foolcontrol / WIFI tips for RED DSMC cameras.

DSMC2 camera's **wifi antenna** is located between the 2 fans so make sure nothing is obstructing this area (some top plates in particular can reduce wifi range if they cover the fan area with metal).

WIFI

The camera offers a WiFi connection that provides communication support for third-party applications. The camera uses the REDLINK® Command Protocol (RCP) to communicate information between the camera and an application. As with all wireless devices, the communication range may be affected by the environment and any radio frequency (RF) interference that may be present. The WiFi frequency is 2.4 GHz.

There are two (2) ways to connect the camera to a device:

▸ **Ad-Hoc mode**: The camera and your device connect to each other.
▸ **Infrastructure mode**: The camera and your device both connect to an access point, and communicate through that wireless network.

NOTE: To connect the camera to an app, the app must have been programmed using the REDLINK SDK, which is available through the REDLINK Development Kit.

NOTE: The WiFi antenna is integrated into the fan grill (top side of camera). For optimal WiFi performance, do not obstruct the antenna with any accessory, mounting plate, or mounting rail.

Do Not Obstruct WiFi Antenna (Marked in Red)

The camera wifi has 2 different modes : Ad Hoc and Infrastructure.

AD HOC is a camera created network that does not require any other accessory.
It can use a password to secure the connection.

If you experience drop outs, make sure you try a different channel as the default (1) is often crowded with other networks. On mac you can use apps like 'wifi scanner' or 'wifi explorer' to look at your surrounding networks and choose an available channel for the camera wifi.
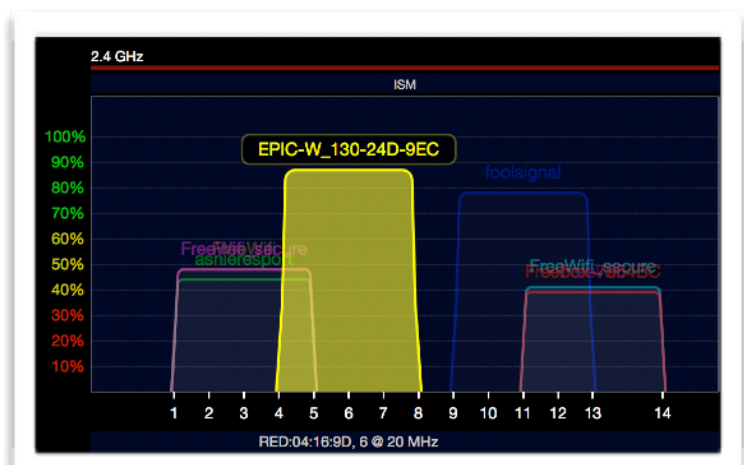
While Ad Hoc works in most cases it is not always the best solution as it requires rescanning wifi network on your iOS device every time the camera is restarted and in general the range is lower than when using infrastructure mode.

INFRASTRUCTURE MODE allows you to connect your camera(s) and iOS device to a common network that is always available when rebooting the camera. It requires the use of a router on set and in general will be much stronger than Ad Hoc mode. You can also protect it with a password (see your router settings / configuration page).

You can use any 2.4 Ghz wifi router (no need to connect it to the internet).
some are small, affordable and can be easily powered with USB like this one :

http://www.amazon.com/TP-LINK-TL-WR802N-Wireless-Repeater-300Mbps/dp/B00TQEX8BO

some are much more expensive but with their multiple antennas and higher power range will obviously offer a stronger wifi connection :

http://www.amazon.com/RT-AC88U-Wireless-AC3100-AiProtection-Complete-Security/dp/B016EWKQAQ/

With infrastructure mode you can also connect to your iOS device directly without using a router if your iPhone / iPad (cellular + wifi) and operator allows for it …

