



ZeeVee Guide

PLAYER AND ELECTRONIC PROGRAM GUIDE

User Manual

Updated February 2021

zeevee Signal Intelligence	2:00PM	2:30PM	3:00PM	3:30PM	4:00PM
3 NICJR	...	Max & Ruby	Cleo & Cuquin	Hey Duggee	Wallykazam!
4 BBCA	Star Trek: Voyager	Star Trek: Voyager	Star Trek: Voyager	Star Trek: Voyager	Star Trek: Voyager
5 ZeeVee1	Norway	Norway	Norway	Norway	Norway
6 ZeeVee2	Jazz	Jazz	Jazz	Jazz	Jazz

About ZeeVee:

ZeeVee is the leading manufacturer of high-quality encoder/modulator/decoder products for video distribution over any type of transmission media; be it RF coax, fiber, or copper ethernet.

Established in 2007, ZeeVee has been manufacturing industry-leading products while operating the company responsibly in compliance with the strictest levels of regulatory and environmental requirements. The standards by which we govern our corporate conduct are far higher than that required by law.

Our mission is to completely fulfill the toughest customer application requirements with the highest quality products we can produce. After the sale, we strive to support the customer with award-winning support and service. Our goal is that no customer shall be ever be dissatisfied. It is both our mission and our passion.

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Product Description

An Electronic Program Guide (EPG) presents information about the available programs without requiring that the consumer browse or “surf” through all the offered content to make a selection.

A minimal system consists of:

Video Sources
 Encoder devices (HLS or RF)
 Browser enabled device (Tablet, Laptop, PC etc..)
 Internet access

ZeeVee Guide Part Numbers

The following part numbers are associated with the ZeeVee Guide.

Product Name	Part Number	Description
ZyPerMX Player	ZMXPLA	ZyPerMX Player is a cloud-based player that allows for HLS streams to be viewed via a web browser. Works with ZeeVee AV over IP products including ZyPerMX-2, ZyPerMX-4, or HdBridge3000 with 3KHVM4i Media Module Blade.
ZyPerMX Player with Electronic Program Guide IP-75	ZMXPLAEPG-IP-75	ZyPerMX Player with Electronic Program Guide IP-75 is a cloud-based player that allows for HLS streams to be viewed via a web browser and is coupled with television program guide information with support for up to 75 channels. Works with ZeeVee AV over IP products including ZyPerMX-2, ZyPerMX-4, or HdBridge3000 with 3KHVM4i Media Module Blade.
ZyPerMX Player with Electronic Program Guide IP-1 (Additional Channel)	ZMXPLAEPG-IP-1	ZyPerMX Player with Electronic Program Guide IP-1 (Additional Channel) is an annual service that provides television program guide information for each channel above the 75 channels provided by the required ZMXPLAEPG-IP-75
ZeeVee Electronic Program Guide RF-75 (Software only)	ZVEPG-RF-75	ZeeVee Electronic Program Guide RF-75 is an annual software/service that delivers television program guide information with support for up to 75 channels to a ZeeVee RF Modulator for distribution over coax. ZeeVee EPG software must be installed on a computer with Internet connectivity to access program guide information. Cables and ZeeVee RF Modulator hardware (with HDMI Input) not included.

