

## Product Data Sheet: FlatMesh Camera

The FlatMesh Camera is a fully integrated product which combines a high quality digital camera, GPRS 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

- Can be triggered to take an image via the FlatMesh Web Monitor or by a message initiated by Senceive's dual-axis tilt sensor nodes and passed over the FlatMesh wireless communications network
- Dual illuminators for good image quality in low light conditions
- Choice of lens types i.e. wide or narrow for different site conditions, depending on the length of the site and the possible positioning of the camera
- Integrated Quad Band GPRS Modem.
- Fully integrated solar charging circuit connected to internal rechargeable lithium battery pack (no external battery pack)
- Integrated invisible infrared illuminators for simple and error-free installation. The use of infra-red means there is no visual disturbance for personnel in the vicinity
- Integrated temperature sensor and battery monitor
- Weatherproof to IP66

## 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 +50°C

## Imaging Specifications

Parameter	Value
Maximum Image Resolution	1600 x 1200 pixels
Shutter Type	Rolling shutter
Scanning	Progressive
Lens Focal Length	6mm for standard configuration Other configurations are available
Angle of view	Approximately 35° wide, 25° high (6mm lens)
Compression Format	JPEG

## Infrared Illuminator Specifications

Parameter	Value
Power	48W
Wavelength	940nm (invisible to the human eye)
Beam Angle	35° wide, 10° high for standard configuration Other configurations are available
Range	In standard configuration, 80 to 100m (day-time), approximately 60m (night-time) Consult with Senceive for your application

## FlatMesh Radio Specifications

Parameter	Value
Communication Type	Proprietary FlatMesh v3 Mesh Networking Protocols IEEE 802.15.4
Frequency Band	2400 – 2485 MHz ISM Band
Maximum Transmit Power	+6.5dBm as tested to EN 300 328 v1.8.1
Maximum Permitted Antenna Gain	+2.2dBi
Maximum e.i.r.p.	+8.7dBm

<b>Gain of Supplied Antenna</b>	+2.0dBi
<b>Range</b>	Up to 500m depending on the environment and fitted antenna

## Cellular Radio Specifications

Parameter	Value
<b>Communication Type</b>	Quad band GSM
<b>Frequency Bands</b>	850 MHz, 900 MHz, 1800 MHz, 1900 MHz
<b>Output Power</b>	Class 4 (+33dBm) for 850 and 900 MHz Class 1 (+30dBm) for 1800 and 1900 MHz
<b>Maximum Antenna Gain</b>	+1.5dBi
<b>Data Transfer Standards</b>	Multislot Class 10 GPRS Coding Scheme 1 - 4

## Internal Battery

Parameter	Value
<b>Battery Type</b>	Lithium Iron Phosphate, rechargeable
<b>Nominal Voltage</b>	12.6V
<b>Nominal Capacity</b>	9000mAh
<b>Typical Runtime without charge</b>	10 days when taking up to 6 photos per day Consult with Senceive for your application

## Power Input

Parameter	Value
<b>Recommended Solar Panel Type</b>	12V 20W
<b>Target Voltage for MPPT</b>	15.0V
<b>Mains Power Supply</b>	XP Power AEL20US24C2