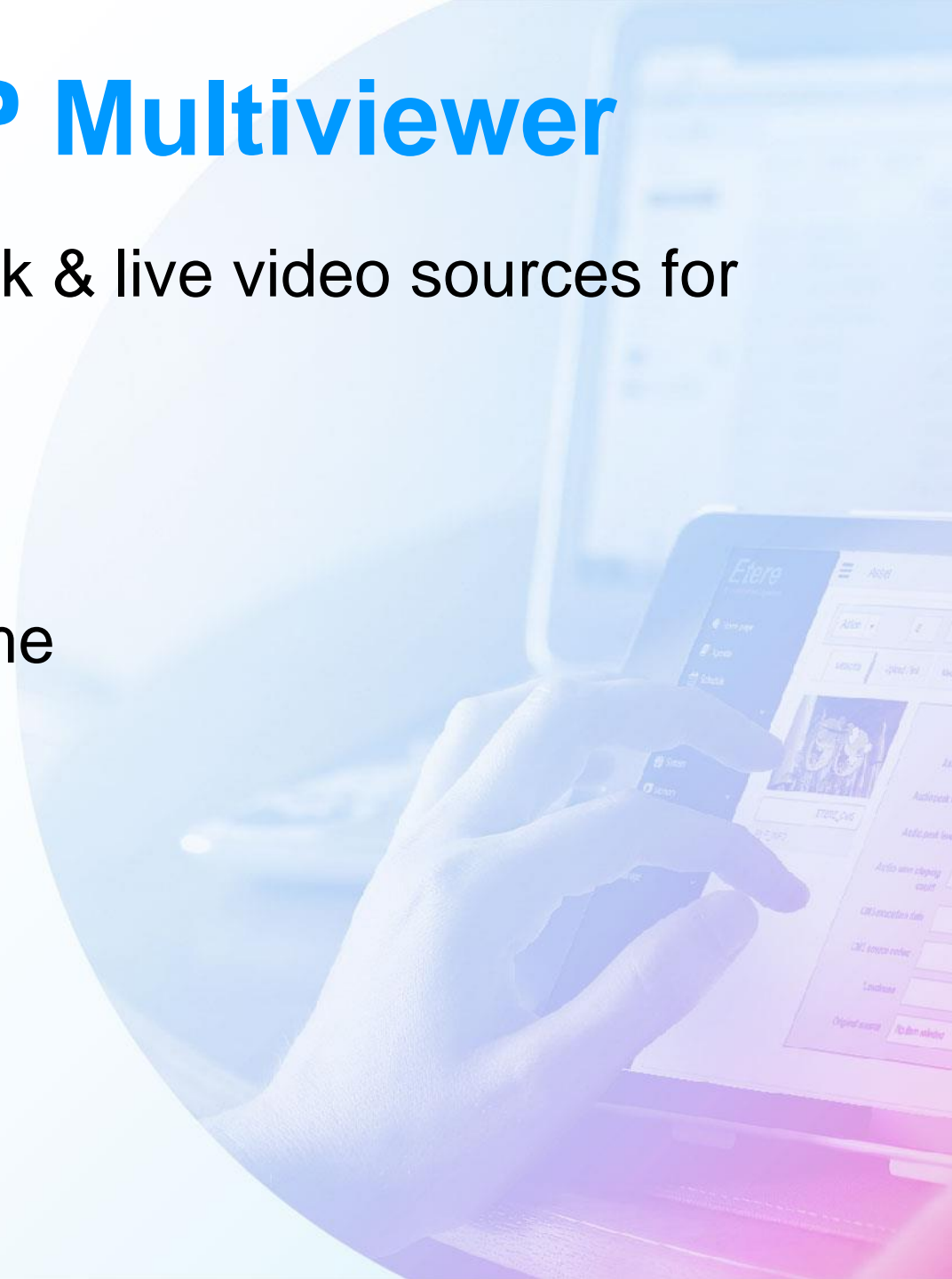
Etere ETX-M IP Multiviewer

- Automatic email alerts
- Record simultaneously for live video & network video broadcast
- Compatible with ALL stream types including H.264
- Customizable buffering including low delay & user-defined speeds



Etere ETX-M IP Multiviewer

- Manage multiple inputs of network & live video sources for simultaneous broadcast
- 4K resolution monitoring
- Up to 9 display monitors
- Up to 30 video streams in real-time
- Includes ETX Legacy Converter



