About Safiery

WHO WE ARE / GOLD COAST, AUSTRALIA

We own the whole stack.

Safiery designs and makes the electrical system of modern boats and vehicles: the power conversion, the battery, the switching, the controllers and the software that ties them together, with AI on top.



Two product families.

Safiery THE HARDWARE

State of the art power conversion, digital switching, tank monitoring and lithium batteries. Every product is native to, or compliant with, the Victron Energy ecosystem, so the whole system is visible and controllable from a Victron touch display. Open protocols, not closed systems.

Quasar AI ENABLED

AI enabled from the start of a project and after commissioning. Error free engineering and programming, so builders get high productivity and confidence. Then high availability on the water: predictive maintenance, day before trip pre-checks and a vessel log that keeps every issue, from report to resolution, with the boat. Two AI models advise and check, and both can be replaced.

C Quasar Concierge
The common onboarding tool. AI configures the system and builds the engineering files in minutes, for any size of system, including the Victron products.

C Quasar Care
Constant monitoring of the digital twin in the cloud for the highest uptime and no surprises. Resale value goes up with a sea trial against the current vessel log.

Partnering with Victron Energy. STAR-Tank and STAR controllers have native access to Victron's GX ecosystem. Scotty AI, the BMG and Solid State Lithium are all compliant products, with direct visibility in Victron's GX devices.

OUR MISSION

Predictive maintenance of boats and vehicles, using a digital twin and AI agents. Control of the whole system, with voice and local AI.

20+	11	13	8 yrs
Countries we ship to	Engineers on the Gold Coast	Patents filed	Trading, since 2018

Self funded from day one, with no debt and no outside investors.

Tells you before it happens.

Innovation always has the fingerprints of failure on it. Before the black box flight recorder, air crashes were explained by guesswork. We set out to go to the next level with lithium batteries. A black box that warns before a crash. Batteries and boats: a measured, recorded twin that tells engineers exactly what may happen and warns owners before it does.

SAFIERY

Hardware, native to or compliant with Victron

POWER

- **SCOTTY AI DC-DC** — 12, 24, 48, 96, 400 V, self tuning
- **BMG** — 48 V belt motor generator
- **LITHIUM QUASAR BMS** — Meteor, solid state, HiBlade

SWITCHING AND SENSING

- **STAR** — Digital switching
- **STAR TANK** — Tank levels over Bluetooth
- **LIN NODES** — Sealed switch panels

QUASAR

AI enabled, hybrid cloud and local control

CONTROL AND DISPLAY

- **QUASAR GLASS** — Displays for boats and vehicles
- **QUASAR ONE** — Predictive health
- **QUASAR MASTER** — Local AI and Home Assistant

CLOUD AND AI

- **QUASAR TWIN** — Semantic model of each boat
- **AI HARNESS** — Two models, the boat decides
- **VESSEL LOG** — Every reading, time stamped

The Safiery range, designed and built in Australia. Some products are sold through Victron dealers.

HIGHLIGHT / HIBLADE

HiBlade with Quasar BMS.

From containment to prevention.

Weeks of warning, not seconds. HiBlade brings together what we have learnt across every Safiery product. Its Quasar BMS tests every cell each day and tells you how best to use the battery, warning of a problem weeks before it could happen. Lithium safety moves from containing a failure to preventing one.

Proof on the water.

Official Battery, America's Cup	Extensive testing of the IP67 rated lithium battery, which delivers up to 30 kW within a second for performance yachting.
McConaghy MC86GT	300 digital switching points and integrated screens on an 86 ft power catamaran, on the water since August 2026.
Panther Electric 56	Full Quasar system and lithium batteries on order, for delivery in May 2027.
Solid state batteries	200 delivered and on order for catamarans and electric tenders.
Sail-by-wire	A partnership with McConaghy to develop the first sail-by-wire on the open Quasar framework.
Agents at work	Since mid 2026, AI agents run our own ERP and ISO 9001 system. The same skills now watch over boats.
Auto docking	Edge AI reads 360 degree cameras and radar to dock the boat.



Helm station, McConaghy 86GT, Open source Quasar by Safiery.

Two founders.

Committed to a brand that lasts.

Bruce Loxton, CEO. Engineer. Honeywell, ABB (global leader for robotics and industrial IT in Zurich) and Anglo American. Chairman Qinetiq AU. Built 6,000 RVs at Kimberley.

Fiona Hou, Designer. Communications engineer. Leads industrial design of the Quasar family, the supply chain and compliance.

AWARDS | **Nominated for the DAME Award** (Design and Manufacturing Excellence) at METSTRADE Amsterdam, 2023, 2024.

Let's build something together.

45/8 Distribution Court, Arundel QLD 4214, Australia.

safiery.com sales@safiery.com +61 7 2102 2553

36TH AMERICA'S CUP NAPLES, ITALY — SAFIERY — OFFICIAL BATTERY

SAFIERY

ROI: AI that shifts your productivity.

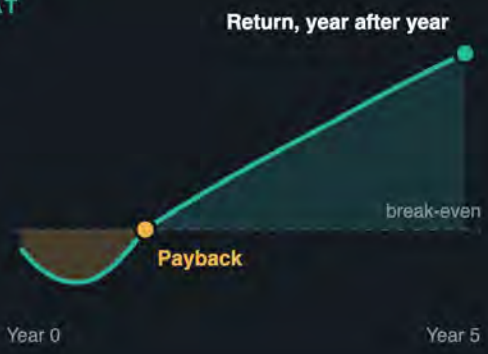
Safiery gives boat builders, owners, service teams and support a measurable return. Our AI tools set the boat up, watch it run and keep the record, from the first switch-on to the last owner. We talk payback. We talk ROI. Technology is only a tool.

RETURN ON EVERY BOAT

€2M+

free cash flow over 5 years, for a builder shipping 200 boats a year

PAYBACK FIRST, THEN AN ANNUITY



PRODUCTIVITY

SYSTEM SET-UP
~~Days~~ → **1 hour**

FAULT FOUND
~~Offshore~~ → **At the dock**

WARRANTY CLAIM
~~By email~~ → **With data**

Four financials returns from one system. QUASAR CONCIERGE + QUASAR CARE

BOAT PRODUCTION

Set up in an hour, not days

- Quasar Concierge configures the whole system from one spreadsheet.
- A second AI checks every report. Answers in 12 languages.

BOAT BUILDER

Fewer call-backs, plus an annuity

- Every warranty issue logged with its data and closed with the fix.
- 25% of each Quasar Care renewal from year 2, for the life of the plan.

SERVICE

Shorter visits, first-time fixes

- Log in remotely and read the history before you go aboard.
- The fix is recorded and re-checked, so a bad repair shows too.

BOAT OWNER

More days on the water

- A pre-check the day before every trip, so faults are found at the dock.
- Weeks of warning before a failure, and a log that lifts resale value.

THE RETURN, IN NUMBERS

1 hour
to set up 300 switching points on a McConaghy MC86

Weeks
of warning before a breakdown, not an alarm offshore

25%
of each renewal paid to the builder, from year 2

Year 1
of Quasar Care included with the boat

HOW THE RETURN IS MADE

ROI: Two AI agents. The whole life of the boat.

SET UP AND LEARN THE BOAT

Quasar Concierge

Scan the QR code and send one spreadsheet: STAR outputs, Victron serial numbers, the battery. Concierge configures the system over the router SIM, a second AI checks the report before switch-on, and it then answers as the boat's operating manual.

WATCH, PRE-CHECK AND LOG

Quasar Care

Agents assess every signal against the boat's own history. A pre-check the day before every trip, an early warning before an alarm, and a vessel log that follows each issue from first report to final fix.

WORKED CASE / QUASAR ONE / STARBOARD ENGINE

Found at the marina, not 50 nm offshore.

09:42	09:44	10:15	10:32	10:40	10:45
Exhaust temp rising for the RPM	Owner asked to check the strainer	Technician logs in and checks the data	Strainer found blocked and cleaned	Exhaust temp back to baseline	Impeller change booked for next service

Every step is time stamped in the vessel log. The owner, the builder and the technician see the same record.

Why you can trust it.

Two models, two vendors
One model advises, a second from another vendor checks. Nothing reaches you unless it passes.

The boat decides
The AI proposes. Gensets and watermakers have no remote command path at all.

Your data, your say
The vessel log stays with the boat and is shared only with the owner's say.

SUPERYACHTS / 98 M PLANNING CASE

Pays for itself in 5 to 11 months on cash savings alone.

€0.6M to €1.2M a year in cash savings once mature, and 3 to 8 more days a year on the water. Quasar Care runs sovereign on board, reporting to the owner and captain only.



SAFIERY

SAFIERY OWNS THE WHOLE STACK

Designed, built and supported by Safiery. No handoffs, no gaps, one accountable team.

Tap our Chatbot
Follow us LinkedIn
Build with us.

Press Release: Safiery 48V Semi Solid State Lithium is Official Battery of the 38th America's Cup

Oct 5, 2026 · @Bruce



Safiery named Official Battery of the 38th America's Cup

Australian semi-solid state 48V 3C battery selected as the Exclusive Lithium Battery Supplier for the 38th America's Cup, Naples, Italy. On show at IBEX 2026, Booth 1-315.

FOR IMMEDIATE RELEASE

TAMPA, Florida, 6 October 2026. Safiery, the Australian marine power electronics manufacturer, today announced that its 48V 3C semi-solid state lithium iron phosphate battery is the Official Battery of the 38th America's Cup, to be held in Naples, Italy. Under an Event Supporter Agreement with event organiser ACE Italy S.r.l., Safiery is the Exclusive Lithium Battery Supplier to the event. The battery makes its US show debut this week at IBEX 2026 in Tampa.

Why the America's Cup chose it

The America's Cup needed high power from a small, light pack that could be carried aboard, charged anywhere and switched safely from the helm. The 48V 3C delivers 150 A continuous from a 20 kg pack, 2,788 Wh per pack, and 6,000 cycles at 80 percent depth of discharge. Packs stack flat or on edge, lock into each other and connect with power straps down the side, with no battery boxes and no cable runs.

Safety was central to the selection. The cells have been tested by nail penetration, 200 kN crush, 130 degrees C heat and extended short circuit. Every pack carries switchable charge and discharge MOSFETs controlled over CAN, and one remote button at the helm switches all connected packs. The installation for the event was reviewed with Reinova S.p.A. and designed with open venting to protect crew.

Built for electric tenders and chase boats

The battery is sized for the electric tenders and support craft that run all day around a race course. Two packs run a 10 kW motor, four packs run 30 kW, and up to 20 packs can be paralleled in one bank. It charges three ways: cross charging from a mother ship's 12 or 24 V system at 1,500 or 3,000 W, fast 48 V

DC shore charging, or up to 10 kW from Safiery's BMG engine-mounted generator. Cross charging is low voltage and can be done with the tender in the water.

The pack is Victron ready with a CAN BMS, NMEA 2000 output and a wired stop charge signal, and a Bluetooth app shows every connected battery with cell temperatures. Certifications include IEC 62619, UN38.3 and CE with EMC. Warranty is 5 years on CAN control.

"The America's Cup is the hardest proving ground in sailing, and being chosen as its official battery says everything about where semi-solid state technology has reached," said Bruce Loxton, CEO and Co-Founder of Safiery. "The same packs that power the Cup are shipping now to tender builders, superyacht owners and boatbuilders worldwide. We want IBEX visitors to see them stacked, strapped and switched from a helm, exactly as they will be used in Naples."

See it at IBEX 2026

The 48V 3C is on display at Safiery, Booth 1-315, IBEX 2026, Tampa Convention Center, 6 to 8 October 2026, stacked and strapped as it will be installed for the event. Safiery is also showing its Quasar vessel intelligence platform, STAR controllers and the 48V BMG belt motor generator. The battery is available now. Pricing is ex works Arundel, Queensland.

About Safiery

Safiery Pty Ltd is an Australian designer and manufacturer of marine and RV power electronics, founded in 2018 in Arundel, Queensland and exporting to more than 20 countries. Its range includes solid state lithium batteries, STAR controllers, Scotty AI DC-DC converters, the BMG belt motor generator and the Quasar vessel intelligence platform. Safiery products integrate natively with Victron Energy GX systems. Safiery was nominated for the DAME Award at METSTRADE in 2023 and 2024. Safiery and Quasar are trademarks of Safiery Pty Ltd.

Media contact

Bruce Loxton, CEO and Co-Founder sales@safiery.com +61 7 2102 2553 www.safiery.com

High resolution images of the 48V 3C and the 38th America's Cup Official Battery lockup are available on request.

ENDS

Quasar Care

AI ENABLED VESSEL HEALTH / WORKS ACROSS ALL BRANDS

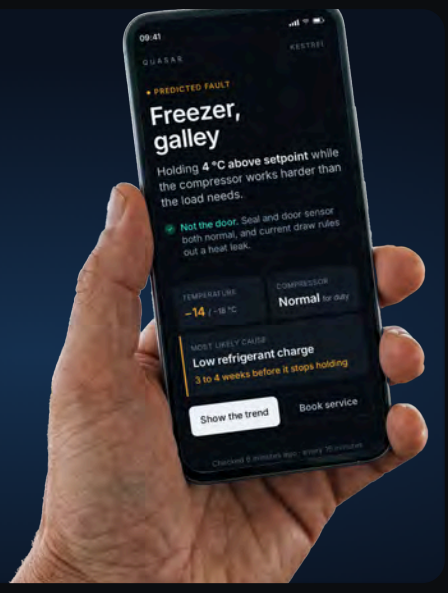
High availability once on the water.

Quasar Care watches the digital twin of your boat in the cloud, every day. Predictive maintenance, a pre-check the day before every trip, and a vessel log that keeps every issue from first report to final fix. No surprises.

PREDICTED FAULT / 3 TO 4 WEEKS AHEAD

Weeks of warning. One tap to book the service.

The agents checked the galley freezer every 15 minutes, saw it holding 4 °C above setpoint with the compressor working harder than the load needs, ruled out the door, and named the likely cause. Show the trend or book service, from the phone.



Two people it works for.

The Boat Owner NO SURPRISES

- **Predictive maintenance.** AI agents watch the health data every day and flag wear before it becomes a failure.
- **Day before trip pre-checks.** The boat checks itself before you leave, so the problem is found at the dock.
- **Vessel log.** Every reading, every event, time stamped, in one place.
- **Issue to resolution.** From first report to final fix, the whole trail is recorded and stays embedded in the vessel log.
- **Resale value rises with the log.** A sea trial against the current vessel log proves the boat.

The Boat Builder FLEET VIEW

- **Warranty log with tracking.** Every issue raised during warranty is logged, tracked and closed with a record of what was done.
- **Fleet performance by device.** See how each device performs across every boat you have built, by brand and model.
- **Revenue stream.** A share of every Quasar Care subscription on the boats you build.
- **€2,000,000+ over 5 years.** Free cash flow from subscription revenue and savings, for a builder shipping 200 boats a year.

victron energy BLUE POWER

Works across all brands. Quasar Care reads Victron GX, NMEA 2000, Bluetooth sensors and the Safiery STAR and Quasar range through Quasar ONE. One twin, one log, whatever is fitted.

