



Electronic & Marine Research Industries

Service & Support



Excellence in Ship Control

www.emri.dk/service

Contact

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Achieving excellence in ship control is a matter of trust, professional interest and making sure that all types of equipment are in good condition many years after installation. At EMRI you will meet a dedicated and experienced team, who takes care of our valued customers and their steering experience.

Global Service

EMRI can provide service worldwide, depending on your need and preferences.

Service opportunities

- Remote support
- Onboard service by EMRI's own technicians
- Onboard service by a conveniently located service partner

No matter which service option we agree is the best for your situation, we strive to reach a solution without going onboard the vessel again and again. We have an experienced service team and our service partners are trained and known for their high service standards / solution rate. We are known for quality products and subsequently, the service must meet the same expectations.

Check out the [service map](#) on the last page.

Worldwide footprint

Besides having trained service partners and own service department, EMRI are in close contact with major ship integrators around the world, who are acquainted with our products. They might have installed navigational equipment from EMRI within their scope of supply and in some cases, even performed commissioning and sea trials. Either way, the list of contact points around the world is characterized by more than 45 years of experience. So, if you prefer to order spare parts from a local vendor, we can help guide you to someone with the right expertise.



Maintaining your steering experience over time

Potentiometer upgrade

Performing a potentiometer upgrade can be done during a service visit, either by attending late in a dry dock period for easy budget planning, or attending during the itinerary at a conveniently located port. This, depend on the scope of work and your preference.

- Feedback potentiometers are essential parts of the steering system, and should be serviced on a regular basis due to expected wear. They are found within the rudder feedback units RFU and RFB. We recommend that these potentiometers are replaced every 5 years.
- Potentiometers within the mini wheels are recommended to be replaced every 8-10 years.
- The steering wheel is recommended to be serviced every 8-10 years. We would suggest to replace the complete steering wheel instead of just the potentiometers, due to possible mechanical wear and the complexity of the many potentiometers within the steering wheel.

Feedback Potentiometers	Every 5 years
Mini Wheel Potentiometers	Every 8-10 years
Steering Wheel Potentiometers	Every 8-10 years

Indicator upgrade

Some indicators have become obsolete and can be replaced with newer units that have easier readable scales. View [list of obsolete parts](#).

Upgrading the indicators can be done by the crew onboard the vessel, if the old indicators become defective. These are always on stock and can be ordered directly at EMRI or we can guide you to a local supplier. An upgrade can also be part of a planned service visit. Performing both potentiometer upgrade and indicator upgrade can be done during the same service attendance – thereby lowering the total cost.

WMS / PLC upgrade

When the PLC modules used in the steering PLCs are obsolete it is highly recommended to start planning an upgrade in order to avoid problems. As some PLC modules have been out of production for several years, there might not be a quick fix when the problem occurs. The best solution for maintaining your steering experience and maximizing the vessels uptime, is to take the necessary precautions. Without the PLC there is no follow-up steering in the bridge wings or no lamp/sound indication related to the steering system.

It takes time to do the upgrade as it involves recompilation of software, design and production of a new WMS (work mode station) factory acceptance test and installation. An estimated time frame for such work is 3-4 months, where the result is a ready to install WMS updated with new PLC versions where spare parts are available.

EMRI has experience with such upgrades, which has been performed on e.g. cruise vessels and tankers. Satisfying results are achieved by thoroughly testing the new equipment in a setup, made at the factory in Denmark in order to limit installation time onboard to only a few days, while also securing it will work when onboard.

Our recommendation is to contact us before your scheduled drydock and let us prepare the upgrade, so we can install it while the vessel is still in drydock. Planning an upgrade for a series of similar vessels will lower design costs as less work needs to be done on the following vessels.

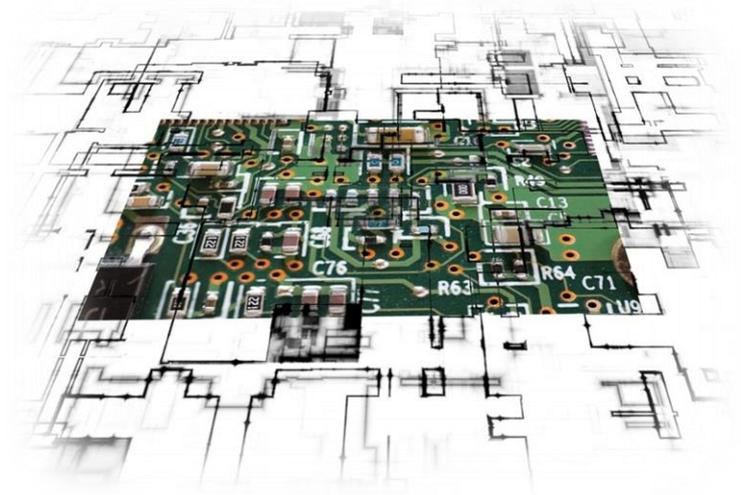
Upgrade information

Delivery time: 3-4 months.

