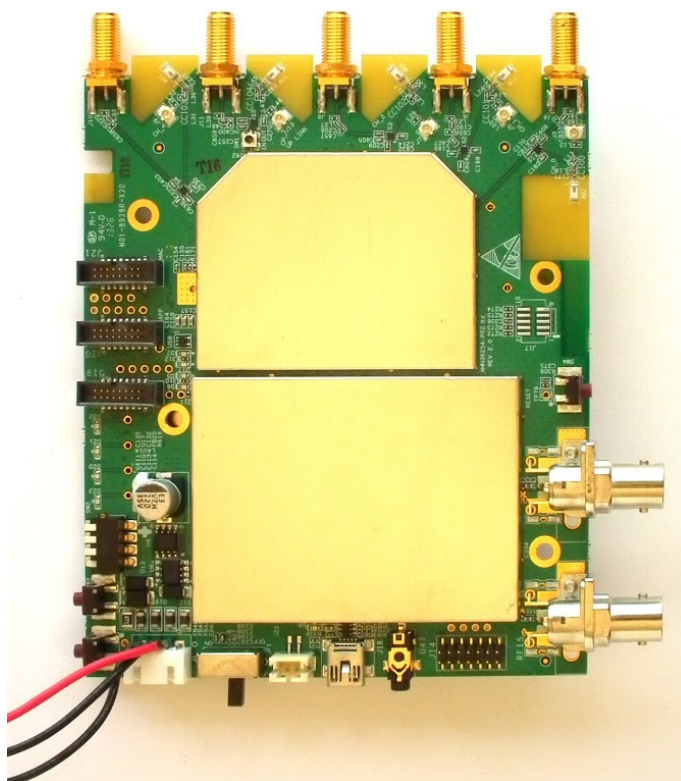
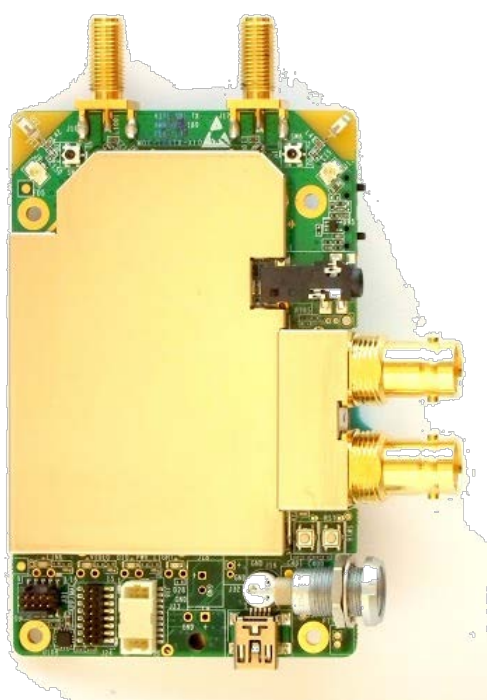


ARRI WVS Module-Manual

Tx - AMN35253_PB_ARRI_A

Rx - AMN36254_PB_ARRI_A



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Version 2.4-FCC

Overview

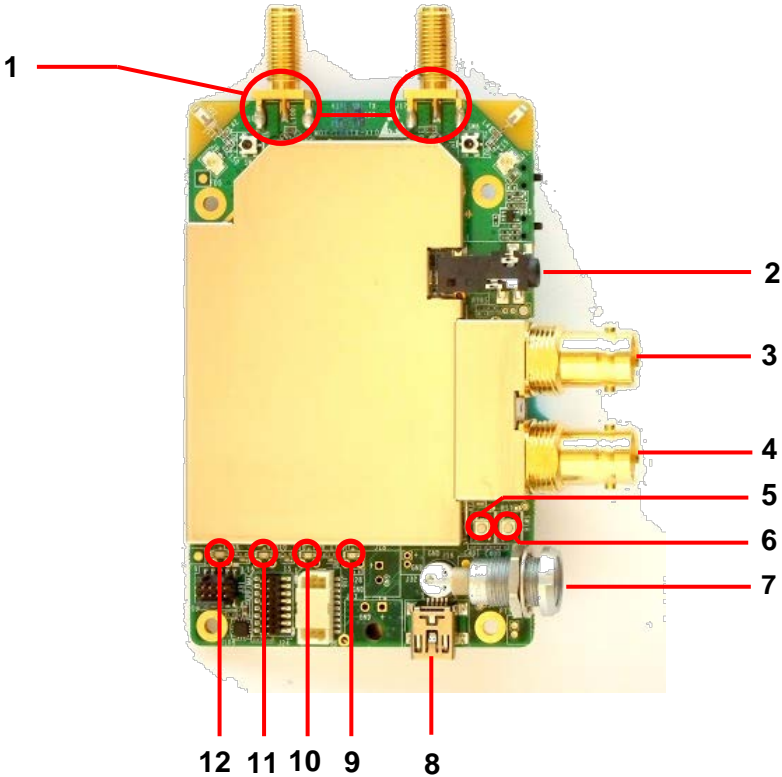
The WVS system was designed to establish wireless HD video signal transmission without any latency over large distances. The WVS is a lightweight but still very powerful wireless HD system, which is the perfect solution for live streaming from your multicopter or from a steadycam system.

