

bOFFx

Power. Beyond the grid.

Three modules. One adaptable energy system.

M1 All-in-One

M2 Battery

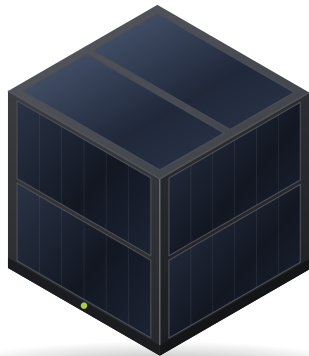
M3 Solar

Product concept · October 2026

ONE PLATFORM

Build exactly the power you need.

One transport envelope. Three functions. Start with M1, then add storage or generation.

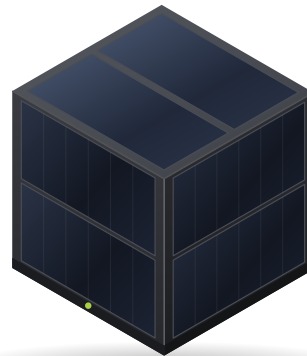


M1 All-in-One

30_{kW}

Hybrid inverter · 3-phase

System core: inverter, EMS, 60 kWh LFP battery
and 20 kVA diesel backup.

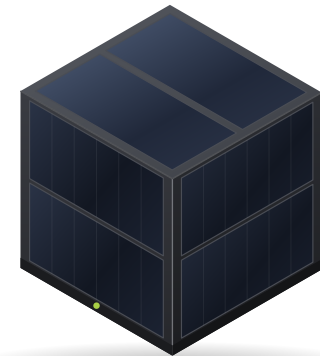


M2 Battery

150_{kWh}

Nominal LFP storage

Adds storage with its own MPPT solar charging.
Uses the inverter in M1.



M3 Solar

14.96_{kWp}

34 PV modules

10 external panels plus 24 deployable ground
cassettes.

Modules connect through **bOFFx LINK**: proposed DC connection, communication and mechanical corner coupling. Final interface and protection arrangement are defined in detailed engineering. Illustrations are schematic.



M1 · ALL-IN-ONE

The independent core.

A self-contained energy hub for remote sites, temporary facilities and backup power. Compact outside. Complete inside.

30_{kW}

3-phase hybrid inverter

60_{kWh}

LFP battery, nominal

20_{kVA}

Diesel, auto-start

Solar array **4.40 kWp**

PV modules **10 × 440 Wp**

AC outputs **400 V / 230 V**

Usable energy* **≈ 54 kWh**

Mass **≈ 3.2 t**

Deployment **2 people · ~30 min**

EMS coordinates solar, storage and generator operation. *Assumes a 90 % usable state-of-charge window. Generator ≈ 16 kW at cos φ 0.8: higher loads are shared with the battery. Render shows the folding enclosure, not the final internal layout.

STORAGE EXPANSION

150 kWh

Keep energy available — day and night. Without a second inverter.

≈ 135 kWh

Usable at 90 % SoC window

90–230 kWh

Proposed capacity range

210 kWh

M1 + M2 combined, nominal

4.40 kWp

Own PV via dedicated MPPT

Integrated storage management. Battery racks, BMS and thermal management inside the same transport envelope. Approximate module mass 3.0 t.

Connected through LINK. M2 supplies the shared system through M1. Battery voltage and BMS compatibility with M1 are confirmed in detailed design.

GENERATION EXPANSION

More sun. More daily energy.

One transport module unfolds into a full solar field.

14.96 kW_p

Total installed PV

34

Modules: 10 on the enclosure, 24 in cassettes

66 m²

Active PV area (34 × 1.95 m²)

