



DRAGONFLY

MINIATURE COFDM TRANSMITTER
CAMERA TRANSMISSION SYSTEM



INTRODUCTION

The IMT **DRAGONFLY** Transmitter is a superior miniature wireless video transmission system designed to capture real-time, high-quality video from UAV/UGV/Body Cams/ Concealments for display on fixed or mobile receive applications. The transmitter features HD/SD-SDI or optional HDMI inputs with COFDM transmission in a small, lightweight chassis. The **DRAGONFLY** delivers up to 50mW of power in a package weighing less than 1.2grams/34grams, providing long range, reliable HD video transmission.

The **DRAGONFLY** is a compelling choice when broadcast quality, exceptional range and reliability are required. IMT's COFDM technology ensures the transmission of uninterrupted, live TV pictures over long ranges, despite the effects of foliage, challenging terrain, buildings and other common non line-of-sight limitations. This gives it a significant advantage over uncompressed solutions.

An additional benefit of the **DRAGONFLY** compared to alternative solutions is the ability to operate at latency levels as low as 70ms, making it well-suited for remote control applications.

The **DRAGONFLY** was designed with a compact size and weight form factor and minimized power requirements, making it ideal for drone use. **DRAGONFLY** has an HD-SDI input or HDMI for high quality camera interface. IMT has also developed a new antenna design customized specifically for use with micro drones.

The **DRAGONFLY** may be configured or remotely controlled by the built-in Wi-Fi webserver. An Android or iOS device will see the **DRAGONFLY** and automatically open the control browser. Optionally, a 900MHz transceiver enabling processing of in-flight commands including camera control or gimbal manipulation.

DRAGONFLY



The DragonFly runs off two cell battery for 4 hrs!

Eliminates the need to cart around a DIONIC-90!

FEATURES:

- RANGE OVER 2 MILES LINE OF SIGHT
- LIGHTWEIGHT <1.2 OUNCES (34 GRAMS)
- HDMI OR SDI CAMERA INPUTS
- INTERNAL ISM AND GPS ANTI-JAM FILTER
- <4W DC POWER CONSUMPTION
- BROADCAST QUALITY VIDEO TRANSMISSION
- LICENSED AND ISM FREQUENCIES
- LOW LATENCY <70MS
- WI-FI REMOTE CONTROL
- TRANSCEIVER FOR TELEMETRY DATA

OPTIONS:

- POV CAMERA KIT
- S-BUS OR RS485 FOR CONTROL
- CAMERAS
- CAMERA CONTROL
- HDMI INPUT

AVAILABLE ACCESSORIES:

IMT Headquarters
200 International Drive
Mt. Olive, NJ 07828 USA
Tel: + 1 908 852 3700
FAX: + 1 908 813 0399
www.imt-solutions.com

RF PERFORMANCE:

Base Model Number	Frequency (GHz)	Power Out (mW)
23DFTx	2.0 - 2.5	50
47DFTx	4.5 - 5.0	50
5.5DFTx	5.0 1- 6.0	50
2/5DFTx	2.0 - 2.5 5.1 - 6.0	50

Tuning step size:250 kHz step size
Frequency stability:± 10ppm

MODULATION MODES

Modulation Formats:.....COFDM (DVB-T)
Carriers:2K
Constellation:QPSK, 16QAM
Code Rate:1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval:1/32, 1/16, 1/8, 1/4
Bandwidth:6, 7, & 8 MHz

MPEG ENCODER

VIDEO

Video Coding:.....MPEG-4 Part 10/H.264
Video Input:HD/SD SDI
.....HDMI
Video Formats.....720p 59.94
.....1080i 59.94

AUDIO

Audio Coding:.....MPEG 1 (Layer I or II)
Audio Sample Rate:48Khz

CONTROL

Wired.....micro USB
.....Webpage
WirelessWi-Fi
.....2.4 ISM Band
.....Android/iOS Web
Camera Control (Optional).....Wi-Fi
.....Brightness, Color Hue
.....Color Gain, Contrast
.....White balance mode

WEBPAGE

Settings.....Frequency, Bandwidth
.....Modulation
StatusPower, Frequency
.....Battery Run Time Meter
AlarmsPower
.....Video
.....Battery