First create a **personal hotspot** and connect the camera to it. Upon camera restart wifi will automatically reconnect to your network and proved to be a better overall solution versus Ad Hoc when no router is available.
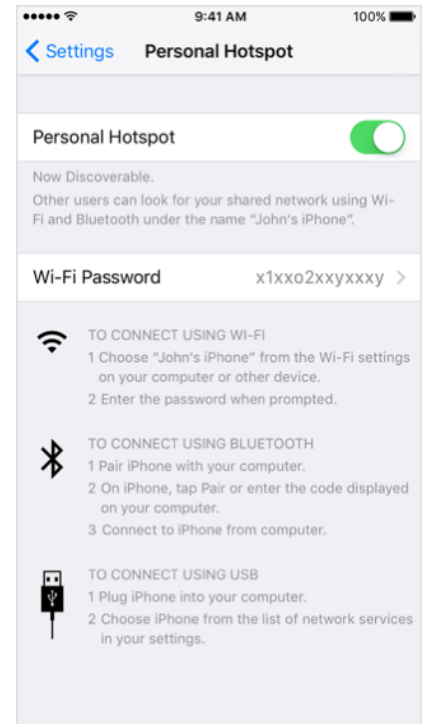
Various other 3rd party accessories that can help with wifi on set using RED cameras …

TERADEK COLR can create or connect to an existing network like the camera but has a strong 2.4 / 5 Ghz wifi radio with external antennas. It is a wireless LUT box that can be used as a simple router (using camera wifi connected to it) or be wired to the camera using GIG-Ethernet. Compatible with DSMC1 cameras using the appropriate GIG-E lemo cable it also works on DSMC2 with the JETPACK SDI or REDVOLT expander module. Unfortunately base expander and V-Lock expander module do not have GIG-E connectivity so you will no be able to use those with COLR.

https://vimeo.com/147896815
https://vimeo.com/149352339
https://vimeo.com/149446784

http://teradek.com/collections/colr-family

WOODEN CAMERA WIFI SIDE PLATE

This side plate developed by Wooden camera re-routes the internal wifi antenna to the side of the camera. You will still be using the camera built in wifi but with the option to attach different sized external SMA 2.4 antennas.


More info and signal range test
www.woodencamera.com/wifi-side-plate-weapon-epic-w-scarlet-w-raven-p/228800.htm

RTMOTION LATITUDE

The latitude MDR has wifi connectivity and can be used on DSMC1 and DSMC2 brains to connect foolcontrol to the camera's CTRL port. Latitude system offers advanced features for lens control (internal or external motors, thumwheels, hand unit…) and can also provide long range foolcontrol using 2 boxes in relay mode (first box bridges wifi from iPhone/iPad to second box on camera via long range RF).

http://www.rtmotion.com/latitude
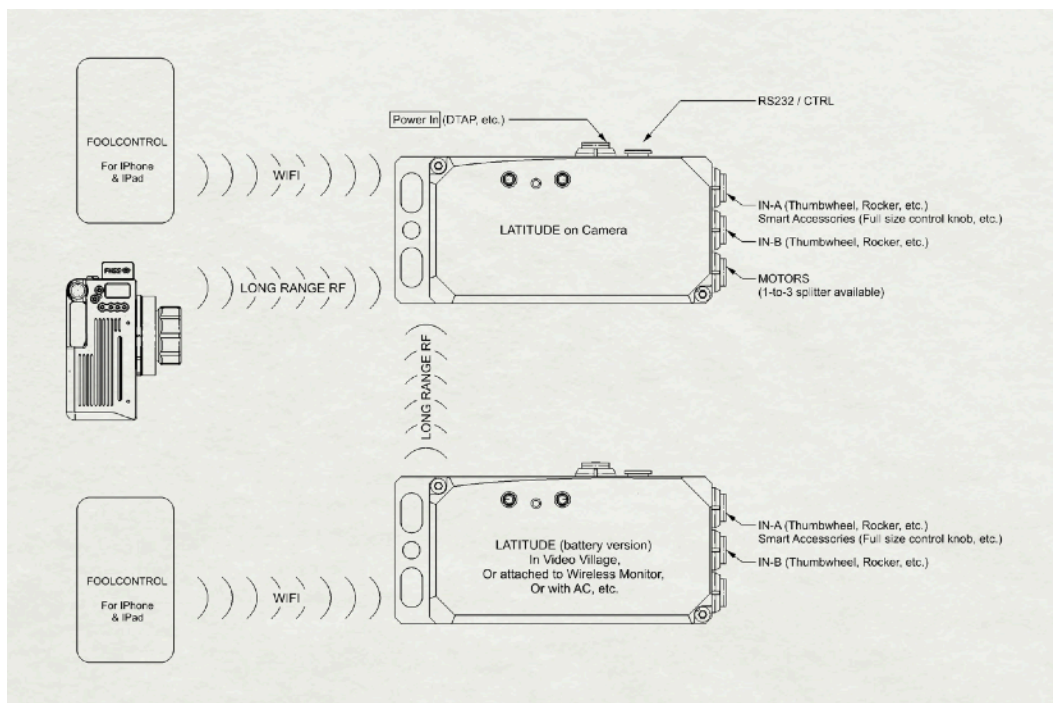
OFFHOLLYWOOD OMOD