The WVS transmits encoded but uncompressed signals. Broadcasting is therefore possible without any delay (latency less than 1ms). This is the ideal live streaming equipment for sports events, movies and TV productions and also industrial and inspection and monitoring related applications.

Multicasting is supported - the signal of one transmitter can be received by multiple receivers at the same time, which allows parallel streaming and live preview for the camera operator during recording. The system allows you to have full control and you can follow the legal regulations of your country or region.

Product Description

Transmitter



1	Antenna connectors	7	DC-in 7-17v LEMO connector (removed)
2	Microphone/Headphone	8	MiniUSB port - Used for firmware updates
3	SDI Output	9	Power LED (Battery status)
4	SDI Input	10	Video Status LED
5	Registration button	11	Network Status LED
6	Reset button	12	TBD

LED behaviors – Transmitter

Network LED

BLINKING MODE	DESCRIPTION
Solid	Link established
Slow	Searching frequency
Normal	Establishing link
Fast	In case of FW malfunction, both network and video LED will blink fast
Fast	During Registration or when system is reaching Out of range

Video LED

BLINKING MODE	DESCRIPTION
Solid	Video signal is Locked
Fast	In case of FW malfunction, both network and video LED will blink fast
Fast	Unsupported video resolution
Off	Power down or unlocked video

Power LED

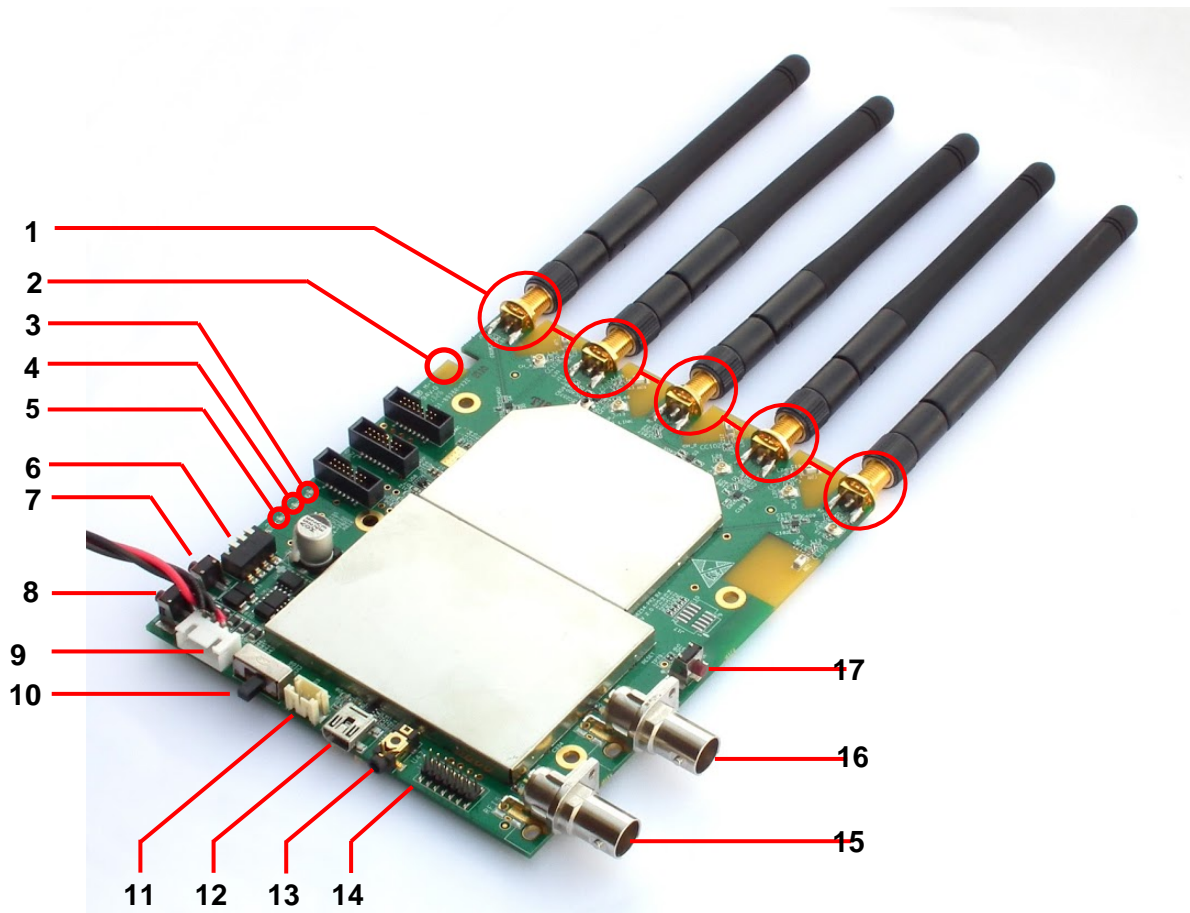
BLINKING MODE	DESCRIPTION
Solid	On
Fast	System error
Off	Off

