



ALPHATRON |
Marine



FleetXpress solutions

Applications driven by proven technology

www.jrc.am

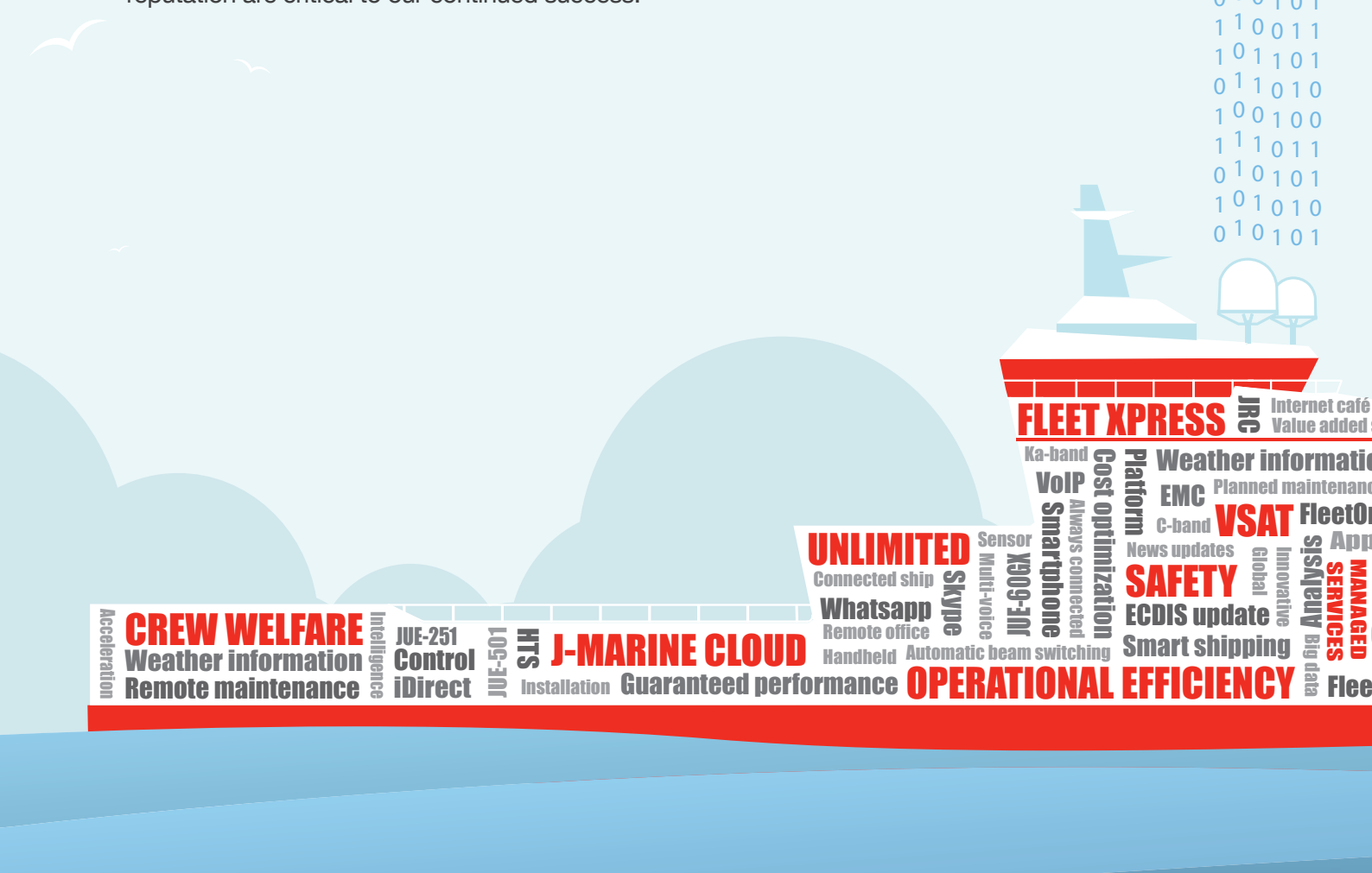
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Omotenashi to our customers

The Japanese concept of Omotenashi comes from the heart. JRC translates this unique Japanese mindset of service and hospitality in many ways, one of which is in how we develop products ensuring total value for users. The product needs to function as a solution, or serve a specific purpose for our customers. And this is exactly how we started development of our new JUE-60GX Inmarsat Global Xpress communications product: diverse and flexible, applicable and relevant to different markets on different types of vessels, working hard in the background offering greatly enhanced levels of communications speed, quality and service to users, without them even noticing. But still retaining our enviable reputation for manufacturing quality, product reliability and customer support.

