



FlatMesh™



Product Data Sheet: FlatMesh 4G Camera

The FlatMesh Camera is a best in class solar powered solution for static imagery in remote or industrial areas.

It contains a monochrome digital camera which can take clear, high quality photographs day or night without the use of external illuminators.

The 4G camera connects to a Senceive EdgeHub (with FlatMesh) unit which provides connectivity over the cellular network (2G/3G/4G) or existing wired ethernet networks whilst the integration of a rechargeable battery ensures that the camera can be powered without the need for external mains supply.

Key features

- Can be triggered to take an image via Senceive WebMonitor or by a message initiated by Senceive's triaxial tilt sensor nodes and passed over the FlatMesh wireless communications network
- Fluid lens allows for variable focus for different site conditions, depending on the length of the site and the possible positioning of the camera
- No illuminators required for great quality night time shots
- Integrated 2G/3G/4G modem for high speed image upload
- Fully integrated solar charging circuit connected to internal rechargeable lithium battery pack (no external battery pack)
- Integrated temperature sensor and battery monitoring
- Waterproof to IP67

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Physical Specifications (excluding EdgeHub)

Parameter	Value
Dimensions excluding pole bracket	73 x 73 x 67 mm
Dimensions including pole bracket	73 x 73 x 170 mm
Total Mass	0.5 kg (approx.)
Housing Material	Anodised aluminium
International Protection Marking	IP67
Mounting Options	Universal 1/4" UNC thread mounting hole Mounting bracket rotation and tilt adjustment for pole mount or wall mount
Operating Temperature Range	-20°C to 55°C

Imaging Specifications

Parameter	Value
Maximum Image Resolution	3088 x 2076 pixels
Shutter Type	Rolling shutter
Image Colour	Monochrome
Exposure Time	0.013 ms to 2 mins
Lens Type	Liquid lens (variable focus)
Lens Focal Length	Nominal 9.6 mm

Internal Battery

Parameter	Value
Battery Type	Lithium Ion (Li-Ion), rechargeable
Nominal Voltage	14.4 V
Energy	41.8 Wh
Operating Temperature Range	-20°C to 60°C
Charging Temperature Range	0°C to 45°C

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Power Input - EdgeHub

Parameter	Value
Recommended Solar Panel Type	12 V 30 W
Target Voltage for MPPT	Dynamic
Power Supply	18 - 30 VDC mains power supply

Cellular Radio Specifications - EdgeHub

Parameter	Value
Frequency Bands for GSM/GPRS/EDGE	850 / 900 / 1800 / 1900 MHz
Frequency Bands for UMTS/HSPA+	800 / 850 / 900 / 1700 / 1800 / 1900 / 2100 / 2600 MHz
Frequency Bands for LTE	700 / 800 / 850 / 900 / 1700 / 1800 / 1900 / 2100 / 2600 MHz

FlatMesh Radio Specifications - EdgeHub

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	6.72 dBm (EN 300 328 v2.2.2)
Maximum Antenna Gain	2.2 dBi
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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Ordering Information and Accessories

Model	Description
FM3C-LTE	LTE Camera
FM3H-LTE	EdgeHub (with FlatMesh)