THE PROMISE

The boat you trust is the boat that tells you what is about to break. Found at the dock, not at six in the evening offshore.

24/7	1 day	2	1
Agents watching the twin in the cloud	Pre-check before every trip	AI models, one advises and one checks	Log that stays with the boat for life

HOW IT WORKS / FROM READING TO RESOLUTION

A paper trail that stays with the boat.

Most boats carry their history in an owner's inbox and a few invoices in a drawer. Quasar Care keeps it in the vessel log inside the digital twin: every reading, every pre-check, every issue, who looked at it and how it was closed. A surveyor, a buyer, an insurer or the next skipper can read it and trust it.

ISSUE TO RESOLUTION

Every step recorded in the vessel log, time stamped

MEASURE 01
Every reading, every day
Engines, batteries, charging, tanks, bilge, switching and sensors feed the Quasar Twin.

ASSESS 02
Agents find the trend
Wear and drift are spotted weeks out. A second AI model checks the finding before you hear about it.

REPORT 03
Health indicator on the twin
Green, amber or red on the 3D model. Tap to read what was seen and what to do.

ACT 04
Owner, builder or technician
Assign it, email it to the yard, record the inspection finding or the part fitted.

RESOLVE 05
Closed in the log
The issue is marked resolved with the fix recorded. The trail stays embedded in the vessel log.

Day before trip pre-checks run the same path automatically, so the boat has already looked at itself before you step aboard.

HIGHLIGHT / RESALE

Resale value rises with the log.

Prove the boat, do not describe it.

A sea trial against the current vessel log. The buyer sees the state of health today, the history of every issue and how each one was closed. A boat with a complete record sells faster and for more, and the log goes with the boat to its new owner.

What the owner sees.

State of Health	One score for the boat and one for each system, shown as indicators on the 3D animated twin on your phone, tablet or Quasar Glass display.
Pre-trip checks	The day before a trip the agents run the pre-check and tell you if anything needs a look before you leave.
Predictive health	Trends across trips, not single alarms. Impeller, coolant, battery cells, charging and shore power are watched for drift.
Hours run	Service intervals tracked by hours run, with the scheduled inspection logged when it is done.
Warranty	Items under warranty are flagged so the claim is raised with the builder, with the data attached.

For the builder.

Fewer call backs, a fleet you can see, and an annuity.

Warranty. Every issue raised in the warranty period is logged with the data behind it, tracked to whoever is fixing it, and closed with the record of the fix.

Fleet by device. Performance of each device across every boat you have delivered, so a weak part shows up across the fleet before it shows up in your inbox.

Subscription share. Quasar Care is sold as a subscription with the boat. The builder earns a share for the life of the plan.

AWARDS

Nominated for the DAME Award (Design and Manufacturing Excellence) at METSTRADE Amsterdam, 2023, 2024. Quasar ONE with AI onboarding entered for 2026.

Let's build something together.

45/8 Distribution Court, Arundel QLD 4214, Australia.

safiery.com **sales@safiery.com** **+61 7 2102 2553**

36TH AMERICA'S CUP NAPLES, ITALY
SAFIERY
OFFICIAL BATTERY

Quasar Care

FOR SUPERYACHTS

SAFIERY

AI ENABLED VESSEL HEALTH / SOVEREIGN ON BOARD / YACHTS OVER 50 M

A learning superyacht. Sovereign on board.

Quasar Care runs on the boat. Two Jetson Thor computers hold the Quasar Vessel Anatomy, the semantic model of the yacht, and a two tier AI harness: one model advises, one checks. 2,000 points every five minutes, over 4 million readings a week, assessed on board and reported to the owner and the captain. Nobody else.

PLANNING CASE / 98 M NEW BUILD

Pays for itself in 5 to 11 months on cash savings alone.

And gives the owner 3 to 8 more days a year on the water.



€0.6M to €1.2M
cash savings a year, once mature

€2.2M to €5.1M
net cash benefit over five years

2 to 6 weeks
of warning before a breakdown

4 million
readings assessed every week

Two people it works for.

The Owner NO SURPRISES

- **Availability.** 3 to 8 more days a year, with faults found at the dock, not at six in the evening offshore.
- **Cash.** €0.6M to €1.2M a year once mature: fewer secondary repairs, shorter yard periods, warranty claims backed by data.
- **Sovereign.** The vessel log is encrypted and stays on board. It reports to you remotely and to the captain on board. Nobody else sees it without your permission.
- **Resale and insurance.** A tamper free log a surveyor can trust makes insurance easier to manage and lifts the price at resale.

The Captain and Chief Engineer ON BOARD

- **Shadow mode first.** 30 days of findings graded by the chief engineer before anyone else is told.
- **Checked before you hear it.** One model advises, a second checks it against the raw data. A disputed finding comes to the engineer marked as disputed, never dropped.
- **Pre-trip checks.** The boat looks at itself the day before departure and keeps working with the comms off.
- **Read only.** No command path to propulsion, gensets or steering. The alarm and safety system stays exactly as it is.

Works with what is already

Quasar Care reads the alarm and monitoring system, the engines and gensets,

HOW IT WORKS / THE QUASAR VESSEL ANATOMY

A semantic model of the yacht, on board.

The only way an AI agent can read 4 million readings a week with confidence is to place every one of them in a semantic model of the boat. Palantir call it an ontology. We call it the Quasar Vessel Anatomy: every device, every reading and every relationship, with a place on the boat and a time stamp. On top of it the agents learn the yacht's own operating signature, so a reading is judged against what is normal for this boat in this state, not against a limit from a manual.

ISSUE TO RESOLUTION

Every step recorded in the encrypted vessel log, time stamped

MEASURE 01

Every reading, on board

2,000 points from the automation already fitted feed the Anatomy every five minutes.

ASSESS 02

Agents find the drift

Baselines learned for this boat. One model proposes the finding, a second checks it against the raw data.

REPORT 03

Health on the twin

Green, amber or red on the 3D model for the owner and the captain. Disputed findings go to the chief engineer.

ACT 04

Chief engineer decides

Assign it, book the yard, record the inspection finding or the part fitted.

RESOLVE 05

Closed in the log

The fix is recorded and the signature re-checked, so a bad repair shows up as well.

Pre-trip checks run the same path automatically the day before departure, so the boat has already looked at itself before anyone steps aboard.

HIGHLIGHT / LEARNING

Useful in weeks. Calibrated in six months.

Shadow mode first, then measured.

Weeks 2 to 4: first baselines on the systems that run every day. **Weeks 8 to 12:** operational, with findings checked before anyone is told. **Month 6:** calibrated against real outcomes on this boat. The first 30 days run in shadow mode with the chief engineer, so the next number you see is a measured one.

What the owner and captain see.

State of Health	One score for the boat and one for each system, on the 3D twin on phone, tablet or Quasar Glass.
Pre-trip checks	The day before a trip the agents run the check and say if anything needs a look before you leave.
Predictive health	Trends across trips, not single alarms. Cooling, refrigeration, power, pumps, hydraulics and cells watched for drift.
Hours run	Service intervals tracked by hours run, with the inspection logged when it is done.
The log	Encrypted, on board, for the life of the boat. Exported to a surveyor, insurer or buyer only with the owner's permission.

For the builder.

Fewer call backs, a fleet you can see, and an annuity.

Warranty. Every issue raised in the warranty period is logged with the data behind it, tracked to whoever is fixing it, and closed with the record of the fix.

Fleet by device. Findings and outcomes, never raw data, pooled across the yachts you have delivered, so a weak part shows up across the fleet before it shows up in your inbox.

Subscription share. Quasar Care is sold as a subscription with the boat. The builder earns a share for the life of the plan.

What is on board.

Two Jetson AGX Thor computers, the adviser on one and the checker on the other, each able to carry both. Three history peers, so the record survives losing any one of them. Six to eight read only gateways. 0.4 to 0.7 kW for the whole installation, fitted during a planned yard period.

48V 3C

SEMI-SOLID STATE LITHIUM IRON PHOSPHATE



The battery used by the America's Cup.

Semi-solid state technology with 3C power: 150 A from a 20 kg pack. Stack them, strap them together, and switch every pack from the helm or over CAN.

PERFECT FOR ELECTRIC TENDERS

38TH AMERICA'S CUP NAPLES, ITALY

SAFIERY

OFFICIAL BATTERY

High power. Under your control.

3C high power

150 A continuous from every 48 V pack. Add packs in parallel for 10 to 30 kW tender motors.

Switchable MOSFETs

Turn the charge or discharge MOSFETs of any pack on or off over CAN. Remote on and off from the helm.

Stack and strap

Packs lie flat or stand on edge, lock into each other, and join with power straps down the side.

150 A	2,788	20 kg	6,000
Continuous at 3C, 160 A for 2 s	Wh per pack, 53.4 Ah at 48 V	Per pack, 420 × 252 × 150 mm	Cycles at 80 percent depth, 0.2C discharge

Semi-solid state lithium iron phosphate (LFP) cells. IP67. Output varies with temperature, installation and battery state.

Made for electric tenders.

A tender needs high power in a small, light space, and it needs charging wherever the mother ship is. The 48V 3C delivers full power from a compact stack, charges from the mother ship's own 12 or 24 V system, and every pack can be switched from the helm.

SIZE YOUR TENDER

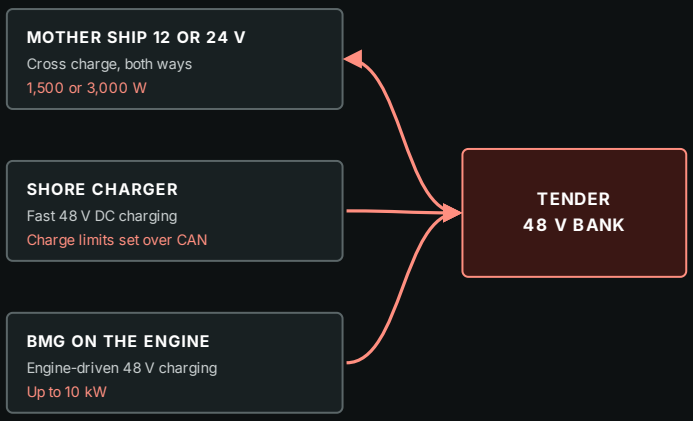
Packs for each outboard or jet power.

MOTOR	LIGHTEST	MORE RANGE
10 kW	2 packs, 42 kg	8.4 kWh, 63 kg
15 kW	2 packs, 42 kg	11.3 kWh, 84 kg
20 kW	3 packs, 63 kg	14.0 kWh, 105 kg
25 kW	3 packs, 63 kg	16.7 kWh, 126 kg
30 kW	4 packs, 84 kg	22.6 kWh, 168 kg

Sizing is a guide. Final pack count is confirmed for each motor, hull and range.

CHARGE IT THREE WAYS

On the davit, in the water or at the dock.



Cross charging is low voltage and safe, and can be done with the tender in the water.

Control from the helm or over CAN.

MOSFET control Charge or discharge MOSFETs switched on or off over CAN, pack by pack.

Remote on and off Push button with LED on every pack. One remote button at the helm switches all connected packs.

Victron ready CAN BMS with Victron protocols. NMEA 2000 and a wired stop charge output.

One app The Bluetooth app shows every connected battery, with cell temperatures.

Parallel Up to 20 packs in one bank.

Temperature Charge 0 to 55 °C, discharge -20 to 65 °C. Optional heater.

Tested cells Nail penetration, 200 kN crush, 130 °C heat and extended short circuit.

Certifications IEC 62619, UN38.3, CE with EMC certification.

Warranty 5 years on CAN control, 3 years with no CAN control.



45 KWH STACKED EITHER SIDE OF AN ENGINE ROOM

Stack and strap.

No battery boxes, no cable runs.

Each pack lies flat at 150 mm high, or stands 250 mm high and locks into the next. Positive and negative power straps join the packs down the side.

Safiery and Quasar are trademarks of Safiery. Design patent registered for interlocking case and integrated straps.

Let's power your tender.

Bring your motor size, your hull and the range you need.

safiery.com sales@safiery.com +61 7 2102 2553

38TH AMERICA'S CUP NAPLES, ITALY
SAFIERY
OFFICIAL BATTERY

HiBlade

48 V HYBRID SOLID STATE / QUASAR BMS

6,750 Wh in 29 kg.



Then it checks every cell, every day, and tells you weeks before a fault. High density cells, and a BMS that looks ahead.

MARINE POWER WITH QUASAR INSIDE

More energy. Fewer surprises.

High density blades

42 thin hybrid solid state cells stand on edge like blades. Heat leaves up the tabs into a billet aluminium heat sink.

Far less fuel for a fire

Most of the liquid electrolyte is replaced by solid material, so there is much less to burn.

Warns weeks ahead

The Quasar BMS tests every cell group each day and compares it with the day the battery was built.

235	150 A	1,500	4 to 8
Wh/kg at pack level	Continuous, 250 A for 2 s	Cycles to 80 percent	Weeks early warning, typical

135 Ah at 50 V nominal, 100 A charge, IP67 marine enclosure, 400 × 300 × 188 mm. Early warning windows are typical estimates against each cell's factory baseline, with field validation under way.

A battery that tells you weeks before it fails.

Most lithium safety systems wait for something to go wrong, then react. HiBlade works the other way round. It looks for the small changes inside each cell that come weeks before a fault, and acts on them while there is still time.

ONE DAILY SWEEP, FOUR MEASUREMENTS PER CELL GROUP

>1 KHZ	100 HZ TO 1 KHZ	1 TO 100 HZ	BELOW 1 HZ
THE METAL	**THE COATING**	**THE REACTION**	**THE STRUCTURE**
Welds, busbars, joints, compression	Film that uses up lithium	Safety faults show here first	Cracking inside the electrodes

High frequency → Low frequency

AT THE BATTERY — QUASAR BMS
- EIS sweep of every cell group
- Validity check, repeat if not clean
- Acts on imminent faults itself

→

ON THE BOAT — QUASAR ONE
- Every valid result sent on
- Timestamped where it was measured
- Offline readings keep their time

→

IN THE CLOUD — QUASAR TWIN
- AI harness reads every cell group
- Against its own history and siblings
- Second, independent check first

Protection lives in the battery and works with no network. Quasar ONE adds the whole-bank view.

The method is electrochemical impedance spectroscopy (EIS). Laboratories have used it for decades. HiBlade runs it on board, on every cell group, every day.

Built into every pack.

