



Zenty | Professional A/V Solution Provider

# User Manual <sup>[V1.0]</sup>



## 4K 30Hz 4-Port H.265 HDMI Video Encoder

ZT-452 | ZT-EN204X



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# Table of Contents

1. Web Interface .....	3
1.1 Web Interface Login .....	3
1.2 Status .....	3
2. Encoding Settings .....	4
3. Encoder Network Settings .....	5
4. Application .....	6
4.1 VLC Player .....	6
4.2 Multicast .....	7
4.3 NVR .....	9
5. Common Problems .....	10
6. Maintenance .....	11
7. Warranty .....	11
8. Mail-In Service .....	12
9. Limited Warranty Limits and Exclusions .....	12

# 1. Web Interface

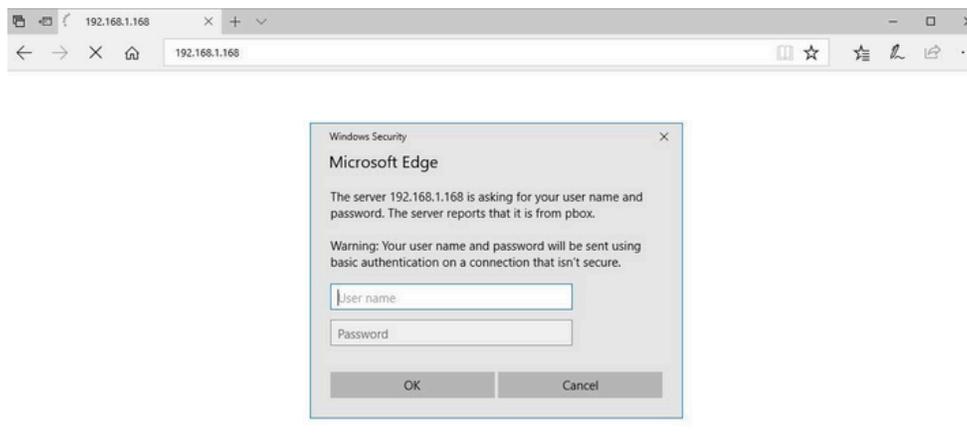
## 1.1 Web Interface Login

In the address bar, type in the default IP address of the encoder (**192.168.1.168**) and hit 'enter'. When you are prompted to enter login information, please enter the following credentials:

Username: **admin**

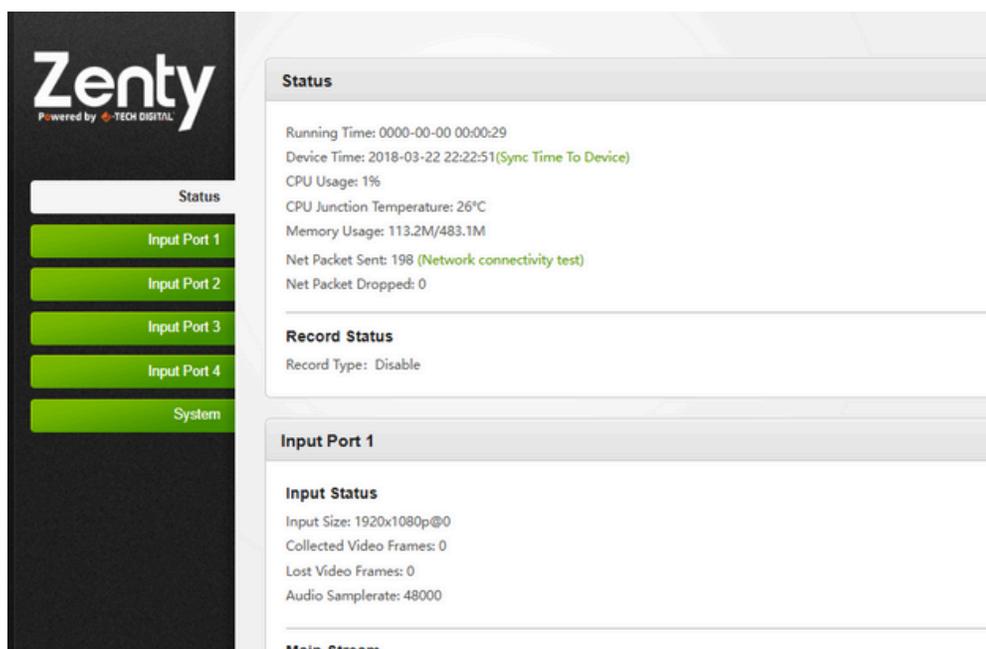
Password: **admin**

From here, you should now have access to the encoder's WEB GUI.



