

# IP Video Captioning and Subtitling

## What is Alta?

Alta is the answer for any broadcaster planning captioning in IP video production environments. The virtualized caption and subtitle encoding connects these modern workflows to the iCap Network, making live accessibility a seamless and natural part of program production.

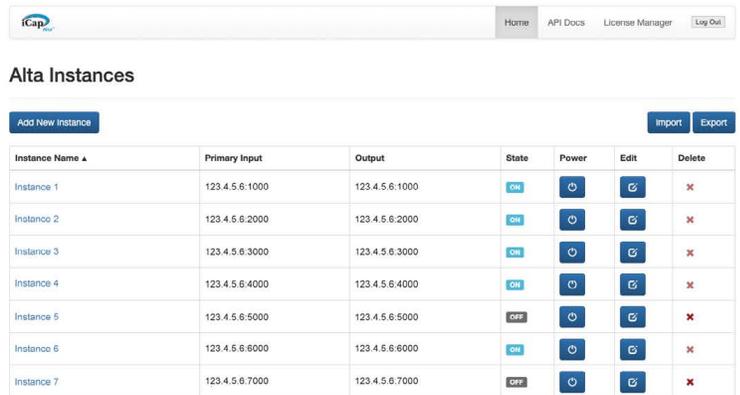
Supporting closed captioning standards in the USA, EU, UK, and Australia, Alta powers your application with 24/7 connectivity to thousands of iCap-certified captioners across the globe.

## Captioning Output Standards

- ATSC User Data (608/708)
- DVB Teletext
- SMPTE 2038 (RDD-11)
- DVB TTML
- SMPTE 2110-40
- DVB Subtitles

## Optimal Solution For

- Broadcasters



The screenshot shows a web interface for managing 'Alta Instances'. It includes a navigation bar with 'Home', 'API Docs', 'License Manager', and 'Log Out'. Below the title 'Alta Instances', there are 'Add New Instance', 'Import', and 'Export' buttons. A table lists seven instances with columns for Instance Name, Primary Input, Output, State, Power, Edit, and Delete. Instance 5 is highlighted with a red background.

Instance Name	Primary Input	Output	State	Power	Edit	Delete
Instance 1	123.4.5.6:1000	123.4.5.6:1000	ON	⏻	✎	✖
Instance 2	123.4.5.6:2000	123.4.5.6:2000	ON	⏻	✎	✖
Instance 3	123.4.5.6:3000	123.4.5.6:3000	ON	⏻	✎	✖
Instance 4	123.4.5.6:4000	123.4.5.6:4000	ON	⏻	✎	✖
Instance 5	123.4.5.6:5000	123.4.5.6:5000	OFF	⏻	✎	✖
Instance 6	123.4.5.6:6000	123.4.5.6:6000	ON	⏻	✎	✖
Instance 7	123.4.5.6:7000	123.4.5.6:7000	OFF	⏻	✎	✖

