

Hi Tech Systems Ltd

Avita overview

**INNOVATIVE DEVELOPER AND MANUFACTURER OF BROADCAST PRODUCTION,
PLAY-OUT INGEST AND FACILITY WIDE CONTROL SYSTEMS**

SEPT 2024

Hi Tech Systems overview

Hi Tech Systems is a UK based manufacturer of control systems for the broadcast television industry and has been designing and building control systems since the 1990s. The company was established by its founder and managing director Tom Favell who continues to lead the organisation which is based in Hampshire.

Target customers are TV broadcasters, service providers, and cable and satellite operators. Products are operator focused and designed to be flexible, reliable and scalable. A range of control systems are available from simple 1 or 2 channel control to facility wide solutions. The company's innovative solutions manage ingest and multi-channel playout workflows around the world.



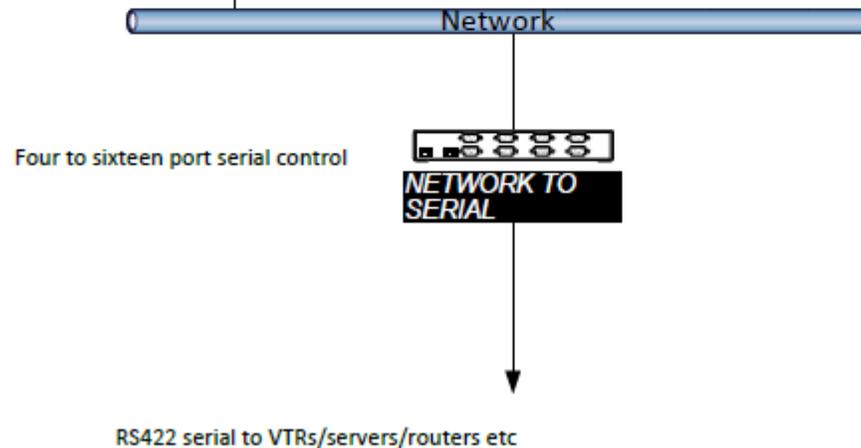
Avita deployment Avita Lite

Avita installed in Array panel with integral PC

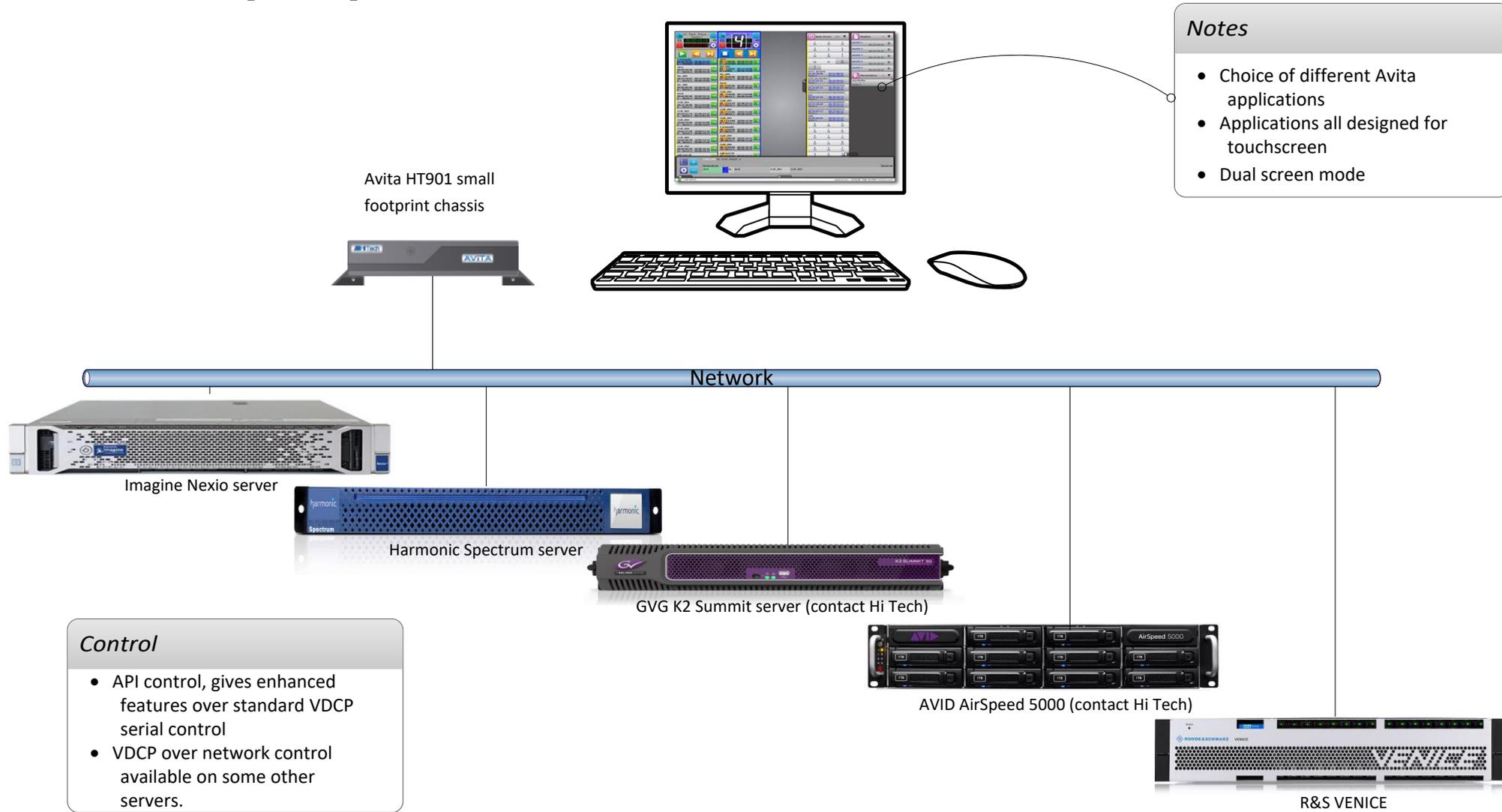


Configuration

- Array hardware panel with built in PC running Avita and choice of applications.
