

Android Player Project

(for the xxth customer)

www.ezhomotech.com

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1. Introduction

Android Player is an easy-to-use streaming player on android device with **MAC Address protection** that can let you watch Live / DVR Channels and Video on Demand from EZserver.

Features:

- Live Channels
- DVR Channels
- Video on Demand



2. Software Requirement

Items	Version
EZhomotech EZserver	Release 1.2
Google Android	5.1 +

3. Hardware Requirement

Items	Specification
Processor	Above 1.0GHz
Memory	At least 1GB for 200 channels
Network Interface	802.11 a/b/g/n
Disk Space	248K bytes

4. Software Specification

General Function
<ul style="list-style-type: none">• OS: above Android 5.x
<ul style="list-style-type: none">• HTTP Streaming Protocol
<ul style="list-style-type: none">• MAC Address protection
<ul style="list-style-type: none">• Support Smart TV, IP STB, Tablet PC, Mobile Phone
<ul style="list-style-type: none">• Support Touch Screen Menu
<ul style="list-style-type: none">• Support Remote Controller
<ul style="list-style-type: none">• Support Video Server: EZserver
<ul style="list-style-type: none">• Automatic App Update
<ul style="list-style-type: none">• Automatic Start
IPTV/OTT
<ul style="list-style-type: none">• Video Streaming From EZserver
<ul style="list-style-type: none">• Channel Selection
<ul style="list-style-type: none">• DVR Channels for play, pause, forward/backward seek
<ul style="list-style-type: none">• Video Format: MPEG2/H264 Transport Stream, Adobe FLV
<ul style="list-style-type: none">• My Favorite
<ul style="list-style-type: none">• Time expired checking
<ul style="list-style-type: none">• Automatic Channel Update
Video On Demand
<ul style="list-style-type: none">• Video Format : MP4, Adobe FLV
<ul style="list-style-type: none">• Playback : Pause, Play, Resume, Forward/Backward Seek
<ul style="list-style-type: none">• Menu Bar for Movie Category
<ul style="list-style-type: none">• Automatic and Real-Time Movie Category Update
<ul style="list-style-type: none">• Easy-to-Use Playback Menu
Setting
<ul style="list-style-type: none">• User Name and Password
<ul style="list-style-type: none">• EZserver Domain Name / IP
<ul style="list-style-type: none">• Port No.
<ul style="list-style-type: none">• Setting Protection by Password

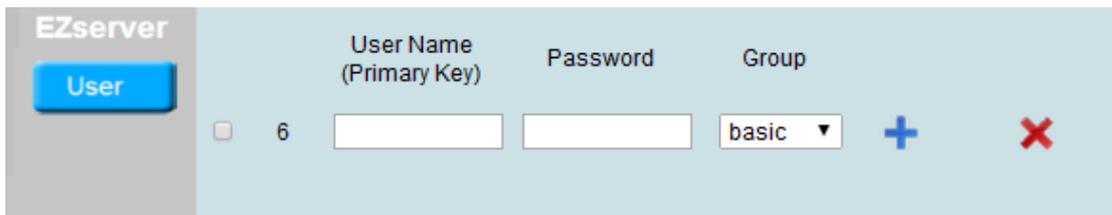
5. Create New User

- Click User button and click + button.



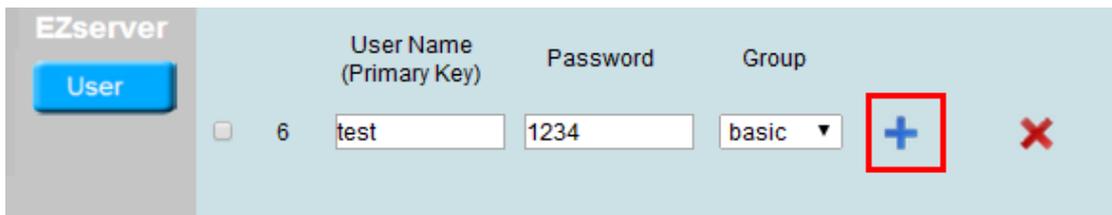
The screenshot shows the EZserver interface with a 'User' button on the left. The main area has two columns: 'MAC ID' and 'Reseller'. Below these columns are two empty text input fields. A blue '+' button is highlighted with a red box, indicating the next step in the process.

