

SOLAR CCTV TOWER · OFF-GRID · ZERO FUEL

Fyrfly Solar Tower

An autonomous 6 m mast platform carrying Fyrfly surveillance, AI detection and communications, powered by solar and battery alone.

A 1,080 W solar array and a 400 Ah battery pack carry the full Fyrfly payload with no fuel, no exhaust and no engine to service. Where irradiance supports the duty cycle the tower runs indefinitely and unattended; the battery alone holds a 75-hour reserve at a continuous 100 W load. The platform is delivered open: Fyrfly integrates the cameras, AI detection, lighting, PA and communications into the head mount and lockable equipment bay before the tower ships.

KEY FEATURES

- **6 m hot-dip galvanised manual mast**, mechanical safety brake; automatic winch brake available
- **1,080 W solar array** (3 × 360 W book-opening), manual deployment, no tools
- **400 Ah / 9.6 kWh 24 VDC battery pack** (AGM standard; LiFePO4 on request)
- **No fuel and no engine** in the solar configuration: nothing to refuel, nothing to steal, nothing to service
- Lockable steel equipment bay for cameras, recorder and comms, 370 × 200 × 470 mm
- Permanently silent and zero-emission in operation, the lowest signature in the range
- Forklift-portable skid base, all-terrain, ten units per truck



FIG. 01 — FYRFLY SOLAR TOWER, DEPLOYED

75 hBATTERY RESERVE,
NO SOLAR INPUT**400 Ah**STORAGE
AT 24 VDC**1,080 W**INSTALLED
SOLAR ARRAY**Zero**FUEL, EMISSIONS
AND NOISE

Reserve figure quoted at a continuous 100 W payload draw with no solar input. A standard Fyrfly camera payload averages roughly 50 W; the tower runs indefinitely where irradiance supports the duty cycle. Use the free Solar Viability Calculator at www.fyrflysystems.com for a month-by-month forecast at your location.

WHERE IT WORKS

Schools & public sector

Perimeter and grounds security with no grid connection or cabling.

Construction & highways

Compounds and corridors with no mains supply on site.

Critical infrastructure

Substations, water, pipelines, telecoms and depots.

Rapid & temporary sites

Events, incidents and response operations, live in under 90 minutes.

Noise-sensitive & urban

Residential edges and town centres, silent and fume-free.

Remote & border sites

Fuel-free monitoring with no thermal or acoustic signature.

MAST

Lifting method	Manual
Maximum height	6 m
Rotation	None
Safety brake	Mechanical
Body	Hot-dip galvanised

BATTERY

Type & number	AGM × 4
Power pack	24 VDC – 400 Ah
Usable energy	9.6 kWh
Expected cycles	500
Upgrade option	LiFePO4 on request

SOLAR & CHARGING

Array	3 × 360 W – 1,080 W
Deployment	Manual, book-opening
Charge source	Solar only
Engine & fuel	None
Emissions in operation	Zero

RUNNING TIME AT 100 W

Battery only	75 hrs
With solar input	Continuous where irradiance allows

DIMENSIONS & WEIGHT

Transport L×W×H	1200 × 1700 × 2520 mm
In operation L×W×H	3280 × 2400 × 6000 mm
Weight	1,100 kg
Equipment bay, internal	370 × 200 × 470 mm

TRANSPORT & HANDLING

- Ten units per truck, packaged for rapid unloading
- Forklift pockets; transportable across all terrains
- Mast raised manually in minutes by one operator, no tools
- Solar array opens by hand; no technicians required on site

YOUR SITE, OUR POWER – THE FYRFLY PAYLOAD

The platform ships as a ready-to-use tower. Fyrfly specifies and integrates the surveillance payload before delivery:

- HD CCTV, PTZ and IP cameras
- LED matrix or infrared floodlighting
- LTE, 5G and Wi-Fi router modules
- Encrypted onboard recording, 33-day retention
- AI detection with human and vehicle classification
- PA deterrent with audio challenge
- Motion and environmental sensors
- Remote access, live monitoring and ARC alerting

COMMON QUESTIONS

What powers the tower?

A 1,080 W array (3 × 360 W) charging a 24 VDC 400 Ah AGM pack. In the solar configuration there is no engine and no fuel on board.

How long does it run without sun?

75 hours at a 100 W draw on battery alone, and indefinitely where irradiance supports the duty cycle. A typical Fyrfly payload draws less.

How loud is it?

Silent at all times in the solar configuration, with no exhaust and no thermal signature.

Is it secure against tampering?

Cameras, recorder and comms are housed in a lockable steel equipment bay, with tamper status reported to the Fyrfly management portal.

Where is it made?

The power platform is manufactured in Europe to specification. Fyrfly integrates, commissions and supports the tower in the UK for the life of the deployment.

Deep winter or high load? Fyrfly Solar Tower Hybrid (FST-H6)

For northern sites, deep winter or high-power payloads, the Hybrid variant adds a Stage V HVO renewable-diesel generator that recharges the battery automatically and runs only when needed, with a larger reserve for continuous winter uptime.

Tell us the load, the site and the conditions.

We specify, integrate and support the tower for the life of the deployment. Lead time, spares and warranty confirmed at quotation.

ENQUIRIES

www.fyrflysystems.com

hello@fyrflysystems.com