OMOD command is a 3rd party DSMC2 camera module that attaches to the back and offer various integrated features (LUTS, lens control, timecode…) it also sports a strong wifi chip similar to a teradek COLR. It can greatly increase wifi range and reliability on set with the 2" stub antennas.

https://shop.offhollywoodny.com/collections/omod
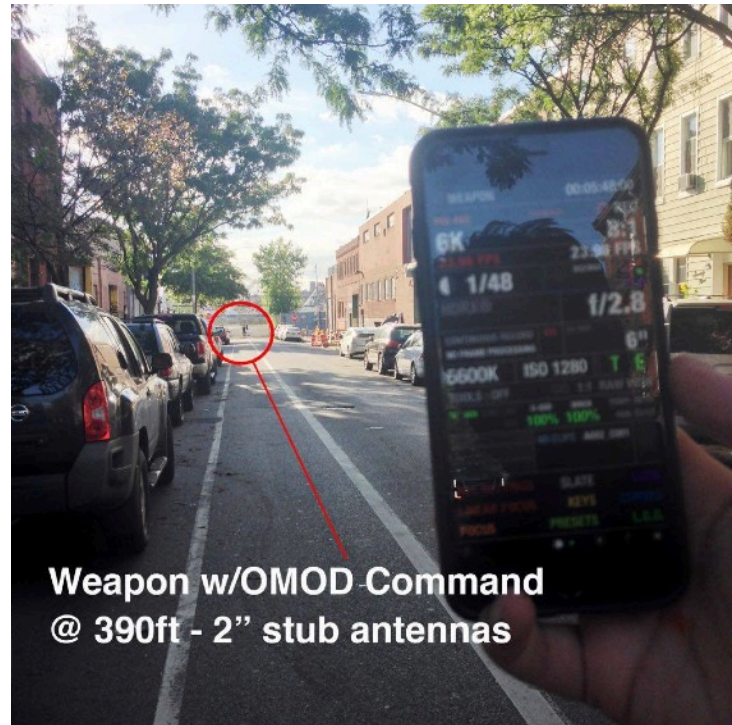
Weapon w/OMOD Command
@ 390ft - 2" stub antennas

On **DSMC 1** cameras with no built in wifi, you can use a 10/100/1000 router connected to the camera lemo GIG-E port or RED's **REDLink** bridge module or OffHollywood **HOTLink** module.

http://www.red.com/store/products/redlink-development-kit

There are also different specialised solution for wired connection (for helicopters, underwater, russian arm…) using either ethernet, fiber, ethernet + wifi or direct RS232 CTRL port connection from iOS devices so get in touch if you need more info on those specific solutions …

Gates Underwater, GSS, Shotover, Nauticam and more companies can provide tailored solution for your exact requirements.
mika@foolcolor.net