



LG Pro:Centric® Catena®

A MANAGEMENT SOLUTION FOR PUBLIC SPACE TELEVISIONS

Helps Businesses Manage and Control Multiple Televisions Efficiently

LG's Pro:Centric® Catena system is designed for businesses, such as bars, restaurants, and gyms, to help staff manage and control multiple televisions efficiently. Comprised of a server and TV application, the system utilizes a simple web-based user interface to control all of the televisions and provide TV channel listings. TV's can be grouped based on location and managed as a group or individually. Pro:Centric Catena operates on LG's Pro:Centric Smart IPTV commercial displays and supports HD and 4K UHD resolutions.

Supports Cable, Satellite and Other Channel Content Sources And Provides Pro:Idiom® Content Protection

Pro:Idiom unlocks access to premium content and has been designed specifically for users of premium HDTV content from cable, satellite, or video on demand (VOD) services. It also incorporates a leading DRM system that provides end-to-end content protection. With LG's Pro:Centric Catena solution, there's no need to tune each TV or multiple set-top boxes manually.

LG's Pro:Centric Catena Can Reduce System Complexity and Deliver Cost Savings

LG's Pro:Centric Catena system can reduce deployment costs through IP networking, utilizing Ethernet Cat 6 wiring distribution to every TV, and by reducing the need for multiple set-top boxes or satellite receivers. No video matrix switches or HDMI splitters are needed, simplifying the entire installation.

Integrated Mobile Audio Streaming Provides Personalized Listening Options

LG's Pro:Centric Catena system allows patrons to select and receive television audio on their mobile device using a simple web-based user interface, **no app is needed**. Using real-time streaming audio, they have the ability to listen to any muted TV channel directly to their personal device via a Wi-Fi access point. The access point redirects to the audio streaming page or URL which can be located on the facilities website. Catena identifies the live video stream which manages timing and syncing of the sound with a user's mobile device. As an added benefit, Catena uses on-site audio processing which reduces facility external bandwidth usage and provides precise audio lip-sync.

The Administrative Client

The Administrative Client is securely accessed through VPN either on-site or remotely. Through this secure connection it is easy to configure TVs, server and set-up data feeds for EPG and other content like weather.

Server Management Menu
Configure TVs, server and set-up data feeds for EPG and other content like weather.

The screenshot shows the 'Server Management' menu on the left with options: Information, Network, Updates, Users, IP/Server Config, F/W Update, Channel Map, and Log. The main area displays the 'Information' page with a 'License' section and a 'Metrics' table.

Metric	Value
XAIT	117
POP VERSION	4.0
ADMIN CLIENT VERSION	unknown
EPG APP VERSION	unknown
SERIAL NUMBER	020490XK00028
HARDWARE ID	4.0
OS VERSION	Linux 3.10.0-957.27.2.el7.x86_64
OS RELEASE	#1 SMP Mon Jul 29 17:46:05 UTC 2019
PHP VERSION	7.3.16
GEM VERSION	1.8.0
NODE VERSION	10.19.0

TV Mngement Menu
Set up TV groupings and TV name/ID's

The screenshot shows the 'TV Grouping' page. On the left, the 'TV Management' menu is expanded to show 'Groups', 'TV Grouping', and 'Video Playlist'. The main area has a search bar for 'TV name' and a 'Target Group' dropdown set to 'backroom'. Below, there are two columns of TV/Bar buttons: 'All TVs' (TV1, TV2, TV3, TV4, Bar1) and 'Target Group' (TV4, Bar1).

Channel Map
Configure channel map, EPG IDs and icon

The screenshot shows the 'Channel Map' page. The left menu has 'Channel Map' selected. The main area shows options for 'Start Channel' (Selected Channel), 'Broadcast Type' (ATSC), and a table of channels.

CH #	PHYSICAL	LABEL	LISTING	ICON	START	ENCRYPTED
2	237.0.0.4	NHL Network	LSE1715391	NHL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	237.0.0.3	NBA TV	LSE1715137	NBA TV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	237.0.0.6	Foxsports	LSE1703058	Fox Sports	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	237.0.0.5	NFL Network	LSE1715338	NFL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	237.0.0.7	237.0.0.7	LSE1703023	FOX	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

IP/Server Configuration
Set-up the Server IP network

The screenshot shows the 'IP/Server Config' page. The left menu has 'IP/Server Config' selected. The main area shows 'Deployment Mode' set to 'Multicast' and several input fields: Application IP (237.0.0.1), Port (1234), NIC (eth0), and TTL (1). There is also a 'Video Playlist Slots' dropdown menu.