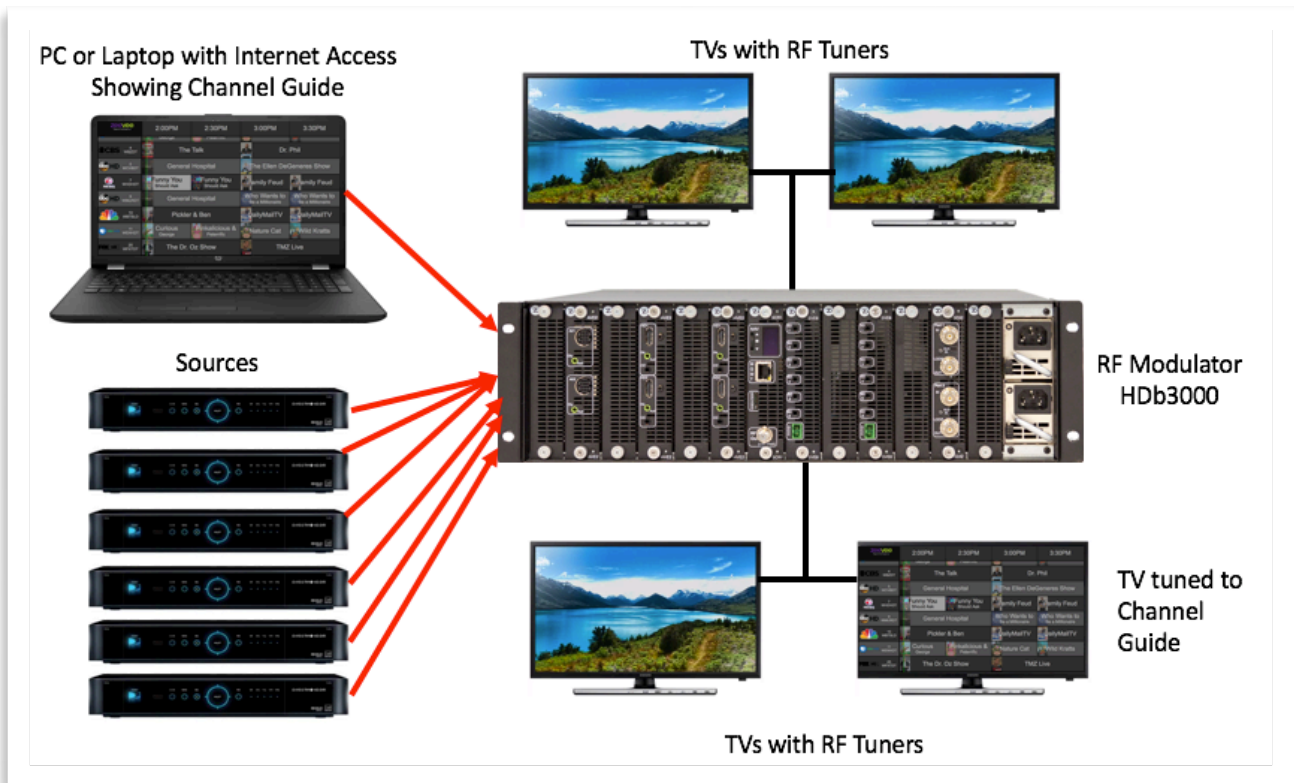
Product Name	Part Number	Description
ZeeVee Electronic Program Guide RF-75	ZVGD-RFS-1	“ZeeVee Electronic Program Guide RF-75 comes with ZeeVee Guide software preinstalled on a small form factor computer that delivers television program guide information to a ZeeVee RF Modulator for distribution over coax. It includes one year of ZeeVee EPG with support up to 75 channels. ZeeVee EPG hardware requires Internet connectivity to access program guide information. Cables and ZeeVee RF Modulator hardware (with HDMI Input) not included.
ZeeVee Electronic Program Guide RF-1 (Additional Channel)	ZVEPG-RF-1	“ZeeVee Electronic Program Guide RF-1(Additional Channel)” is an annual service that provides television program guide information for each channel above the 75 channels provided by the required ZVEPG-RF-75 or ZVGD-RFS-1

RF System Highlights

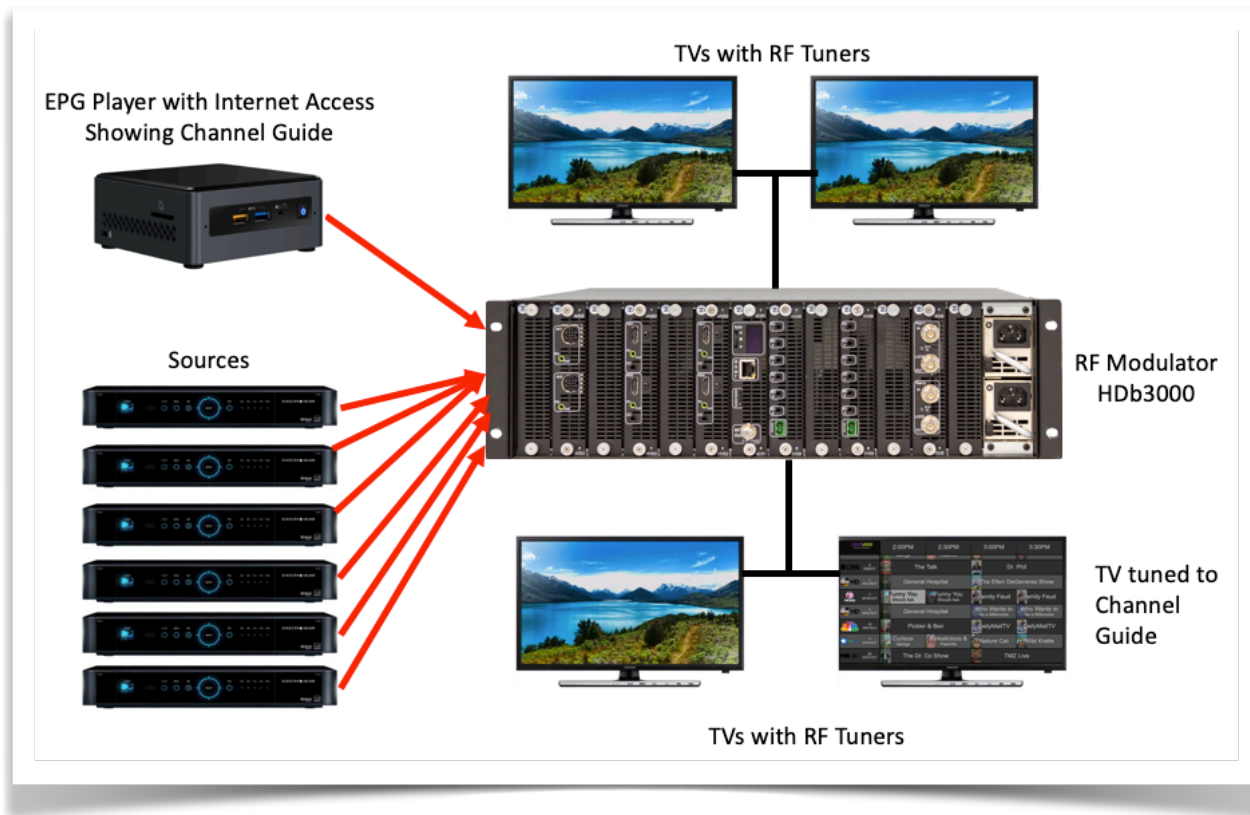
The ZeeVee Guide in an RF system will provide a scrolling list of all available channels showing current and future programs for approximately the next 3 hours. The list will scroll from lowest numbered channel to highest numbered channel and then rollover/repeat.