Daily cell test	A small, harmless signal from 0.1 Hz to 1 kHz, measured to 10 μΩ on an automotive-grade NXP chipset.
Birth certificate	Every weld and joint is tested at the factory. The result is signed and sealed, and every later reading is judged against it.
15 fault types	Plating, soft shorts, weak welds, dryout, lost compression and more, from one daily measurement.
Banks that share	Up to 128 in parallel. The pack doing too much is limited, and the weakest pack charges first.
Charger lock-out	A wrong or mis-wired charger is found and refused within a tenth of a second.
Longer life	A gentler charge window by default that narrows with age, resting at 75 percent on shore power.
Fits your boat	BMS CAN, plug and play with Victron. NMEA 2000 port.
Warranty	3 years, extended to 5 years with a continuous Quasar subscription.

When it finds something.

ADVISORY	Logged and trended. Owner and dealer can see it.
CAUTION	Charge trimmed. Named cell, named cause, weeks left.
WARNING	Charge and discharge gently reduced. Dealer notified.
PROTECT	The pack limits itself, without waiting for anyone.

The record stays with the battery. No subscription is needed to read it. Add a Quasar ONE and the bank appears in the Quasar Twin, each pack green, amber or red.

8 patents filed on Quasar BMS and HiBlade battery. HiBlade, Heartbeat and Quasar are trademarks of Safiery.

25 Quasar BMS functions in every pack

Daily EIS on every cell group, graduated escalation, low-current measurement to 6 mA, matched-condition measurement across the bank, Heartbeat pressure-informed charging, charge taper verification, charger over-voltage lock-out, alternator soft-off, low charge dwell alert, inter-pack CAN for up to 128 packs, impedance-informed load sharing, staircase charging on poor solar days, cell-group discharge isolation, joining packs at any charge, native Victron CAN interface, auxiliary supply with MOSFET control, automatic Quasar Twin set-up, Nyquist display, life-of-battery record on the pack, fleet AI scanning with a second check, longevity window that adjusts with age, shore power rest at 75 percent, passive spectral listening, bus-side impedance of connected equipment, assessment on board or in the cloud.

Let's size your bank.

Bring your loads,
your charge sources and the space you have.

sales@safiery.com +61 7 2102 2553

38TH AMERICA'S CUP NAPLES, ITALY

SAFIERY

OFFICIAL BATTERY

BMG

SAFIERY

48V BIDIRECTIONAL MOTOR GENERATOR



Engine power. House power.

Turn power from your main engine into controlled 48V charging for the house bank. Store that energy for onboard loads, including time with the engine off.

5kW of power at idle.

MARINE POWER WITH SCOTY AI V3

More engineering. Less to package.

Integrated inverter

The electric machine and inverter share one compact assembly. Scotty AI provides supervisory control.

Hybrid excitation

Permanent-magnet efficiency combines with adjustable electromagnetic field control.

Hairpin windings

Dual three-phase hairpin windings support high power density in a compact machine.

10kW
Peak output / 20 seconds

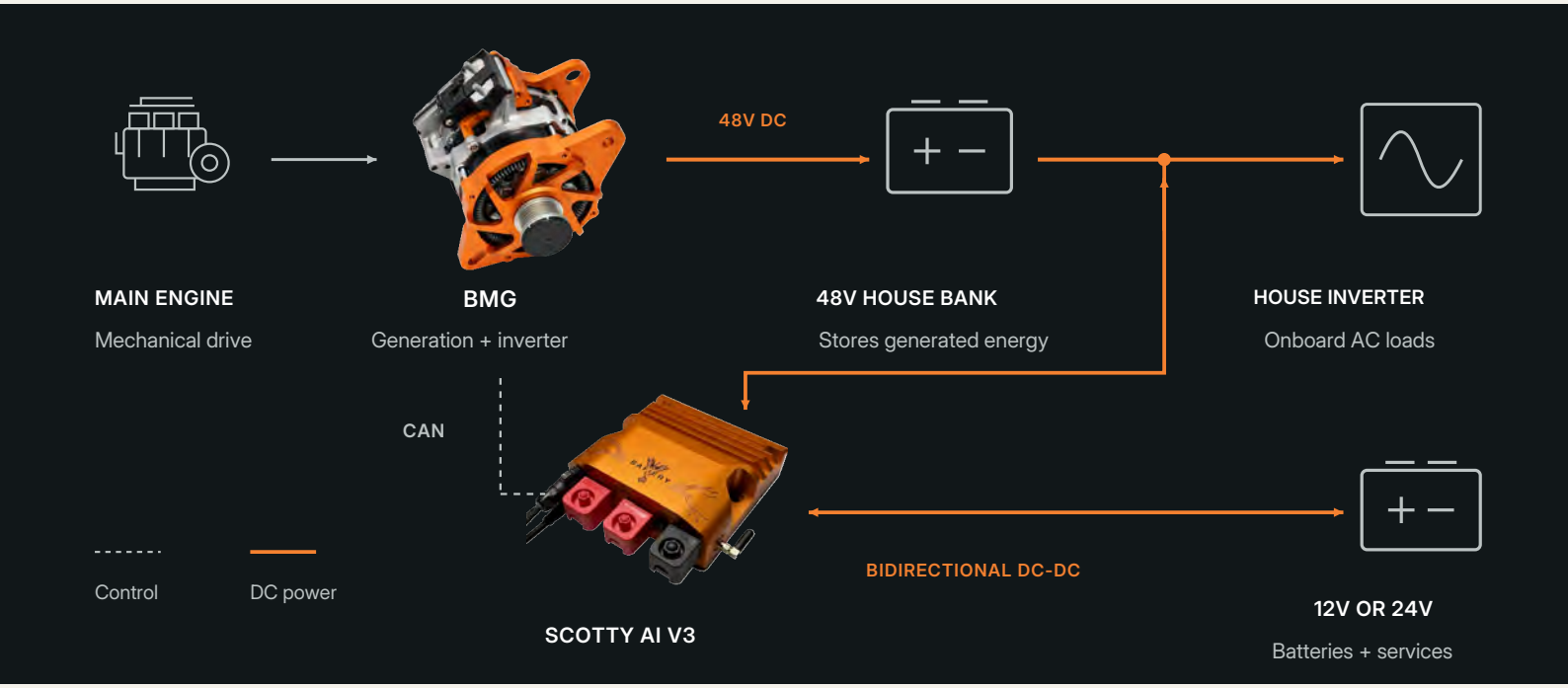
7.5kW
Approx. continuous output

85%
Peak net efficiency

Peak rating: 20 seconds at 105°C and >5,000 BMG rpm. Continuous output is approximate. Output varies with model, installation, speed, temperature and battery acceptance. BMG rpm is not engine rpm. Efficiency is generator + inverter conversion.

Built around 48V. Connected to your boat.

BMG charges the house bank directly. Scotty AI manages charging and connects 48V storage with your 12V or 24V system through integrated bidirectional DC-DC conversion.



Conceptual architecture. Battery, house inverter and installation are specified for the vessel.

Power that responds.

Engine load — Reduces output if engine overload is detected.

Temperature — Regulates output as motor and inverter temperatures change.

Battery demand — Compatible CAN BMS integration and stop-charge input.

System protection — Integrated load-dump protection.

Scotty AI app setup and monitoring.
Compatible Victron GX display integration.



VOLVO D11 / SAFIERY INSTALLATION

Mounting options for selected Yanmar, Volvo Penta and Cummins applications. Single- and twin-engine configurations, with fitment confirmed for each engine.

Let's specify your system.

Bring your engine model, house-bank voltage and onboard power needs.

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38TH AMERICA'S CUP NAPLES, ITALY
SAFIERY
OFFICIAL BATTERY

No genset. 5 kW at idle.

A priced 10 kW, 48 V house system, against an APS alternator with Wakespeed, and Integrel.

The BMG bolts to the main engine on a J180 mount and puts up to 10 kW into the 48 V house bank, with 5 kW at engine idle. This note gives the parts and US$ retail price, then the figures that decide whether the generator comes off the boat: power at idle, continuous output, and the engine hours to refill a day's energy.



THE PACKAGE

BMG charging at 48 V, 10 kW rear inverter

ITEM	QTY	RRP US$
BMG on J180 billet mount, 10 kW inverter to 48 V	1	3,936
BMG controller, phone app, 2 CAN ports	1	312
BMG package, 48 V only		**4,248**

One unit. The inverter is inside the BMG, so there is no separate rectifier or regulator to mount and wire. The BMG appears natively as an alternator in Victron GX displays, and BMG temperature also displays in Victron.

FOR REFERENCE

A similar job done two other ways

ITEM	US$ APPROX
APS 48 V 170 A alternator	2,500
Wakespeed WS500 Pro, harness, shunt	750
Alternator and regulator, 48 V	**3,250**
Integrel E-Power 9 kW package	from 15,000
Integrel E-Drive, generator and drive	quoted per vessel

The alternator route is cheaper to buy. However, it gives virtually no power at idle, so the boat still runs the engine hard or keeps a generator. It is only useful at cruising speed.

OPTION 1

Add a 12 V or 24 V house

Most boats keep 12 V or 24 V for instruments, pumps and lights. Scotty AI is a bidirectional DC-DC from the 48 V bank, and it takes over BMG control, so the US$312 controller is not needed.

ITEM	QTY	RRP US$
BMG on J180 mount, from above	1	3,936
Scotty AI 1500 W, 12 V	1	1,680
BMG with 12 V house		**5,616**
Or Scotty AI 3000 W, 12 or 24 V	1	2,878
BMG with 24 V house		**6,814**

Scotty AI is E-Mark type approved under UNECE R10 and shows in Victron GX devices.

OPTION 2

Add a screen and remote monitoring

A 4 inch Quasar Glass display shows charge, engine load and temperature. Quasar ONE adds the digital twin, predictive health alerts and remote diagnostic support over its own modem and eSIM.

ITEM	QTY	RRP US$
BMG package, from above		4,248
Quasar Glass 4 inch display	1	296
Quasar ONE, modem and eSIM	1	495
BMG, screen, twin and remote support		**5,039**

The display needs Quasar ONE or a modem router. Add Scotty AI from Option 1 for a 12 V or 24 V house. After 12 months a subscription continues the eSIM and AI services.

WHY 5 KW AT IDLE MATTERS

The generator's job, done by the main engine.

A cruising couple with an electric galley and hot water uses about 10 kWh a day. How long must the engine run to put that back?

- BMG at idle, 5 kW: about 2 hours in neutral at anchor; motoring at 7 kW, about 85 minutes
- APS 48 V 170 A at idle: 0.2 to 1.6 kW, so 6 hours or more, or a fast idle
- Integrel E-Power at idle: 2 to 3 kW, 3.5 to 5 hours; E-Drive about 2 kW
- A 5 kW diesel generator: 2 hours, plus its own fuel, service, space and noise

Idle figures: BMG from Safiery test data; APS from its published UPI 100 C curve at 2,250 to 2,500 alternator rpm; Integrel from its FAQ and user guides. Output varies with engine, pulley ratio, temperature and battery acceptance.

POWER AGAINST ENGINE SPEED

What each machine gives, and when

An alternator makes its rated power only at high alternator speed. The BMG uses hybrid excitation and an integrated inverter, so it holds output at low engine speed and is limited by temperature, not rpm. Integrel winds for low speed too but rectifies rather than inverts.

48 V, HOT	SAFIERY BMG	APS 48 V 170 A + WS500	INTEGREL E-POWER 9	INTEGREL E-DRIVE
At engine idle	5 kW	0.2 to 1.6 kW at 2,250 to 2,500 alternator rpm	2 to 3 kW at 700 rpm, up to 4 kW on some engines	About 2 kW
Continuous	About 7.5 kW at high idle and above	3.6 kW at 3,000 alt rpm, 5.2 kW at 4,000	7 to 8 kW at cruise, well ventilated	About 11 kW at 1,900 to 2,200 rpm
Peak	10 kW for 20 s	170 A, about 9 kW, full speed	9 kW, 170 A, temperature limited	15 kW stated
Conversion efficiency	Generator 90%, integrated inverter 94%, 85% net	External regulator; 50 to 60% hot	External bridge rectifier; efficiency not published	Inverter drive; 4.1 to 4.7 kWh per litre on trials
Weight	7.3 kg, inverter included	Alternator plus regulator box	11.9 kg plus 5.4 kg controller	In the driveline
Fitment	J180 mount; Yanmar, Volvo Penta, Cummins	Stock position, plus regulator harness and shunt	Large frame on the engine front	Yanmar JH 40 to 110 hp, factory fit
Network	Published CAN to Scotty AI, Victron GX, Quasar	Published CAN, NMEA 2000, Victron	Proprietary Argo CAN	Proprietary Argo CAN

APS figures from its published UPI 100 C comparison sheet (May 2025), in alternator rpm; engine idle of 750 to 850 rpm is 2,250 to 2,550 alternator rpm on a 3:1 pulley. Integrel figures from the E-Power datasheet 1.8, the E-Power and E-Drive user guides and the Integrel FAQ. BMG peak is 20 s at 105 C above 5,000 BMG rpm; BMG rpm is not engine rpm.

5 kW
At engine idle, in neutral

2 h
Of idling to put back 10 kWh

85%
Net efficiency, generator plus inverter

7.3 kg
For 10 kW, inverter inside

PROTECTION AND CONTROL

What keeps the engine and the bank safe

	SAFIERY BMG	APS ALTERNATOR + WS500	INTEGREL E-POWER AND E-DRIVE
Engine load	Torque sensed; backs off on engine overload. Can operate with a 30 hp motor	No torque sensing; field limit set by installer	Load management in controller
Temperature	Motor and inverter sensed, output regulated	Alternator sensor to regulator	Air cooled; output falls when hot
Battery	CAN BMS integration, stop charge input	V, A and temperature targets; CAN to BMS	Proprietary CAN to own BMS
Load dump	Integrated, 100% protected	External protection needed	In the controller
Redundancy	Dual three phase windings, half power on a fault	Single winding	Single winding
Standards	Automotive platform, ISO 26262 ASIL B, IP6K9K	No functional safety rating	Marine rated

COMPETITIVE ASSESSMENT

Where it stands

Close to us, but not the same

- Charging from the main engine. All three take the generator's job onto the propulsion engine; the difference is what they give at the speed the boat actually runs.
- Smart regulation. The WS500 regulates on voltage, current and temperature and talks CAN to Victron and most BMSs. It cannot add power the alternator does not make at idle.
- 48 V house. All three agree. Only the BMG route includes the bidirectional DC-DC to 12 V or 24 V as a matched part.

Where the BMG is better

- Power at idle. 5 kW against 0.2 to 1.6 kW for the alternator and 2 to 3 kW for Integrel. This decides whether the generator comes off the boat.
- Efficiency. 85% net against 50 to 60% for a hot alternator. Less fuel and less engine room heat for the same kWh.
- One unit. Inverter inside, 7.3 kg, J180 mount. Integrel adds a 5.4 kg controller and its own network; the alternator adds a regulator, harness and shunt.
- Any battery. Charges any 48 V battery safely, whether on CAN or not. Open source interface.

Consideration

- The alternator route is about US$1,000 cheaper to buy. It is not cheaper to run, and it does not remove the need for a generator.
- Integrel E-Drive is also an electric drive. Where silent harbour propulsion is the goal it answers a different question. For charging alone it is heavier, proprietary and quoted per vessel.
- APS sells its 48 V alternators through qualified upfitters only, so its pricing here is indicative.

