

TOP 5 BEST VTX (VIDEO TRANSMITTER) FOR MINI QUAD



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Video transmitters (aka VTX) are devices that transmit videos from your drone to your FPV Goggles or ground station. In this edition of "Top 5 Best" we will announce 5 best 5.8Ghz VTX for your mini quad.

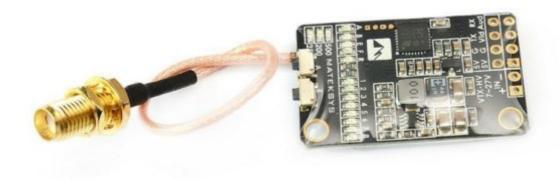
The 5.8Ghz video transmitters recommended here are chosen by our group members in a public poll (Facebook group: Multicopter International), as well as consideration on their features. Anyway, please do your research carefully before deciding which VTX to get. Here is a guide I wrote a while back you might find helpful: How to choose Video Transmitter for FPV Mini Quad.

For more "top 5 best" products, check out our list: oscarliang.com/tag/top-5-best

Common features we see on these top VTX's are:

- VTX remote control (can be controlled from Taranis TX using LUA script)
- Adjustable output power level down to 25mW
- Support wide range of input voltage (can be powered directly from battery)
- Using MMCX connectors rather than standard heavy SMA, or fragile U.FL or IPEX
- · Small form factor and light weight
- Support 40 channels or more
- Pitmode

Matek HV VTX





Main Features

- Form factor: 36mm x 18mm, exactly half of your FC and cable be mounted on top of your FC stack
- Support VTX Control using Tramp Telemetry
- 2S-6S voltage input (7V 27V)
- Power switchable: 25mW, 200mW and 500mW
- IPEX or MMCX connector
- 5V 1A BEC (for camera)
- Nice LED array for power/channel indication
- · Allows wire direct soldering

Very powerful and appealing list of features as we can see above, for only \$30!

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TBS Unify Pro



Main Features

- SmartAudio V2 allows you to connect the VTX to your FC, and change VTX settings with your radio TX and OSD
- Selectable output power between 25mW, 200mW, 500mW and 800mW
- One of the lightest and smallest for an 800mW video transmitter (5g only)
- Supports 40 channels, as well as custom frequency

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- PitMode reduces the power of your VTX to extremely low level while powered up, allowing you to troubleshoot without interfering other racers
- SMA pigtail is attached with U.FL connector allowing easy replacement

The TBS Unify Pro is a tiny yet powerful VTX. It's a premium quality product packed with advanced features. One of the most important features would probably be "SmartAudio". It allows the user to change channels and power using OSD and TX, and it truly brings user experience to the next level. (We have a tutorial coming soon)

If you are not using SmartAudio you can still change VTX settings using the button, and there is a tiny little LED indicating your channel, band and frequency. However, trying to judge your settings by counting how many times that LED blinks has been proven a nightmare. The connector is fragile and the VTX can get very hot especially when running at high power

There are different versions of Unify Pro:

- V2 (\$40) Output power 25mW to 800mW, but only accepts 5V input strictly
- HV (\$50) Output power 25mW to 800mW, and accepts 2S-6S LiPo input (up to 25.2V)
- Race (\$30) Output power 25mW to 200mW, and accepts 2S-6S LiPo input (up to 25.2V)

The Race edition is quite a good deal for \$30, if you don't mind the limited power of 200mW.

- Unify Pro V2 Shop
- Unify Pro HV Shop
- Unify Pro Race Shop

Tramp HV VTX by ImmersionRC





Main Features

- Very light weight and compact (4g without SMA connector)
- Allows wide range of input voltage directly from LiPo (2S to 6S 22.2V)
- Supports 48 channels
- Programmable linear output power control from 1mW to 600mW
- OEM Integration (similar to SmartAudio)
- PitMode
- Supports TNR wand (touch and race), a remote that configures your VTX settings without touching the transmitter (purchase separately)
- Resilient against voltage spikes
- SMA pigtail is connected with U.FL connector

Another high end VTX that can match the features on the Unify Pro would be the ImmersionRC Tramp HV. The Tramp VTX is a great alternative and it's \$10 cheaper than the TBS Unify Pro HV.

You can change channel and power with your Taranis via LUA script too on the Tramp. (tutorial coming soon) However on the Unify Pro, you will lose audio capability. On the Tramp, you can still have audio because it doesn't occupy the audio pin, because it has a dedicated telemetry port for this purpose.

The TNR wand is a great accessory that makes the Tramp more convenient to use. You can change VTX channel, frequency and power without touching the transmitter at all (if you

don't use the Taranis / LUA script hack this is a good solution).

