



FlatMesh™



Product Data Sheet: FlatMesh 3G Camera

The FlatMesh Camera is a fully integrated product which combines a high quality digital camera, 3G modem and FlatMesh network radio node in order to provide a high quality and robust visual monitoring capability as an integral part of the FlatMesh network.

Dual Infrared illuminators ensure that the camera is capable of taking very clear images at night whilst the integration of a rechargeable battery ensures that the camera can be powered without the need for external mains supply.

Key features

- Image triggering on request via web portal or by a message sent by FlatMesh Tilt Sensor Nodes across the local wireless network
- Dual illuminators for good image quality in low light conditions
- Multiple lens options to suit different installation conditions
- Integrated 3G modem for high speed image upload
- Integrated solar charging circuit and internal rechargeable battery pack
- Integrated illuminators simplifies installation
- Invisible infrared illuminators means no visual disturbance for personnel in the vicinity
- Integrated temperature sensor and battery monitoring
- Waterproof to IP66

FlatMesh 3G Camera



Physical Specifications

Parameter	Value
Dimensions excluding pole bracket	336 x 174 x 302 mm
Dimensions including pole bracket	356 x 305 x 302 mm
Total Mass	5.6 kg (approx.)
Housing Material	Extruded aluminium with plastic end caps
International Protection Marking	IP66
Mounting Options	Wall mounting bracket included with one-screw rotation and tilt adjustment Pole mounting bracket adaptor also available
Operating Temperature Range	-20°C to +60°C

Internal Battery

Parameter	Value
Battery Type	Lithium Iron Phosphate, rechargeable
Nominal Voltage	12.8 V
Nominal Capacity	7500 mAh
Charging Temperature Range	0°C to 45°C
Charging Temperature Range	10 days when taking up to 6 photos per day Consult with Senceive for your application

FlatMesh Radio Specifications

Parameter	Value
Communication Type	Proprietary FlatMesh v3 Mesh Networking Protocols IEEE 802.15.4 compliant
Frequency Band	2400 – 2485 MHz ISM Band
Maximum Transmit Power including Antenna Gain	+9.1 dBm (EN 300 328 v1.8.1)
Range	Up to 300 m depending on the environment and fitted antenna Consult with Senceive for your application
RF Module	Senceive FM3Node

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Imaging Specifications

Parameter	Value
Maximum Image Resolution	1600 x 1200 pixels
Shutter Type	Rolling shutter
Scanning	Progressive
Lens Focal Length	3.6 mm for standard configuration Other configurations are available
Compression Format	JPEG

Infrared Illuminator Specifications

Parameter	Value
Power	48 W
Wavelength	940 nm (invisible to the human eye)
Beam Angle	60° wide, 25° high for standard configuration Other configurations are available
Range	In standard configuration, 80 to 100 m (day-time), approximately 60 m (night-time) Consult with Senceive for your application

Cellular Radio Specifications

Parameter	Value
Frequency Bands for GSM/GPRS/EDGE	850 / 900 / 1800 / 1900 MHz
Frequency Bands for UMTS/HSPA+	900 / 2100 MHz
Output Power for GSM/GPRS/EDGE	Class 4 (+33dBm) for 850 and 900 MHz Class 1 (+30dBm) for 1800 and 1900 MHz
Output Power for UMTS/HSPA+	Class 3 (+24 dBm)
Maximum Antenna Gain	+5 dBi
Support SIM Cards	3 V and 1.8 V
RF Module	SIMCom SIM5360E



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Power Input

Parameter	Value
Recommended Solar Panel Type	12 V 45 W
Target Voltage for MPPT	15.0 V
Maximum Input Voltage	32.0 V
Input Voltage for Charging	15.0 V – 32.0 V (recommended 24 V)