## 1.2 Status

Click on the status tab on the left side to check the encoders working and input status, such as CPU and memory usage, input port status etc.



## 2. Encoding Settings

The screenshot shows the Zenty web interface for configuring the 'Main stream' encoder settings. The sidebar on the left contains navigation options: Status, Input Port 1, Encoder, Main stream (selected), Substream1, Substream2, Substream3, OSD, Main stream, Substream1, Substream2, Substream3, LOGO upload, Video, Audio, GB28181, Input Port 2, Input Port 3, Input Port 4, and System. The main content area is titled 'Main stream' and contains the following settings:

- Encoding Type: H.264
- FPS: 30 (range: 5-60)
- GOP: 30 (range: 5-300)
- Bitrate(kbit): 3200 (range: 32-32000)
- Image Quality Range: Lower-Best
- Encoded size: same as the input
- H.264 Level: high profile
- Bitrate control: vbr
- TS URL: /0.ts (Enable)
- HLS TS URL: /0.m3u8 (Disable)
- HLS MP4 URL: /0\_mp4.m3u8 (Disable)
- MP4 URL: /0.mp4 (Enable)
- FLV URL: /0.flv (Enable)
- RTSP URL: /0 (Enable)
- RTMP URL: /0 (Disable)
- RTMP(S)/RTSP PUSH URL: rtmp://192.168.1.169/live/0 (Disable)
- Multicast IP: 238.0.0.1 (Disable)
- Multicast port: 1234 (range: 1-65535)
- Multicast SAP Name: GROUP0\_STREAM0
- SRT Listener Port: 9000 (Disable)
- SRT Caller URL: srt://192.168.1.169:9000 (Disable)
- SRT Encryption Password: 0123456789 (Disable)
- HLS PUSH URL: https://a.upload.youtube.com/http\_upload\_hls (Disable)

An 'Apply' button is located at the bottom of the settings area.

Your encoder setting options are the same for 'Main Stream' & all substreams. However, each stream must be configured as desired.

**Encode Type:** H.264 | H.265 | MJPG – Select your compression type

**FPS:** Frames Per Second – Set your stream FPS (5-60 fps)

**Bitrate (kbit):** Stream's Bitrate Setting (32 – 32000 kbps)

**Bitrate Control:** VBR (Variable Bit Rate) | CBR (Constant Bit Rate)

**TS URL:** Enable/Disable Transport Stream URL

**HLS URL:** Enable/Disable HTTP Live Stream URL

**FLV URL:** Enable/Disable HTTP-Flash Video Stream URL

**RTSP URL:** Enable/Disable Real Time Streaming Protocol URL

**RTMP URL:** Enable/Disable Real Time Messaging Protocol URL

**RTMP(S) / RTSP PUSH URL:** Enable/Disable Real Time Messaging/Streaming Protocol Push URL

**Multicast IP:** Enable/Disable & set the Multicast IP to be used

**Multicast Port:** Assign the multicast port to be used (1 – 65535)

**SRT URL:** Enable/Disable Secure Reliable Transport URL

**SRT PUSH URL:** Enable/Disable Secure Reliable Transport Push URL

**SRT Encryption Password:** Set password necessary to view SRT stream

### 3. Encoder Network Settings

In order for the encoder to operate correctly, the device needs to live on your existing network and have access to the internet. The best way to ensure that these two things happen is to assign your encoder a new static IP address.

Before you assign the encoder a static IP address, you will need to know the scheme of your current network and ensure that the IP address it not being used.

Once you know the IP address you want to assign the encoder, navigate to the 'System' Tab > 'Network' menu.