A rich history

Established in 1915, JRC has built and maintained a hard-earned reputation in the marine business for reliable and innovative engineering backed up by an extensive global customer support network. Our products are valued in the market because they provide modern affordable services which work dependably. JRC's engineering standards are matched by the rigour of our Quality Assurance process, our brand and our reputation are critical to our continued success.



FLEET XPRESS JRC Internet café Value added

Ka-band VoIP Platform Weather information
 Always connected Sensor Multi-voice Y309-301

Cost optimization EMC Planned maintenance
 News updates C-band VSAT FleetO

SAFETY Global Innovative App
 ECDIS update Smart shipping

OPERATIONAL EFFICIENCY Managed services Big data Fleet

UNLIMITED
 Connected ship
 Whatsapp Remote office
 Handheld Automatic beam switching

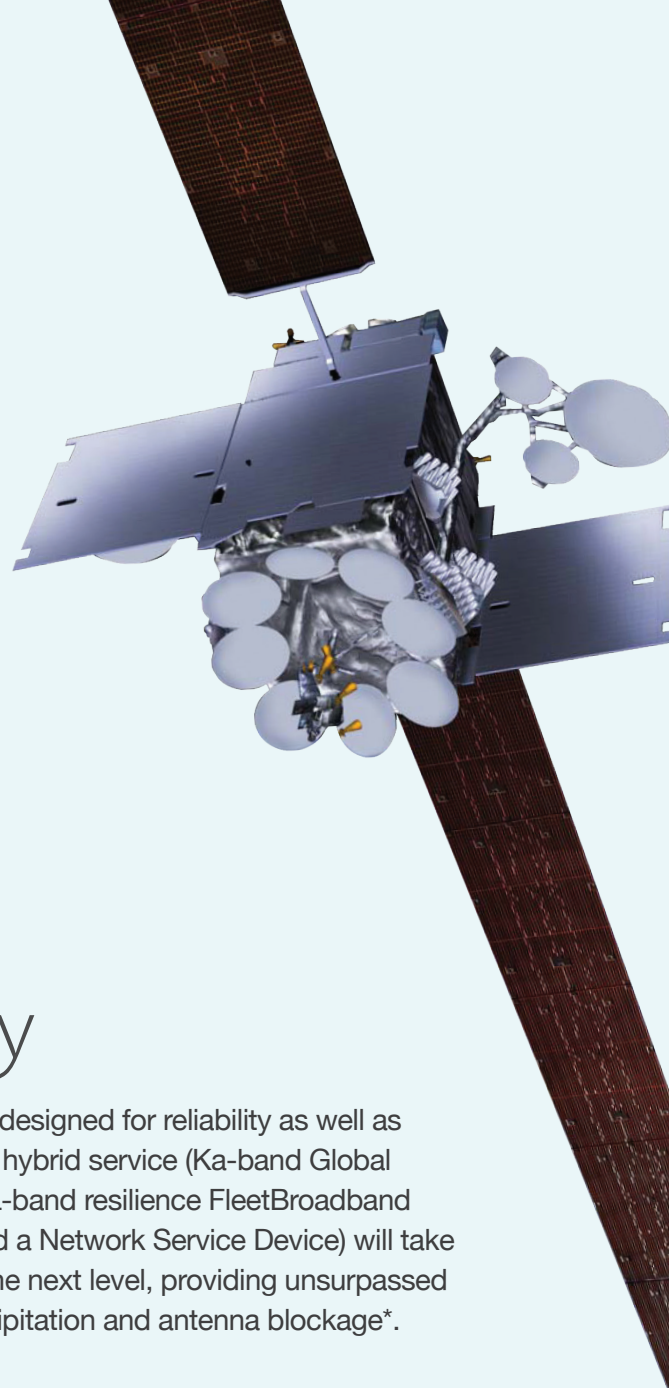
J-MARINE CLOUD
 Guaranteed performance

CREW WELFARE
 Weather information Remote maintenance
 Intelligence
 JUE-251 Control iDirect
 JUE-501
 HTS Installation

Acceleration

FleetXpress, Fast, Faster, Fastest

JRC is one of the world's longest-established companies in the field of marine electronics, and a pioneer in global mobile L-band satellite communications as Inmarsat's longest-serving manufacturing partner. From the beginnings of the maritime satellite communications era JRC has invested heavily in research and development year-on-year. This investment will continue so as to offer creative solutions to the marine industry, through a new design of compact JUE-60GX Ka-band terminal and antenna delivering enhanced connectivity speeds in Mbps in response to user demands.