The ZeeVee Guide itself can be viewed on a browser such as Chrome. The output from the laptop/PC running the browser can be fed back into the RF distribution network to make the Channel Guide available as a dedicated channel for all users.

See diagram below: (Customer provided Laptop or PC)



See diagram below: (Using ZeeVee provided EPG Player hardware)



RF Channel Guide example shown below:

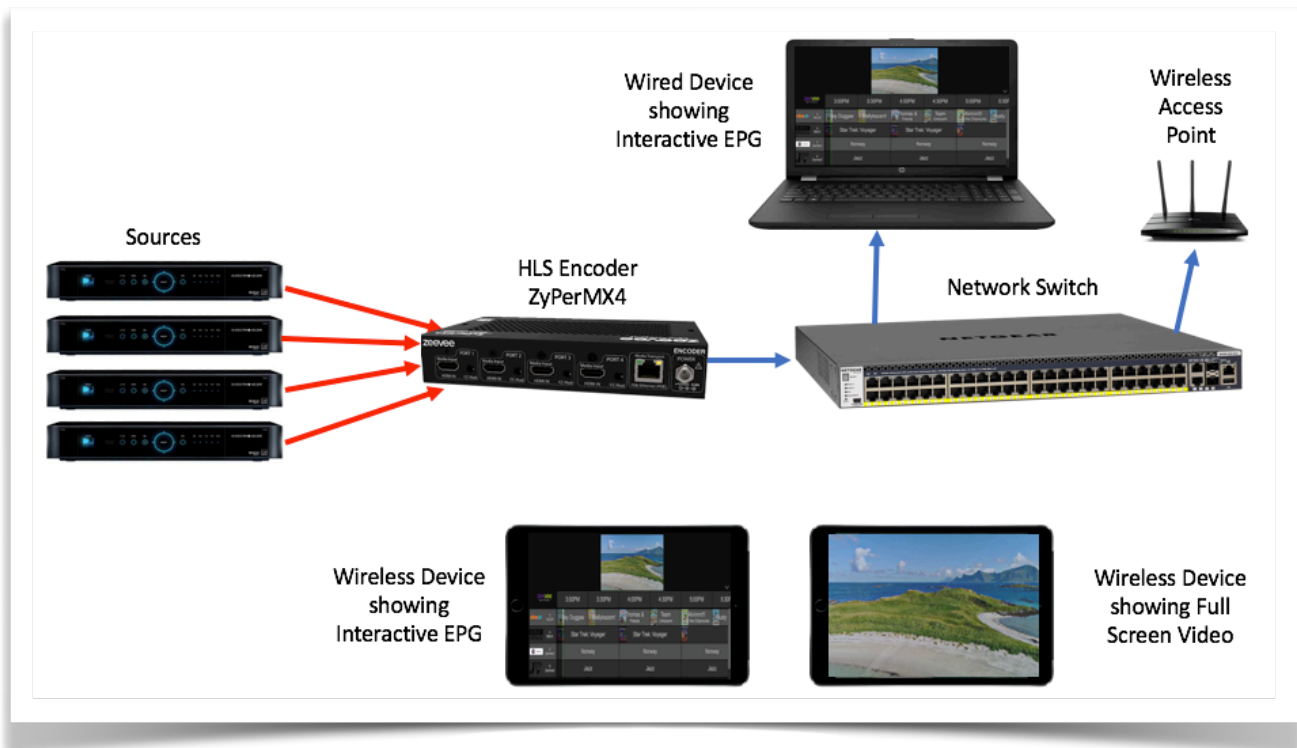
zeevee Signal Intelligence		2:00PM	2:30PM	3:00PM	3:30PM
		George	Peter	Nature Cat	Nature Cat
CBS 4 WBZDT		The Talk		Dr. Phil	
abc HD 5 WCVBDT		General Hospital		The Ellen DeGeneres Show	
7 NEWS 7 WHDHDT		Funny You Should Ask	Funny You Should Ask	Family Feud	Family Feud
abc HD 9 WMURDT		General Hospital		Who Wants to Be a Millionaire	Who Wants to Be a Millionaire
NBC 10 WBTS LD		Pickler & Ben		DailyMailTV	DailyMailTV
PBS HD 11 WENHDT		Curious George	Pinkalicious & Peterific	Nature Cat	Wild Kratts
FOX HD 25 WFXTDT		The Dr. Oz Show		TMZ Live	

