



# Airvine WaveTunnel™

Technical Note

WaveTunnel™ Firmware Updates



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# Firmware Note

New firmware is released periodically for the Airvine WaveTunnel™ bridges that will include new features and bug fixes that can improve the performance and add functionality. This Technical Note will assist the user in locating the firmware, release notes as well as the firmware updating process.

## Finding Airvine Resources

General information and support for Airvine products can be found at

<https://www.airvine.com>

<https://airvine.com/support/>

Support includes access to firmware downloads, documentation, warranty, product registration and technical Q&A.

Locate the Support tab on Airvine's website and click on the link that will take you to the Support site.

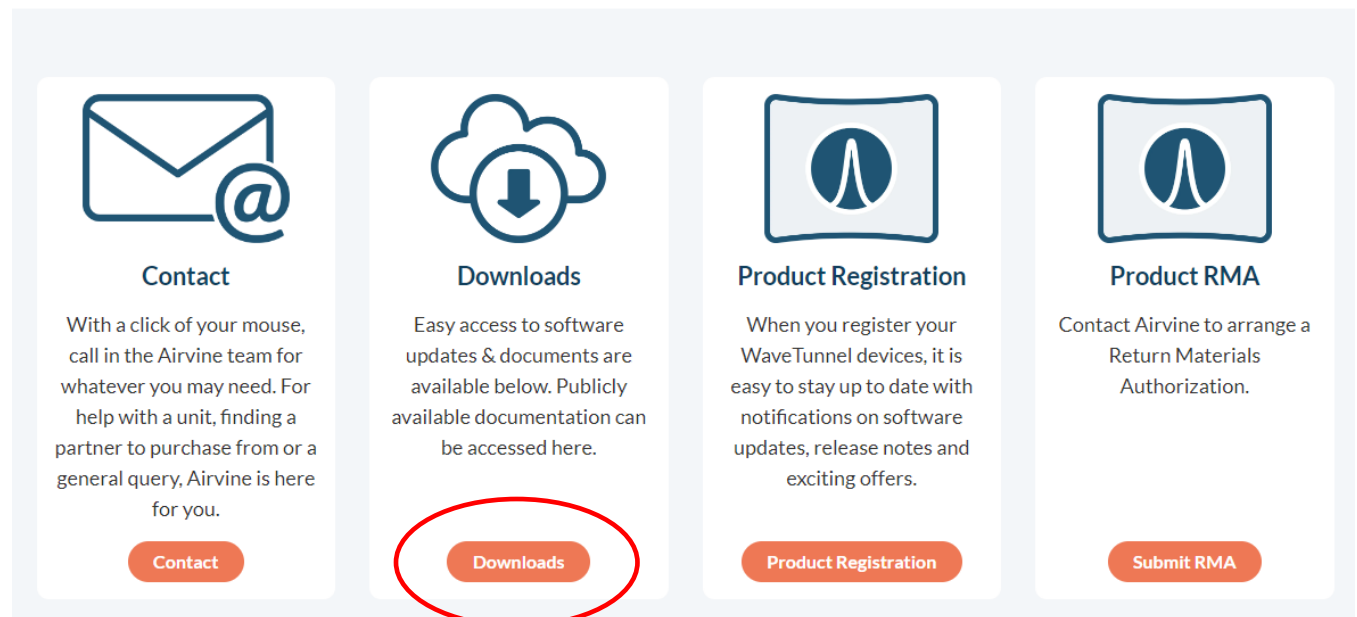


You will be presented with options for Contacting our support team, Downloads, Product Registration as well as Product RMA. It is important to register purchased products to assist with support issues so please take a few moments to do this if you haven't already.





To gain access to the latest firmware version and release note, click on the Downloads tab.

## Airvine Support

At Airvine we strive to deliver not only top of the line hardware and software, but we complete our mission of being a full service supplier with our range of support services. Whether you are looking for the latest firmware, warranty information or updated documentation, this web page is your one click stop for all Airvine Support topics.