- Shop BG
- Shop Amazon

Eachine VTX03 Super Mini VTX



Main Features

- Good value only \$15
- Tiny and low weights: 2.5g
- It can be mounted on the back of a micro FPV camera!
- Power switchable: 25mW and 200mW
- Built-in U.FL connector rather than SMA

The Runcam TX200 VTX took the place of the Eachine VTX03 because I have more reliable performance from it, and it can be stacked on the back of a micro FPV camera such as the Micro Swift 2. This makes mounting the VTX super easy especially for a tight and light weight racing drone.

The TX200 comes in "Lock Mode" which limits the power output and channels you can choose to follow regulations in many countries related to FPV. However you can unlock it easily if you wish and I think that's a great safety feature.

Downsides are you can only power it with filtered 5V (3.5V-5.5V), that's probably the reason why it's so tiny and light because it doesn't have voltage regulator and filtering.

If you are looking for a simple, cheap and light weight VTX that works, this is the one to get IMO.

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Eachine TX526



Main Features

- · One of the cheapest in the list
- Switchable power: 25mW, 200mW, 600mW
- 40 channels
- Built-in microphone for audio

This is not the best VTX in terms of quality and performance, but it's cheap and versatile! If you are looking for an affordable VTX for a low cost build this would be a good choice. However be aware that this VTX comes with a RP-SMA antenna connector.

Purchase: Banggood | Amazon

Top VTX in the past

Here are some of the top VTX we recommended in the past that are still worth considering today.

Eachine VTX03 Super Mini VTX

- Very good value only \$12
- · Tiny and low weights: under 3g
- Supports 72 channels
- Power switchable: 0mW, 25mW, 50mW and 200mW
- Built-in U.FL connector rather than SMA

The Eachine VTX03 is a super small, light weight and affordable VTX. It offers decent performance as far as we can see from the video reviews online. It comes with U.FL connector just like the Unify Pro. If you prefer to use antennas with SMA connectors, you can add a SMA pigtail with U.FL connector. The 72 channels support is probably an overkill for most of us :D but why not?

You can only power the VTX03 with filtered 5V (input voltage 3.5V-5.5V).

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Diatone SP3 VTX

- Stackable on top of FC/PDB for easy mounting
- Integrated MinimOSD
- 4 selectable power: 0mW, 25mW, 200mW and 600mW
- 10V-25V input voltage
- Supports 48 channels

The Diatone SP3 VTX is a great option as it has OSD integrated (using MWOSD firmware just like MinimOSD). it's a massive time saver if you know how much trouble it is to install and configure the minimOSD. It's designed to be stacked on top of the FC, so make sure your frame can house extra height. The selectable power is a new standard in FPV and a most welcome feature.

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Aomway 200mW

- 32 channels
- Input voltage: 6V-24V
- 5V output for camera
- Weights 6g

The Aomway 200mW was voted the best VTX back in March 2016, before all of the VTX above were released. Although it has the annoying dip switches for channels, and it certainly isn't the cheapest or lightest. It's a very reliable video transmitter based on user feedback and reviews.

If all you need is a simple and plain device without any of the bells and whistles, then take a look at the Aomway:) However the power is fixed at 200mW on this one so it might not be the best choice for indoor flying.

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Edit History

- Mar 2017 List created
- Sept 2017 List updated

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600mW VTX Review
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Posted in Reviews and News and tagged top 5 best, video transmitter, vtx on 28th August 2017 [https://oscarliang.com/top-5-best-vtx-mini-quad/] . 7 Replies

7 thoughts on "Top 5 Best VTX (Video Transmitter) for Mini Quad"

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5th December 2017 at 8:43 am

How does the Diatone SP3 compare to the unify pro for long range and video feed?

notfish

21st October 2017 at 8:47 pm

The Eachine TX526 doesn't have a built in microphone, just audio in wires.

iceman

15th September 2017 at 8:23 am

Matek hv vtx It's very hot

Harry Herring

2nd September 2017 at 1:44 pm

Using smartaudio on the unify pro doesn't break regular audio, you just need to add a small cap and maybe a resistor depending on which mic you use

moosestang

31st May 2017 at 7:46 pm

input voltage for the aomway 200mw is 6-28v, i don't think you can even buy the 24v one anymore.

Elmattbo

25th March 2017 at 4:32 pm

Rather than the 200mw aomway I'd suggest the switchable version. 2 buttons control power and frequency, with an easy to read led display to tell you the settings. Can select power on or off when battery applied. I run that and the unify pro.

Paul

23rd May 2017 at 1:38 pm

I've always used the Aomway 200 & it has been a very reliable solid option.

I recently got the switchable 25/200/600 but be aware it is somewhat larger ($25 \times 30 \times 9$ mm) and maybe a bother to fit in a compact build.

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