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US$ RRP, October 2026, excluding battery, house inverter, installation, freight and tax. Competitor figures from published datasheets, user guides and retail listings; brand names belong to their owners and none is affiliated with this product. Application note 2 of 2.

SCOTTY AI

HIGH-POWER BIDIRECTIONAL DC-DC

UP TO

3 kW

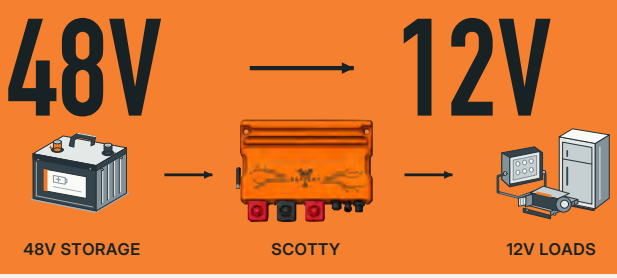
IN EITHER DIRECTION.

1.5kW model also available



Scotty AI 3000 shown

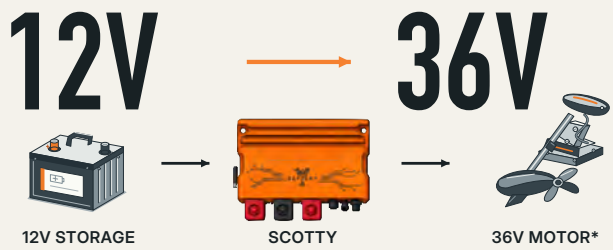
01 / STANDALONE DC SUPPLY



12V loads. No 12V battery.

Run lights, pumps, electronics and refrigeration from 48V storage. A standalone converter: no engine or alternator needed.*

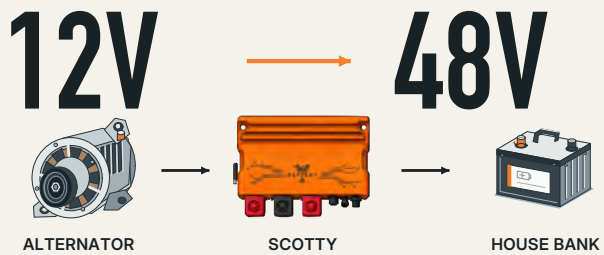
02 / TROLLING MOTOR POWER



Your 36V trolling motor. Your 12V system.

Charge a 36V trolling bank from 12V, or run a compatible motor directly from 12V storage, without a 36V battery.*

03 / ALTERNATOR CHARGING



Keep the alternator. Upgrade the storage.

Charge 24V, 36V or 48V from 12V, or 48V from 24V. Replenish house or gyro-system storage while retaining factory regulation.

UP TO 1.5kW / 3kW | **BIDIRECTIONAL** | **IP66 ENCLOSURE**

*Batteryless and direct-motor setups need controlled start-up, specified pre-charge and load sizing. Match model and voltage pair.

High power. More possibilities.

Up to 3kW of conversion and charging power. Six more ways to put it to work across your boat, with a 1.5kW option for smaller power requirements.

04 Power your 24V equipment.



Supply 24V distribution and equipment from a 48V bank with the dedicated 24V model.

05 Keep your 12V inverter.



Run a compatible 12V inverter from higher-voltage storage, including a 36V trolling bank.

06 Support the windlass.



Supplement the starter battery and its winch or windlass load with energy from the house bank.

07 Use your existing charger.



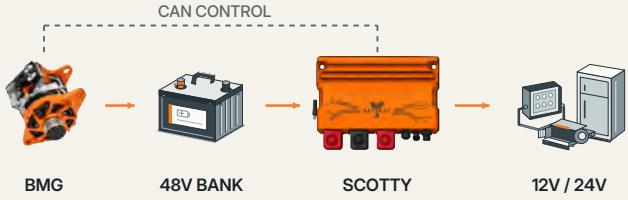
Replenish a 36V trolling bank through a suitable shore-powered or portable 12V charger.

08 Combine two alternators.



Configured twin-Scotty systems coordinate charging from two engines into shared storage.

09 Integrate BMG generation.



Scotty controls BMG charging over CAN, and supplies low-voltage services from the 48V bank.

Choose your voltage. Choose your power.

MODEL	BIDIRECTIONAL VOLTAGE PAIR	MAX. POWER
Scotty AI 1500	12V ↔ 24V, 36V or 48V	**1.5kW**
Scotty AI 3000 / 12V	12V ↔ 24V, 36V or 48V	**3kW**
Scotty AI 3000 / 24V	24V ↔ 48V	**3kW**

Ratings are up to, in either direction. One voltage pair per unit. Output depends on current limits, temperature, source capacity and battery/load requirements. Match motor starting loads and inverter settings.

WI-FI SETUP + AUTO-TUNE / COMPATIBLE CAN BMS + VICTRON GX INTEGRATION

What would you like to power?

Tell us your source voltage,
equipment voltage and power requirement.

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38TH AMERICA'S CUP NAPLES, ITALY

SAFIERY

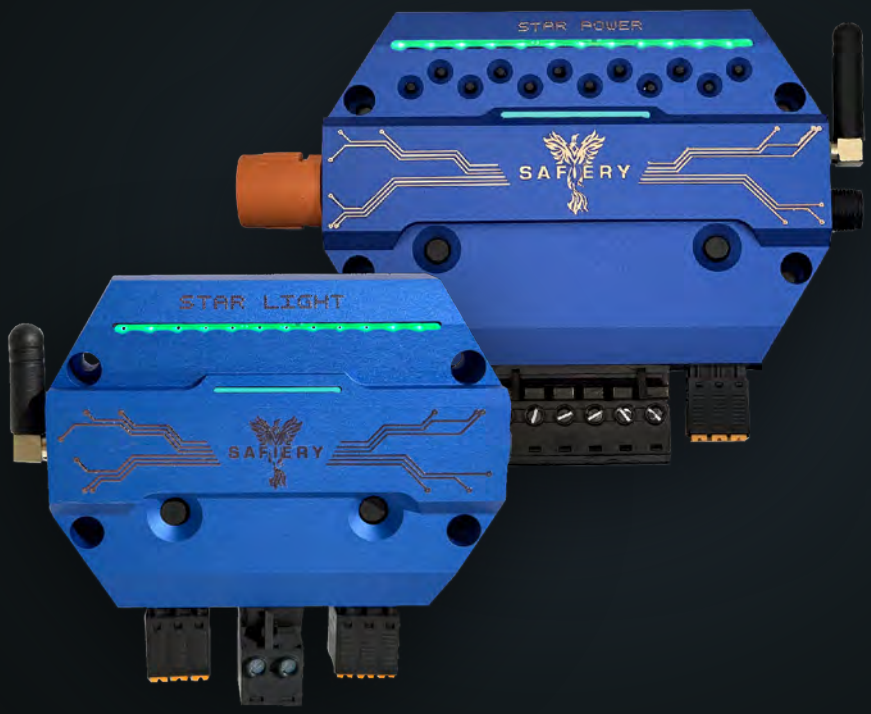
OFFICIAL BATTERY

STAR Range

DIGITAL SWITCHING AND DIMMING CONTROLLERS

Certified.
eMark and Victron.

Fuseless digital switching and dimming for 12 and 24 V boats and RVs. One cable to your Victron system and it is plug and play.



DESIGNED AND MADE IN AUSTRALIA

No fuses. No hub. One cable to Victron.

Fuseless protection

Every output is cut off by hardware in 80 millionths of a second on a short. No output fuses to fit.

No hub, no master

Each switch talks straight to its controller. Add a controller or a switch without reprogramming the rest.

Plug and play Victron

One NMEA 2000 or VE.Can cable. Switching pages appear on the Cerbo GX touch screen.

12	100 A	80 µs	12 or 24
Channels on STAR-Power and STAR-Light	STAR-Power total, 6 × 30 A + 6 × 10 A	Hardware cut-off on a short circuit	Volt systems, one range

eMark certified for vehicles. CE, UKCA and RoHS. Victron is a trade mark of Victron Energy B.V.

Three controllers. Any switch. Your screen.

Choose the controller for the loads, then switch them from Bluetooth buttons, CAN keypads, your own switches, a Victron Cerbo GX, an NMEA 2000 MFD or Quasar Glass. Up to 6 switches can work each channel.

THREE CONTROLLERS, ONE FAMILY

All 12 to 24 V, fuseless, Bluetooth and CAN, NMEA 2000 connector.

	STAR-POWER	STAR-LIGHT	STAR-ROVER
CHANNELS	6 × 30 A, 6 × 10 A dimmable	12 × 10 A, 8 dimmable	4 × 15 A, all dimmable
TOTAL CURRENT	100 A	40 A	30 A
POLARITY	Positive	Positive or negative	Positive or negative
RGBW	-	Up to 2 RGBW lights	1 RGBW light
CASE	Anodised aluminium	Anodised aluminium	ABS, IP65
EXTRAS	12 backup buttons on face	-	Compact, crimp and seal
SIZE	163 × 122 × 28 mm	121 × 105 × 28 mm	101 × 66 × 27 mm

Every output cut off in 80 millionths of a second by hardware on a short. No fuse needed on the output.

Bluetooth range is up to 100 m line of sight and about 40 m in a typical cabin or RV.

Switch it your way.

Native Victron Plug and play to a Victron GX device. The switches appear automatically on any Victron display and the remote console.

Bluetooth switches Wall and SP4 switches on a coin battery. Up to 80 wireless switches, each locked to its own ID.

CAN keypads 8 or 12 backlit buttons with interchangeable icons. The LEDs follow the channel, however it was switched.

Dual channel Press once, twice or three times for one channel, the other or both. White, amber or gold.

Master switches Any button can be a master or sub-master for a group of channels.

MFD control NMEA 2000 multi-function displays can switch the channels directly.

AI configurator Lay out your boat or RV online and get the channel plan, wiring and parts list.



QUASAR GLASS 4 / REAL ANDROID TOUCHSCREEN

Add Quasar Glass.

With or without Victron.

Put your STAR switching on real glass: 4, 10 or 13.3 in touch screens and the free Quasar Glass App on your phone.

With Victron, the same screen shows your batteries, solar and chargers. **Without Victron,** it runs your switching, tanks and sensors on its own.

STAR-Switch Custom

Your own switches, made smart.

Six wired inputs, read high above 8 V or low below 3 V, each set as momentary, toggle or latched. Every input becomes a virtual switch that works any STAR channel, just like a Bluetooth or CAN switch.

- AND, NAND, OR, NOR logic
- Inputs and STAR outputs combined
- Interlocks, such as pump off when the engine starts
- CAN for safety logic, MQTT over Wi-Fi

Let's plan your switching.

Bring your circuit list and where you want the switches.

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38TH AMERICA'S CUP NAPLES, ITALY · SAFIERY · OFFICIAL BATTERY

Quasar Range

SAFIERY

GLASS, ONE AND MASTER / ONE FAMILY

Glass on the boat. Twin in the cloud, on the AI harness.

Start with a screen that runs your switching, tanks and Victron. Add the Quasar Twin to scan every device and flag small changes before they become faults. The same glass all the way up.



Four tiers. Each builds on the last.

Glass Bluetooth

Zero data wires, zero engineering. Glass, STAR switching, sensors and Victron read over the air.

Power and Vision

Adds the Wi-Fi modem router, full Victron control through Cerbo GX, and cameras.

Quasar ONE

Adds predictive health, the Quasar Twin on the AI harness, LIN switch nodes and eSIM.

Quasar Master

Adds Home Assistant on a CM5 puck: Matter, 50+ integrations, Apple and Google, local scenes and automations.

20+
Widgets on every screen

3
Glass sizes, 4, 10 and 13.3 in

15 min
Between health checks with Quasar ONE

50+
Integrations with Quasar Master

Pick your tier. Keep your glass.

Each column builds on the one to its left. ● included, ○ with Quasar Glass added, – not in this tier.

Capability	Glass Bluetooth	Glass Power and Vision	Quasar ONE	Quasar Master
EVERY TIER				
4, 10 and 13.3 in Quasar Glass displays with 20+ widgets	●	●	○	●
STAR digital switching: dimming, colour, scenes, confirmed state	●	●	○	●
Wireless sensors: STAR-Tank radar, Ruuvi temperature and air	●	●	○	●
Victron live monitoring (Bluetooth instant readout, no GX) [1]	●	●	○	●
Free Quasar Glass App, local on board with no internet	●	●	○	●
POWER AND VISION ADDS				
Wi-Fi modem router with 4G (2.4 GHz STARs, 5 GHz glass and cameras)	–	●	○	●
Victron full data and control through Cerbo GX, remote console on the glass	–	●	○	●
IP cameras, 360° birds-eye and live video on the glass	–	●	○	●
Remote app access over the router's 4G	–	●	○	●
QUASAR ONE ADDS				
Predictive health: every device scanned, small changes flagged to the phone [2]	–	–	●	●
Quasar Twin on the AI harness, vessel log, eSIM	–	–	●	●
ZERO keyboard onboarding: photos, voice, self-learning	–	–	●	●
LIN switch nodes: up to 48 individual switches	–	–	●	●
Trip log	–	–	●	●
Conversational voice AI in the cloud, where internet exists	–	–	●	●
QUASAR MASTER ADDS				
Home Assistant on a CM5 puck: Matter plus 50+ integrations [3]	–	–	–	●
Apple Home and Google Home, native	–	–	–	●
Scenes and automations stored locally: departure, arrival, bedtime, storage	–	–	–	●
8 in and 15.6 in 3D touch displays: spin, roll, X-ray view	–	–	–	●
QUASAR MASTER PLUS NVIDIA JETSON ORIN 16 GB				
Conversational voice and vision AI on board: no internet, 12 languages	–	–	–	●
Vision AI notifications and perimeter alarm ("Hey Quasar, who's outside?")	–	–	–	●
In vehicles: OBD-II bus, CAN TPMS to 14 points, CarPlay and Android Auto	–	–	–	●

○ Quasar Glass can be added to Quasar ONE but is not included. [1] Victron read over Bluetooth is monitoring only; control needs a Cerbo GX on Power and Vision or above. [2] HiBlade escalates Advisory to Protect locally in its BMS whatever the tier; the Quasar Twin surfaces trends and service windows. [3] Quasar Glass itself does not use Matter. Matter and the consumer ecosystems come through Home Assistant on Quasar Master, with scenes and automations stored and run locally, so they work with no internet. Victron is a trade mark of Victron Energy B.V. Quasar is a trade mark of Safiery.

victron energy
BLUE POWER

Victron devices read over Bluetooth, and GX integration for Power and Vision

SmartSolar MPPT, SolarSense 750, SmartShunt, BMV-712 Smart, Smart Battery Sense, Lithium Battery Smart, Lynx Smart BMS, Smart BMS 12-200 and CL, Orion-Tr Smart, Orion XS, Inverter Smart, Sun Inverter, Inverter RS, Multi RS, MPPT RS, Smart BatteryProtect, Blue Smart IP22 and IP65 chargers, and MultiPlus, Quattro and BlueSolar with a Victron Bluetooth dongle.