## What Does Alta Offer?

### Seamless Transition from SDI

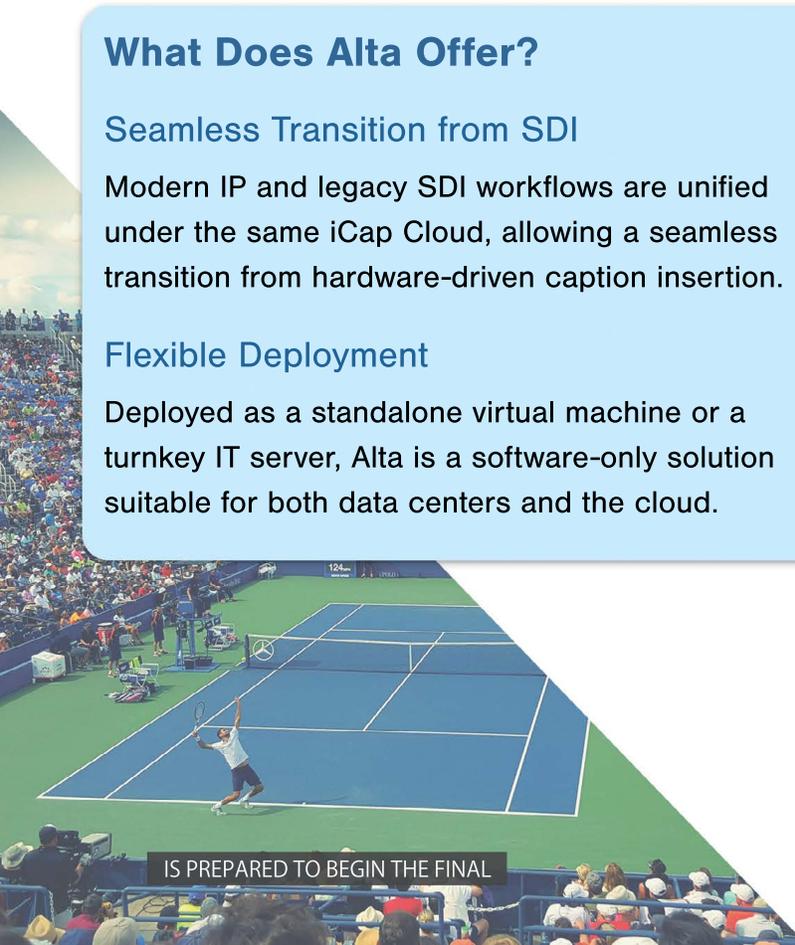
Modern IP and legacy SDI workflows are unified under the same iCap Cloud, allowing a seamless transition from hardware-driven caption insertion.

### Flexible Deployment

Deployed as a standalone virtual machine or a turnkey IT server, Alta is a software-only solution suitable for both data centers and the cloud.

### Two Product Modes

Each VM is configured for processing either MPEG Transport Streams or SMPTE 2110 audio and ancillary streams. The SMPTE 2110 Alta VM supports NMOS IS-04 and IS-05 Connection Management and PTP, and is JT-NM Tested for 2110-30, 2110-40, and TR-1001.



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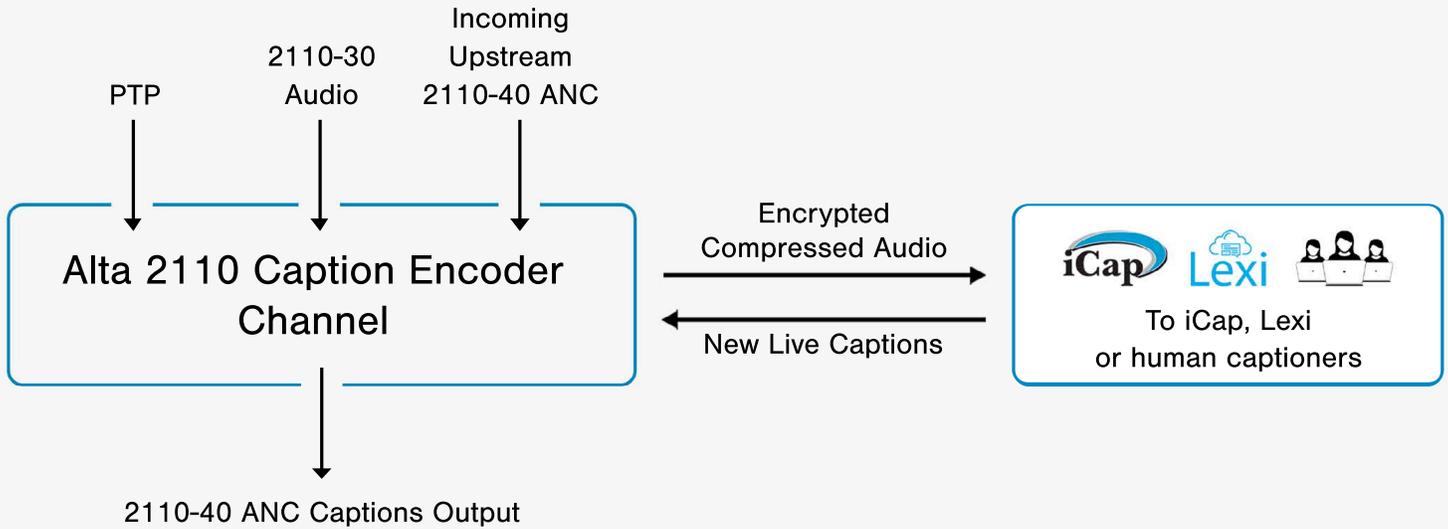
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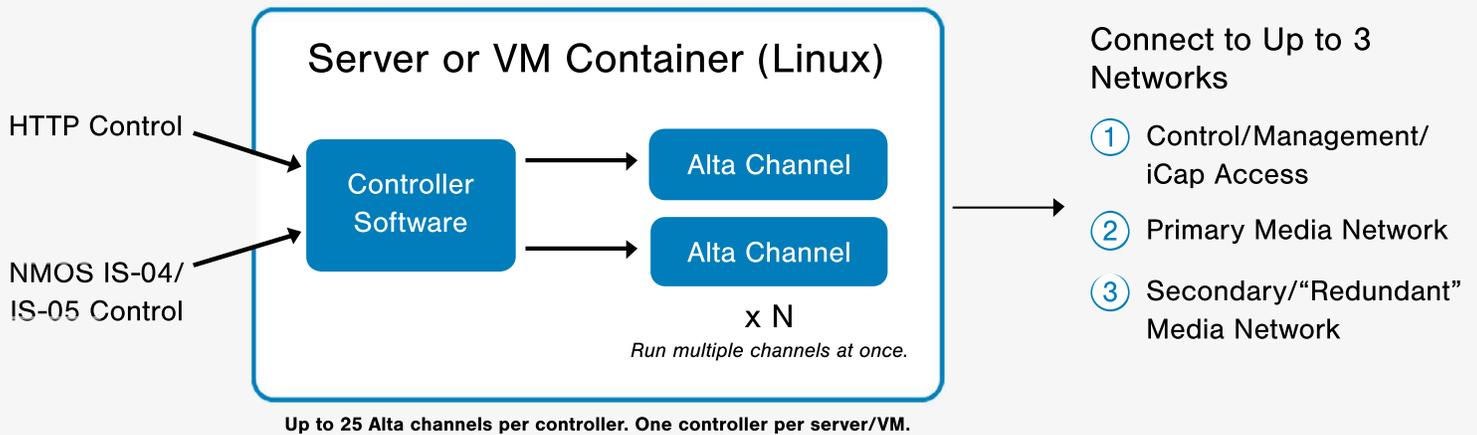


