



MFR-SDR

A System Configurable,
Mesh Enabled, PTZ High
Definition Camera

The MFR-SDR is a very rugged Mesh enabled PTZ camera environmentally sealed for use in harsh environments.

It incorporates the DTC Software Definable Radio which has a configurable transmission method and encryption standard.

Whilst Mesh transmission method is the first choice, COFDM point to point transmission is also supported as a system option, which operates along side a UHF telemetry module for system control.

A digital wireless Mesh radio network is self healing and exchanges encoded video, audio and data between several Mesh nodes simultaneously.

The MFR-SDR build is modular such that it can configured to include an optional power amplifier to increase system range and the option to add a battery power source.

It incorporates a Sony high definition camera with a 30x optical zoom, a 63.7° field of view and configurable video resolutions up to 1920 x 1080.

The pan and tilt axes have absolute position feedback, which allows the camera to self correct its actual position if external forces act upon it. It also supports user presets that can be saved allowing PTZ framing and camera racking profiles to be easily recalled.

The pan and tilt drive trains are actuated by gearless stepper motors, reducing the operational noise to a minimum. Pan and tilt speeds are zoom factor corrected, giving fine control over the entire range of the lens with pan speeds up to 100° per second.

The outer casing is machined from aluminium, all of its external mating surfaces are gasket sealed to maintain the IP68 environmental rating.

Overview

Wireless Mesh Network

Configurable Transmission Method

Frequency Band Selectable

Battery Powered Option

Power Amplifier Option

1920 x 1080 Resolution

30x Optical Zoom

Fast Pan Speeds, 100°/Sec

Progressive Speed Control

High Resolution Movement

Position Recall

Encrypted Transmission

IP68 Environmental Rating

Rugged Build



MFR-SDR Kit Part Numbers			
Frequency Band	Battery Power	PA Included	Part Number
1670-2350 MHz	✓	✗	110-0369
1980-2700 MHz	✓	✓	110-0371
1670-2350 MHz	✓	✓	110-0372
1140-1500 MHz	✓	✓	110-0373

In addition to the main camera module the MFR-SDR system can be configured to incorporate a dual battery power source. This allows low power batteries to be hot swapped without any interruption to system operation.



To improve the system's RF range the unit can be configured to include a 2x1 Watt power amplifier.



Specifications			
RF Frequency	L-Band, S-Band, C-Band	RF Power	100mW or 2x1 Watt
RF Type	COFDM Mesh, COFDM	User Presets	8
RF Sensitivity	-96dBm	Pan & Tilt Range	270° Tilt, Continuous Pan
Max Mesh Node Count	16 for a Single System	Pan & Tilt Drive	Low Noise Stepper
Data Capacity	Up to 14.6Mb/s	Battery Capacity	2 x 3.35Ah
Bandwidth	Selectable 2.5 to 10MHz	Input Volts	10-18V DC
Optical Zoom	30x	Environmental	IP68
Resolution	1920 x 1080 Pixel	Full Build Dimensions	ø115 x 295.5mm
Encryption	DES, Optional AES 128/256	Casing	Anodised Aluminium

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