The screenshot shows the Zenty Network Settings web interface. On the left is a navigation menu with options: Status, Input Port 1, Input Port 2, Input Port 3, Input Port 4, System, Network (selected), Record, Advanced, Change Password, Transport, Upgrade and Backup, Reload, Schedule Polling, and Power. The main content area is titled 'Network' and contains several sections: 'Internet access' with fields for DHCP (Disable), IP (192.168.1.168), Netmask (255.255.255.0), Gateway (192.168.1.1), and MAC (00:13:14:04:F9:AF); 'DNS' with fields for DNS1 (8.8.8.8) and DNS2 (192.168.1.1); 'NTP' with fields for NTP Enable (Disable), NTP Server (time.windows.com), and Time Zone (UTC-8); 'Port' with fields for HTTP Port (8086) and RTSP Port (8554); 'HTTPS' with fields for HTTPS (Disable), HTTPS Port (8443), HTTPS Private Pass, and an Upload Certificate File section with an Upload button; and 'HOSTNAME' with fields for HOSTNAME (Encoder6001), mDNS (Enable), and mDNS URL (Encoder6001.local).

In this menu, you can customize your network settings for the encoder.

**DHCP - Disable/Enable -** It is recommended you leave DHCP disabled and assign a static IP address to your encoder so that you know where to access the WEB GUI.

**IP** - This is the field where you will enter your new static IP address for the encoder that matches your current network's scheme

**Netmask** - Set the netmask based on your connected network. In the above example, our network is Class C so our subnet mask is 255.255.255.0

**Gateway** - Enter the gateway address of your network's router

**MAC** - This is the MAC address of your encoder and does not need to be edited

After you have customized your settings, hit the 'Apply' button at the bottom of the screen. A notification window will pop up saying that the changes were saved and that a reboot is required. To reboot your encoder, navigate to **System > Reboot**

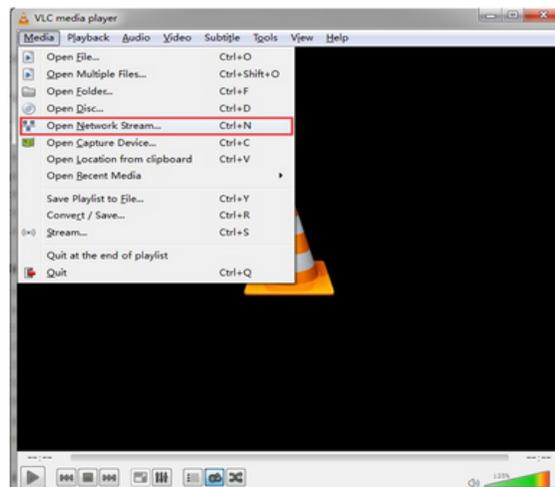
After your device has rebooted and your changes have saved, directly connect your encoder to your network switch or router via ethernet cable.

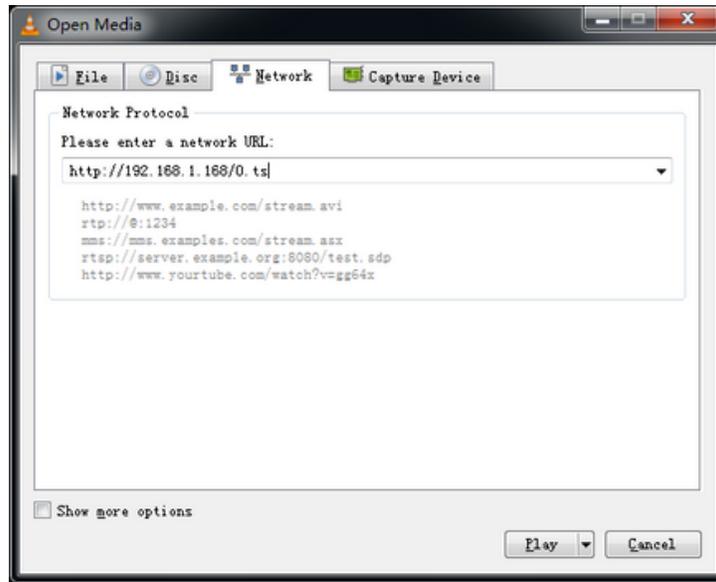
Reconnect your computer to your network switch or router via ethernet cable or ensure you still have connectivity to the network via WiFi.