Installation: during drydock.

Installation time: 2-3 days.

Note: other upgrades can be scheduled during the same drydock period. Let us put together an upgrade package that fits your needs and budget.



General maintenance check-up

Onboard routine maintenance can be performed by the crew, documentation and manuals should be available onboard. In case you need help with this, it is of course always a possibility to contact EMRI for guidance. We can provide remote guidance or provide a service technician to go onboard the vessel, at a specified port during the vessel's itinerary. Examples of such maintenance check-up could be checking the Joystick/DP System, checking the levers, making adjustments according to the captain and navigators' steering preferences and possibly suggest replacement of equipment.

Availability of factory tested spare parts

If something goes down, availability of needed spare parts are an important factor when it comes to maintaining a high uptime. EMRI always have a wide range of spare parts available for shipment, which can be delivered within 1-4 days most places around the world. If needed parts are not on stock e.g. custom-made products, we can start production from day to day depending on complexity.

Many of the ship integrators who have integrated navigational equipment from EMRI within their project deliveries, carry a selected spare parts stock. They usually replenish their stock shortly after parts have been used.

Sub-supplier products

EMRI is also a sub-supplier of some servo modules, pitch converters and maneuver distribution circuit boards for Man Energy Solutions. Please note that this arrangement dates back in time, so products might have been acquired through Alfa Diesel or Man Diesel which can now be found at Man Energy Solutions. In case of any inquiries relating to these products, whether it is for maintenance or replacement units, we refer to Man Energy Solutions.

Remote support

EMRI can provide remote support and help guide the crew onboard, for troubleshooting and for making possible adjustments. Sometimes it requires going through old manuals and data, which is why we might ask you to create a helpdesk case, as it will enable us to dedicate enough resources to help you properly. A helpdesk order is calculated on an hourly basis, where only actual used hours will be invoiced. The case will be closed when a solution is reached or as decided by the customer.



List of obsolete parts

Some parts have become obsolete, due to unavailable components or technological advancement. In those cases, we search for a better alternative in order to extend the lifetime of your system.

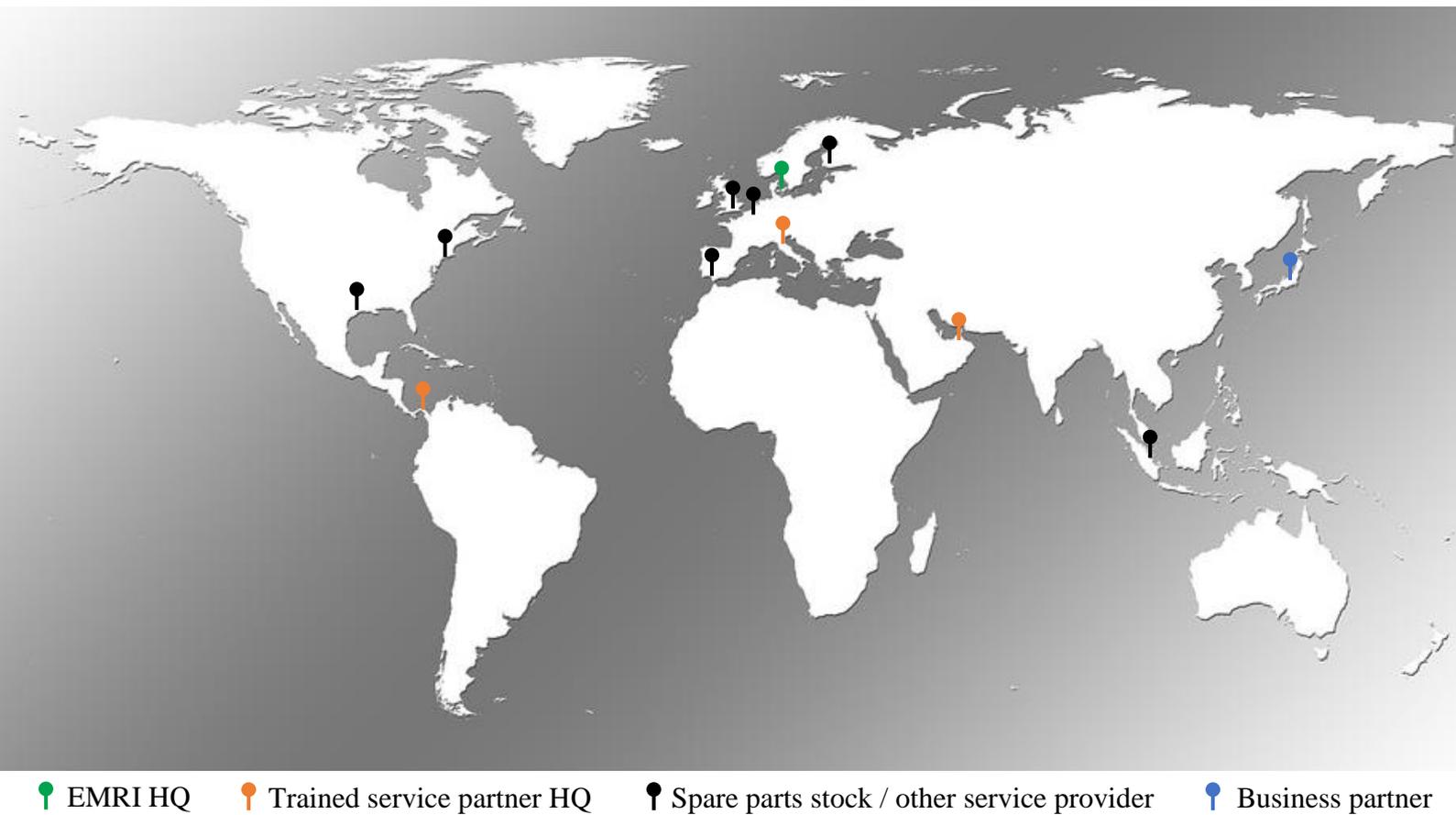
The list is not fully comprehensive, if needed older parts are not listed, contact service@emri.dk. We might be able to still produce based on the original drawings or suggest an upgrade.