IP System Highlights

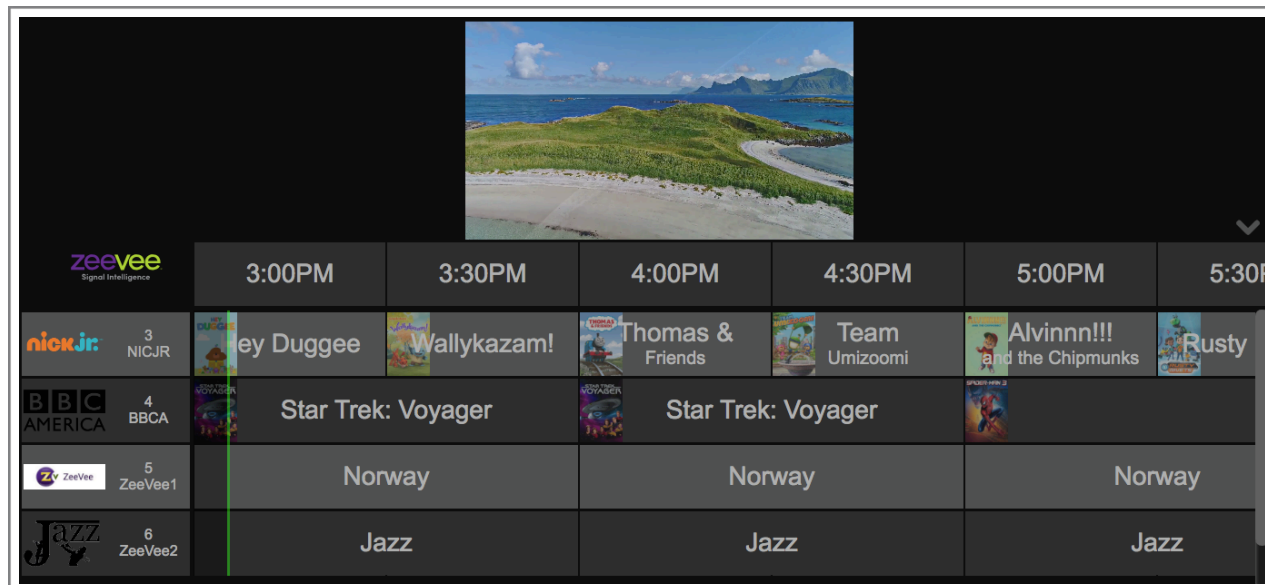
The EPG in an IP system (**HLS streams only**) will provide a list of all available channels showing current and future programs for approximately the next 3 hours. The list can be manually scrolled from lowest numbered channel to highest numbered channel.

At the top center of the screen is a video preview window. The EPG in this mode is fully interactive. Clicking on any channel will result in that channels video/audio being playing in the preview window. The preview window can be double clicked to show the video full screen. (Hiding the EPG)

IP System Diagram shown below:



Close up of Interactive EPG shown below:>



		3:00PM	3:30PM	4:00PM	4:30PM	5:00PM	5:30PM
zeevee Signal Intelligence							
nick Jr. 3 NICJR	Hey Duggee	Wallykazam!	Thomas & Friends	Team Umizoomi	Alvin!!! and the Chipmunks	Rusty	
BBC AMERICA 4 BBCA	Star Trek: Voyager	Star Trek: Voyager	Star Trek: Voyager	Star Trek: Voyager	Star Trek: Voyager	Star Trek: Voyager	
ZV ZeeVee 5 ZeeVee1	Norway	Norway	Norway	Norway	Norway	Norway	
Jazz 6 ZeeVee2	Jazz	Jazz	Jazz	Jazz	Jazz	Jazz	

ZeeVee Guide Channel Configuration

The EPG service is hosted on a server in the cloud.

