Senceive
Wireless condition monitoring

FlatMesh™
Intelligent monitoring

CameraHub

The FlatMesh CameraHub is Senceive's third-generation, solar-powered solution featuring a high-quality camera in a single, fully integrated unit.

Designed for capturing static imagery in remote or industrial areas, it delivers both visual monitoring and intelligent edge processing in one streamlined device.

Building on the proven success of previous models, this all-in-one unit is engineered for reliability and ease of use. The CameraHub features an upgraded low-light monochrome digital camera for clear day and night photography without external illuminators, a high-capacity rechargeable battery, and a crystal clear fixed-focus lens with advanced self-cleaning technology. Its intuitive interface and modern durable design ensure seamless operation in demanding conditions.

Key Features

- InfraGuard™ integration: Images can be captured when triggered by a user via WebMonitor™ or automatically by FlatMesh™ sensor nodes over the communications network.

- Fixed focus lens – no adjustment necessary, perfect clarity every time.

- Advanced lens cleaning technology – ensures consistently clear images by removing rain, dew, condensation, snow and ice.

- No illuminators required for great quality night-time shots.

- Integrated Eighteen Band LTE, Eight Band UMTS/HSPA+ and Quad Band GSM/GPRS/EDGE Modem for worldwide use

- External antennas to achieve best cellular coverage

- Fully integrated solar charging circuit connected to an internal pluggable rechargeable lithium-ion battery pack

- Powered by a quad-core processor, delivers computational performance while maximising energy efficiency - enabling several days of battery-only operation without the need for recharging.

- Wide battery charging temperature range for year-round operation, -20°C to 45°C

- Weatherproof to IP66

- Incorporated pole mount bracket

- HMI for installation feedback (LEDs activate briefly for status check, only when triggered by user)

CameraHub

Physical Specifications

Parameter	Value
Dimensions (including hood, excluding pole mount and antennas)	285 x 148 x 165 mm
Dimensions (including hood, pole mount, and antennas)	285 x 475 x 215 mm
Total Mass	2.4 kg (approx.)
Housing Material	Polycarbonate (outdoor suitable)
Ingress Protection	IP66
Mounting Options	Pole mount (included as standard, designed for standard 48.3 mm scaffold tube) For wall mounting, use FF-CH-WB (sold separately)
Operating Temperature Range	-30°C to +60°C

Imaging Specifications

Parameter	Value
Image colour	Monochrome
Maximum Image Resolution FM3C-LTE(CH5)	5MP, 2592 x 1960 pixels
Exposure time	Variable
Shutter Type	Rolling shutter
Lens type	Fixed focus C-mount (focused in factory)
Lens Focal Length	8 mm
Compression Format	JPEG

CameraHub

Cellular Radio Specifications

Parameter	Value
Frequency Bands for GSM/GPRS/EDGE	850 / 900 / 1800 / 1900 MHz
Frequency Bands for UMTS/HSPA+ Band (Frequency – MHz)	1 (2100), 3 (1800), 2 (1900), 4 (1700), 5 (850), 6 (800), 8 (900), 19 (800)
Frequency Bands for LTE Band (Frequency – MHz)	1 (2100), 2 (1900), 3 (1800), 4 (1700), 5 (850), 7 (2600), 8 (900), 12 (700), 13 (700), 18 (850), 19 (850), 20 (800), 26 (850), 28 (700), 66 (1700), 38 (2600), 40 (2300), 41 (2500)
Maximum Cellular Antenna Gain	+3.5dBi
RF Module	Cinterion PLS63-W FCC Identifier QIPPLS63-W

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 (EN 300 328 v2.2.2)	6.5dBm
Range	Range Up to 300 m depending on the environment
RF Module	Senceive FM3Nano

CameraHub

Internal Battery

Parameter	Value
Battery Type	Lithium Ion, rechargeable
Nominal Voltage	14.4V
Nominal Capacity	5200mAh
Charging Temperature Range	-20°C to 45°C
Operating Time Without Solar	Up to 18 days