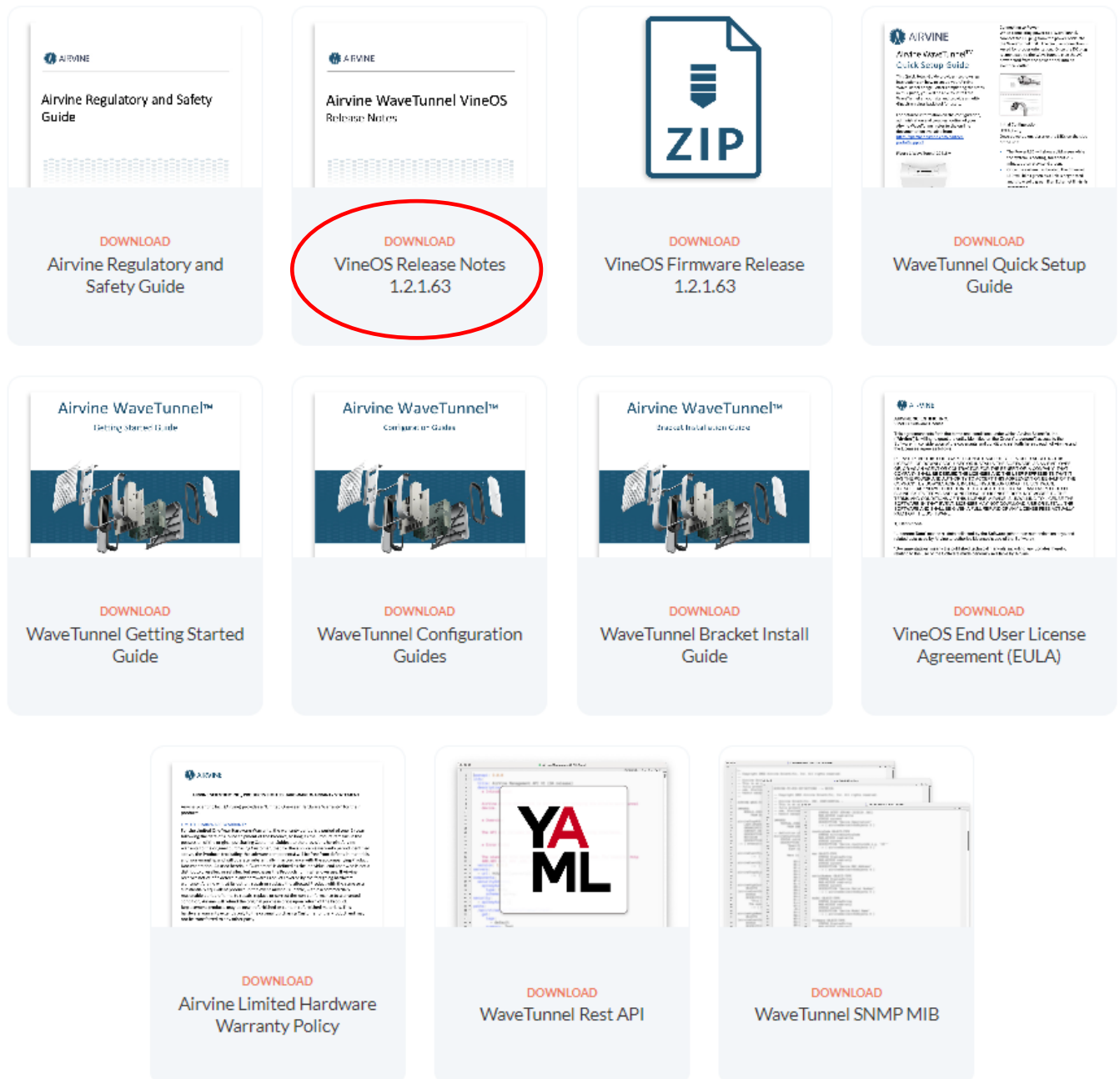


The image shows a navigation menu with four columns. Each column has an icon, a title, a description, and a button. The 'Downloads' button is circled in red.

Icon	Title	Description	Button
	Contact	With a click of your mouse, call in the Airvine team for whatever you may need. For help with a unit, finding a partner to purchase from or a general query, Airvine is here for you.	Contact
	Downloads	Easy access to software updates & documents are available below. Publicly available documentation can be accessed here.	Downloads
	Product Registration	When you register your WaveTunnel devices, it is easy to stay up to date with notifications on software updates, release notes and exciting offers.	Product Registration
	Product RMA	Contact Airvine to arrange a Return Materials Authorization.	Submit RMA

Once in the Downloads section, you will see many helpful resources that will assist you with configuration and advanced programming as needed. Note that the [WaveTunnel Getting Started Guide](#) is located here with step-by-step instructions on configuring a WaveTunnel™ cluster for the first time.