The EPG data comes from a 3rd party service provider.

There are two parts to the EPG service: Channel Configuration and EPG display. Both components are accessed through a web browser.

The channel configuration interface is used by integrators to enable a unique EPG display for each of their customers. The process allows a user to select from the full channel lineup and local channels based on the users postal code. In addition, the integrator may configure site-local channels, such as for digital signage. From that channel list, the integrator selects the subset of channels for each customer and assigns each a local, rebroadcast channel number.

The distributor/integrator is provided a unique EPG ID which is used to configure the channel lineup and this EPG ID is then provided to the end customer. The distributor/integrator must provide ZeeVee the following information before being provided with the EPG ID.

End Customer Name

End Customer Contact information: Name, Phone, Email

End Customer Address including postal code

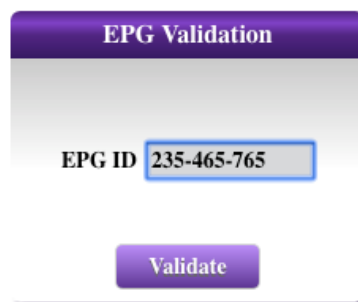
End Customer Content Provider. (Satellite provider, Cable provider etc.. Up to 3)

Editing the Channel Lineup

The Distributor or Integrator is responsible for setting up the EPG Lineup.

This is done from a browser by navigating to the following location and entering in the 9-digit EPG ID provided by ZeeVee. (Must include dashes)

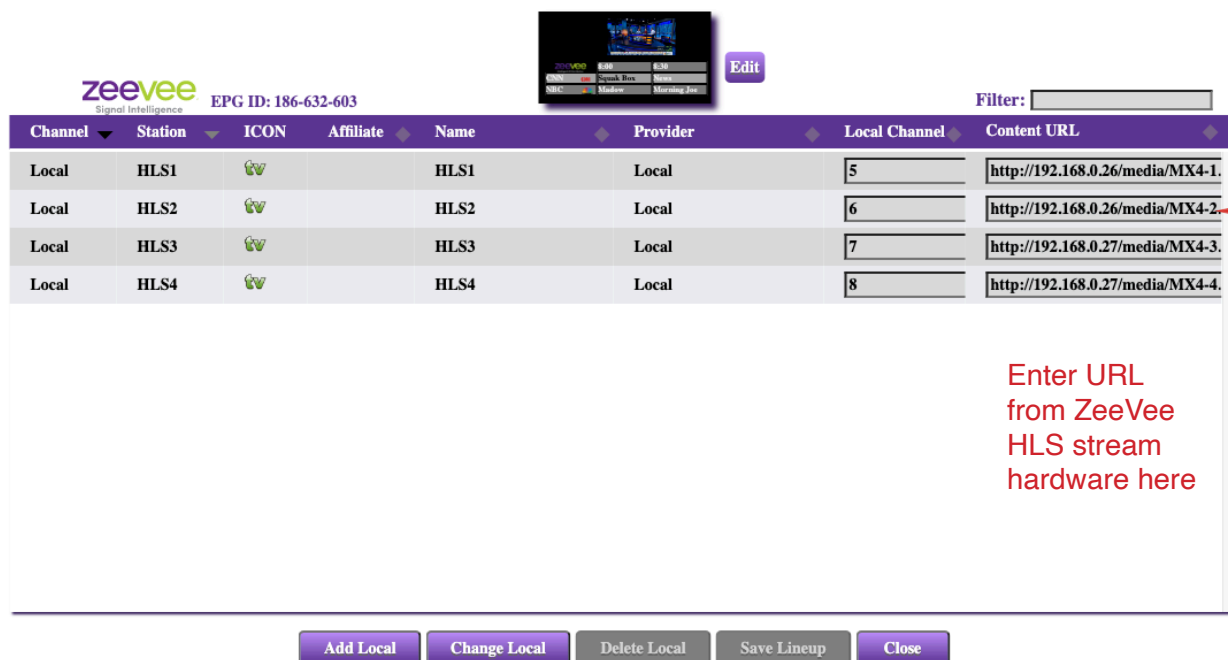
<https://epglineup.zeevee.com/zvepgprov.html>






 A screenshot of the EPG Validation form. It has a purple header with the text "EPG Validation". Below the header, there is a label "EPG ID" followed by a text input field containing "235-465-765". Below the input field is a purple button labeled "Validate".