Listed Antennas – Transmitter

Manufacturer	Ordering Information	Gain	Type
Wanshih Electronic Co.,Ltd.	WSS002 SJ1WF10006A	2dBi	Dipole
Laird Technologies	RD2458-5-RSMA	5dBi	Dipole

Similar antennas with smaller or equal gain can also be used.

Receiver



1	Antenna connectors	10	Power switch
2	DFS chip antenna (back side)	11	N/A
3	Power LED (Battery status)	12	MiniUSB port - Used for firmware updates
4	Video Status LED	13	I/R input connector
5	Network Status LED	14	N/A
6	DIP Switches (removed)	15	HD-SDI output
7	N/A (removed)	16	HD-SDI output
8	Registration (pairing) button	17	Reset Button
9	DC-in 7-17v input		

LED behaviors – Receiver

Network LED

BLINKING MODE	DESCRIPTION
Solid	Link established
Slow	Searching for Tx unit
Fast	In case of FW malfunction, both network and video LED will blink fast
Fast	During Registration or when system is reaching Out of range
Off	No registered devices

Video LED

BLINKING MODE	DESCRIPTION
Solid	Video signal is locked
Fast	In case of FW malfunction, both network and video LED will blink fast
Off	Power down or Out of Range

Power LED

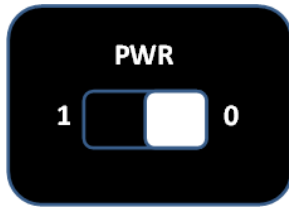
BLINKING MODE	DESCRIPTION
Solid	On
Fast	System Error
Off	Off

Listed Antennas – Receiver

Manufacturer	Ordering Information	Gain	Type
Johanson Technology	5400AT18A1000	2dBi	Chip
Wanshih Electronic Co.,Ltd.	WSS002 SJ1WFI0006A	2dBi	Dipole
Laird Technologies	RD2458-5-RSMA	5dBi	Dipole

Similar antennas with smaller or equal gain can also be used.

ON/OFF Slide switch Receiver - operation mode selection



1 – Powered ON
0 – Powered OFF

System Operation

A link is established between a single receiver and a single transmitter.

Operating Frequencies

Frequency	US	EU indoor	JAP Indoor	EU Outdoor	JAP Outdoor
5190 MHz	√	√	√	NA	NA
5230 MHz	√	√	√	NA	NA
5270 MHz, DFS	√	√	√	NA	NA
5310 MHz, DFS	√	√	√	NA	NA
5510 MHz, DFS	√	√	√	√	√
5550 MHz, DFS	√	√	√	√	√
5590 MHz, DFS	√	√	√	√	√
5630 MHz, DFS	√	√	√	√	√
5670 MHz, DFS	√	√	√	√	√
5755 MHz	√	NA	NA	NA	NA
5795 MHz	√	NA	NA	NA	NA
5835 MHz	NA	NA	NA	NA	NA

The system allows for a single Tx to be received by up to 4 Rx units.