- Choice of Array panels and configurations.
- No other hardware or software required (user supplies monitor, keyboard/mouse as required)
- Ideal for live productions
- Applications all designed for touchscreen
-



Avita deployment overview



Avita deployment overview

Avita installed in
Array panel with
integral PC



AND/OR

Avita HT901 small
footprint chassis

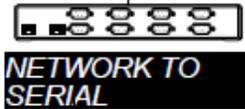


Notes

- Choice of different Avita applications
- Applications all designed for touchscreen
- Dual screen mode

Network

Four to sixteen port control

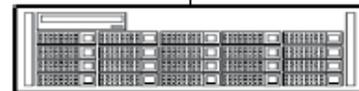


NETWORK TO
SERIAL

RS422 serial to VTRs,
Servers,routers etc

AND/OR

Control over IP



16 GPI or GPO



Array panels programmed
from Avita HT901

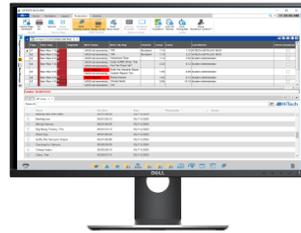


Notes

- Choice of different Array control panels.
- Up to four Array panels can be joined to form an Array Surface
- Up to six Array Surfaces can be connected to each Avita for multi-position control

Avita NRCS example

NRCS Client



Clip playback status

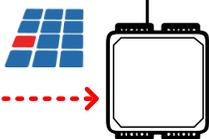
- Play
- Cue
- Freeze
- Re cue

MOS rundown order.