Redundancy

The new ultrafast FX service is designed for reliability as well as speed. Inmarsat's Fleet Xpress hybrid service (Ka-band Global Xpress JUE-60GX backed by L-band resilience FleetBroadband family JUE-251 or JUE-501 and a Network Service Device) will take your operational efficiency to the next level, providing unsurpassed reliability, even with heavy precipitation and antenna blockage*.

*Note: existing JUE-251 or JUE-501 can be used as part of the FX package, but cannot be used separately unless disconnected from the GX terminal. Redundancy only applies in the overlap regions between GX I-5 satellites and FB I-4 satellites. Data transmission speed through the JUE-251 or JUE-501 will be at normal FB rates.

solutions

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ne
&
DOYB
Engine monitoring
Controlled cost
Machine to machine
t management

ALPHA EYE
One-stop-shop

Bandwidth
ICT support
Control
GMDSS
Inmarsat



Unique antenna design, Small, Lightweight, Durable

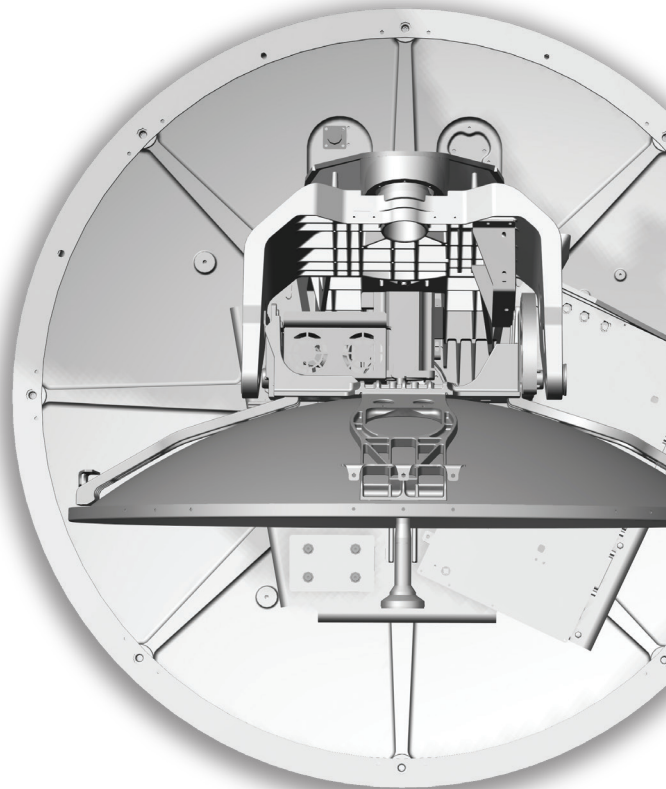
The design of a lightweight but ultra strong radome for the Ka-band environment has been a particular challenge. JRC engineers used a 3 layer sandwich Fibre Reinforced Plastic (FRP) with a special resin-honeycomb structure for the core of just a few millimeters. The honeycomb structure gives the radome high strength and is extremely lightweight. The radome is dipped in a bath of resin and shaped in an oven, so as to achieve a curved structure without excessive mechanical force or heating.

Installation is quick and easy. With such a lightweight antenna the vessel's downtime is minimal, no crane necessary for installation, and the onboard setup will be just as simple as it is today for FleetBroadband.

Keeping on track

Our experience and expertise gained through JRC's rich heritage of delivering successful Inmarsat products served us well in the design of our new, highly stable antenna. By keeping as much weight on and around the base plate, the antenna center of gravity remains low which greatly assists in stable communications under harsh operating conditions.

Monocoque structure: **Rigid**
Low center of gravity: **Stable**
Demper free design: **No vibration**



Interfacing

JRC's below deck unit providing intuitive setup by web browser GUI and offering easy hardware interfacing. Installation arrangements are made by dual cabling for RX/TX. Depending on antenna distance with a maximum of 60 meter, JRC can provide various high-quality cables sets. Besides standard NSD (also compatible for futued Digital Base Platform) interfacing, JRC has provided one extra RJ-45 connector for EXT LAN connection to the vessels' VDR and/or Inmarsat C to enable JRC's unique Remote Maintenance System (RMS).



High-speed communication is made possible between antenna and below deck unit with JRC's unique Wi-Fi technology.