A link can be established even when the systems are not within close proximity to each other.

Installation

Transmitter

See [Transmitter Product Description](#) for port location described in this section.

1. Switch on Source.
2. Connect the transmitter to the HD video source via HDMI input port.
3. Connect the transmitter to the power.
4. Antenna orientation: It is recommended to separate the antennas.
5. Receiving antennas should be oriented in the same plane as the transmitting antenna.

Receiver

See [Receiver Product Description](#) for port location described in this section.

1. Switch on Monitor.
2. Connect the receiver to the video sink (monitor) using a HD-SDI cable via HD-SDI output.
3. Make sure all DIPs on DIP Switch are up.
4. Connect the Amimon-AMN36254_PR2 receiver to the "Input Voltage connector 7-17v", using the power supply.
5. Enable Power on by sliding the slide Switch #10 left.
6. Antenna orientation: It is recommended to separate the antennas.
7. Receiving antennas should be oriented in the same plane as the transmitting antenna.

Note: For maximal range

- Keep line of sight between the transmitter and the receiver.
- Avoid placing any obstacles besides the transmitter or the receiver.
- Position both transmitter and receiver in an upwards position, for enhanced antennas performance.
- Mount the Amimon - transmitter and the receiver with proper air ventilation.
- Bring the transmitter and receiver closer together while trying to maintain at least 3 meter between them and 1m between receivers.

Troubleshooting

Registration fails

- ✓ Make sure both transmitter and receiver are powered on.
- ✓ Make sure the power cable is connected.
- ✓ Make sure that pairing units are the only Amimon devices currently powered on.
- ✓ Bring the transmitter and receiver closer together but no closer than 3 meter.
- ✓ Keep the number of solid walls between the transmitter and receiver to a minimum.

No Signal on monitor

- ✓ Make sure the receiver is powered on.
- ✓ Make sure the monitor is powered on.
- ✓ Make sure the receiver is properly connected to the monitor.
- ✓ Make sure the monitor is set to display video from the right source (HD-SDI1, HD-SDI2, HD-SDI3 etc.).
- ✓ Reboot the receiver.
- ✓ Unplug and then re-plug the HD-SDI cable between the receiver and the monitor.
- ✓ Replace the HD-SDI cable.
- ✓ Make sure the video resolution is supported by the monitor.

No video over the wireless link

- ✓ Make sure the transmitter is properly connected to the source.
- ✓ Make sure the source is powered on.
- ✓ Unplug and then re-plug the transmitter to the source.

Abnormal Color or Noise on the monitor

- ✓ Unplug and then re-plug the HD-SDI cable between the receiver and the monitor.
- ✓ Unplug and then re-plug the HDMI cable between the transmitter and the source.
- ✓ Bring the transmitter and receiver closer together but no closer than 3 meter.
- ✓ Keep the number of solid walls between the transmitter and receiver to a minimum.
- ✓ Power cycle the system.

No Audio

- ✓ Check the mute and audio volume settings on the monitor.
- ✓ Check the audio format setting on the source is incompatible with system. Change the source to output PCM 2.0, DTS or Dolby Digital.

FCC Warning

Notice:

This module in its final integration requires the end-product to continue to comply with DFS requirements.

A class II permissive change may be required for operation not already described in the FCC Grant filing.

OEM Labeling Requirements

Notice: The OEM of final integrator must ensure that FCC labeling requirements are met.

For a host using this module, if (1) the module's FCC ID is not visible when installed in the host, or (2) if the host is marketed so that end users do not have straightforward commonly used methods for access to remove the module so that the FCC ID of the module is visible; then an additional permanent label referring to the enclosed module should be used, with the following contents:

- For AVTS35253: "**Contains FCC ID: Y7N-AVTS35253**"
- For AVTS36254: "**Contains FCC ID: Y7N-AVTS36254**"

The host OEM user manual must also contain clear instructions on how end users can find and/or access the module and the FCC ID.

The manuals must contain the following information:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: Radio Transmitter (Part 15) – Class B Digital Devices

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

To satisfy FCC RF exposure regulation requirements, the transmitting device must operate with a minimum separation distance of 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.