Etere multi viewer preview

1

Instant Last hour 10-11

-21,61 -24,17 -60,00

0dB

Channel 1

2

11:13:49

VENERDÌ 23 MARZO 2018

15:48:49

VENERDÌ 23 MARZO 2018

3

Instant Last hour 10-11

-18,98 -16,46 -60,00

0dB

Channel 2

4

Instant Last hour 10-11

-36,19 -30,02 -60,00

0dB

Channel 11

6

Instant Last hour 10-11

-35,38 -23,59 -60,00

0dB

Channel 12

5

Channel 5

7

Channel 7

8

Channel 8

9

4K ULTRA HD

Channel 8

10

Channel 9

11

Channel 10

CPU: 15,8% | Memory: 8041,9 MB | Network: 52,20 Mbps

Instant
This hour
Last hour

Configurable
Tally

Tally Lights



Multi Time Zones Clock

1

11:31:55

Monday, 25 September 2017

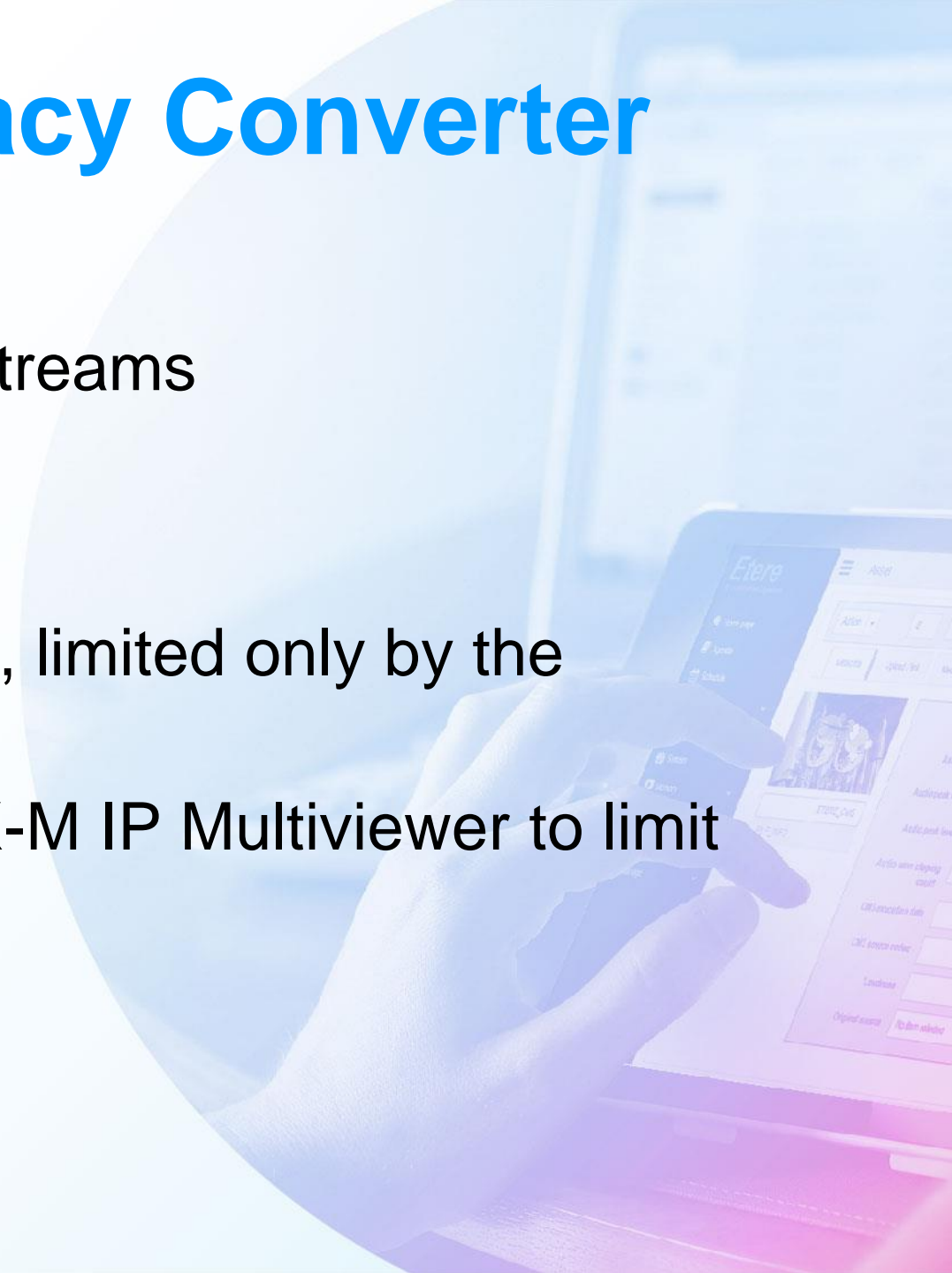
03:31:55

Monday, 25 September 2017



Etere ETX Legacy Converter

- ETX Legacy Converter
- Converts SDI in & SDI out in NDI streams
- Converts IP in out to NDI streams
 - **Uses UDP/RTP/RTSP/RTMP**
- It can easily manage 20+ channels, limited only by the Network interface speed
- Software can be embedded in ETX-M IP Multiviewer to limit connection & bandwidth



Etere ETX Legacy Converter

The screenshot displays the 'Etere multi viewer' application window. On the left, a 'Sources' panel lists several channels with their respective IDs, preview monitors, inputs, and outputs. The main area is divided into 'Settings' and 'Control' tabs. The 'Preview' section shows the selected channel (Channel1), preview window (1), and audio thresholds (Yellow: -18 dB, Red: -12 dB). The 'Input' section