If connecting to your network via ethernet, you'll want to change your PC's IP address settings back from the static IP address you set (192.168.1.100) to DHCP.

## 4. Application

### 4.1 VLC Player





## 4.2 Multicast

For a large number of viewers watching the stream simultaneously via LAN, it is recommended to use multicast mode.

**Zenty**  
Powered by TECH DIGITAL

**Main stream**

Encoding Type: H.264

FPS: 30 [5-60]

GOP: 30 [5-300]

Bitrate(kbit): 3200 [32-32000]

Image Quality Range: Lower-Best

Encoded size: same as the input

H.264 Level: high profile

Bitrate control: vbr

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TS URL: /0.ts [Enable]

HLS TS URL: /0.m3u8 [Disable]

HLS MP4 URL: /0\_mp4.m3u8 [Disable]

MP4 URL: /0.mp4 [Enable]

FLV URL: /0.flv [Enable]

RTSP URL: /0 [Enable]

RTMP URL: /0 [Disable]

RTMP(S)/RTSP PUSH URL: rtmp://192.168.1.168/live/0 [Disable]

Multicast IP: 238.0.0.1 [Enable]

Multicast port: 1234 [1-65535]

Multicast SAP Name: GROUP0\_STREAM0

SRT Listener Port: 9000 [Disable]

SRT Caller URL: srt://192.168.1.169:9000 [Disable]

SRT Encryption Password: 0123456789 [Disable]

HLS PUSH URL: https://a.upload.youtube.com/http\_upload\_hls [Disable]

**Apply**

**Zenty**  
Powered by TECH DIGITAL

**Status**

Running Time: 0000-00-00 00:06:31

Device Time: 2018-03-22 22:28:53(Sync Time To Device)

CPU Usage: 2%

CPU Junction Temperature: 33°C

Memory Usage: 113.2M/483.1M

Net Packet Sent: 9095 (Network connectivity test)