POWER REQUIREMENTS:

Input range.....Battery Powered
Power consumption:.....<3.5Watts

ENVIRONMENTAL:

TEMPERATURE:

Full specification-10° to +50°C Ambient
Storage-40° to +80°C
Humidity.....0 to 95% non-condensing

ALTITUDE:

Operating:20,000ft (6,000 m)
Storage:50,000ft (15,000 m)

PHYSICAL CHARACTERISTICS:

Size:.....1.85" x 1.38" x .51"
.....50 x 35 x 13mm
Volume:1.3 cubic inches
.....16.83 cubic centimeters
Weight:< 1.2 ounces (34 grams)
.....< 1.3 ounces (38 grams) with antenna

CAMERA #1 OPTION:

Output:.....SDI
Formats:.....720p 59.94
.....1080i 59.94
Field of View:98°
.....128°
Features:.....High Dynamic Range
.....Image Stabilizer
.....Noise Reduction

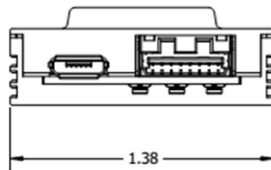
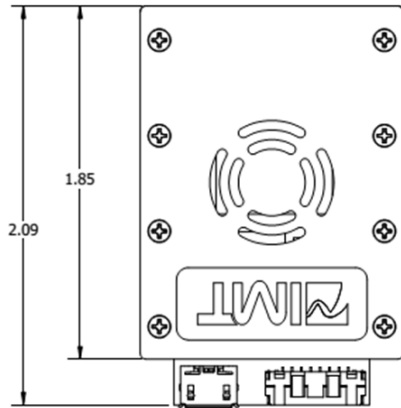
CAMERA #2 OPTION

May be outfitted with application specific cameras



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OUTLINE:



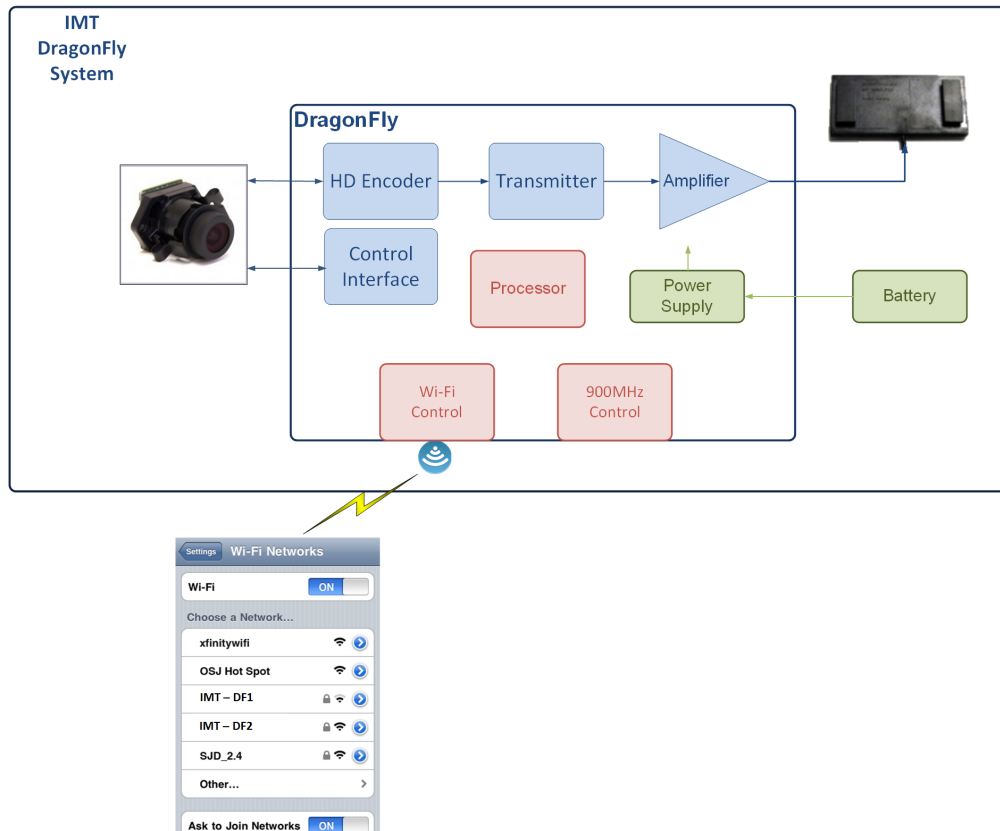
CONNECTORS:

Connector	Function
MMCX	Transmission and 900MHz Transceiver Output
Embedded Antenna	Wi-Fi Output
micro-USB	Software update
Multi-pin	Power
Multi-pin	Camera Power, RS485 or S-Bus Configuration
MMCX	SDI Input

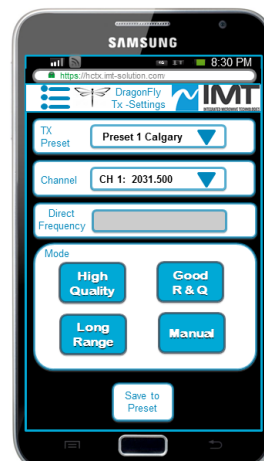


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BLOCK DIAGRAM:

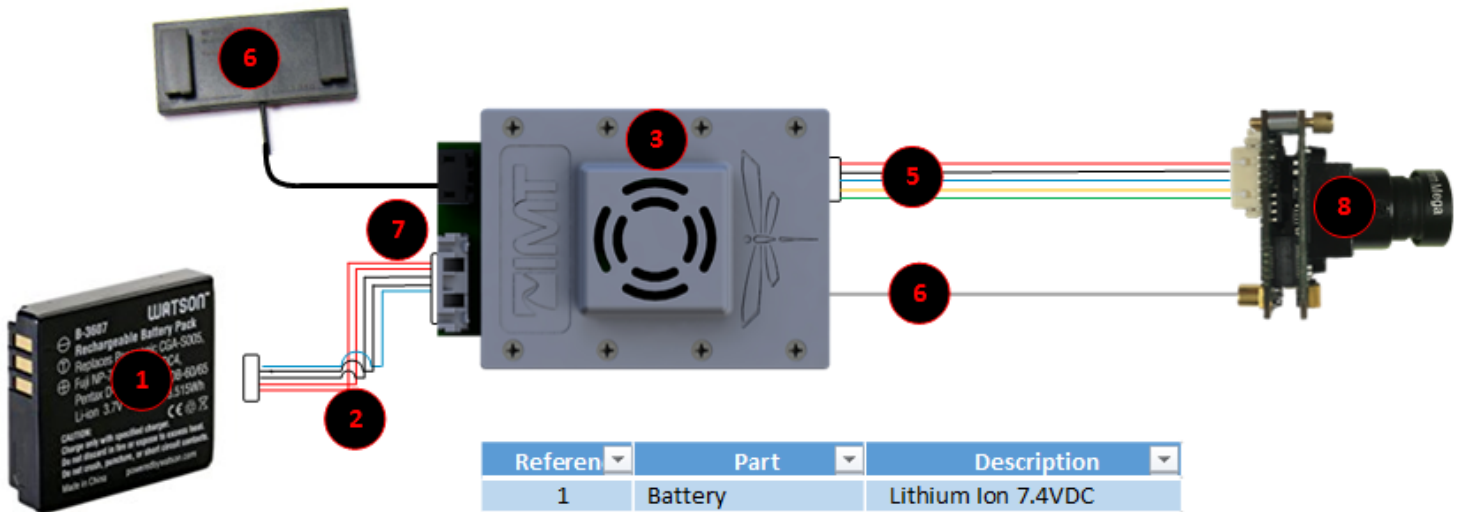


WI-FI CONTROL:



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POV CAMERA KIT DIAGRAM:



Referen	Part	Description
1	Battery	Lithium Ion 7.4VDC
2	Power Cable	Power Cable
3	DragonFly	Transmitter
4	Video Input	SDI Input Cable
5	Cable	Camera Power and Control
6	Output Antenna	RF Output Antenna
7	Embedded Antenna	Wi-Fi Control Output/Input
8	SDI Camera	SDI Camera



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