is set to 'Video device input' and shows details for 'Video input' (NDI Receiver 01ETX0001N) and 'Audio input' (<From Video>). The 'Backup NDI' section shows details for 'Video input' (01ETX0002N) and 'Audio input' (<From Video>). The 'Output' section is set to 'Video device output' and shows details for 'Device Output' (DeckLink SDI). A 'GPI' dropdown is set to 2. At the bottom, there are 'Add', 'Remove', 'Edit', 'Save', and 'Cancel' buttons.

Channel	Id	Preview monitor	Input	Output
Channel1	Channel1	1	NDI (01ETX0001N)	DeckLink SDI
Clock	Clock	2	-	-
Channel3	Channel3	3	NDI (CARLOW8 (PCH_1) ND	-
Channel5	Channel5	4	NDI (CARLOW8 (PCH_2) ND	-
Channel7	Channel7	5	DeckLink SDI (2)	-
Channel9	Channel9	6	NDI (MASSIMOW10 (01ETX	-

Preview
Id: Channel1
Preview window: 1
Audio thresholds (dB): Yellow -18, Red -12
Redundant channel Multiviewer: MULTI2
Channel: Channel3
 View closed captions

Input
Type: Video device input

Device input

Section	Property	Value
Video input	Video device	NDI Receiver
	Video line NDI stream	01ETX0001N
	List active NDI streams	False
	NDI bandwidth	highest
Audio input	Audio device	<From Video>
	External audio	<No External Audio>
	Audio format	<Auto/Not Specified>

Backup NDI

Section	Property	Value
Video input	Video line NDI stream	01ETX0002N
	List active NDI streams	False
	NDI bandwidth	lowest
	Video format	<Auto/Not Specified>
Audio input	Audio device	<From Video>
	External audio	<No External Audio>
	Audio format	<Auto/Not Specified>