- Running Order name
- Clip ID
- Clip duration
- Storey name



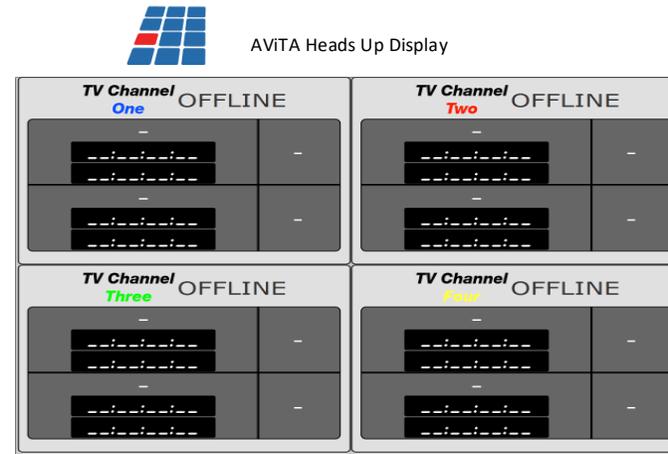
AVITA NRCS MOS interface integrates within Avita "engine"



AVITA 16 channel GPIO interface to vision mixer



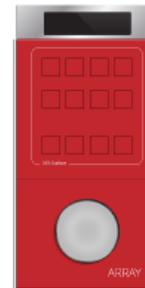
Playout and ingest servers



AVITA Heads Up Display



Array Customisable control panel



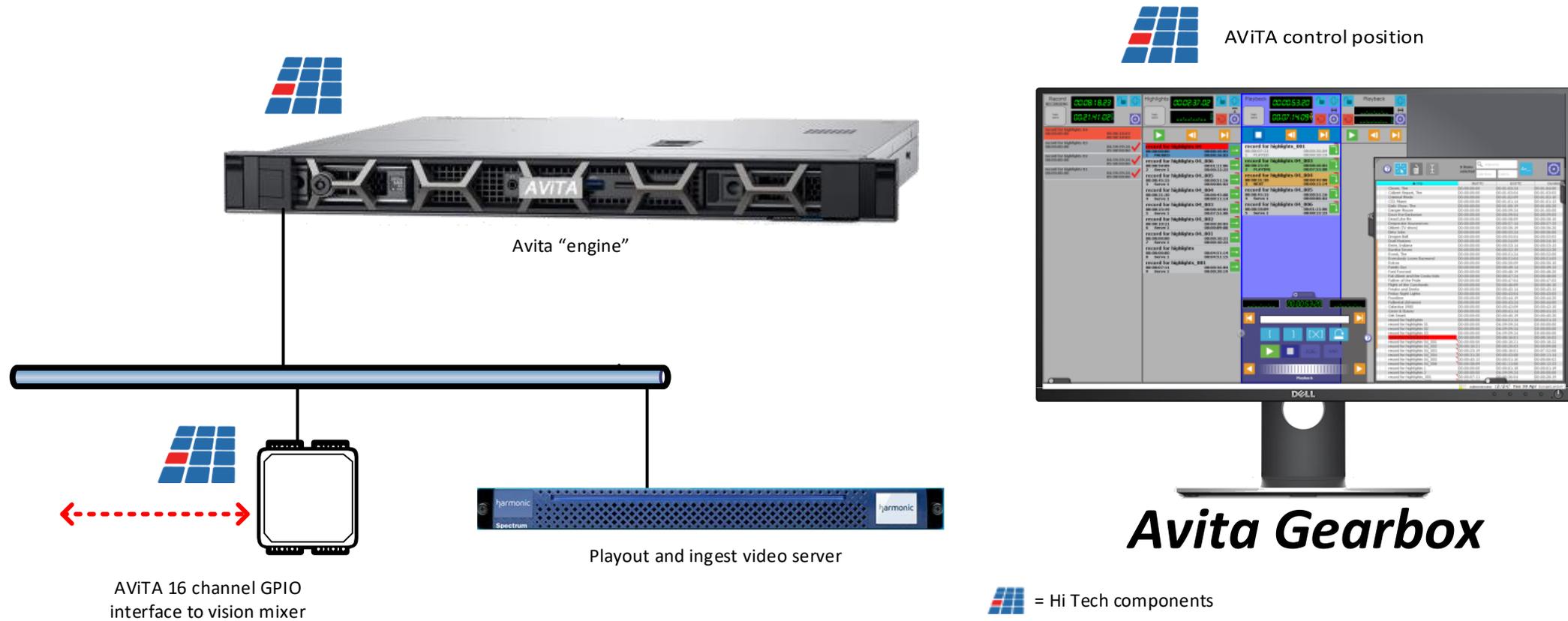
AVITA control position



Avita Multiplay and NRCS option

= Hi Tech components

Avita Playback, Ingest and preview example



Avita Gearbox standard features

Recording

- Store additional Avita metadata for each recording.
- Start recording from GUI, Array hardware panel or GPIO.
- Create placeholders.
- Lock channel to prevent stopping recordings.