The Victron encryption key for each device is added once to the Quasar Glass.

Let's find your tier.

Bring your boat or vehicle, your Victron equipment and the screens you want.

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Quasar Glass

SWITCHING, VICTRON AND CAMERAS / ON REAL GLASS

Power, Control and Vision on real glass.

It shows your Victron, your tanks, your lights, fans and your cameras. Start on Bluetooth with zero data wires. Add the Wi-Fi modem router for full Victron control and camera streaming.



Two platforms. The same glass.

Quasar Glass Bluetooth

Zero data wires. Zero engineering. Victron, tanks, sensors and STAR switching, all read over the air.

Power and Vision

Adds the Wi-Fi modem router, a full control interface to Victron and live camera streaming.

The free app

Scan the QR code, tap Join, and the same tiles are on your phone. No internet needed on board.

Cameras

IP cameras, yours or ours, 360 degree birds-eye

3

Glass sizes 4, 10 and 13.3 in

1 hour

AI configuration, 300 points

US$899

Quasar Glass Bluetooth
4 in display + STAR-Light 12 channels
Add any number of Victron Bluetooth

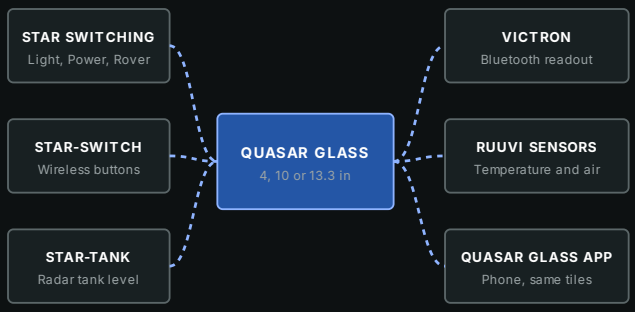
Price ex tax and subject to change. Power and Vision bundles and options at safiery.com. The phone shown is not included.

Pick a platform.
Add what you want to see.

Every package is the same glass, the same app and the same STAR controllers. Each option adds a page. Nothing is thrown away as you grow, and a Quasar ONE later adds predictive health to the same glass.

QUASAR GLASS BLUETOOTH

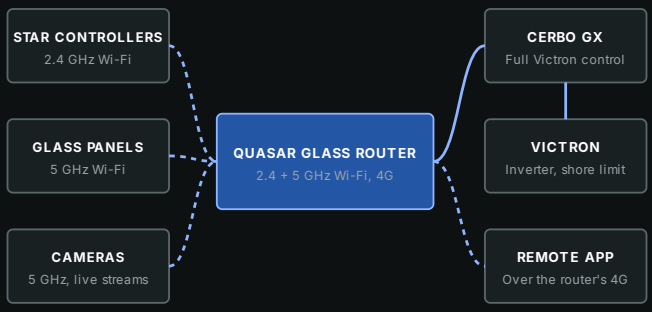
Zero data wires. Zero engineering.



12 V to each device. Everything else talks over the air.

QUASAR GLASS POWER AND VISION

Adds the Wi-Fi modem router.



Everything on the Bluetooth platform, plus the router, Cerbo GX and cameras.

Wireless — Ethernet / Victron link

Conceptual layout. Victron is a trade mark of Victron Energy B.V. Victron read over Bluetooth is monitoring only.

Victron devices read over Bluetooth

SmartSolar MPPT, SolarSense 750, SmartShunt, BMV-712 Smart, Smart Battery Sense, Lithium Battery Smart, Lynx Smart BMS, Smart BMS 12-200 and CL, Orion-Tr Smart, Orion XS, Inverter Smart, Sun Inverter, Inverter RS, Multi RS, MPPT RS, Smart BatteryProtect, Blue Smart IP22 and IP65 chargers, and MultiPlus, Quattro and BlueSolar with a Victron Bluetooth dongle.

The Victron encryption key for each device is added once to the Quasar Glass.

Options for either platform.

Tanks	STAR-Tank wireless radar level sensor, one per tank. Fresh, grey, black water and fuel. Any number.
Temperature and air	Ruuvi Air for CO2, PM2.5, NOx, VOC, temperature and humidity. RuuviTag Pro for fridges and lockers.
Batteries	Either CAN by adding a STAR-Rover, or add a Victron SmartShunt, or read Victron NG batteries over Bluetooth directly.
Wireless switches	STAR-Switch SP4 backlit or battery Quad. Place anywhere. The screen shows every press.
20+ widgets	Pre-built for Victron devices, digital switching, temperatures, tanks and cameras.
Cameras	With Power and Vision. Our cameras matched to your kit, or any on our compatible list.
Upgrade path	Cerbo GX, Quasar ONE, Quasar Master. The same glass throughout.



QUASAR GLASS 4 / REAL ANDROID TOUCHSCREEN

Configured before you switch it on.

AI Configuration Service.

Fill in one spreadsheet. Safiery's AI names every channel, places every tile and sets every charge voltage over the air, then a second AI checks the result. A 300 point catamaran took about an hour.

Safiery is the official exclusive supplier of lithium batteries to the 38th America's Cup, Naples 2027.

Connect Quasar Glass in any size screen to Quasar ONE for State of Health and Quasar Twin on the AI harness

Let's put your boat on glass.

Bring your channel list,
your Victron equipment and the screens you want.

sales@safiery.com +61 7 2102 2553

38TH AMERICA'S CUP NAPLES, ITALY

SAFIERY

OFFICIAL BATTERY

Apple HomeView

NATIVE DISPLAY OF VICTRON AND SAFIERY / SAFIERY MATTER GATEWAY

Victron on the boat. Matter in STAR-Rover, HomeView on the wall.

STAR-Rover reads your Victron equipment over Bluetooth, or over Wi-Fi from the Cerbo GX, and presents it to Apple Home as standard Matter energy devices. Pair once by QR code. Battery, solar, inverter, lights and fans appear as native tiles on Apple HomeView, with no Safiery app in the loop.



Two ways in. One set of tiles.

Victron over Bluetooth

STAR-Rover reads SmartSolar, SmartShunt, Orion XS and the rest of the Victron Bluetooth range directly. No GX, no data wires. Monitoring only.

Wi-Fi to the Cerbo GX

STAR-Rover joins the boat Wi-Fi and takes the whole system from the Cerbo GX: every VE.Direct and VE.Can device, shore power, AC loads and totals, with on and off control.

Safiery Matter Gateway

STAR-Rover is a certified Matter 1.4 node. Victron readings land in 14 standard energy endpoints beside its own lights and fans. No custom clusters, no Safiery app.

Apple HomeView

Pair once by QR code in the Home app. Native tiles for battery, solar, inverter, lights and fans, with Siri, scenes and automations. Same tiles on either path.

14

Matter electrical endpoints in STAR-Rover for Victron energy

0

Data wires. Bluetooth, or Wi-Fi to the Cerbo GX

1

QR code pairing in the Home app, no Safiery app in the loop

US$299

Apple HomeView, shipping 13 November 2026

Standard clusters. Native tiles.

One Matter 1.4 node, 20 endpoints, standard device types and clusters only. ● on this path, ◐ on this path, read only.

Apple HomeView tile and what the owner sees	STAR-Rover endpoint	Matter device type	Server clusters	Victron Bluetooth	Cerbo GX Wi-Fi
SWITCHING, STAR-ROVER'S OWN CHANNELS					
Lights, one tile per channel: on, off, dim	1 to 4	Dimmable Light	On/Off, Level Control	●	●
Colour light: colour and brightness of the RGBW group	5	Extended Color Light	On/Off, Level Control, Color Control	●	●
Fan: on, off, speed	1 to 4, set to fan	Fan	On/Off, Fan Control	●	●
ENERGY METERS					
Solar, one tile per charger: live watts, energy today [1]	6 to 8	Energy Meter	Electrical Measurement, Power Source	●	●
Inverter, one tile per inverter: live watts, energy today [1]	9, 10	Energy Meter	Electrical Measurement, Power Source	●	●
Sixth meter, assigned at setup: shore or alternator [1]	11	Energy Meter	Electrical Measurement, Power Source	●	●
BATTERIES					
House battery: state of charge, charging or discharging	12	Energy Storage Device	Power Source, Electrical Measurement, Power Configuration	●	●
Second bank: start, thruster or tender battery	13	Energy Storage Device	Power Source, Electrical Measurement, Power Configuration	●	●
DC-DC AND MOTOR GENERATOR					
DC-DC converter 1 and 2: power flow, on or off [2]	14, 15	Energy Transfer Device	Electrical Measurement, Power Source, On/Off	◐	●
BMG belt motor generator: power flow, on or off	16	Energy Transfer Device	Electrical Measurement, Power Source, On/Off	●	●
WHOLE BOAT					
Solar plus battery: total in, total out	17	Aggregator	Electrical Measurement, Power Source	●	●
All inverters: total out	18	Aggregator	Electrical Measurement, Power Source	●	●
Whole system: total in, total out [3]	19	Aggregator	Electrical Measurement, Power Source	●	●
CHARGING					
Shore or tender charging: charge state, on or off [2]	20	EVSE	Electrical Measurement, Power Source, Power Configuration, On/Off	◐	●
COMMISSIONING					
Pairing by QR code, diagnostics, software update over the air [4]	0	Root node	Basic Information, General Diagnostics, OTA Software Update, Network Commissioning	●	●

[1] Lights, fans and battery state of charge show in every version of the Home app; the Energy Meter, Energy Transfer and Aggregator tiles show where the Home app draws the Matter energy clusters. [2] Victron over Bluetooth is monitoring only; on and off for DC-DC converters and chargers needs the Cerbo GX path. [3] Over Bluetooth the totals cover the devices STAR-Rover can see; the Cerbo GX path adds shore power and AC loads. [4] Apple HomeView needs a Wi-Fi router on board to operate, with STAR-Rover on the same network. Safiery can supply the Quasar WRI Router for this. The Descriptor cluster sits on every endpoint. CAN, NMEA 2000, Bluetooth and MQTT traffic stays inside the boat and is not exposed to Matter. STAR-Rover is Matter 1.4 certified by the Connectivity Standards Alliance and validated for Apple Home. Apple, Apple Home and HomeView are trade marks of Apple Inc. Victron is a trade mark of Victron Energy B.V. Matter is a trade mark of the Connectivity Standards Alliance. STAR and Quasar are trade marks of Safiery.

victron energy
BLUE POWER

Which Victron device feeds which tile

Solar: SmartSolar MPPT, MPPT RS, SolarSense 750. **Battery:** SmartShunt, BMV-712 Smart, Smart Battery Sense, Lithium Battery Smart, Lynx Smart BMS, Smart BMS 12-200 and CL. **DC-DC:** Orion XS, Orion-Tr Smart, Smart BatteryProtect. **Inverter:** Inverter Smart, Sun Inverter, Inverter RS, Multi RS. **Charging:** Blue Smart IP22 and IP65 chargers. **Through the Cerbo GX:** MultiPlus, Quattro and everything on VE.Direct and VE.Can, plus shore power, AC loads and system totals.

The Victron encryption key for each Bluetooth device is added once to STAR-Rover.

Let's put Victron on HomeView.

Bring your Victron equipment and the cabins you want to see it in.

safiery.com sales@safiery.com +61 7 2102 2553



Four tanks, no wires.

A priced application for a four tank boat: Quasar Glass at the helm, or a Victron Cerbo already fitted.

One battery radar sensor sits on top of each tank. Nothing is wired to it and nothing is cut into a plastic tank. Levels go by Bluetooth to a Quasar Glass panel or a Victron GX. This note gives the parts and US$ retail price, then sets the sensor against the Simarine STR and Gobius C radar senders on their published figures.

STAR-Tank

60 GHz phased coherent radar. Battery powered, 3 to 5 years.

Fresh, grey, black water and diesel.
Reads through plastic and thick GRP; bolts to the SAE 5 hole on metal.





COMMON TO BOTH OPTIONS

Sensor layer: 4 tanks, 4 sensors

ITEM	QTY	RRP	US$
STAR-Tank, fresh, grey or black water	3	240.00	720
STAR-Tank, diesel fuel firmware	1	240.00	240
Cables, drops and tank cut-outs	0	–	0
Sensor layer			**960**

One sensor SKU covers every water tank; the fuel unit is the same hardware with fuel firmware. Depth is set on the sensor to 500, 1,000 or 2,000 mm, so no depth variants are stocked. Battery CR2477, user replaceable.

ADD ON, ANY OPTION

Temperature or air quality sensors

ITEM	QTY	RRP	US$
RuuviTag 4in1, temperature and humidity	1	45.00	45
Cables, drops and cut-outs	0	–	0

Also pressure and motion. Battery Bluetooth, read by the panel and the Cerbo. IP67 Pro 4in1 US$55; Ruuvi Air adds CO2, PM2.5, VOC.

FOR REFERENCE

Same 4 tanks on a Simarine screen

ITEM	QTY	APPROX	US$
STR1 radar sender, analogue	4	108	432
ST107 tank module	2	139	278
Pico display, 3.5 inch	1	337	337
3 core cable, 10 m per tank	40 m	2.00	80
Fuse holder and fuse, per run	4	6	24
Labour, 4 runs 1.5 h, setup 2 h	8 h	70	560
Simarine, on its own screen			**1,711**

The STR1 is the cheap part. To see the level at the helm it needs a tank module, a Pico and a fused run to every tank. The Pico One cannot take modules, so the expandable Pico is costed. Gobius C has no screen of its own; its sensor price is on page 2.

OPTION 1

Nothing at the helm yet: Quasar Glass

A 4 inch Quasar Glass Bluetooth panel reads the four sensors directly. No GX device and no NMEA 2000 backbone. Set up once from the panel's Tanks page: name, depth, full and empty. Levels are also in the free Quasar Glass App.

ITEM	QTY	RRP	US$
Sensor layer, from above			960
Quasar Glass 4 inch Bluetooth Monitoring Panel	1	295.00	295
Option 1 total, panel included			**1,255**

The panel also shows any Victron Bluetooth device on board. One cable pair to the panel. 10 inch and 13.3 inch panels are US$590 and US$890.

OPTION 2

Victron Cerbo GX already on the boat

STAR-Tank is a native Bluetooth sensor in Venus OS. Enable Bluetooth sensors in the Cerbo, switch each one on, and the four tanks appear on the GX Touch, the Victron app and VRM with level, temperature and sensor battery voltage.

ITEM	QTY	RRP	US$
STAR-Tank sensor layer, from above			960
Nano USB Bluetooth adapter for the Cerbo	1	15.00	15
Option 2 total, Cerbo unchanged			**975**

The USB adapter is recommended because the Cerbo's internal Bluetooth switches off when the processor runs hot. A Quasar Glass panel can be added later as a second view.