This will take the Distributor/Integrator into the EPG configuration screen where they can select desired channels, add Content URL if IP streaming and edit the look/feel of the EPG guide itself.


Below is image for adding IP channels.

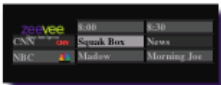
Example URL for HLS stream: <http://192.168.0.26/media/MX4-1.m3u8>


 A screenshot of the EPG Configuration screen. At the top left is the ZeeVee logo and "Signal Intelligence". To its right is "EPG ID: 186-632-603". Above the table is a small video player showing a ZeeVee logo and a "Edit" button. To the right of the video player is a "Filter:" label and an empty input field. The main part of the screen is a table with the following columns: Channel, Station, ICON, Affiliate, Name, Provider, Local Channel, and Content URL. The table contains four rows of data for Local channels HLS1 through HLS4. A red arrow points to the Content URL cell for HLS2. Below the table is a large text area with the instruction "Enter URL from ZeeVee HLS stream hardware here". At the bottom of the screen are five buttons: "Add Local", "Change Local", "Delete Local", "Save Lineup", and "Close".

Channel	Station	ICON	Affiliate	Name	Provider	Local Channel	Content URL
Local	HLS1			HLS1	Local	5	http://192.168.0.26/media/MX4-1.m3u8
Local	HLS2			HLS2	Local	6	http://192.168.0.26/media/MX4-2.m3u8
Local	HLS3			HLS3	Local	7	http://192.168.0.27/media/MX4-3.m3u8
Local	HLS4			HLS4	Local	8	http://192.168.0.27/media/MX4-4.m3u8













Below is image for adding RF channels.


 EPG ID: 083-399-067



Edit

Filter:

Channel ▼	Station ▼	ICON	Affiliate ◆	Name	Provider ◆	Local Channel ◆
1	WINS			WINS	DIRECTV - Satellite	<input type="text"/>
70	QVC			QVC	DIRECTV - Satellite	48
70	QVCHD		QVC	QVC HD	DIRECTV - Satellite	<input type="text"/>
71	AUD			Audience Channel	DIRECTV - Satellite	<input type="text"/>
71	AUDHD			Audience Channel HD	DIRECTV - Satellite	<input type="text"/>
72	JTV			Jewelry Television	DIRECTV - Satellite	<input type="text"/>
73	EVINE			EVINE Live	DIRECTV - Satellite	50
74	DT309			SHOPnow	DIRECTV - Satellite	<input type="text"/>
75	SHOPLC			Shop LC	DIRECTV - Satellite	51
76	QVC2		QVC	QVC2	DIRECTV - Satellite	<input type="text"/>
77	SALE			SALE: great prices on...	DIRECTV - Satellite	<input type="text"/>
78	DT203			LOOK no farther for ...	DIRECTV - Satellite	<input type="text"/>

Add Local
Change Local
Delete Local
Save Lineup
Close

Lineup Table

The lineup table allows the integrator select which channels are included in the EPG display.

The ability to add a local channel (digital signage of some sort).

The table can be sorted on any of the columns. You may also filter based on an arbitrary string that appears in the Station, Affiliate or Name columns.

Adding a channel to the lineup: Just enter a number in the local channel for the desired channel. No ordering of numbers is required. The EPG display will always display in Local Channel order. (The channel will typically relate to the channel number or program number listed in Maestro)

IP Interactive EPG: Just add a “content URL” for each channel. It must be a valid, accessible HLS source file (m3u8). If using the ZeeVee ZyPerMX2/4 products; this URL information can be found on the IP Streaming tab within Maestro. (**Note:** The “content URL” field is not present in RF EPG installs)

Delete a channel from the lineup: Just delete the local channel number. It will become an empty entry.

You must click “Save Lineup” to have you changes take effect. They will take effect on any active EPG display within a few seconds.

Note: If there are a lot of channels, it can take a while to save.

Adding a local channel

Click on add “Add Local”. This will bring up a dialog box where you can enter the “Station”, “Name” and optional Icon File.

The “Station”, limited to 7 characters, shows up where it would be expected in the EPG display (like ABC, NBC). The name presently is used as the “program” for the channel and is repeated for every hour block in the EPG display.

The optional icon file can be a gif, jpeg or png file less than 50,000 bytes. The best is a png file with alpha channel for transparency. Clicking on the “Icon File” text box will bring up a file browser to select the file.

Don't forget! Once you add the channel, you must assign it a Local Channel for it to appear in the EPG display.