Create highlights

- Using the Array hardware panels record mark in and out buttons to create highlights on a player channel.
- Edit each highlight as necessary – trim, rename, delete.

Playback highlights

- Add clips to playback channel directly from edit channel or from the clip database.
- Choose playback modes – “shot box” or automation back to back playback.
- Edit playlist during playback – add, remove or re-order clips

The main interface is divided into several sections:

- Recording:** Shows a list of recorded clips with columns for name, start/end times, and status (e.g., 'record for highlights 04').
- Highlights:** Shows a list of highlight clips with columns for name, start/end times, and status (e.g., 'record for highlights 04_006').
- Playback:** Shows a list of clips currently being played, with columns for name, start/end times, and status (e.g., 'record for highlights_001').
- Clip Database:** A searchable list of clips with columns for name, start/end times, and duration. A search bar is visible at the top.
- Playback Controls:** A central control panel with buttons for play, stop, and jog, along with a time display.

Clips, playlists and databases (shown open)

- Search for all clips on a server, or by keyword, date, character. Results stored in bins – can also create user bins
- Clips can be put into a play channel as a placeholder prior to recording, or whilst recording has started (server dependent). Placeholders will adjust to reflect any changes in record duration

Avita Multiplay standard features

Playlists

- Created by dragging clips from the clip database
- Automated or manual playback
- Each clip can be set to four different playback modes when in automation
- Clip status displayed – loaded, cued, playing or finished
- Customisable display of clip information

Channel display

- Up to four channel control
- Clip duration, count up/down time code displayed
- Mini transport control panel for each channel (can be turned off)
- Channel grouping for playback
- Channel locking
- Each channel can be set to manual or automated play out
- Separate channel control for record/playback (not part of main rundown)

Clips, playlists and databases

- Search for all clips on a server, or by keyword, date, character. Results stored in bins – can also create user bins
- Clips can be put into a play channel as a placeholder prior to recording, or whilst recording has started (server dependent). Placeholders will adjust to reflect any changes in record duration

Playback functions

- Playback control from GUI or hardware panel
- Playback modes A→B→C→D or A→A→A and B→B→B etc.
- Play next function (skip clip playing on A and play B)
- Eject/load all clips

Play out modes

- Clips can be re-assigned to different play out channels
- Play out manually or automatically
- ABCD news-style GUI
- Secondary event control (MultiPlay Plus) to routers and character generators
- Colour coded status

AViTA MultiPlay options

- MOS interface to a Newsroom Computer System such as ENPS or iNews
- Remote clip status display for use in galleries

Timed start

- Start at a pre set TOD
- Start in HH:MM:SS

System information

- User rights and log in
- Time & date
- Server and clip status and warnings

Page	Story slug	Clip information	Chan	State
1	Adventure Time	00:00:00:00 00:01:19:24 PLAYING 00:01:20:00	A	PLAY
2	America's Next Top Model	00:00:00:00 00:01:19:04 Serve 1 00:01:19:05	A	
3	American Dreams	00:00:00:00 00:01:18:09 START 00:01:18:10	B	START
4	Andy Griffith Show, The	00:00:00:00 00:01:17:14 Serve 1 00:01:17:15	B	
5	Are We There Yet?	00:00:00:00 00:01:16:19 Serve 1 00:01:16:20	B	
6	Army Wives	00:00:00:00 00:01:15:24 Serve 1 00:01:16:00	B	
7	Arthur	00:00:00:00 00:01:15:04 Serve 1 00:01:15:05	C	
8	Avatar: The Last Airbender	00:00:00:00 00:01:14:09 END 00:01:14:10	C	END