Simple-to-Use Staff Interface

- Simple-to-use web page UI for TV control and channel listings
- Works on most web browser devices using Wi-Fi connection
- TV's can be grouped based on location and controlled as a group or individually
- UI branding – basic skin can be recolored and company logo added

Customizable User Interface
allows admin to choose desired GUI color and add company branding

What's On Feature
displays currently playing TV channel listings and program information

TV Manager
Drag-and-drop channel icons onto desired TV and it will automatically tune to that channel. Select TVs individually or in group zones to easily power on/off, reboot, adjust volume and mute. Each TV has a unique ID#.

Mobile End User Web Page Interface

- Web page user interface works on Android® and iOS® web browsers provides easy access to the TVs channel audio

URL Access
Guest clicks on the URL and audio is Synched to selected TV Channel

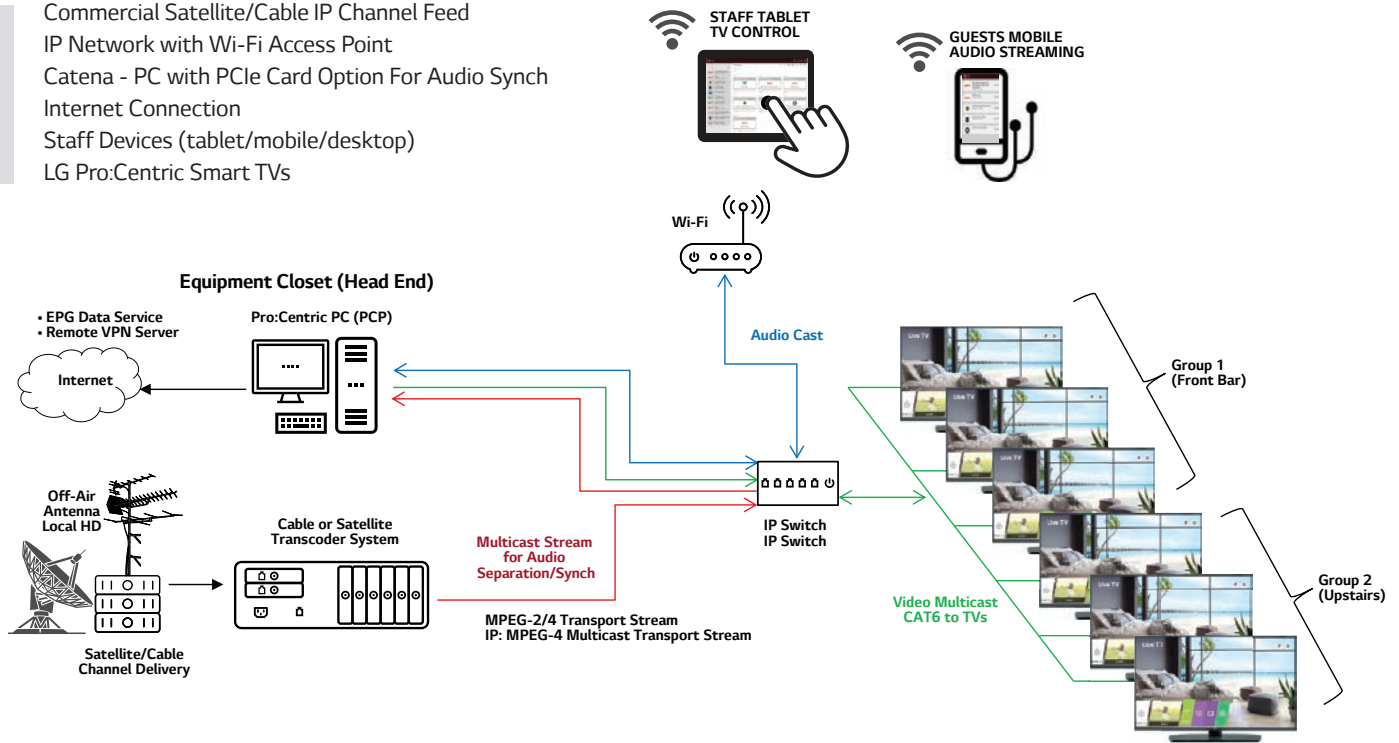
What's On
Displays programs currently running on TVs, simply select desired channel and audio for that channel is automatically tuned.

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System Architecture Requirements

- Commercial Satellite/Cable IP Channel Feed
- IP Network with Wi-Fi Access Point
- Catena - PC with PCIe Card Option For Audio Synch
- Internet Connection
- Staff Devices (tablet/mobile/desktop)
- LG Pro:Centric Smart TVs



NOTE: UI images are for illustrative purposes only, may differ on actual products.

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