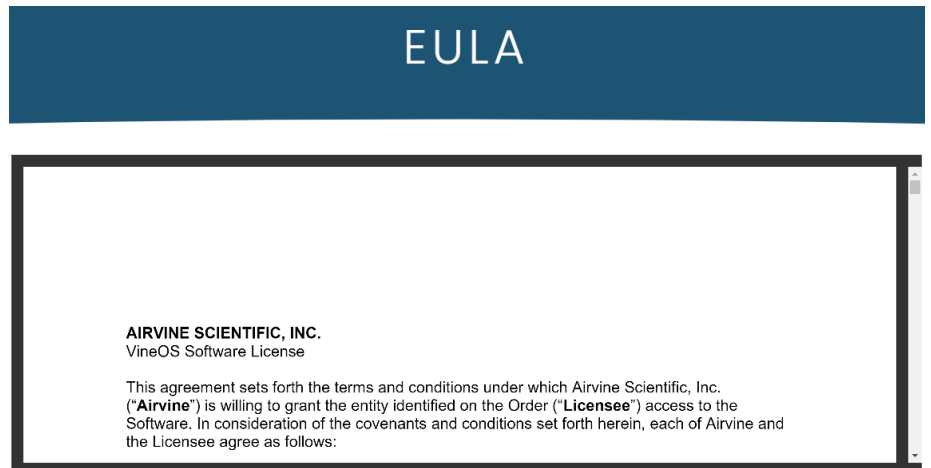
Locate and click on the [VineOS Release Notes](#) tab to download and review the latest firmware enhancements and fixes. **Always review VineOS Release Notes before updating the firmware on a WaveTunnel™ network as specific instructions are sometimes required.**



The image displays a grid of 15 download cards for various Airvine WaveTunnel™ resources. The cards are arranged in three rows. The first row contains four cards: 'Airvine Regulatory and Safety Guide', 'VineOS Release Notes 1.2.1.63' (circled in red), 'VineOS Firmware Release 1.2.1.63', and 'WaveTunnel Quick Setup Guide'. The second row contains four cards: 'WaveTunnel Getting Started Guide', 'WaveTunnel Configuration Guides', 'WaveTunnel Bracket Install Guide', and 'VineOS End User License Agreement (EULA)'. The third row contains three cards: 'Airvine Limited Hardware Warranty Policy', 'WaveTunnel Rest API', and 'WaveTunnel SNMP MIB'. Each card features a 'DOWNLOAD' button and a thumbnail image representing the resource.

# Downloading Firmware

To download the latest WaveTunnel™ firmware, click on the VineOS Firmware icon. You will be presented with an End User Licence Agreement (EULA). Read through this agreement and scroll to the bottom. Once there, click on “I Accept” and your firmware download will start.

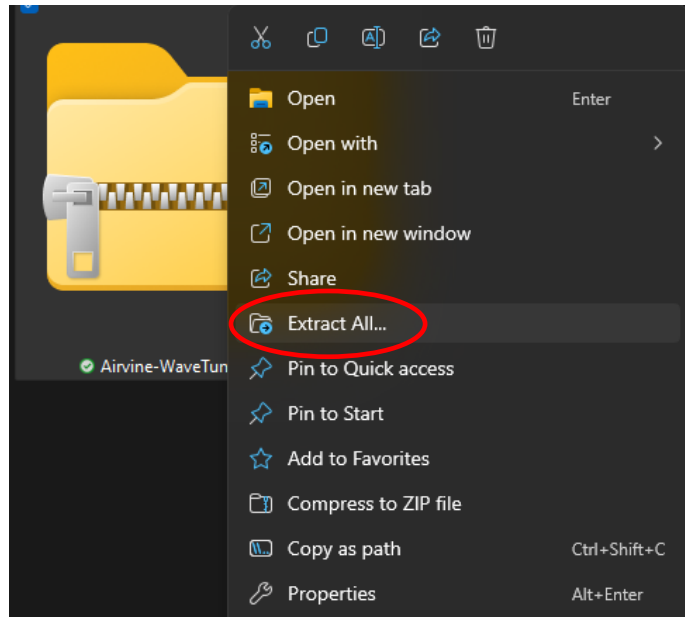


You must scroll to the end of the End-user License Agreement to acknowledge that you have read it.



# Extracting Firmware

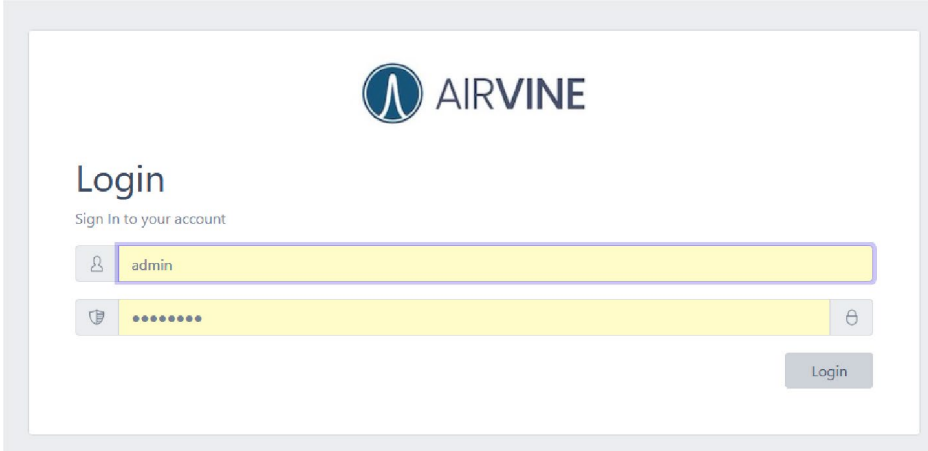
Locate the folder on your computer where the firmware has been downloaded to. Firmware will be in a compressed folder labeled “Airvine-WaveTunnel-Firmware.zip”. Right click this file and select Extract All... The extracted folder will contain a copy of the release notes and EULA as well as the firmware image. The firmware image will be a large file in the format of “avslmage-x.x.x.x”. Note the location of this firmware.