INSTALLATION AND SPECIFICATION

Three radar senders, side by side

	STAR-TANK	SIMARINE STR1 / STR2	GOBIUS C
Radar	60 GHz phased coherent radar. One shot reading every 60 s, 1 mm repeatability.	Micro radar with surface filtering. Accuracy stated at mm level.	Micro radar, 2 to 3 mm stated accuracy, wave motion reduction.
Temperature	Integrated sensor, tank temperature reported with the level.	None listed.	Built in, per product page.
Power	Battery, CR2477, 3 to 5 years. Nothing from the house bank.	Wired. STR1 12 V with gauge wiring; STR2 from the NMEA 2000 backbone.	Wired. 12 to 24 V analogue, or 12 V from the NMEA 2000 backbone.
Wiring to the tank	None.	One run per tank: three analogue outputs, or an NMEA 2000 drop.	One run per tank: analogue and alarm wires, or an NMEA 2000 drop.
Plastic and GRP	Glue on top, any wall thickness including thick fibreglass.	Adhesive on top, wall up to 10 mm.	3M tape on top, no wall limit stated.
Metal tanks	SAE 5 bolt pattern machined into the base. Bolt on.	Needs the S5 metal tank adapter.	50 mm hole plus adapter, about US$40.
Tank depth	To 2,000 mm, set at 500, 1,000 or 2,000. Deadband 9 to 15 mm shallow, 30 mm standard.	150 to 2,000 mm, auto height. Dead zone published as 10 mm and as 40 mm.	200 to 2,000 mm.
Liquids	Fresh, grey, black with foam, diesel (fuel firmware, metal tank or reflector, to 500 mm).	Fuel, fresh and grey water listed.	Black, grey, fresh, diesel and petrol listed.
Where the level shows	Quasar Glass panel and app. Victron GX, app and VRM, native in Venus OS.	STR1: analogue gauges, Pico, phone app. STR2: MFD over NMEA 2000, phone app.	MFD over NMEA 2000, or gauges. Cerbo GX by Bluetooth on the analogue model.
Housing, approvals	Billet aluminium, IP66. FCC, CE, UKCA.	Plastic, low profile. CE; NMEA 2000 certification pending.	ABS, 65 mm high, 90 mm wide. CE, NMEA 2000.
Warranty	5 years on non metal tanks, excluding battery. 1 year on the SAE metal fit.	3 years.	Not published on the product page.
US$ RRP, each	**240**	**108** STR1 / **149** STR2	**345** analogue / **378** NMEA 2000

0
Wires to the tank. Battery and Bluetooth only

1 mm
Repeatability from a single one shot radar reading

40 m
Bluetooth range through metal skins in a typical build

5 yr
Warranty on non metal tanks, excluding the battery

COMPETITIVE ASSESSMENT

Where it stands

Close to us, but not the same

Radar through a plastic lid. Simarine and Gobius both do it, and both avoid cutting the tank. Top mounted radar is no longer unique.

Direct to the MFD. STR2 and Gobius C NMEA 2000 put the level on a chartplotter on their own. STAR-Tank reaches the MFD through a GX or a Quasar Master.

Sensor price. Simarine STR1 at US$108 is the lowest cost radar sender in the market. STAR-Tank competes on what it costs to see the level at the helm, not on sensor price.

Where STAR-Tank is better

No wiring. A battery sensor goes on a tank under a bunk with no run back to a backbone or a gauge. The wired senders need a loom to every tank. That is the labour.

Native in Venus OS. The Cerbo lists STAR-Tank as a Bluetooth sensor: no module, no analogue input, no CAN drop. Gobius does this on its analogue model only; Simarine arrives over NMEA 2000.

Black water with foam, metal without an adapter, 5 year warranty. The holding tank is the one owners most want read. The SAE 5 pattern is in the base.

Innovation with Quasar Glass

Add Victron Bluetooth devices. Any number on the same panel: SmartShunt, Orion XS, SmartSolar.

Add Ruuvi temperature and air quality. Any number of Ruuvi sensors, battery powered, no wiring.

Multiple displays. Step up to 10 inch or add more 4 inch panels; all read the same sensors.

AI profile per tank, push button setup. One button sets depth; the sensor keeps the dominant return for that depth, so one unit suits a 300 mm water tank and a 2 m fuel tank.

Fuel by bottom bounce. Diesel reflects little radar, so the fuel firmware reads the tank floor return and inverts it.

safiery.com sales@safiery.com +61 7 2102 2553

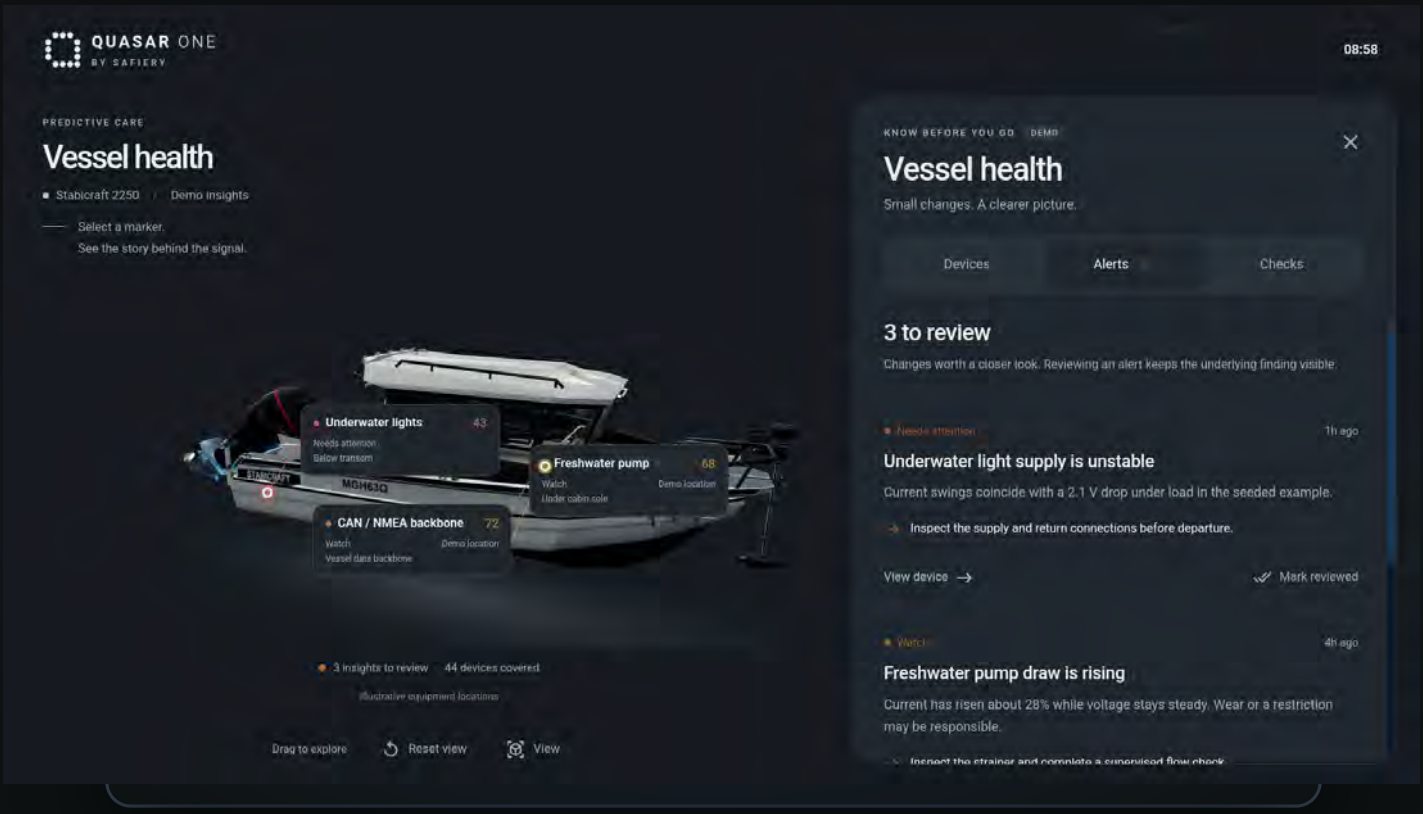
US$ RRP, October 2026, excluding freight and tax; Safiery prices from the AUD list at 0.70. Competitor figures from manufacturer specifications and retail listings. Simarine, Gobius, Ruuvi and Victron are trademarks of their owners, not affiliated with this product. Application note 2 of 2.

Quasar ONE

PREDICTIVE HEALTH / QUASAR TWIN

Know before you go. Not after the alarm.

Quasar ONE checks every device on the boat every 15 minutes and compares it with the boat's own history. Small changes show up early, on a picture of your boat, long before they become an alarm.



Notices and flags small changes. Predictive Health.

Every device scanned

Every device on the boat is scanned and given a status: healthy, watch or needs attention.

Trends, not limits

AI spots drift from your boat's usual readings, like the exhaust temperature slowly rising because of a partially blocked strainer.

See it on your phone

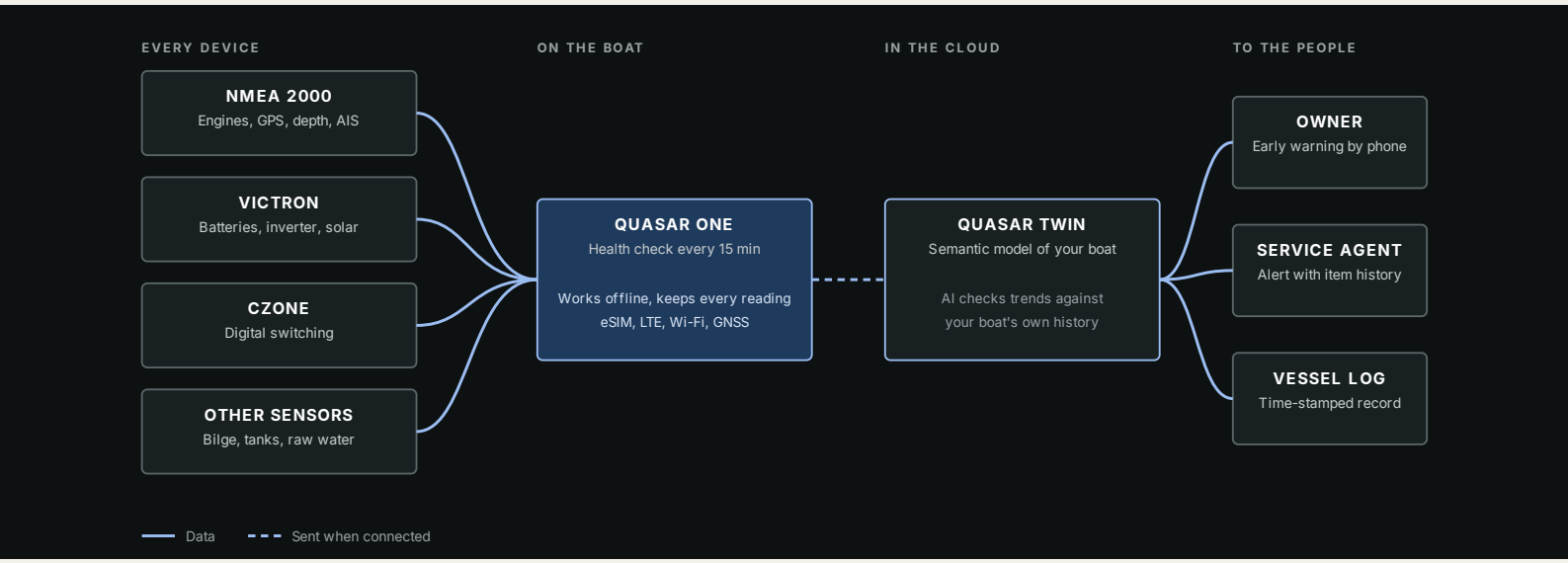
Alerts and the status of each device come straight to your phone. A 3D picture of your boat is an option.

60	15 min	12	US$500
AI health checks	Between checks	Languages by voice	First year of cloud and eSIM included

Subscription from year 2. No internet needed on board: readings are kept and sent in the right order when the boat is connected.

Boat to service to owner. One traceable thread.

When Quasar ONE flags a health issue, the boat sends it straight to the service agent with a link to the history of that item. Checking the data before the visit makes the visit shorter. The results go to the owner and into the vessel log at the same time.



Conceptual architecture. Connected systems are confirmed for each boat. CZone and Victron are trademarks of their owners.

ZERO keyboard onboarding.

Photos. Voice. Self-learning. Take photos of the devices and talk it through. Quasar learns the boat itself, with no typing and no setup screens to fill in.

Built for the boat.

Billet case	Machined, anodised aluminium, IP65. Concealed rear hanger for cabinet mounting.
Touch screen	HD screen on the front for onboarding, diagnostics and alerts.
Interfaces	CAN / NMEA 2000, Ethernet and RS485 on IP67 cables.
Connected	Wi-Fi, GNSS and LTE on one three-way antenna, with an on-board eSIM.
Power supply	10 to 60 V DC.
Works offline	Keeps every reading when there is no signal and sends it in order later.
Your control	You decide what can be controlled remotely. Gensets and watermakers have no remote command path.
For builders	Traceable warranty, issues seen as they happen, and performance checked across the fleet.



QUASAR ONE / BILLET ALUMINIUM CASE

Add what the boat needs.

Optional accessories.

LIN Switch Node. Six sealed RGB buttons per node, up to 48 circuits.

Quasar Glass. Displays for control at the helm.

Bluetooth sensors. Read through a separate Bluetooth to Wi-Fi gateway.

Five filed provisional patents. Designed and built in Australia.

Let's check your boat's health.

Bring your engine models, the systems on board and your fleet size.

safiery.com sales@safiery.com +61 7 2102 2553

38TH AMERICA'S CUP NAPLES, ITALY
SAFIERY
OFFICIAL BATTERY

Quasar ONE

LIN Node

QUASAR LIN SWITCH NODE / SIX BUTTONS

Buttons anywhere. State you can trust.

Fit sealed stainless push buttons wherever the boat needs them. Each lit ring shows the checked state of the circuit, not just the position of the button.



No panel. No cut-outs. No stickers.

True state feedback

The ring colour follows the real circuit state, including trips and changes made from the MFD.

Permanent icons

Each icon is laser annealed into the stainless cap. Nothing to peel, fade or fit at commissioning.

Any 19 or 22 mm hole

Drill where the helm wants it and plug the button into the node. No template and no custom fascia.

560 ft
Less wire
(about 171 m)

54 lb
Less copper
(about 24 kg)

40%
Fewer install hours
(5.7 hours saved)

15%
Lower installed cost
on average

Comparison for a 24 circuit installation: 12 circuits at 25 A and 12 circuits at 10 A. Savings vary with the boat, the layout and the number of circuits.

LIN NODE + QUASAR / MARINE SWITCHING

One bus.
Every button where you want it.