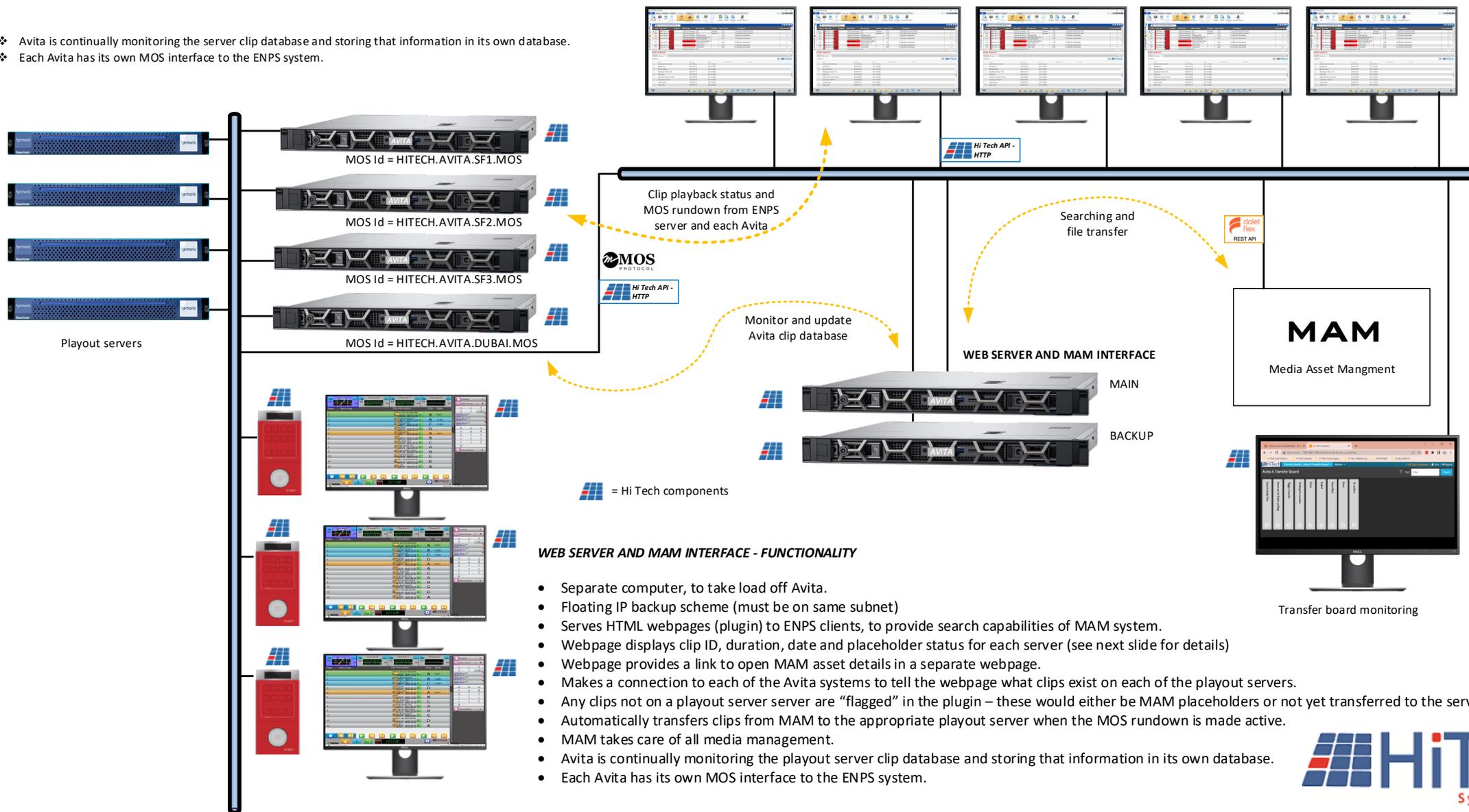
Notes

- Integrated hardware control panel option
- Design optimised for touch screen operation including keyboard
- Unique sliding menu panels
- Operating System GUI completely hidden

Avita MAM interface using Enterprise System Bus

UPTO 100 ENPS CLIENTS

- ❖ Avita is continually monitoring the server clip database and storing that information in its own database.
- ❖ Each Avita has its own MOS interface to the ENPS system.