Name	Date modified	Type	Size
Airvine-VineOS-EULA	2/23/2024 2:01 PM	Adobe Acrobat D...	410 KB
Airvine-VineOS-Release-Notes	2/23/2024 2:01 PM	Adobe Acrobat D...	174 KB
avslmage-1.2.1.63	2/23/2024 2:01 PM	63 File	116,808 KB

# Updating Firmware

Log into the WaveTunnel™ bridge with configured user credentials. If the WaveTunnel™ is at Factory Defaults, the configuration wizard page will be displayed. If the WaveTunnel™ has already been configured, the dashboard will be displayed.



The screenshot shows the AIRVINE login interface. At the top center is the AIRVINE logo. Below it, the word "Login" is displayed in a large font, followed by the text "Sign In to your account". There are two input fields: the first is for the username, containing the text "admin", and the second is for the password, represented by a series of dots. A "Login" button is located to the right of the password field.

Under the System header, navigate to the Firmware Update on the left side of the menu screen.



Note the current Active and Inactive firmware versions.

**SYSTEM**

Image Number	Active	Primary
1	Active	Primary
2	Inactive	Backup

**Step 1 – Select the Protocol**

Select the protocol for the firmware update. In many cases, the Local File option will be the easiest. Click on “Choose a file” and navigate to the location of the firmware file, select the firmware image, then “Open”.





**Step1: Download/Upload The Firmware File**

From:  HTTP  FTP  TFTP  Local File

To upload the firmware file, click [Choose a file] to select the file and then click [Upload] to confirm.

Choose a file

Upload

Name	Date modified	Type	Size
 _MACOSX	10/9/2023 2:26 PM	File folder	
 Airvine VineOS 1.0.1.28 Release Notes 1.0...	10/9/2023 2:26 PM	Microsoft Edge PD...	214 KB
 Airvine-VineOS-EULA	10/9/2023 2:26 PM	Microsoft Edge PD...	410 KB
 avslImage-1.0.1.28	10/9/2023 2:26 PM	28 File	116,642 KB

e:

You will now be able to “Upload” the file to the WaveTunnel™.

### Step 1: Download/Upload The Firmware File

From:  HTTP  FTP  TFTP  Local File

To upload the firmware file, click [Choose a file] to select the file and then click [Upload] to confirm.

Choose a file avslImage-1.0.1.28

Uploading the firmware file.....

Upload

### Step 2 – Write Image to WaveTunnel™

Once the firmware has been loaded, select “Write Image” to the WaveTunnel™ system. Use the “Set as primary” and “Reboot after update” to have the system set the new firmware as the active primary image. Confirm the update and the system will proceed to load the firmware.

#### Step 2: Write The Firmware Image To Device

File Name: avslImage-1.0.1.28 (113.9M)

Set as primary

Reboot after update

Write Image

Delete Image

#### Confirmation

Are you sure? The selected firmware image will be updated to the backup image bank.

No

Yes

# Confirmed Firmware Update

Once the system has been updated and the WaveTunnel™ is rebooted, log into the WaveTunnel™ and navigate to the Firmware Update page. Verify that the new firmware has been loaded and is set to Active, Primary.

Image Number	Active	Primary
1	Active	Primary
2	Inactive	Backup

Congratulations and enjoy working with the new firmware. As always, if you have any issues or questions, please contact us at [support@airvine.com](mailto:support@airvine.com)

# The Airvine Story

Airvine creates a fully redundant fault tolerant indoor wireless backhaul network. We do this with our patented technology that was launched out of the University of Michigan RF Lab. Our team led by 4 PhDs created the world's first mmWave indoor wireless backhaul solution. The Airvine WaveTunnels work in the 60Ghz band. Airvine's patented breakthrough technology opens new possibilities for indoor connectivity. The WaveTunnels are access agnostic and will carry multi-gigabit bandwidth to supply Wi-Fi, 5G and IoT networks.

## Performance

The WaveTunnel system delivers multigigabit, low latency connectivity wherever it is needed



## Simple

Simplifies network design, simple to install, simple to use



## Secure

Tri-Layer security from the ground up.  
Physical Segmentation, VLAN Segmentation, Encryption Security