Six buttons plug into each node. Up to eight nodes share one 12 V and LIN feed, with a single NMEA 2000 cable between nodes. That is 48 circuits on one bus, run by Quasar Lite or Quasar Master.



NODE, BEHIND THE HELM

Conceptual architecture. Node count, button icons and tail length (150 mm or 300 mm) are specified when the boat is ordered.

Built for the helm.

Full RGB rings	12-bit dimming, 4,096 steps per channel. Colour holds steady down to 1% for night watch.
Marine stainless	Buttons sealed to IP67, vandal resistant to IK09 and rated for one million presses.
Sealed	IP67 case.
Clean contacts	3 to 10 mA wetting current on each press keeps silver contacts clean for years. Filtering and ESD protection on every input.
Low power	24 circuits draw 24 mA idle with rings dark, and 85 mA (1 W) with LIN active.
Automotive proven	LIN runs door, seat and steering wheel switches in modern cars. Parts meet automotive transient and temperature standards.
Open protocol	Circuit state on NMEA 2000 for any MFD. No partner programme needed.

CZONE is a registered trademark of its owner. CZONE is not affiliated with this product and does not endorse it in any way.



RGB RINGS / LASER-ANNEALED ICONS

Works with your MFD. Keep CZONE control on the MFD and add LIN buttons for the circuits you want at hand. Buttons and screen always show the same state.

Adjustable brightness.

Built for full sun, built for night.

High | Medium | Dim

Programmable ring brightness: High for full sun, Medium for general use, or Dim for night time.

Let's lay out your helm.

Bring your circuit list, button positions and icons.

safiery.com sales@safiery.com

38TH AMERICA'S CUP NAPLES, ITALY

SAFIERY

OFFICIAL BATTERY

24 buttons on one bus.

A priced application for a 24 circuit boat: CZONE already fitted, or the STAR range.

Six sealed stainless buttons plug into each node. Four nodes share one 12 V and LIN feed on standard NMEA 2000 5 core cable. This note gives the parts and US$ retail price, the power draw and the night dimming behaviour, against CZONE's published figures.



COMMON TO BOTH OPTIONS

Switch layer: 4 nodes, 24 buttons

ITEM	QTY	RRP	US$
LIN node, 6 button, IP67 case	4	126.30	505
Cable, node to switch	24	6.30	151
Stainless RGB push button, laser annealed icon	24	16.10	386
NMEA 2000 5 pin cable, 3 ft	4	22.00	88
Switch layer			**1,131**

Buttons are a separate SKU, so the builder chooses the exact switches to suit. Unused node outlets are capped. One node SKU serves up to 6 circuits.

FOR REFERENCE

Same 24 buttons on CZONE keypads

ITEM	QTY	APPROX	US$
CZONE 6 Way Waterproof Keypad	4	270	1,080
Keypads only, fixed 2 x 3 layout, 52 mm cut-out each			**1,080**

At the switch layer the two are within a few percent of each other. The difference is not the price of the buttons. It is where they can go, what the ring can tell you, and what is cut into the dash. A keypad is one place, one pitch and one label sheet. A node puts six buttons anywhere within a short tail, through a 19 mm hole, with no fascia.

OPTION 1

CZONE is already on the boat

Nothing is removed and nothing is reprogrammed. CZONE keeps switching the loads and keeps its pages on the MFD. The LIN nodes need a LIN master on the backbone, and the controller is the builder's choice. The line below is the Safiery master with modem and eSIM, which also brings phone control and remote operation with local permission.

ITEM	QTY	RRP	US$
Switch layer, from above			1,131
LIN master with LIN interface, modem and eSIM for remote control	1	495.00	495
Option 1 total, CZONE modules unchanged			**1,626**

Circuit state is read and written on NMEA 2000 as PGN 127501 / 127502, so the ring and the CZONE page on the MFD always show the same state.

OPTION 2

No digital switching yet: STAR

The switch panel and the fuse block both go. STAR controllers are fuseless, so the only new wiring is the load runs. Channel current is set per output, so a 10 A lighting channel is not wired for 30 A. That granularity takes the copper and the labour out of the install.

ITEM	QTY	RRP	US$
Switch layer plus LIN master, from Option 1			1,626
STAR-Power, 6 x 30 A + 6 x 10 A	1	643.10	643
STAR-Light, 10 x 10 A, dimmable	1	630.21	630
Option 2 total, switching included			**2,899**

22 switched channels plus two scene or spare buttons. STAR output state drives the rings over CAN. Manual override at the STAR module covers every circuit.

THE LIN MASTER IN BOTH OPTIONS

Full remote control, included with Quasar ONE.

The US$495 line is not only a LIN interface. Quasar ONE is the boat's controller, and all of this comes with it.

- LIN master, up to eight nodes and 48 buttons
- 4G LTE modem with on-board eSIM, 12 months included
- Wi-Fi, GNSS and LTE on one antenna
- NMEA 2000, CAN, Ethernet and RS485 on sealed cables
- Learns the boat from the NMEA 2000 bus in minutes, no forms
- Digital twin with predictive health alerts to the phone
- Voice and phone control in twelve languages
- Remote operation, enabled at the unit aboard, with local permission
- Circuit state on NMEA 2000 for any MFD
- IP65 aluminium case, 10 to 60 V DC, touch screen for setup and diagnostics

After the first 12 months a subscription continues the eSIM and the AI services. Local control from the buttons and the MFD does not depend on it.

POWER CONSUMPTION

24 buttons, 12 V, against CZONE's published figures

A ring only draws when its circuit is on, and it is always a colour, never white: 5 to 30 mA at full daylight brightness depending on the colour, 5 mA at the Dim night preset. A keypad lights its labels and status LEDs continuously; a touchscreen lights a 1200 nit panel.

SWITCH LAYER, 24 CIRCUITS	IDLE	ACTIVE, DAY	ACTIVE, NIGHT	10 H NIGHT
4 Quasar LIN nodes, 24 buttons	24 mA, rings dark	144 to 744 mA, 24 rings lit at High	144 mA (1.7 W), 24 rings lit at Dim	1.4 Ah
Same, typical night, 8 circuits on	24 mA		64 mA (0.8 W) at Dim	0.64 Ah
4 CZONE 6 Way Keypads	7 mA in sleep state (outputs off)	up to 224 mA (4 x 56 mA max)		2.2 Ah
1 CZONE Touch 5 touchscreen	switched off by power wire	900 mA at 13.5 V (12 W)		9.0 Ah

Safiery figures are the switch layer only, excluding the LIN master: 6 mA per node plus the lit rings; all 24 lit is the worst case. CZONE figures are published maximum and standby values; the keypad sleep state turns the connected outputs off, so it is not a like-for-like idle. The 10 h column is the night draw held for 10 hours.

5 mA
Per lit ring at the Dim night preset

48
Switches across 8 LIN nodes per bus

1%
Lowest stable ring brightness, night watch

0
Cut-outs beyond a 19 mm hole

DAY AND NIGHT DIMMING

At the helm

	QUASAR LIN NODE	CZONE WATERPROOF KEYPAD	CZONE TOUCH 5
Dimming control	12-bit PWM, 4,096 steps per colour	4 preset levels, cycled with the power key on each keypad	Screen backlight dims from the menu
Night level	Holds steady down to 1%; Dim preset for night watch	Lowest of the 4 presets	Panel still lights the wheelhouse
Colour	Per button; RGB wide colour choice, and the colour is the circuit state	12 preset colours, one for the whole keypad; separate status LEDs	On screen
Where dimming is set	Once, for all nodes, from the master or the MFD	At each keypad	At the screen

High: full sun | **Medium: general use** | **Dim: night**

Three programmable presets ship as standard. Every ring is driven from the same 12-bit table, so 24 buttons dim as one surface.

COMPETITIVE ASSESSMENT

Where it stands

Close to us, but not the same

- LED state feedback. CZONE keypads show circuit on and blown fuse. EmpirBus Connect 50 drives an LED from module state.
- Momentary plus LED. CZONE, Carling and EmpirBus all do this. Latching switches are a problem when the module trips a circuit.
- Full remote control. CZONE: app control aboard via Touch 5 Wi-Fi; remote needs a separate gateway and data plan. Garmin: OnDeck hub, about US$850 plus a subscription, up to 5 switches.

Where the LIN node is better

- Placement. Any 19 or 22 mm hole within a short to long tail of the node. No fascia, no fixed pitch, no label sheet.
- Per button colour state and channel economy together. EmpirBus gives one or the other: a channel per button with one colour, or four to six switches per channel and no LED.
- Cost per node. A LIN slave needs no crystal, no termination and a bare UART. CAN keypads from Blink, Grayhill and Carling carry a CAN node each, with all the N2K overhead.
- Full remote control. No more items to purchase. Quasar ONE includes modem, eSIM and Digital Twin.
- Easy to expand. Customer wants 4 more switches: clip in another node.

Innovation from automotive

- There is no sealed marine LIN switch node in the market today. EmpirBus lists LIN as hardware support but with no pin assignment or protocol published.
- Built to the automotive LIN silicon standard: AEC-Q100, minus 40 to plus 125 C, with ISO 7637-2 transient immunity as a baseline requirement. That is a harder environmental spec than most marine electronics carry.
- The automotive industry uses LIN for non-critical circuits. A steering wheel is all LIN control.
- A node failure takes out six buttons, not one. Four nodes is six times fewer things to fail; a button is plug and replace.

US$ RRP, October 2026, excluding MFD, freight and tax. CZONE figures from manufacturer published specifications and retail listings; CZONE is a registered trademark of its owner and is not affiliated with this product. Application note 2 of 2.

Zero Engineering System. Add Remote Monitoring.

Two 4 inch glass panels under the hardtop read every Bluetooth device on the boat and switch the STAR range. No PC tool, no config file, no dealer visit.

Every device is powered up at Safiery and its Bluetooth pairing code entered before the kit ships. The builder mounts the panels, runs 12 V and ground, and every device appears. Page 2 adds Quasar ONE for remote monitoring, remote control and predictive health.



WHAT QUASAR GLASS READS AND SWITCHES

Victron, read over Bluetooth

SmartSolar MPPT, all sizes. **SmartShunt**, **BMV-712**

Smart Battery Sense. **Smart BatteryProtect**

Orion XS 12/12-50 and **Orion-Tr Smart** DC-DC chargers

Lithium Battery Smart, **SuperPack NG**, **Lynx Smart BMS**, **Smart BMS 12-200**

Phoenix Inverter Smart, **Sun Inverter**, **Inverter RS**, **Multi RS**, **MPPT RS**, **SolarSense 750**

MultiPlus, **Quattro**, **EasySolar** through the VE.Bus Smart dongle

BlueSolar MPPT, **BMV-700** through the VE.Direct Bluetooth dongle

Blue Smart IP22 and IP65 chargers
to be confirmed

Tanks, environment and Quasar sensors

STAR-Tank radar level, fresh, grey, black, diesel
battery 3 to 5 years, glue on, no wiring

Ruuvi 4in1 temperature, humidity, pressure, motion. **Ruuvi Air** CO2, PM2.5, VOC
cabin, fish box, engine room

Quasar Water Leak
bilge, shower sump, under the galley

Quasar Door open, closed, tamper
console door, hatch, locker

Quasar Occupancy distance and presence
helm seat, cabin, cockpit

Quasar Vibration and **Quasar Temperature**
outboard, anchor locker, any space

Shore power and STAR switching

Quasar Shore Power kit, a Shelly EM Gen3 clamp meter at the inlet with the Safiery beacon loaded
volts, amps, watts, frequency, kWh. Alarms: shore lost, low or high voltage, frequency, inlet overload. 120 V and 230 V, 30 A and 50 A, same part

STAR-Power 100 A, 6 × 30 A plus 6 × 10 A dimmable

STAR-Light 40 A, 12 × 10 A dimmable, 2 x RGBW

STAR-Rover IP65, 4 × 15 A, H-bridge, RGBW

> Fuseless, short circuit protection in 80 microseconds. Switching from the panel. Stainless steel switches, MFD backup and remote control are the add on on page 2.

TYPICAL SYSTEM, COSTED

25 ft centre console, outboard, one house battery, as pictured

ITEM	QTY	RRP	US$
Quasar Glass 4 inch panel, under the hardtop	2	295.00	590
STAR-Power, 6 × 30 A plus 6 × 10 A	1	643.10	643
Victron Lithium SuperPack 12.8 V 200 Ah NG	1	1,200.00	1,200
Victron Orion XS 12/12-50 A DC-DC charger	1	349.00	349
Victron SmartSolar MPPT 100/30	1	144.00	144
STAR-Tank, fuel and fresh water	2	240.00	456
Panels, power, switching and tanks			**3,382**

ITEM	QTY	RRP	US$
Ruuvi 4in1, cabin and fish box	2	45.00	90
Quasar Water Leak, bilge fwd, mid, aft	3	49.00	147
Quasar Door, console door	1	49.00	49
Quasar Occupancy, helm	1	89.00	89
Quasar Shore Power kit, 30 A, 120 V	1	120.00	120
Sensors and shore power			**495**
System total, zero engineering			**3,877**

US$ RRP. Victron at 2026 Q3 USD recommended end user price, ex tax. STAR-Tank second unit at 0.90.

ADD ON FOR ROBUST SWITCHING, MFD BACKUP AND REMOTE CONTROL



Quasar ONE: predictive health and remote control

Quasar ONE is a small controller with a modem and eSIM that sits on the boat's network and the NMEA 2000 backbone. It takes everything the panel already reads and does two things the panel cannot: it watches the data for the early signs of failure, and it lets the owner operate the boat from the phone.

How predictive health works. Quasar ONE listens to the NMEA 2000 bus and the Bluetooth devices for 16 seconds and builds a model of the boat on its own: which engine, battery, charger and pump, and how they relate. Every reading is then compared against that model and the boat's own history. A bilge pump that runs longer each week, a battery whose charge acceptance drops, a shore voltage that sags more each month: these show as a health score falling, weeks before an alarm would fire. The owner sees a Vessel health page on the panel and in the app; the builder sees the same page for warranty questions.

> Twelve stainless steel switches on two LIN nodes control STAR-Power directly. The MFD gives alternative switching. STAR-Power has backup buttons on the module.

What Quasar ONE adds to the kit

CAPABILITY	QUASAR GLASS ALONE	WITH QUASAR ONE
Read Victron, tanks, sensors, shore	Yes	Yes
Switch STAR circuits on board	Panel	Panel, switches, MFD
Switch STAR circuits from off the boat	No	Yes, with local permission
Remote monitoring and alarms off the boat	No	Yes, built in modem and eSIM
NMEA 2000 engine, GPS, AIS data	No	Yes, self discovered
Predictive health, Digital Twin, cloud history	No	Yes
Builder fleet analytics	No	Yes, per hull licence
LIN button nodes	No	Yes, LIN master built in

THE SAME BOAT WITH THE ADD ON

25 ft centre console, costed with 12 stainless steel switches and MFD backup

ITEM	QTY	RRP	US$
Zero engineering system, page 1			3,877
Quasar ONE, modem, eSIM, NMEA 2000, LIN master	1	495.00	495
LIN node, 6 button, IP67	2	126.30	253
Stainless RGB push button, laser annealed icon	12	16.10	193
Cable, node to switch	12	6.30	76
NMEA 2000 5 pin cable, Quasar ONE to node, node to node	2	22.00	44
NMEA 2000 backbone estimate: tees, terminators, 3 drops	1	190.00	190
System total with the add on			**5,128**

Data plan and AI health services billed separately, first year included. Backbone at trade prices; MFD not included.