WEB SERVER AND MAM INTERFACE - FUNCTIONALITY

- Separate computer, to take load off Avita.
- Floating IP backup scheme (must be on same subnet)
- Serves HTML webpages (plugin) to ENPS clients, to provide search capabilities of MAM system.
- Webpage displays clip ID, duration, date and placeholder status for each server (see next slide for details)
- Webpage provides a link to open MAM asset details in a separate webpage.
- Makes a connection to each of the Avita systems to tell the webpage what clips exist on each of the playout servers.
- Any clips not on a playout server are “flagged” in the plugin – these would either be MAM placeholders or not yet transferred to the server.
- Automatically transfers clips from MAM to the appropriate playout server when the MOS rundown is made active.
- MAM takes care of all media management.
- Avita is continually monitoring the playout server clip database and storing that information in its own database.
- Each Avita has its own MOS interface to the ENPS system.

Hi Tech Systems Technology



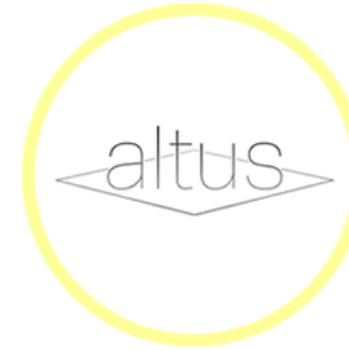
Avita is a system of software applications encompassing ingest, play out, scheduling, News & Sports and works with any professional video server. Array control panels can be fully integrated into an Avita system.



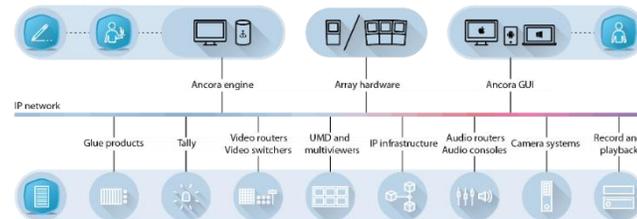
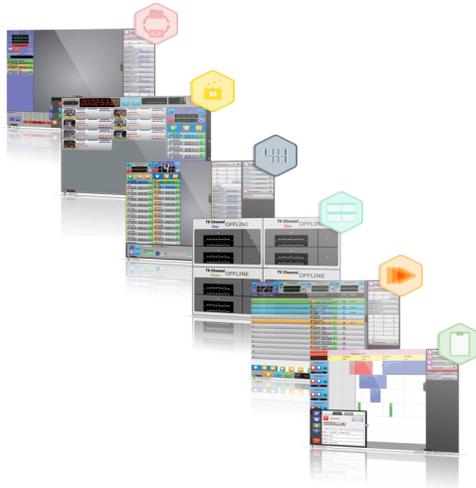
Array is a range of control panels that can be combined together to form a control surface to suit a multitude of workflows. Works with Ancora and Avita software and with third party applications.



Ancora is a facility wide system for controlling, managing and monitoring production and infrastructure equipment. Features a software package to design workflow, GUIs and hardware panel controllers as well as provide a common user interface for all connected equipment.



The Altus HT252 and HT262 hardware control panels feature compact control of two server ports with clip management tools to make the most of a server's record and replay capabilities. Operators no longer have to rely on a front panel user interface to select, load and play clips in a live environment – which can be fraught with disaster



Solution Types

Simple



Altus: Basic control panel for 1 or 2 video server channels

Intermediate



Avita: Software applications that run on Array control panels

Complex



Ancora: facility-wide control that works with Array control panels

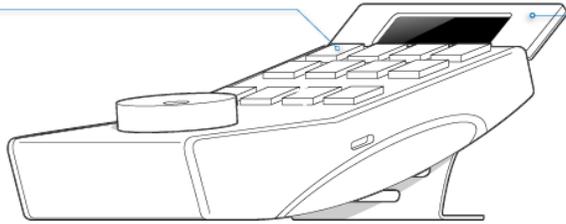


Array: Configurable hardware control panels for Avita and Ancora

Array Control Panel Details

OLED KEYS
Well spaced OLED keys with user assignable graphics and text and programmable with RGB illuminations.