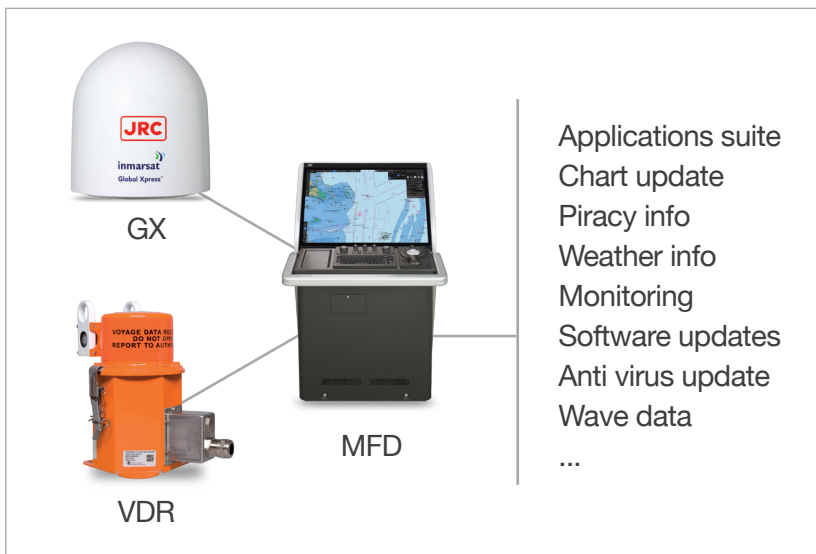
- Design compatible for 19-inch rack
- Available with rack & desk mount type
- Self-diagnostic function
- JRC Remote Maintenance System
- Simple view with LED indication
- Intuitive web browser interface

Fit, and forget

JRC designed the terminal to be flexible. The JRC original design terminal uses web-based operation similar to our FleetBroadband solution, and is designed to be mounted in a 19-inch (communication) rack. As a standard feature, the JRC Global Xpress solution supports our proprietary Remote Maintenance System (RMS), one of the core elements of JRC's customer operations support philosophy.