- Panel will show the empty user fields



The screenshot shows the EZserver interface with the 'User' button. The main area has four columns: 'User Name (Primary Key)', 'Password', and 'Group'. Below these columns are three text input fields and a dropdown menu. The first field contains '6', the second is empty, and the third contains 'basic'. A blue '+' button and a red 'X' button are visible to the right of the fields.

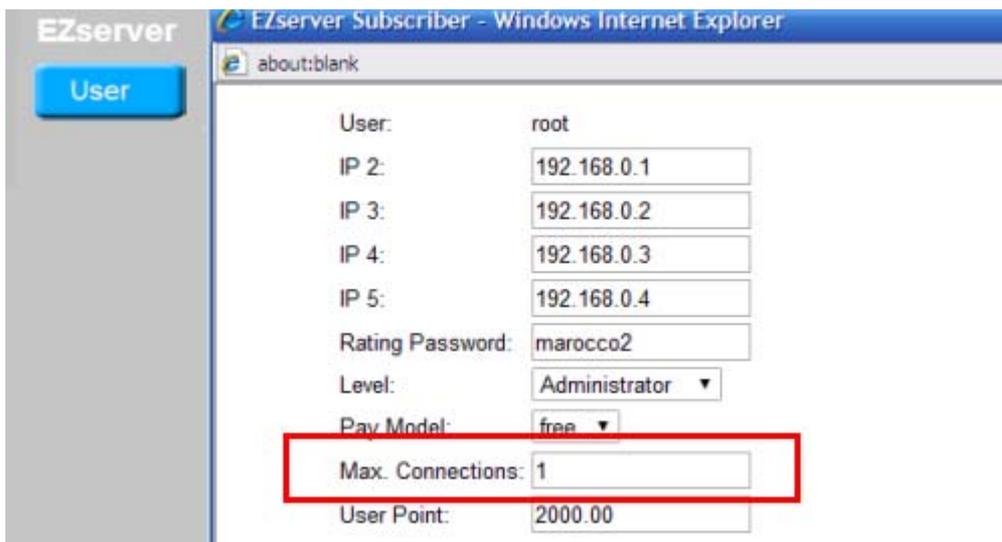
- Input user id, password and etc., then click + button to save it



The screenshot shows the EZserver interface with the 'User' button. The main area has four columns: 'User Name (Primary Key)', 'Password', and 'Group'. Below these columns are three text input fields and a dropdown menu. The first field contains '6', the second contains 'test', and the third contains '1234'. The dropdown menu is set to 'basic'. A blue '+' button and a red 'X' button are visible to the right of the fields. The '+' button is highlighted with a red box.

6. User Max. Concurrent Connections

Administrator can click User button and select More icon to set user max. connections as below:



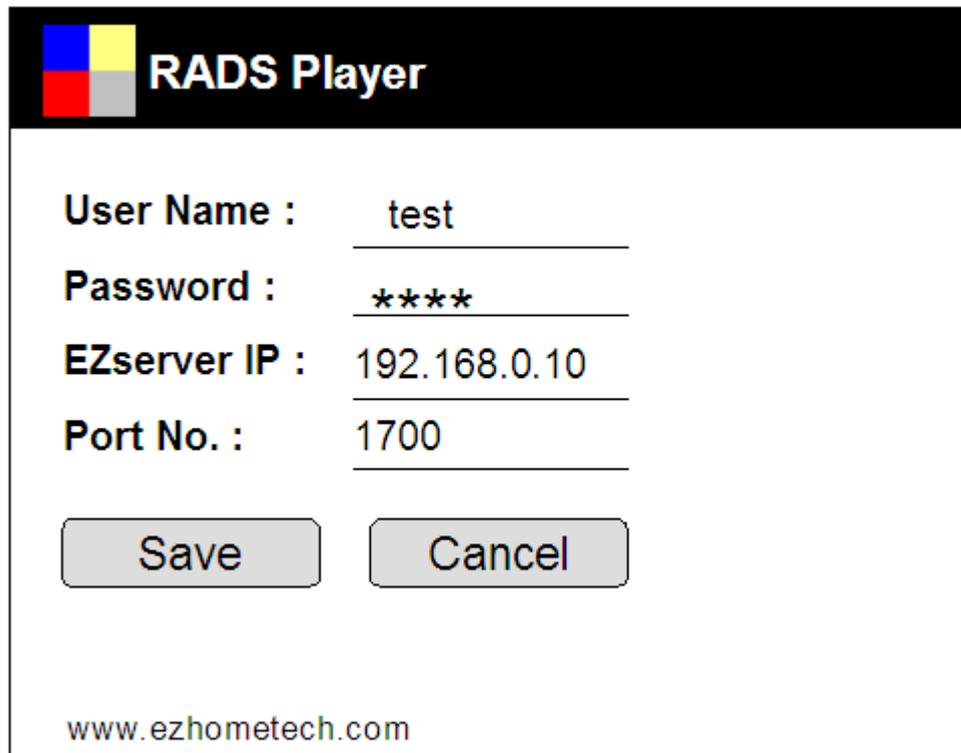
The screenshot shows a browser window titled 'EZserver Subscriber - Windows Internet Explorer'. The address bar shows 'about:blank'. The main content area displays a configuration form for a user. The form includes the following fields and values:

User:	root
IP 2:	192.168.0.1
IP 3:	192.168.0.2
IP 4:	192.168.0.3
IP 5:	192.168.0.4
Rating Password:	marocco2
Level:	Administrator
Pay Model:	free
Max. Connections:	1
User Point:	2000.00

The 'Max. Connections' field is highlighted with a red box.

7. Setting

When you start Android Player first time, you have to input EZserver Information into the Setting. The Setting includes User Name, Password, EZserver Domain Name / IP and Port No. as below:



The image shows a dialog box titled "RADS Player" with a logo consisting of four colored squares (blue, yellow, red, grey). The dialog contains four input fields with labels and values:

User Name :	test
Password :	****
EZserver IP :	192.168.0.10
Port No. :	1700

At the bottom of the dialog, there are two buttons: "Save" and "Cancel". Below the buttons, the website address "www.ezhometech.com" is displayed.

8. Main Menu

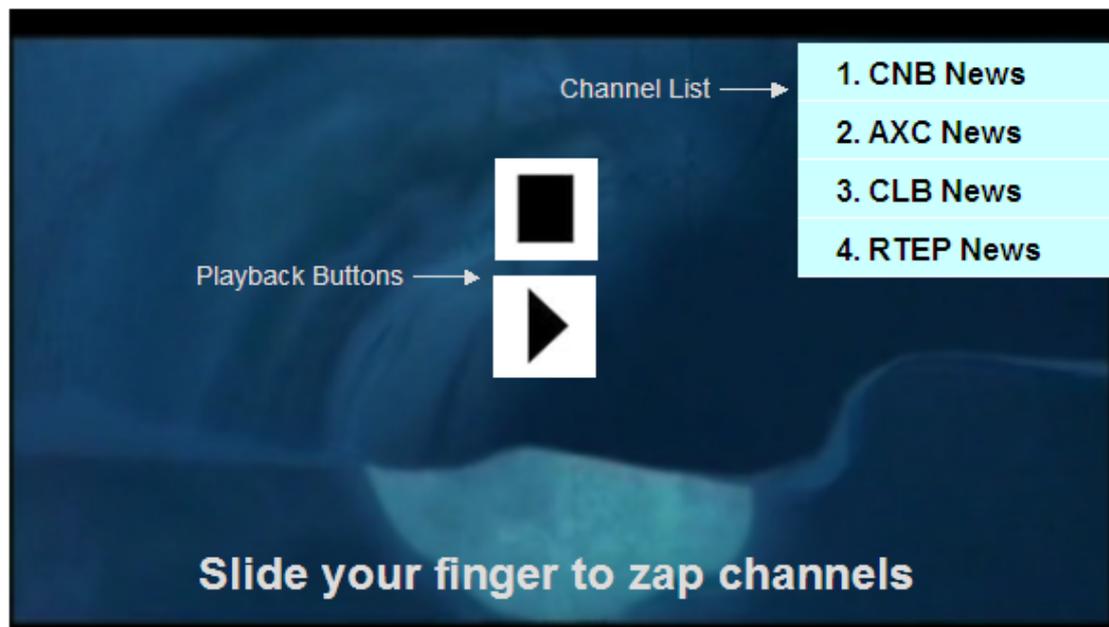
Android Player shows All CH, Channel Categories and Movie on Menu bar, you can switch categories to get movies or channels.