22.5%

Module efficiency, 440 Wp at 1,722 × 1,134 mm

Indicative footprint

≈ 10 × 13 m

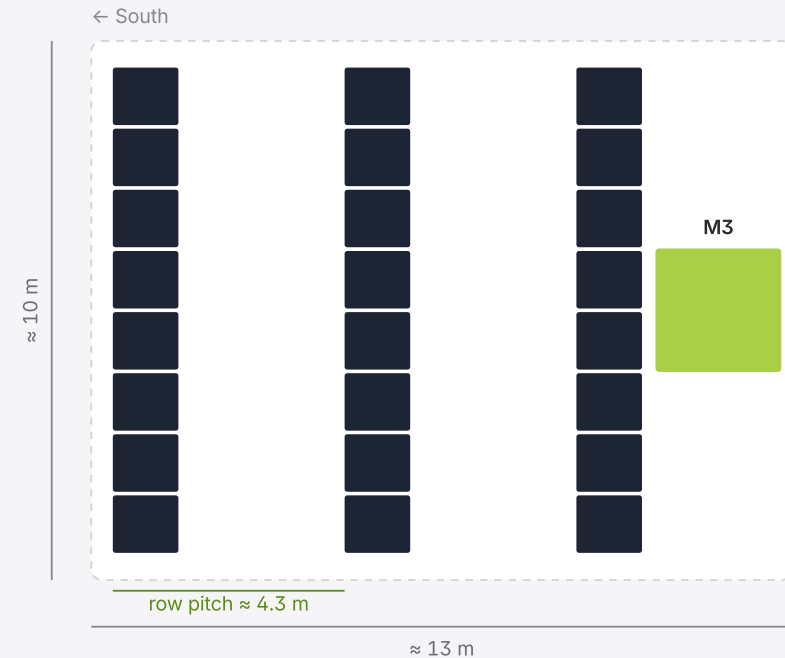
Setup

2–3 people · ~90 min

Mass

≈ 2.6 t

24 cassettes · 3 rows × 8 · portrait



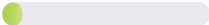
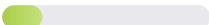
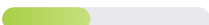
Plan view, to scale. Cassettes are stored vertically on rails and deploy on folding ground supports. At a ≈ 45° tilt, each row stands ≈ 1.2 m high; a ≈ 4.3 m pitch keeps rows unshaded at solar noon in December at 45° N. Final geometry requires engineering confirmation.

SCALE BY FUNCTION

Match supply to demand.

Illustrative daily PV yield

Annual average, 3.5 kWh per kWp per day

M1		15.4 kWh
M1 + M2		30.8 kWh
M1 + M3		67.8 kWh
M1 + M2 + M3		83.2 kWh
M1 + 2×M2 + 2×M3		150.9 kWh

Configuration	PV	Battery	Yield / day	Avg. load*	Yield / year	Mass
M1	4.40 kWp	60 kWh	15.4 kWh	0.64 kW	5,621 kWh	3.2 t
M1 + M2	8.80 kWp	210 kWh	30.8 kWh	1.28 kW	11,242 kWh	6.2 t
M1 + M3	19.36 kWp	60 kWh	67.8 kWh	2.82 kW	24,732 kWh	5.8 t
M1 + M2 + M3	23.76 kWp	210 kWh	83.2 kWh	3.47 kW	30,353 kWh	8.8 t
M1 + 2×M2 + 2×M3	43.12 kWp	360 kWh	150.9 kWh	6.29 kW	55,086 kWh	14.4 t

* Average continuous load that solar alone could cover over a year, before conversion losses. Expect roughly one third of the annual average in mid-winter and up to about 1.5× in mid-summer at 45° N. Additional M1 units may support higher output, subject to inverter compatibility.

Yield = installed kWp × 3.5 kWh/kWp/day (assumption from the source concept, consistent with ≈ 1,280 kWh/kWp/year for optimally tilted, unshaded arrays in continental south-east Europe). Panels left vertical on the enclosure produce considerably less. Not a site-specific forecast; confirm with PVGIS for each project.

CHOOSE YOUR AUTONOMY

Hours on battery. Litres saved.

Battery - only runtime

No sun, no generator, constant load.

Storage	Nominal	Usable	5 kW	10 kW	20 kW
M1	60 kWh	54 kWh	10.3 h	5.1 h	2.6 h
M1 + M2	210 kWh	189 kWh	35.9 h	18.0 h	9.0 h
M1 + 2×M2	360 kWh	324 kWh	61.6 h	30.8 h	15.4 h

90 % usable state-of-charge window, 95 % inverter efficiency. Real runtime depends on load profile, temperature and battery ageing.

Diesel displaced by solar

Illustrative, per year.

Configuration	PV energy	Diesel	CO ₂
M1	5,621 kWh	≈ 1,686 l	≈ 4.5 t
M1 + M2	11,242 kWh	≈ 3,373 l	≈ 9.0 t
M1 + M3	24,732 kWh	≈ 7,420 l	≈ 19.9 t
M1 + M2 + M3	30,353 kWh	≈ 9,106 l	≈ 24.4 t
M1 + 2×M2 + 2×M3	55,086 kWh	≈ 16,526 l	≈ 44.3 t