Smart shipping applications

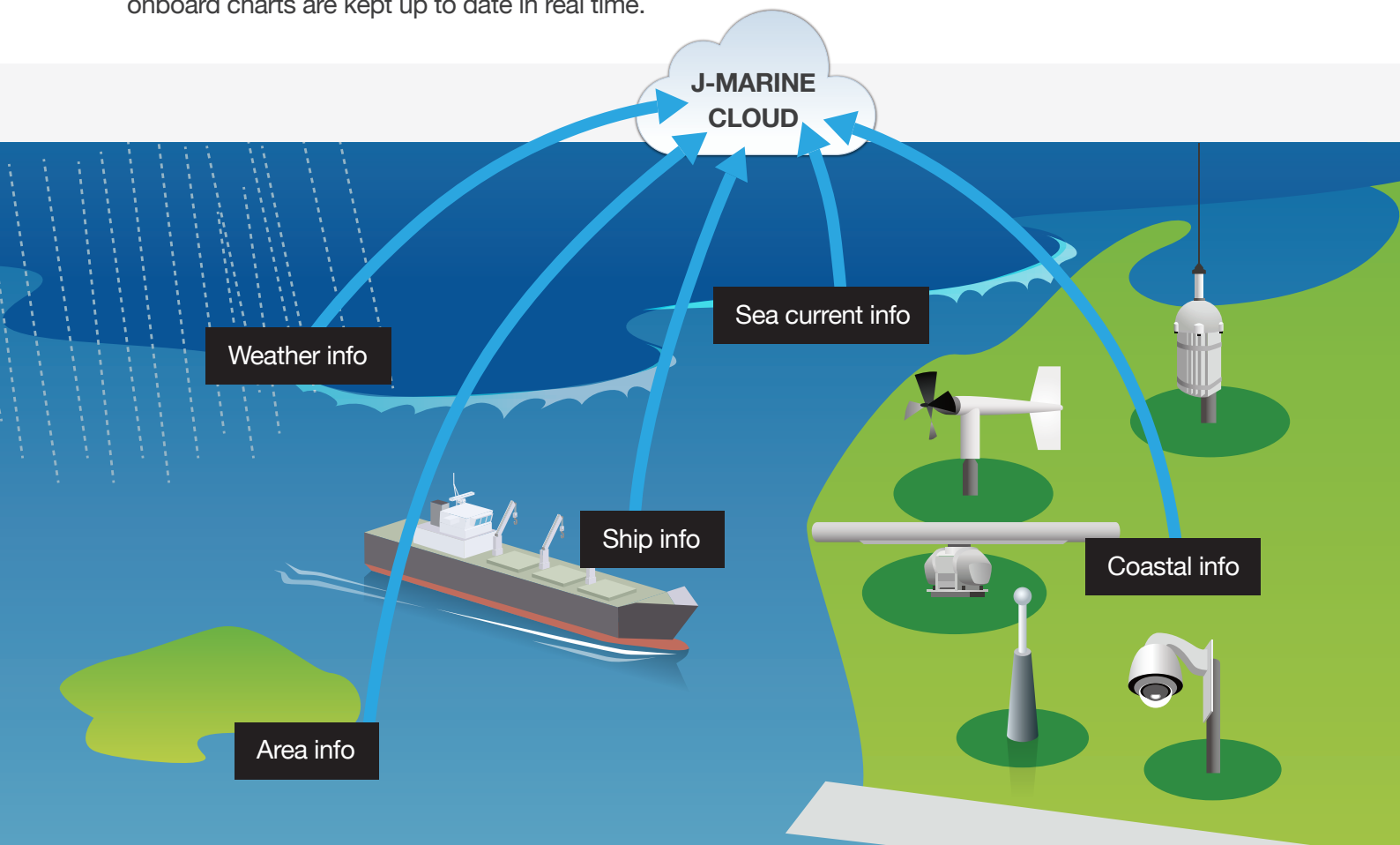


Dedicated high speed communications together with JRC newest generation onboard navigation equipment provides for seamless integration of support and applications, superfast and anywhere between 70 degrees North and South. Functions for captain and officers are directly accessible from our Multi Function Display (MFD).

FX and JRC, in the cloud



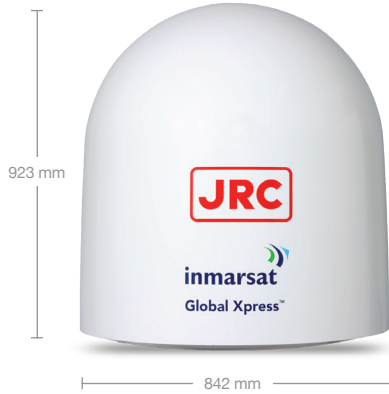
JRC is developing its first and very own 'shared space' for our users, aimed at economy, safety and welfare. FleetXpress will be a central part of our jMarine Cloud™ service to enable advanced applications. When a reliable data communication system is installed, the crew benefits but the ship-owner is the real winner. Real time data makes it possible to plan routes more effectively, avoid bad weather and schedule arrival time more accurately, saving valuable fuel. It can also ensure that the onboard charts are kept up to date in real time.



Tech Specs

JUE-60GX RoHS

NTG-428 Weight 44 kg



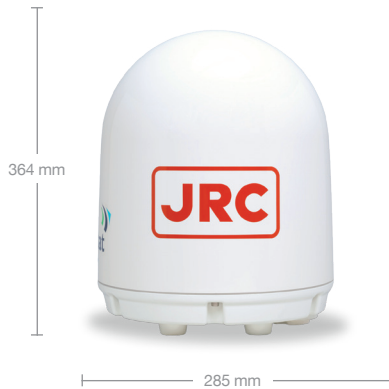
NTF-329 Weight 8 kg



Downlink freq 19.2 to 20.2 GHz
Uplink freq 29 to 30 GHz
Block up convertor 5W
Elevation -20 to 115°, Azimuth 360°
Temp: -25° (ADE) -15°(BDE) to 55°C
Power 100V to 240V AC (300VA)

JUE-251 RoHS

GSC-251 Weight 4,7 kg



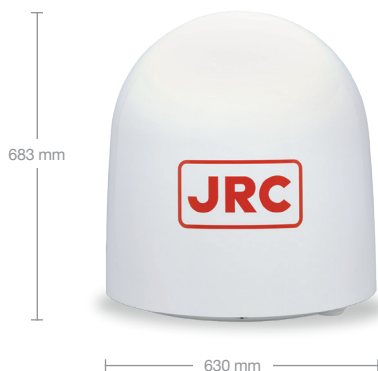
GSC-252 Weight 4,5 kg



TX 1626.5 to 1675 MHz
RX 1518 to 1559 MHz
Streaming IP 284 kbps
Standard IP 8, 16, 32, 64, 128 kbps
Temp: -25° (ADE) -15°(BDE) to 55°C
Power 21.6 to 31.2V DC (AC option)

JUE-501 RoHS

GSC-511 Weight 20 kg



GSC-512 Weight 4,5 kg



TX 1626.5 to 1675 MHz
RX 1518 to 1559 MHz
Streaming IP 432 kbps
Standard IP 8, 16, 32, 64, 128, 256 kbps
Temp: -25° (ADE) -15°(BDE) to 55°C
Power 21.6 to 31.2V DC (AC option)



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