9. Live Channels

When you click a **live channel** icon to watch it, you can click any position of the screen to enable OSD menu for the **channel list** and **playback buttons**.

- For **channel list**, you can slide your finger to select one and click it to watch the selected channel.
- For **playback buttons**,
 - ◆ Click **play button** to disable the OSD menu
 - ◆ Click **stop button** to channel icon menu.
- For **channel zapping**, you can slide your finger from left-to-right or right-to-left to zap a channel.



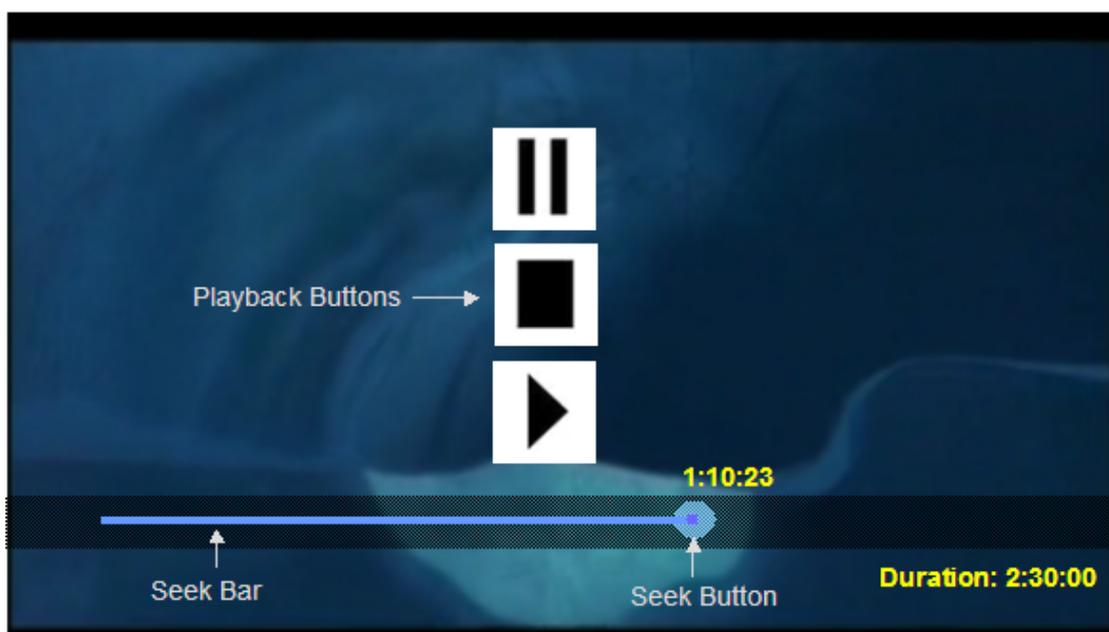
10. Video on Demand for Mobile

When you click **Movie** item in more menu, you can see movie categories in the top/more menu and movie icons on the screen.



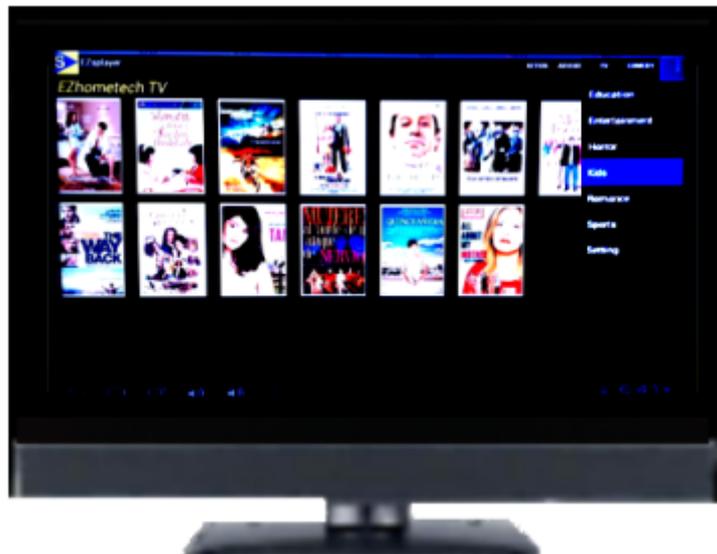
When you click a **movie** icon to watch it, you can click any position of the screen to enable OSD menu for the **seek bar** and **playback buttons**.