Power Input

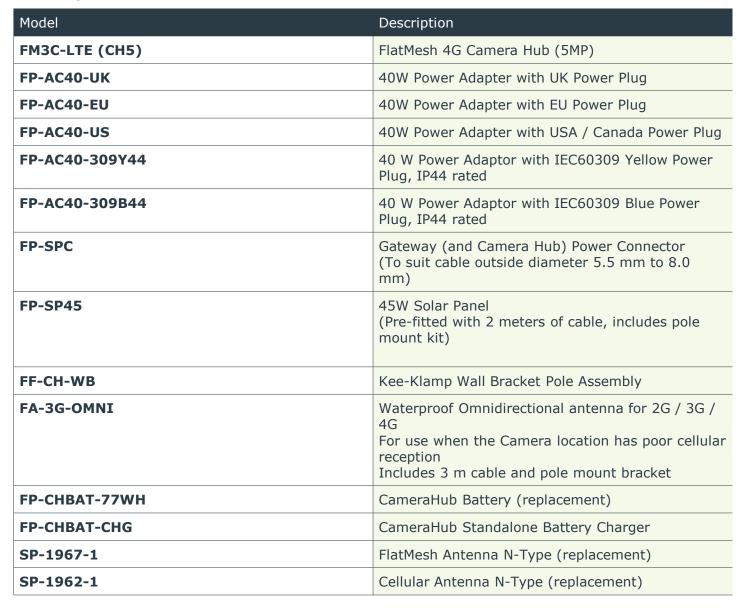| Parameter	Value
Recommended Solar Panel Type	12V 45W (Consult with Senceive for challenging geographies)
Target Voltage for MPPT	Dynamic
Input Voltage for Charging	18-30V DC Recommended 24V 40W+ DC when not using a solar panel

Mains Power Adapter (FP-AC40-x)

Parameter	Value
Dimensions	116.3 x 52.4 x 31.3 mm
Operating Temperature Range	0°C to +65°C
Input Voltage Range	90-264 VAC
Input Frequency	47-63 Hz

CameraHub

Certifications

- CE, FCC, ISED
- Network Rail Acceptance PA05/04146
- Patent pending

Ordering Information

Model	Description
FM3C-LTE (CH5)	FlatMesh 4G Camera Hub (5MP)
FP-AC40-UK	40W Power Adapter with UK Power Plug
FP-AC40-EU	40W Power Adapter with EU Power Plug
FP-AC40-US	40W Power Adapter with USA / Canada Power Plug
FP-AC40-309Y44	40 W Power Adaptor with IEC60309 Yellow Power Plug, IP44 rated
FP-AC40-309B44	40 W Power Adaptor with IEC60309 Blue Power Plug, IP44 rated
FP-SPC	Gateway (and Camera Hub) Power Connector (To suit cable outside diameter 5.5 mm to 8.0 mm)
FP-SP45	45W Solar Panel (Pre-fitted with 2 meters of cable, includes pole mount kit)
FF-CH-WB	Kee-Klamp Wall Bracket Pole Assembly
FA-3G-OMNI	Waterproof Omnidirectional antenna for 2G / 3G / 4G For use when the Camera location has poor cellular reception Includes 3 m cable and pole mount bracket
FP-CHBAT-77WH	CameraHub Battery (replacement)
FP-CHBAT-CHG	CameraHub Standalone Battery Charger
SP-1967-1	FlatMesh Antenna N-Type (replacement)
SP-1962-1	Cellular Antenna N-Type (replacement)

CameraHub

CameraHub product visuals

Example images captured by CameraHub

06h00m58s

12h00m20s

21h02m58s

06h01m07s

00h02m17s

12h01m12s

FlatMesh™
Intelligent monitoring

Eddyfi Technologies
Remote Monitoring | Senceive

Harnessing intelligent monitoring technology
to keep people and infrastructure safe

info@senceive.com