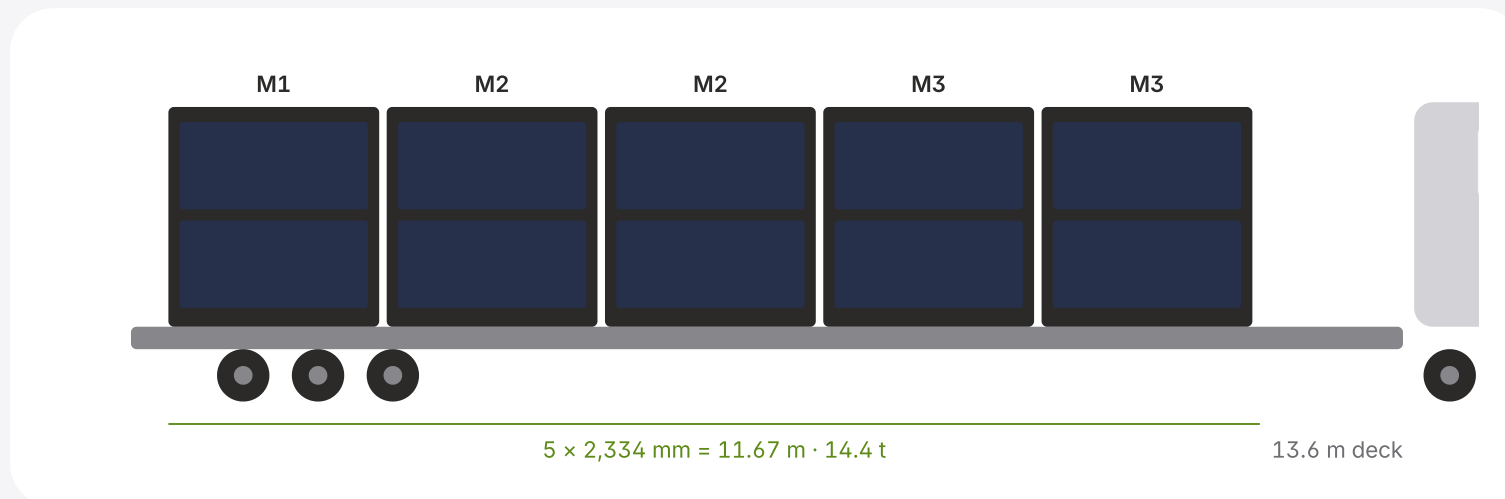
Assumes all solar energy is used and would otherwise come from a small diesel generator at ≈ 0.3 l/kWh; 2.68 kg CO₂ per litre of diesel. Upper-bound estimate.

DESIGNED AROUND MOBILITY

One compact transport envelope.

2,334 × 2,289 × 2,350 mm

LENGTH × WIDTH × HEIGHT · identical for M1, M2 and M3



5

Modules on one standard 13.6 m semi-trailer — the largest configuration fits in a single load.

2,289 mm

Width, within the 2,550 mm EU road limit. No escort or special permit needed.

40' HC

Dimensionally fits a 40-ft high-cube for sea freight (5 per box). Door clearance is tight — verify.

≤ 3.2t

Per module. Forklift pockets and corner handling interfaces proposed.

ENERGY WHERE IT IS NEEDED

A platform for remote operations.

01

Available

Remote work

Construction, field operations, mining camps and agricultural sites.

02

Available

Temporary infrastructure

Events, emergency response and humanitarian facilities.

03

Planned

LIVE

Living or office module, powered by the energy system.

04

Planned

COLD / FREEZE

Chilled storage at 0 to +5 °C and frozen storage down to -20 °C.

05

Planned

MED

Clinical workspace with power for medical equipment.

06

Proposed

Solar retrofit

Folding PV kit for compatible existing containers.

Roadmap items are development concepts. Layout, electrical architecture and application-specific requirements are defined per project.

Tech specs.

Parameter	M1 · All-in-One	M2 · Battery	M3 · Solar
Transport envelope	2,334 × 2,289 × 2,350 mm (all modules)		
PV modules / rated power	10 / 4.40 kWp	10 / 4.40 kWp	34 / 14.96 kWp
PV module reference	440 Wp · 1,722 × 1,134 mm · ≈ 22.5 % efficiency		
LFP battery, nominal / usable*	60 / ≈ 54 kWh	150 / ≈ 135 kWh (range 90–230)	—
Power conversion	30 kW hybrid, 3-phase	MPPT charging	MPPT charging
AC outputs	400 V / 230 V	via M1	via M1
Diesel backup	20 kVA (≈ 16 kW), auto-start	—	—
Indicative mass	3.2 t	3.0 t	2.6 t
Deployment crew / time	2 people · ~30 min	2 people · ~30 min	2–3 people · ~90 min
Deployed footprint	—	—	≈ 10 × 13 m
Monitoring	EMS · RS-485 · CAN · Modbus · 4G		

*90 % usable state-of-charge window assumed. All figures are preliminary design targets. Equipment ratings, usable battery capacity, installation clearances, certification and lifting/stacking limits are confirmed in detailed design. Illustrations and renders are conceptual; panel counts and mechanisms may differ from the stated configuration.



MODULAR POWER. BEYOND THE GRID.

1

Define your loads.

2

Choose your autonomy.

3

Configure your modules.

Product & brand concept · October 2026