- For **playback buttons**,
 - ◆ Click **play button** to disable the OSD menu or resume the movie.
 - ◆ Click **stop button** to stop movie or **pause button** to pause movie.
- For **seek bar**, you can click drag the **seek button** to forward/backward movie.

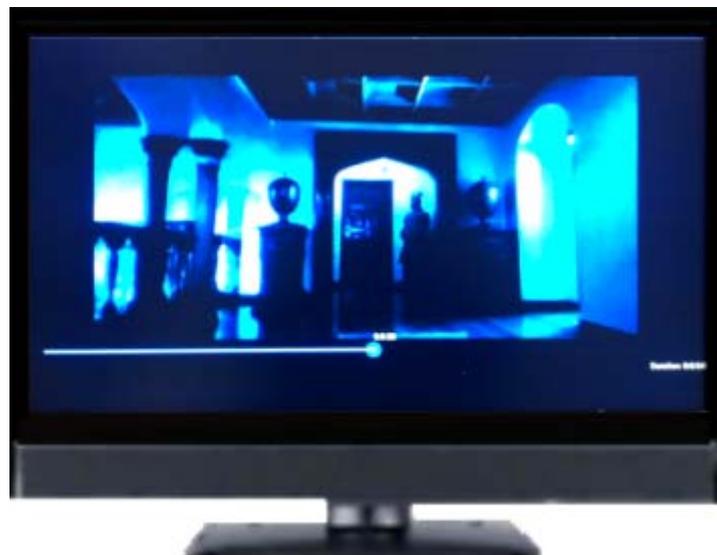


11. Video on Demand for STB with Remote Control

When you select a movie Category on the menu bar, Android player will show movies in the TV screen and you can watch a movie using a remote control.



When a movie is playing, you can press “OK” button to show the playback menu to pause, resume, even forward seek by “Right-Arrow” button “OK” button, backward seek by “Left-Arrow” button with “OK” button.

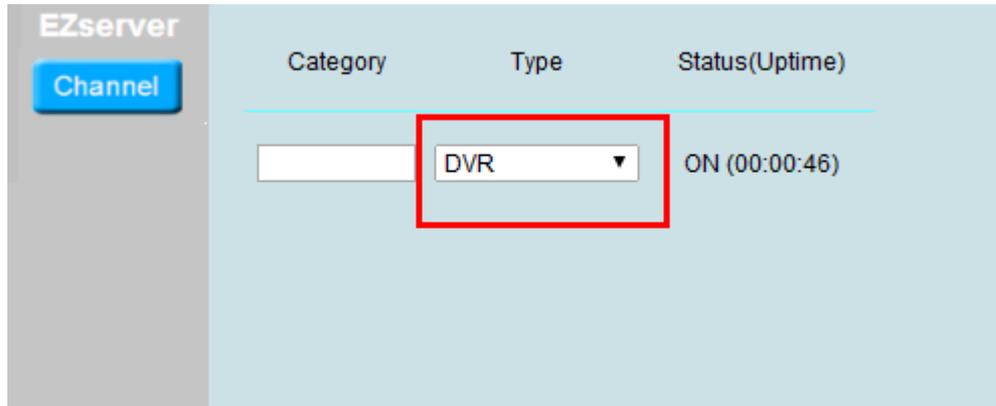


Key Event:

- “OK” Button: Pause/Resume, Play for Forward/Backward Seek
- “Right-Arrow” Button: Forward Seek
- “Left-Arrow” Button: Backward Seek
- “Back” or “Stop” Button: Back to VOD Menu

12. Create DVR Channel

Click Channel button and set Type to **DVR**, then click Save button.