- Autopilot
- Servo
- Monitor, PC
- Indicator
- Amplifier
- PLC modules

	Obsolete part	Replaced by	Notes
●	SEM1000	SEM300	
●	RIB71	RIB71X	New unit has easier readable scale. Replacement instructions to be followed.
●	RIB711-RG	RIB71X	
●	RIB51	RIB51X	New unit has easier readable scale. Replacement instructions to be followed.
●	RIB511-RG	RIB51X	
●	RIA411	RIA51X	
●	RIA511	RIA51X	
●	RIA711	RIA71X	
●	MIB180	MIB180X	
●	SSD	DIB10	
●	ROT144-30-C	ROT144-30-CX	
●	ROT144-60-C	ROT144-60-CX	
●	TPP (all types)	TPL	
●	RIS	SAB	
●	RSM (older types)	Contact EMRI	Spare parts for some older types of RSM servos is not available. If needed, contact EMRI for possible upgrade.
●	PR5111-4-5466	PR4104-4-5466KIT	
●	PR5111-4-5467	PR4104-4-5467KIT	
●	PR5111-4-5468	PR4116-4-5468KIT	
●	PR5111-4-5469	PR4104-4-5469KIT	
●	PR5111-4-5786	PR4104-4-5786KIT	
●	MPC11	MPC12	
●	MPC21	MPC22	
●	JH15T05	JH15T17	
●	JH15T15	JH15T17	
●	CQM1-CPU21	Upgrade needed	Contact EMRI for upgrade. View section WMS/PLC upgrade .
●	CQM1H-CPU21	Upgrade needed	Contact EMRI for upgrade. View section WMS/PLC upgrade .
●	CQM1-ID212	Upgrade needed	Contact EMRI for upgrade. View section WMS/PLC upgrade .
●	CQM1-OC221	Upgrade needed	Contact EMRI for upgrade. View section WMS/PLC upgrade .
●	CQM1-PA206	Upgrade needed	Contact EMRI for upgrade. View section WMS/PLC upgrade .
●	G71-OD16 24DC	Upgrade needed	Contact EMRI for upgrade. View section WMS/PLC upgrade .

Note: ALL types of Omron CQM1 and G71 PLC modules are obsolete. Not all types are listed here.

Service Map



Trained Service Partners

Dynamic Marine

HQ: Venezia, Italy

Service area: Europe and adjoining countries.



Elcome International LLC

HQ: Dubai, UAE

Service area: Middle East and offices at places like Malaysia and Singapore.



Pasras S.A.

HQ: Panama City, Panama

Service area: North America and South America.



EMRI has a service department located in Denmark that performs onboard service and remote support to your vessel and to our service partners.

Service & Support Brochure was last reviewed on 27.August.2019.