Net Packet Dropped: 0

**Record Status**

Record Type: Disable

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**Input Port 1**

**Input Status**

Input Size: 1920x1080p@0

Collected Video Frames: 150

Lost Video Frames: 2

Audio Samplerate: 48000

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**Main Stream**

Encoding Type: H.264

Encoding Size: 1920x1080@30

Video Bitrate: 3200Kbps

Real-time Bitrate: 1628Kbps

Video Encoded: 55.0MByte

TS URL: http://192.168.1.168/0.ts

HLS TS URL: Disable

HLS MP4 URL: Disable

MP4 URL: http://192.168.1.168/0.mp4

FLV URL: http://192.168.1.168/0.flv

RTSP URL: rtsp://192.168.1.168/0

RTMP URL: Disable

RTMP PUSH URL: Disable

Multicast URL: udp://@238.0.0.1:1234

SRT Listener URL: Disable

## 4.3 NVR

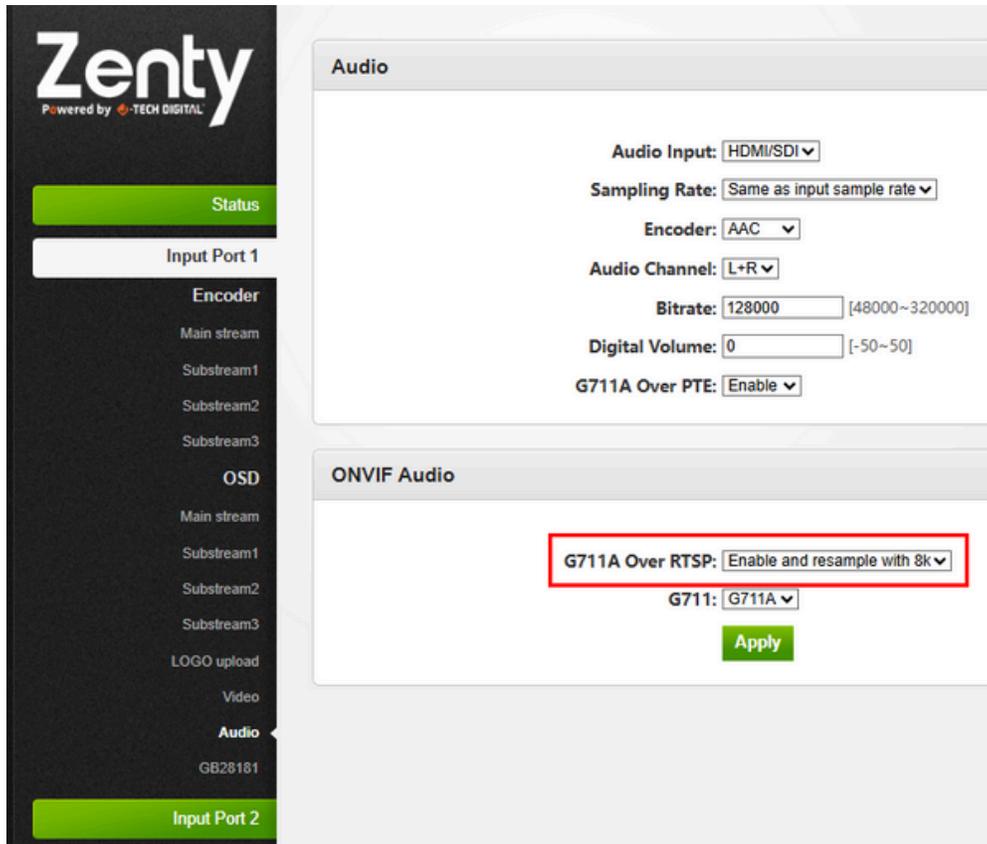
Determine whether the NVR supports the H.264 decoding function. Because of the ONVIF communication, the encoder RTSP stream function is enabled.

The screenshot shows the Zenty NVR web interface. On the left is a navigation menu with the Zenty logo and 'Powered by TECH DIGITAL'. The menu includes 'Status', 'Input Port 1', 'Encoder' (with sub-items 'Main stream', 'Substream 1', 'Substream 2', 'Substream 3'), 'OSD' (with sub-items 'Main stream', 'Substream 1', 'Substream 2', 'Substream 3', 'LOGO upload', 'Video', 'Audio', 'GB28181'), 'Input Port 2', 'Input Port 3', 'Input Port 4', and 'System'. The main content area is titled 'Main stream' and contains the following configuration options:

- Encoding Type: H.264
- FPS: 30 [5-60]
- GOP: 30 [5-300]
- Bitrate(kbit): 3200 [32-32000]
- Image Quality Range: Lower-Best
- Encoded size: same as the input
- H.264 Level: high profile
- Bitrate control: vbr
- TS URL: /0.ts [Enable]
- HLS TS URL: /0.m3u8 [Disable]
- HLS MP4 URL: /0\_mp4.m3u8 [Disable]
- MP4 URL: /0.mp4 [Enable]
- FLV URL: /0.flv [Enable]
- RTSP URL: /0 [Enable]** (highlighted with a red box)
- RTMP URL: /0 [Disable]
- RTMP(S)/RTSP PUSH URL: rtmp://192.168.1.169/live/0 [Disable]
- Multicast IP: 238.0.0.1 [Disable]
- Multicast port: 1234 [1-65535]
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- SRT Caller URL: srt://192.168.1.169:9000 [Disable]
- SRT Encryption Password: 0123456789 [Disable]
- HLS PUSH URL: https://a.upload.youtube.com/http\_upload\_hls [Disable]

An 'Apply' button is located at the bottom center of the configuration area.

If you want the NVR to recognize the encoder audio, you must also enable the following functions. (After setting, please restart the encoder).



**Note:**

If you have already configured the settings above and the NVR still cannot display the video, you can download the ONVIF standard test tool to verify whether the encoder's ONVIF function is working correctly.

If the ONVIF test tool is normal, please check the settings on the NVR.