The screenshot shows the EZserver interface. On the left, there is a sidebar with the text "EZserver" and a blue button labeled "Channel". The main area contains a table with the following structure:

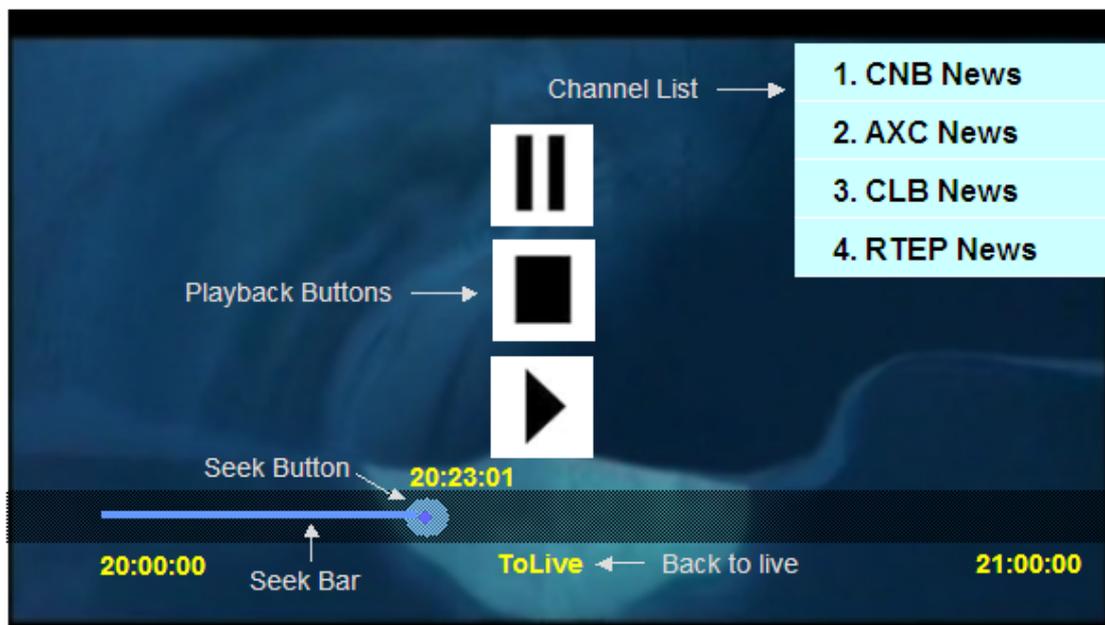
Category	Type	Status(Uptime)
<input type="text"/>	DVR ▼	ON (00:00:46)

The "Type" dropdown menu is highlighted with a red rectangular box.

13. DVR Channels for Mobile

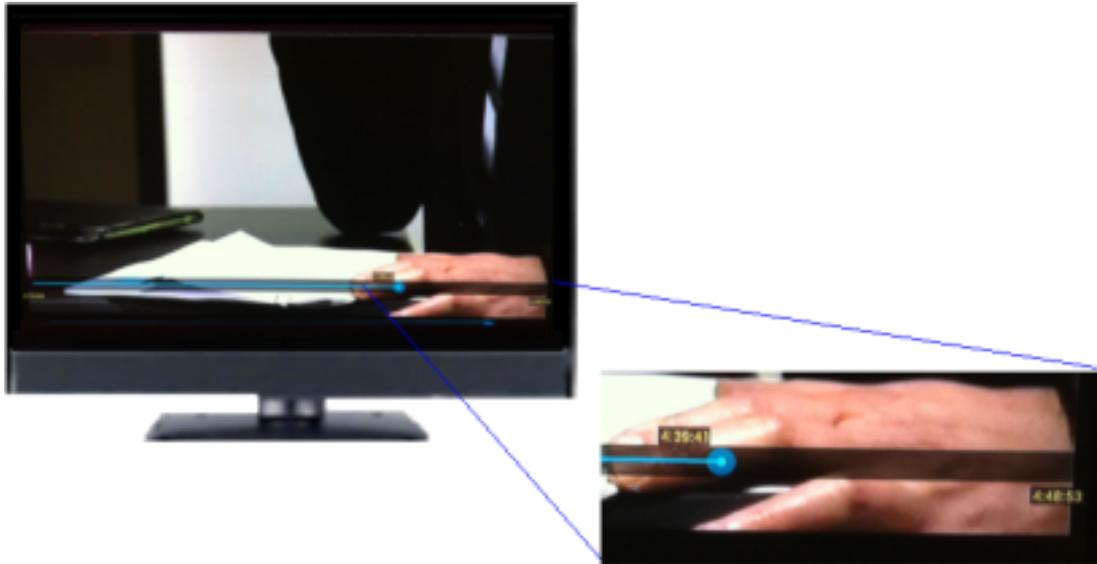
When you click a **dvr channel** icon to watch it, you can click any position of the screen to enable OSD menu for the **channel list**, **seek bar** and **playback buttons**.

