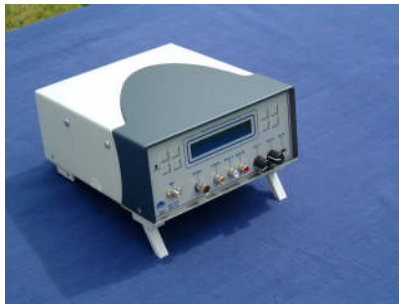


Digital RF

Covert Surveillance



COFDM digital transmission is the new technology which broadcasts digital TV to our homes. COFDM does not suffer multipath fading and a mobile transmitter returns excellent video pictures, voice or data when used in crowd or street scene or inside buildings where clutter is high or on a vehicle or on an aircraft. COFDM can be encrypted. A range of amplifiers and antennas are available covering most scenarios. A RF repeater is also available to extend its range. Ref DRFCT



The digital COFDM receiver is not covert. It is suitable for receiving the video in an adjacent room or in a control centre outside of a building or away from a crowd or scene. The receiver is battery or mains driven. The TX/RX system can be set to 10 different frequencies and only deploys a 6 MHz bandwidth. Video, voice and 64Kbit/s are multiplexed on the same channel in the transmitter and demultiplexed in the receiver.



Covert FM video and sound transmitters have the advantage that they are very small and very low cost. Often they need not be recovered from the scene of threat. At 2.4GHz FM transmission has a limited range and suffers from both propagation loss and severe fading due to multipath and gives best results when the transmitter is stationary or a good line of sight is established between transmitter and receiver. Ref DRFCT I

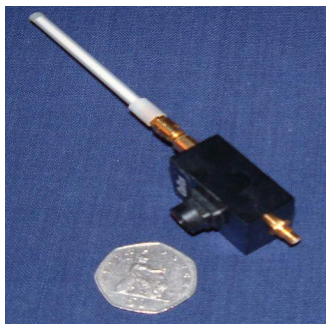
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Digital RF can offer a fully integrated system including cameras, audio microphone, movement detection, FM transmitter and battery all in one package. This is suitable for use as a corridor surveillance. Each time movement is detected the video is transmitted for 10 seconds giving an average battery life of many hours. Ref DRFCCCT2

Digital RF can also offer 1 or 2 watt active antennas which are attached to the antenna port of a 50—100mW low power transmitter to give it a boost in difficult scenarios.



The smallest integrated camera and FM transmitter offered by Digital RF is just 32mm x 32mm x 20mm deep. This transmits 100mW. An active antenna can be added to increase the output power to 1Watt. RefCCCT1



Digital RF offer multi channel FM transmitters and receivers. This allows several systems to operate around a scene of threat without interference between systems. For covert transmissions from a building where the transmitter is static, the wall attenuation along with atmospheric attenuation demands 0.25 watts for 50m range and 1 watt 100m range. The additional power requirements reduces the battery life unless it is controlled by a local switch or PIR movement detector. RefDRFCT2

Typical transmitter Power and Current

	FM	FM	COFDM	COFDM
Distance	50m	100m	50m	100m
Transmission Power	250mW	1W	50mw	200mw
SSPA Sizing	250mW	1.0W	200mW	800mW
Voltage	12V	12V	12V	12V
Current—Camera	100mA	100mA	100mA	100mA
Current—Transmitter	104mA	416mA	83mA	333mA