Editing the EPG Look and Feel

The EPG can be modified in the following ways:

1. A custom image icon can be added to the top left area of the EPG display. (Maximum 50KB file size)
2. The background color of the EPG display can be selected
3. The color of the even number rows can be selected
4. The color of the odd number rows can be selected
5. The color of the font used can be selected



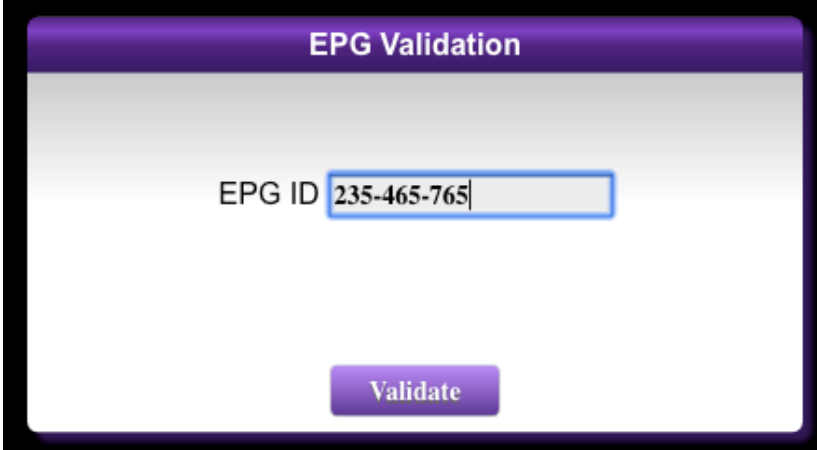
Just click on the desired option and a color selection box will appear. As changes are made, the small representation of the EPG on the screen will reflect the changes. Save all changes when completed.

Using the EPG

The end customer should be provided their unique EPG ID.

From a browser navigate to the following location and enter in the 9-digit EPG ID including all dashes.

<http://epg.zeevee.com/zvepg.html>

A screenshot of a web browser window displaying the "EPG Validation" form. The form has a purple header bar with the text "EPG Validation" in white. Below the header, the text "EPG ID" is followed by a text input field containing the value "235-465-765". At the bottom of the form is a purple button with the text "Validate" in white.

Note: Once validated, the display will not require another validation unless browser cookies are erased.

Alternate EPG Validation

The user can also embed the EPG ID into the browser address line:

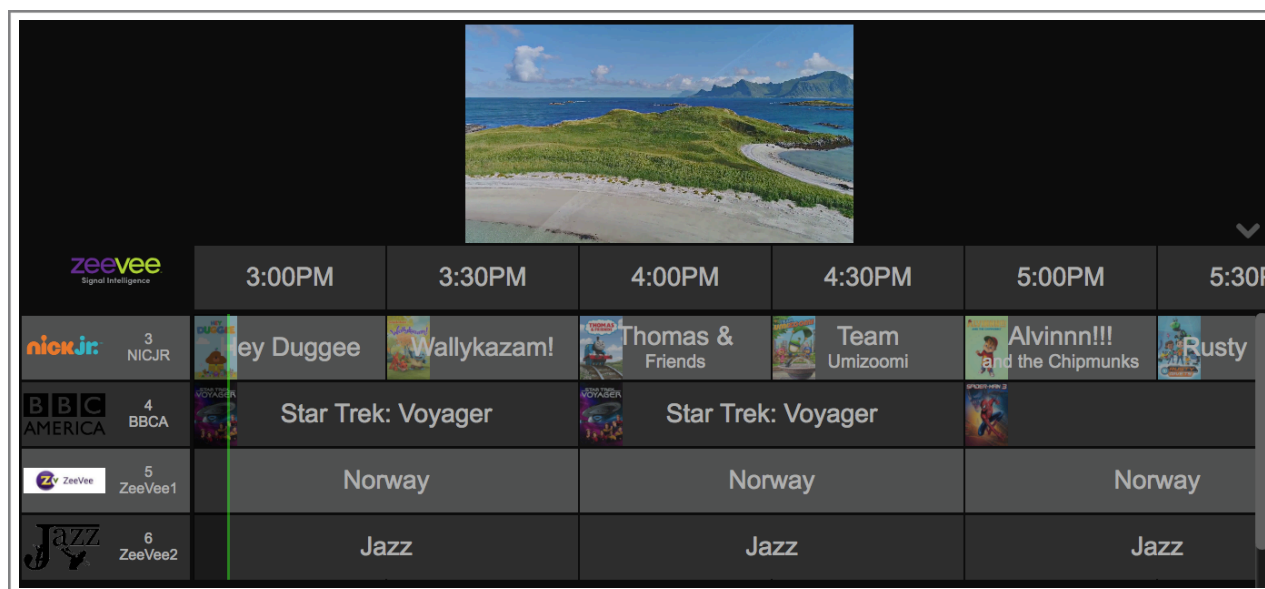
Example:

<http://epg.zeevee.com/zvepg.html?epgid=235-465-765>

If the example above is used, then the EPG validation screen will not appear. This method may be useful in cases where the EPG address is saved as a browser bookmark.