- For **channel list**, you can slide your finger to select one and click it to watch the selected channel.
- For **playback buttons**,
 - ◆ Click **play button** to disable the OSD menu
 - ◆ Click **stop button** to channel icon menu.
 - ◆ Click **pause button** to pause the channel.
- For **seek bar**, you can click drag the **seek button** to forward/backward channel.
- For **channel zapping**, you can slide your finger from left-to-right or right-to-left to zap a channel.
- For **ToLive button**, you can watch the live channel back.



14. DVR Channels for STB with Remote Control

Connect Android STB with TV and use backward and forward buttons of a remote control for dvr function.



Speical Buttons for DVR:

- Right Arrow Button: Fast Backward
- Left Arrow Button: Fast Forward
- Up Arrow Button: Slow Backward
- Down Arrow Button: Slow Forward

15. MAC Address Protection

Android Player supports MAC Address mechanism with EZserver for Video Streaming Protection.

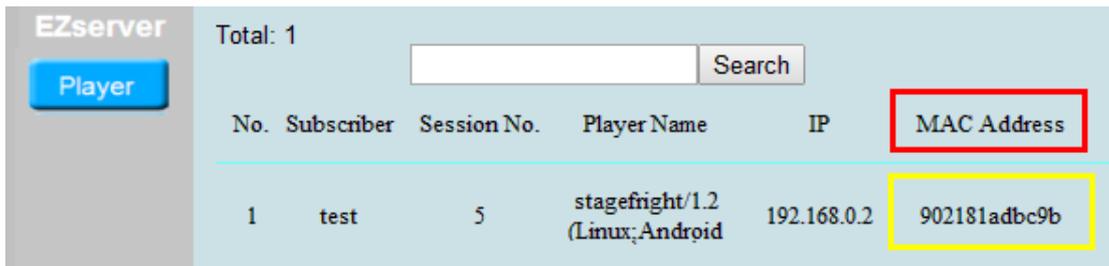
Administrator can define the player MAC address in MAC ID field of each user in User panel.



The screenshot shows the 'EZserver User' panel. It features a search bar and a table with columns: User no, User Name (Primary Key), Password, Group, IP, and MAC ID. The MAC ID column is highlighted with a red box. Two users are listed: 'root' with password '1234' and group 'golden', and 'test' with password '1234' and group 'basic'. The MAC ID for the 'test' user is '902181adbc9b', which is highlighted with a yellow box.

User no	User Name (Primary Key)	Password	Group	IP	MAC ID
1	root	1234	golden		
2	test	1234	basic		902181adbc9b

When the player connects EZserver, EZserver will check its MAC Address for the legal connection. If the player has correct MAC Address with its user name, EZserver will show its connection in Player panel with its MAC Address.



The screenshot shows the 'EZserver Player' panel. It features a search bar and a table with columns: No., Subscriber, Session No., Player Name, IP, and MAC Address. The MAC Address column is highlighted with a red box. One player is listed: 'test' with session number '5', player name 'stagefright/1.2 (Linux;Android)', and IP '192.168.0.2'. The MAC Address for this player is '902181adbc9b', which is highlighted with a yellow box.

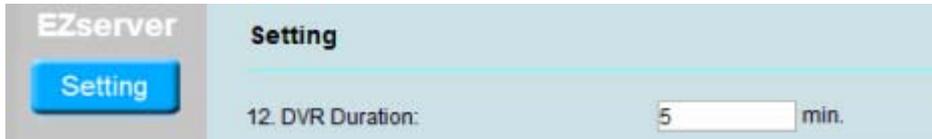
No.	Subscriber	Session No.	Player Name	IP	MAC Address
1	test	5	stagefright/1.2 (Linux;Android)	192.168.0.2	902181adbc9b

16. App Update

- Upload new apk (**radsplayer.apk**) into server folder: **ezserver_prof/apk/**
- Run App to update it automatically.