Output
Type: Video device output

Section	Property	Value
Device Output	Device	DeckLink SDI
	Line-out	SDI

GPI: 2

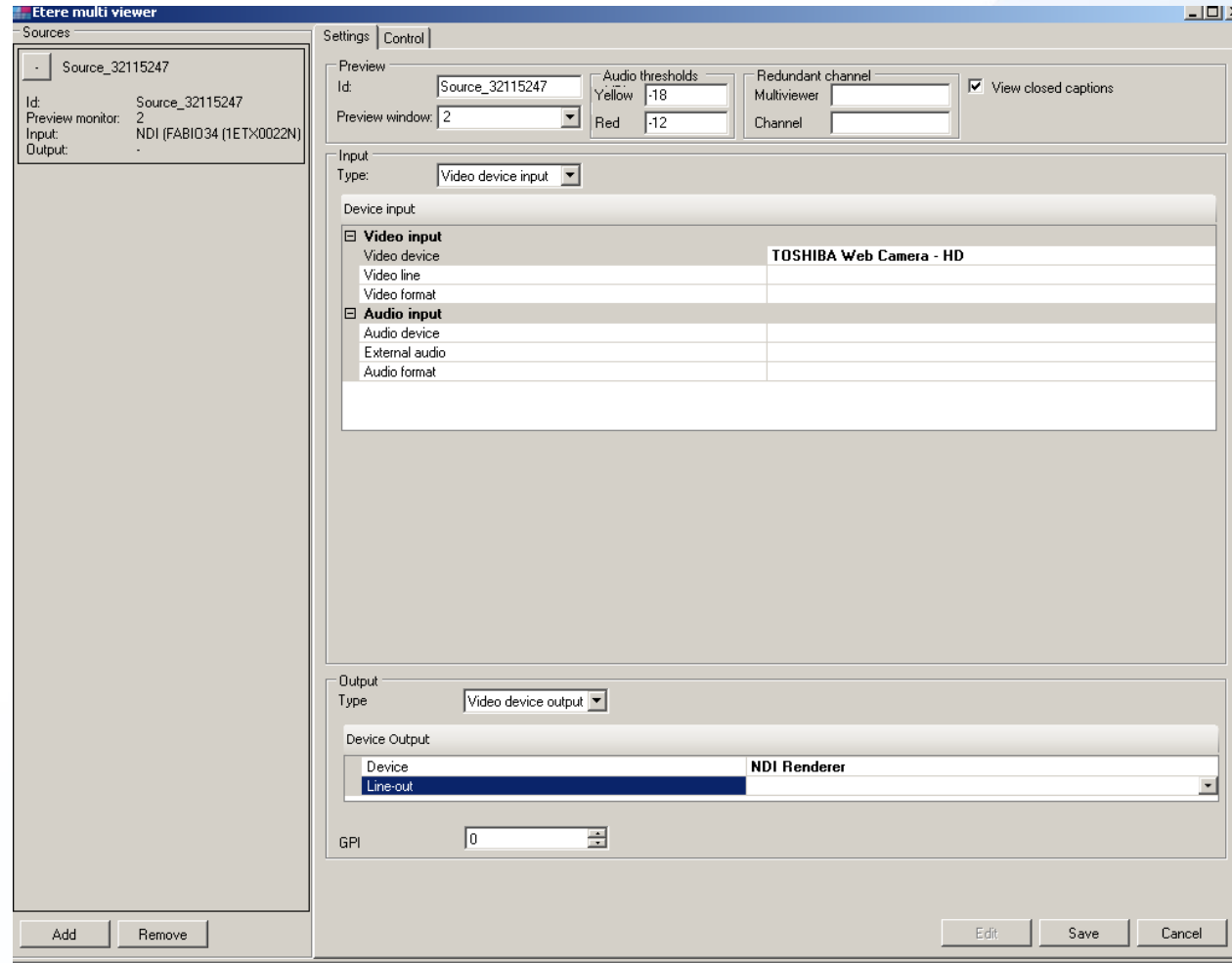
Buttons: Add, Remove, Edit, Save, Cancel

Main

BKP

Output

Legacy from SDI to NDI



Router Monitoring

The screenshot displays a software interface for monitoring video routers. The main window is titled "Video Routers" and shows a specific router configuration for "C-01". A video feed is visible, displaying credits for a production. The credits include:

- Directeur d'Écriture: ALEX GALATIS
- Écrit par: SEÁN CULLEN
- Storyboard: STEVE EVANGELATOS
- Directeur Artistique: MARK EVESTAFF

Below the video feed is a table listing channels. The table has columns for "In/Out Channel", "Description", "Connection", "Manual Used", "View", and "URL".

In/Out Channel	Description	Connection	Manual Used	View	URL	
0	21		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
▶ 0	22 Fabio NDI PLAY		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
0	23		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
0	24		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
0	25		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
0	26		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
0	27		<input type="checkbox"/>	<input checked="" type="checkbox"/>		

Etere Bandwidth and Compatibility

- Manage multiple inputs & outputs ports
- Bandwidth consumption is only limited by the sources that are in use
- IP data packets are automatically processed, sorted & delivered
- Point-to-point IP connection with failovers
- Automatic re-connections



Redundancy and Other Settings

- Etere ETX-M IP Multiviewer allows a main and BKP process
- To have an output in any case
- Closed caption preview is inserted automatically
- Audio custom loudness level for alert