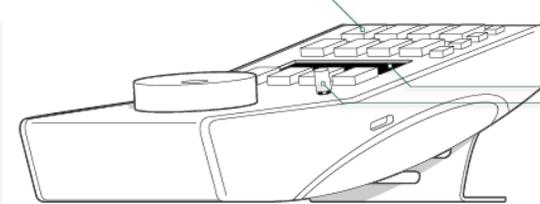
OPTIONAL WHEEL OR T-BAR
Weighted wheel with padded centre grip - programmable for jog, shuttle and variable playback functions.
T-bar for smooth slo-mo playback, programmable for speed range and resolution.



OPTIONAL STATUS DISPLAY
High resolution OLED display for timecode, channel selection, system information.

RGB KEYS
Well spaced, tactile and programmable RGB keys.

OPTIONAL WHEEL OR T-BAR
Weighted wheel with padded centre grip - programmable for jog, shuttle and variable playback functions.
T-bar for smooth slo-mo playback, programmable for speed range and resolution.

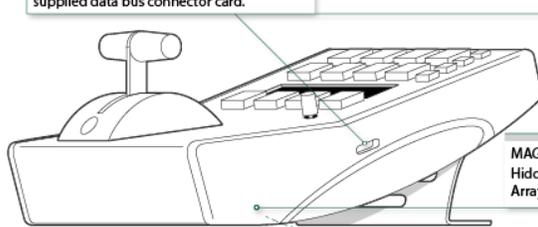


OPTIONAL STATUS DISPLAY
High resolution OLED display for timecode, channel selection, system information.

BUTTON FUNCTION DISPLAY
Crystal clear OLED display with user assignable graphics and text.

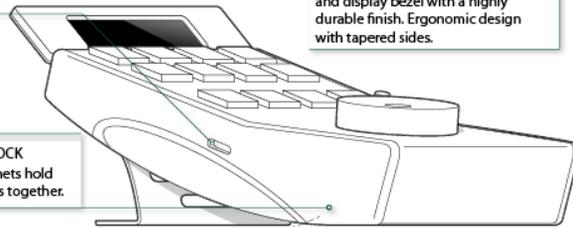
MULTI-DIRECTIONAL WHEEL
6 way multi directional wheel. User programmable for multiple functions.

DATA BUS
Recessed connector for power and data transfer between Array surfaces using the supplied data bus connector card.



CONTEMPORARY DESIGN
Case is made from steel with machined aluminium side panels and display bezel with a highly durable finish. Ergonomic design with tapered sides.

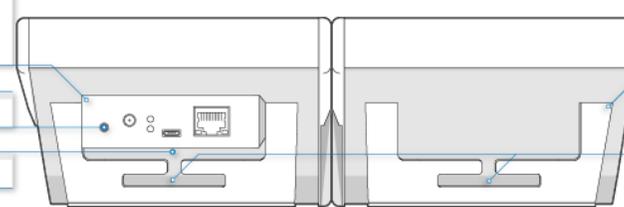
MAGNETIC LOCK
Hidden magnets hold Array surfaces together.



CONNECTOR POD
Cable interface for DC power input socket, bi-directional USB and RJ45 network connectors. Only one required for an Array system.

SOFT PUSH ON / OFF SWITCH

POWER ON INDICATOR

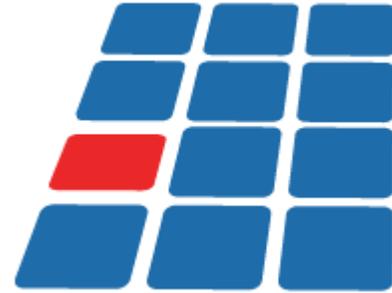


REAR STAND
Cable slot for strain relief and cable retainer with rubber non-slip base.

UNDER CASE ILLUMINATION



Hi Tech Systems 2024



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We take the technical complexity from the operator and put it in the back room