17. DVR Buffer Size

It is the duration for recording live video to do timeshift functions as pause, resume, backward and forward.



18. Channel Icon and Category Customization

Channel icons and categories are defined in the icon path and category field of each channel in the EZserver Panel



The screenshot shows the EZserver interface with a 'Channel' button. Below it, a table lists 7 channels. The 'Icon Path' and 'Category' columns are highlighted with a red box.

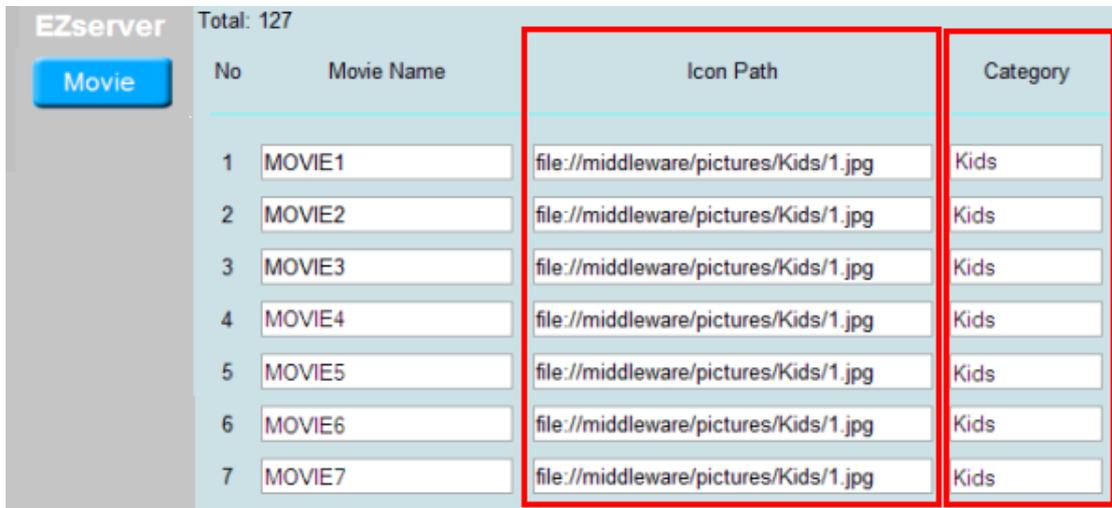
No.	Channel Name	Icon Path	Category
1	TV1	file://middleware/pictures/Sports/1.jp	English
2	TV2	file://middleware/pictures/Sports/2.jp	English
3	TV3	file://middleware/pictures/Sports/3.jp	English
4	TV4	file://middleware/pictures/Sports/4.jp	Germany
5	TV5	file://middleware/pictures/Sports/5.jp	Germany
6	TV6	file://middleware/pictures/Sports/6.jp	France
7	TV7	file://middleware/pictures/Sports/7.jp	France

The icon property is as below:

- Size: 242x350 pixels
- Image format: jpg
- File extension name: .jpg

19. Movie Icon and Category Customization

Movie icons and categories are defined in the icon path and category field of each movie in the EZserver Panel.



The screenshot shows the EZserver interface with a 'Movie' button on the left. The main area displays a table with 7 rows of movie data. The 'Icon Path' and 'Category' columns are highlighted with a red border. The table data is as follows:

No	Movie Name	Icon Path	Category
1	MOVIE1	file://middleware/pictures/Kids/1.jpg	Kids
2	MOVIE2	file://middleware/pictures/Kids/1.jpg	Kids
3	MOVIE3	file://middleware/pictures/Kids/1.jpg	Kids
4	MOVIE4	file://middleware/pictures/Kids/1.jpg	Kids
5	MOVIE5	file://middleware/pictures/Kids/1.jpg	Kids
6	MOVIE6	file://middleware/pictures/Kids/1.jpg	Kids
7	MOVIE7	file://middleware/pictures/Kids/1.jpg	Kids

The icon property is as below:

- Size: 242x350 pixels
- Image format: jpg
- File extension name: .jpg