UPGRADE OPTION	QTY	RRP	US$
Quasar Glass 10 inch panel in place of one 4 inch	1	590.00	+295
Quasar Glass 13.3 inch touch display, helm	1	890.00	+595
Third LIN node and 6 buttons	1	283.00	+283
With the add on and the 10 inch panel			**5,423**

All panels read the same devices; adding one adds nothing to commissioning. The 10 inch shows tanks, power, shore and health on one page at the helm; the 4 inch pages through them.

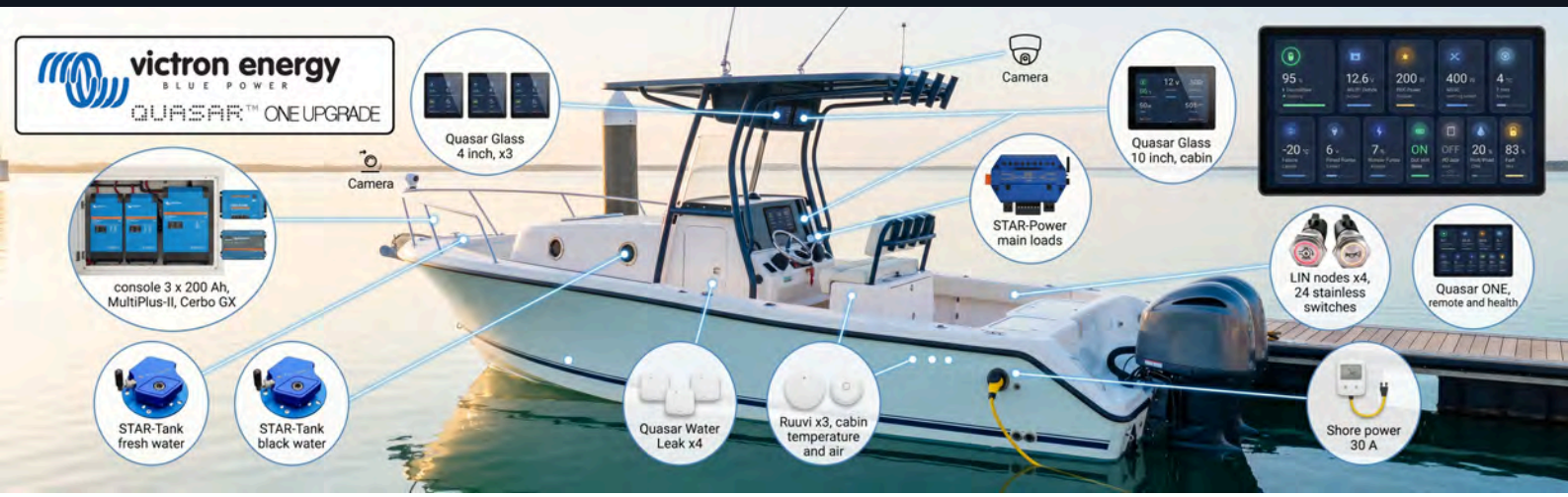
safiery.com **sales@safiery.com** **+61 7 2102 2553**

US$ RRP, October 2026, excluding freight and tax. Victron at Victron 2026 Q3 USD recommended end user prices; Victron, Ruuvi and Shelly are trademarks of their owners and are not affiliated with this product. Zero engineering refers to OEM commissioning of a kit prepared by Safiery. Application note 2 of 2.

Power and Vision. Integrated system with full remote monitoring and control.

36 ft cabin centre console. Victron power, stainless steel switches, STAR control and two cameras on glass at the helm and in the cabin, and in the cloud as a Digital Twin.

Quasar ONE ships in the box. It reads the Cerbo GX over the network and the engines over NMEA 2000, carries its own modem and eSIM, and builds the model of the boat on its own. Every device arrives paired and named.



TYPICAL SYSTEM, COSTED

36 ft cabin centre console, twin outboards, 600 Ah house bank

VICTRON POWER	QTY	RRP	US$
Lithium SuperPack 12.8 V 200 Ah NG	3	1,200.00	3,600
MultiPlus-II 12/3000 2×120 V	1	1,045.00	1,045
Cerbo GX MK2	1	278.00	278
Orion XS 12/12-70 A, one per engine	2	420.00	840
SmartSolar MPPT 100/30	1	144.00	144
Victron power			**5,907**

GLASS, QUASAR ONE, CAMERAS	QTY	RRP	US$
Quasar Glass 4 inch, under hardtop	3	295.00	885
Quasar Glass 10 inch panel, cabin	1	590.00	590
Quasar ONE, modem, eSIM, NMEA 2000	1	495.00	495
Quasar Glass Router, 5 GHz Wi-Fi	1	315.00	315
IP camera, aft deck and anchor winch	2	149.00	298
Glass, Quasar ONE and cameras			**2,583**



STAR SWITCHING	QTY	RRP	US$
STAR-Power, 100 A, main loads	1	643.10	643
STAR-Light, 40 A, cabin lighting	1	630.21	630
LIN node, 6 button, IP67	4	126.30	505
Stainless RGB push button, icon	24	16.10	386
Cable, node to switch	24	6.30	151
NMEA 2000 5 pin cable to nodes	4	22.00	88
STAR switching, 24 switches			**2,403**

TANKS, SENSORS, SHORE	QTY	RRP	US$
STAR-Tank, fresh and black water	2	240.00	456
Ruuvi 4in1 temperature, cabin	3	45.00	135
Quasar Water Leak, bilge	4	49.00	196
Quasar Door, cabin door and hatch	2	49.00	98
Quasar Occupancy, cabin	1	89.00	89
Quasar Shore Power kit, 30 A	1	120.00	120
NMEA 2000 backbone estimate, 5 drops	1	250.00	250
Tanks, sensors, shore, backbone			**1,344**
System total, remote included			**12,237**



ONE APP, POWER AND CAMERAS

The integrated mobile app

The free Quasar Glass App shows the same pages as the glass on board: batteries, inverter, charging, tanks, bilge, cabin, shore power and the two cameras. Aboard it runs over the kit's own 5 GHz Wi-Fi with no internet; away from the boat it runs through the Quasar ONE modem and eSIM, same pages, same alarms.

Power control. The Cerbo GX is read and written over Modbus TCP, so the owner switches the MultiPlus-II on, off or to charger only and sets the shore current limit from the phone, aboard or away. STAR-Power and STAR-Light circuits switch from the app, the glass, the 24 stainless switches and the MFD, and remote switching asks for local permission once per trip.

Cameras. Two waterproof IP cameras stream to the glass and the app: the aft deck for the cockpit and swim platform, and the anchor winch for the chain when weighing anchor. Snapshots attach to alarms, so a bilge or door event arrives with a picture.

WHAT THE OWNER SEES	ABOARD	AWAY
Batteries, state of charge, time to go	Glass and app	App
Inverter on, off, charger only; shore current limit	Glass and app	App
STAR circuits, 24 switches, dimming	Switches, glass, MFD, app	App, with permission
Tanks, bilge, door, hatch, occupancy	Glass and app	App and alarms
Shore power lost, voltage, frequency	Glass and app	App and alarms
Two cameras, live and on alarm	Glass and app	App
Engine data, GPS, AIS from NMEA 2000	Glass and app	App
Vessel health scores	Glass and app	App, weekly summary

AUTOMATED ENGINEERING

Zero engineering with Quasar AI

Before the kit ships. The builder fills in one spreadsheet: circuits, loads, tanks, sensors, panel names. Safiery's AI Configuration Service turns it into the STAR channel settings, the Quasar Glass pages and the Victron settings, loads them, and powers up every Bluetooth device so its pairing code is already in the panels. The kit arrives as one working system.

On the boat. Quasar ONE listens to the NMEA 2000 backbone and the Bluetooth devices for 16 seconds and builds a model of the boat on its own: which engines, which battery, which charger, which pump, and how they relate. No PC tool, no configuration file, no instance numbers, no dealer visit. This self built model is the subject of two Australian patent applications.

> The MFD keeps its own pages and its own switching through the Quasar ONE. If the glass is ever off, the stainless switches and the MFD still run the boat, and STAR-Power has backup buttons on the module.



What that removes from the build sheet. A digital switching configuration day. A Cerbo setup session. A pairing step per device at handover. The instance number clash when a second battery monitor appears. The service call when the owner's phone cannot find the boat.

What it costs the builder. One spreadsheet and the 12 V and NMEA 2000 wiring. Everything else is in the box.

DIGITAL TWIN

Quasar ONE: state of health, pre-checks and predictive maintenance

State of health

Every reading from the Cerbo, the engines, the STAR modules and the sensors is compared against the boat's own model and history in the cloud. Each system carries a health score with the reason in plain words: charge acceptance against last month, DC-DC temperature against load, bilge pump run time per week, shore voltage sag at the usual dock.

System pre-checks

Before the owner leaves the dock, and before the builder hands over, Quasar ONE runs the same list: bank charged and balanced, both DC-DC chargers seen, inverter in the right mode, tanks as expected, all four bilges dry, door and hatch closed, shore cord unplugged, both cameras live. One page on the glass and in the app, green or with the item that is not right.

Predictive maintenance

A falling score is a service item weeks before it is a failure. The owner gets it in the weekly summary; the builder sees it in the fleet view, anonymised by default, so a warranty question is answered from the record. Parts are ordered before the boat comes in. The first year of data and AI health services is included with Quasar ONE.

safiery.com sales@safiery.com +61 7 2102 2553

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Quasar Marine

SAFIERY

ONE SYSTEM. THE WHOLE BOAT. / FOR BOAT BUILDERS

Ready to build the future.

Open products changed building and industrial automation. Engineers now set up a system off site in a fraction of the time, and new products clip straight in. Quasar brings the same open approach to boats.



McConaghy MC86GT helm. Unified displays and 300 digital switching points on an 86 ft power catamaran.

Three outcomes to expect.

Less copper

Over 4,000 feet less cable on the McConaghy MC86GT than a traditional build. More wireless for comfort and lighting.

Unified displays

The same widgets on glass from 4 in to 22 in, in the cabin, the saloon or the ribbon display above the helm.

Easy to use

Not seven systems with seven apps. One app for one open system, with chat help on board and no internet needed.

LEARNT IN BUILDING AUTOMATION

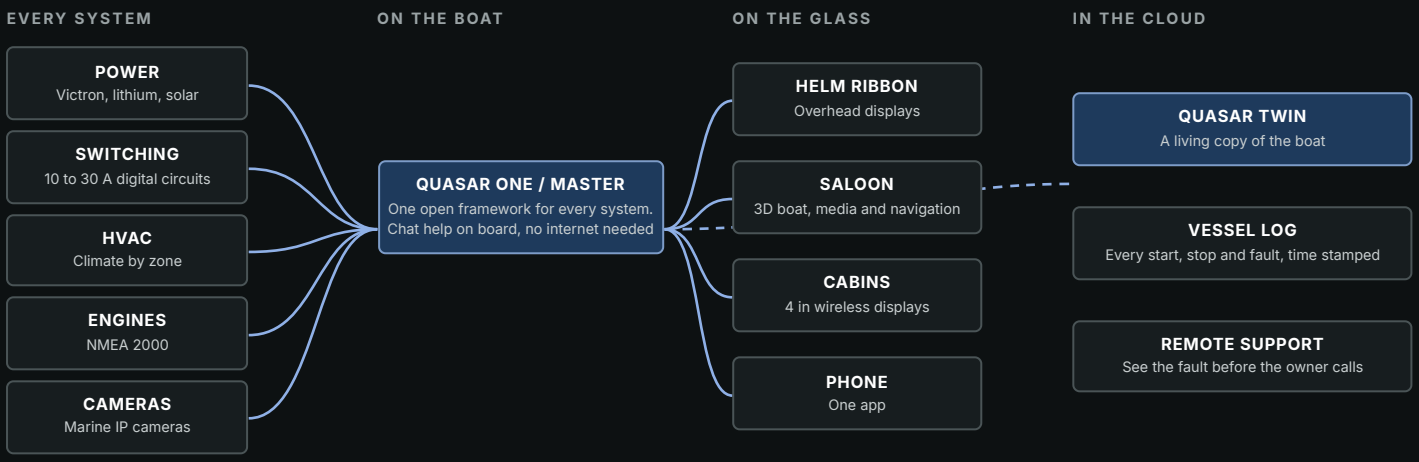
Open products cut the installed cost of buildings by about half, and customers were delighted. Boats are next.

50%+	4,000 ft	2,000	1
Target cut in engineering cost	Less cable on the MC86GT	Nearly that many open products on Matter	App for the whole boat

You pick the equipment. Quasar sets the framework. Victron Energy integrates natively with the open system.

No proprietary MFD. One open framework.

Every system on board, from power to HVAC to cameras, joins one open framework. Every display shows the same picture, so the owner, the crew and the guests all see one boat. Swap a brand at any time, with no lock-in.



Conceptual architecture. Systems connected are confirmed for each boat. Victron and Matter are trademarks of their owners.

Programmed by AI. Checked by AI.

Most of the system set up is done with Quasar AI, on a safe harness with two independent models: one proposes, the other checks. The target is to cut engineering cost by more than half, and repeat boat models with the same set up are programmed in minutes.

Features.

4 in wireless displays — Bring up any widget to monitor or control any connected item. Each one needs only 12 V power.

Cameras in the glass — Low cost marine IP cameras on every screen. AI detection brings up security or safety views.

Simple multimedia — webOS screens join the unified display system. Split the saloon screen between Netflix and navigation.

Vessel log — Every start, stop and fault recorded for the life of the hull. Hand the surveyor and the next buyer a full history.

Spoken stop — A separate processor hears a spoken stop and acts within 250 ms, outside the reach of the AI.



MC86GT / AI ASSISTED PROGRAMMING - 1 HOUR INSTEAD OF 8

The sailing layer.

For sail builders, on the same platform.

Steer by wire and regen by wire. Electric steering and energy recovery under software control.

Auto sailing and auto docking. Sail to a waypoint, then dock with cameras and radar.

PROOF | **McConaghy MC86GT** on the water October 2026. **Panther Electric 56** with full Quasar system, for delivery in May 2027.

Ready to build the future?

Bring your general arrangement, equipment list and build schedule.

quasar.safiery.com sales@safiery.com +61 7 2102 2553

38TH AMERICA'S CUP NAPLES, ITALY

SAFIERY

OFFICIAL BATTERY