# Alta 2110 Workflows

## Media View



## Deployment View



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# Alta 2110 Test Results and Compatibility

## Tested for Success

✓ **General Network Interface Tests**

- Media Network Interface Test

✓ **Media Network Related Tests**

- Basic PTP Configuration test
- Basic Multicast Configuration test
- Extended Multicast Configuration test

✓ **ST 2110-10 Tests**

- IGMPv3 test for a receiver
- SDP verification for a sender

✓ **ST 2110-30 Tests**

- Stream Audible Validation Rx

✓ **ST 2110-40 Tests**

- Stream -40 Validation Tx
- Stream -40 Validation Rx

✓ **Media Node Startup Behavior**

- DHCP
- LLDP
- PTP domain is detected automatically
- IS-04 registration with reference registry

✓ **Media Nodes & IS-04**

- Schema conformance
- Unicast discovery
- Basic registration
- Advanced registration

✓ **Media Nodes & IS-05**

- Schema conformance
- Single Sender routing
- Single Receiver routing
- Scheduled activation
- Bulk Sender routing
- Bulk Receiver routing
- Integration with IS-04

✓ **Media Node Streams**

- Sender configuration and streaming
- Receiver configuration and reception
- IGMPv3
- SDP source-filters

As tested by the JT-NM Tested program. Full test results are available in the [SMPTE ST 2110 Test Plan](#) and [NMOS/TR-1001 Test Plan](#) catalogs.

Last tested: August 2019

## Compatible Standards

**SMPTE 2059** PTP Timing

**SMPTE 2110-30** Uncompressed Audio  
*Up to 64 Channels*

**SMPTE 2110-40** Ancillary Data

**AMWA NMOS IS-04** Registration and Discovery

**AMWA NMOS IS-05** Connection Management

**AMWA NMOS IS-09** System Resource

**SMPTE 2022-7** Seamless Redundant Media Networks



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