## 5. Common Problems

### Can't access the encoder's web interface

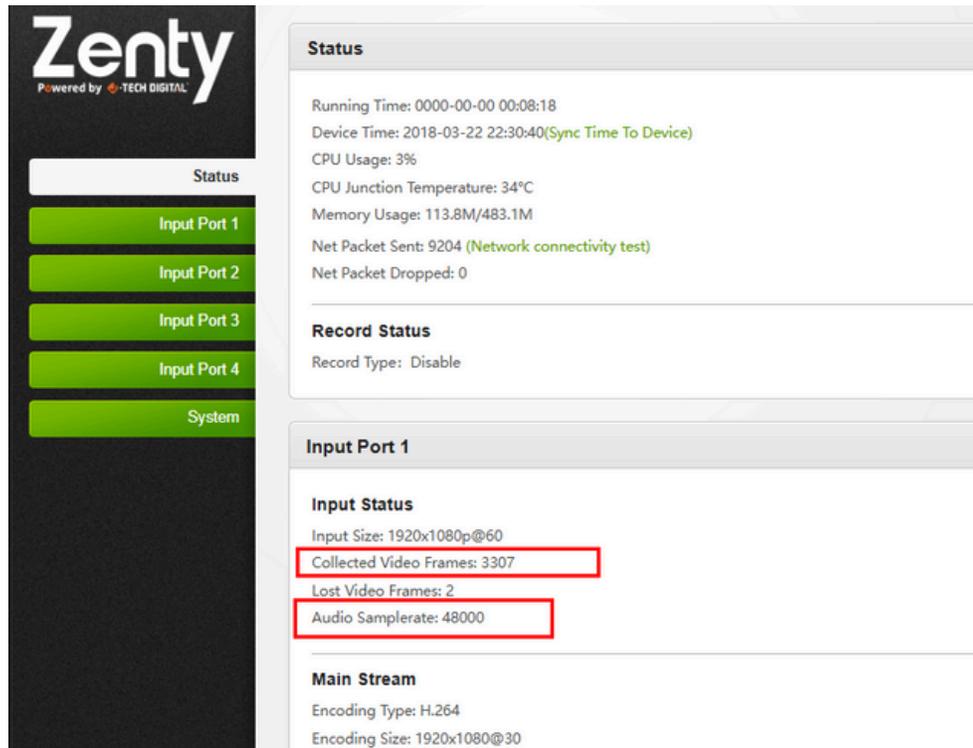
If you cannot access the encoder, there are two possible situations:

1. **Network Connection Issue** – If the network interface light is off, the network cable may be unplugged, damaged, or the encoder's network port may be faulty.
2. **IP Address Conflict** – If your local network is not in the 192.168.1.XX range, you need to manually add an IP address within this range to your computer and connect the encoder's network port directly to the computer.

If you want the NVR to recognize the encoder audio, you must also enable the following functions. (After setting, please restart the encoder).

### VLC player can't play video

If the video does not play after entering the stream address in VLC Player, check whether the video signal is being captured in the WEB interface of the encoder.



If Collected Video Frames = 0, please check whether the video source is properly connected to the encoder. Ensure that the video source is active, the HDMI port is securely connected, and the video source format is supported by the encoder.

## 6. Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner, or benzene to clean.

## 7. Warranty

If your product does not work properly because of a defect in materials or workmanship, our company (referred to as “the warrantor”) will, for the length of the period indicated as below, “Parts and Labor (5) Years”, which starts with the date of original purchase (“Limited Warranty period”), at its option

either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

During the “Labor” limited warranty period, there will be no charge for labor. During the “Parts” warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers products purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

## **8. Mail-In Service**

When shipping the unit, carefully pack and send it prepaid, adequately insured, and preferably in the original carton. Include a letter detailing the complaint and provide a daytime phone and/or email address where you can be reached phone and/or email address where you can be reached.

## **9. Limited Warranty Limits and Exclusions**

This Limited Warranty **ONLY COVERS** failures due to defects in material or workmanship and **DOES NOT COVER** normal wear and tear or cosmetic damage. The Limited Warranty **ALSO DOES NOT COVER** damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, mis-adjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributed to acts of God.

There are no express warranties except as listed under “Limited Warranty Coverage”. The warrantor is not liable for incidental or consequential damages resulting from the use of this product or arising out of any breach of this warranty. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive but are for illustration only). Parts and service, which are not covered by this limited warranty, are your responsibility.



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