The ZeeVee Guide display characteristics:

- You can enter “full screen” mode in the browser to fill the entire screen
- Resizing the browser window will cause the display to automatically resize to fit
- If the lineup does not fit within the display, it will scroll vertically.
- Any provisioning changes will “restart” and adjust the display within a few seconds.



Note that the ZeeVee Guide - IP is interactive and has a preview window located in the top center of the screen. The ZeeVee Guide - RF is not interactive. It does not have a preview window and will simply scroll through all available channels.

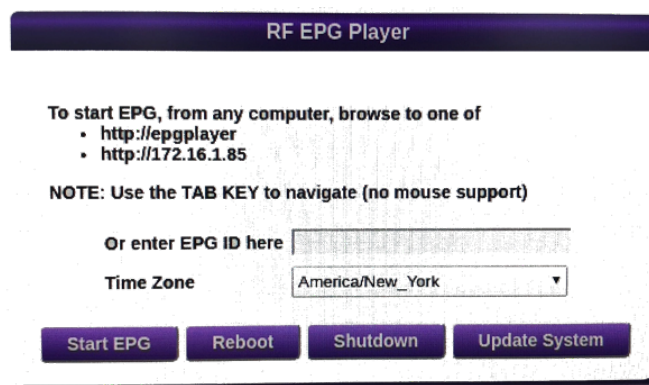
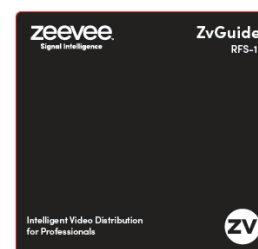
ZeeVee Guide Hardware (RFS-1)

ZeeVee offers an **optional** small form factor computer that provides access and distribution of programing guide information for RF systems. Note this is not required for either RF or IP installations. Setup of this hardware is detailed below:



The unit must be plugged into a **network with Internet access** and also connected to a display via an HDMI cable **prior** to applying power for the first time. It is desired that that network has a DHCP server that will automatically assign the unit an IP Address.

Once the unit has booted; an image similar to the following will appear on the connected display.



This screen will provide the IP Address of the unit assuming one has been assigned by a DHCP server. In the example above the IP address is 172.16.1.85

From any other computer on the network navigate to this location from a browser. You will get a similar screen as shown here. Enter in the EPG ID as provided by ZeeVee and the appropriate Time Zone. Now click "Start EPG"



On the display connected to the unit you should see the EPG information become available and start scrolling on the screen. Disconnect the unit from the display and connect it to an available input on a ZeeVee modulator. (ZvPro810 for example). The EPG should be assigned an RF channel so that it can be tuned to just like any other available channel.

Updating the ZeeVee Guide Hardware

From time to time, it may be necessary to perform a system update on the ZeeVee Guide Hardware. If this is needed you will receive an “update.epg” file from ZeeVee for this purpose. Copy this file onto a computer/laptop and then navigate to the EPG via the IP address. In the example above the IP Address was 172.16.1.85

Click on the “Update System” button. You can now navigate to the provided update.epg file. Select this file. The system will automatically update and reboot. There should be no need to re-enter the EPG-ID after this reboot occurs.



The screenshot displays the 'RF EPG Player' web interface. It features a purple header bar with the title 'RF EPG Player'. Below the header, there are two input fields: 'EPG ID' with the value '235-465-765' and 'Time Zone' with the value 'America/New_York'. A red status message 'EPG Started' is displayed in the center. At the bottom, there are four purple buttons: 'Start EPG', 'Reboot', 'Shutdown', and 'Update System'.

Appendix

Hardware Requirements

The following should be considered the minimum requirements for running the ZeeVee EPG.

CPU	Intel Celeron at 1.0 GHz or greater
Memory	4 GB or greater
I/O	HDMI 1.4 or HDMI 2.0 (A low resolution is recommended. Higher resolutions result in more and smaller information displayed on the screen)
Operating System	Windows 7, Windows 8, Windows 10, MacOS version 10.11 or newer, iOS version 9 or newer
Browser	Chrome, Firefox, Safari. (Recommend currently available versions)

Note: User should select a hardware platform designed for 24/7 operation the meets the minimum requirements shown above.

Important Notes

1. The ZeeVee Guide/EPG system is not compatible with AC3 Audio format. Please configure the ZyPerMX2/ZyPerMX4 or other streaming hardware to use the MP2 audio standard

Disclaimers

ZeeVee has striven to insure that this document is accurate and represents the described products fully. Although, ZeeVee assumes no responsibility for errors found, should any be found, please contact support@zeevee.com and corrections will be issued as appropriate.

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