Global Xpress

Unique antenna design

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.
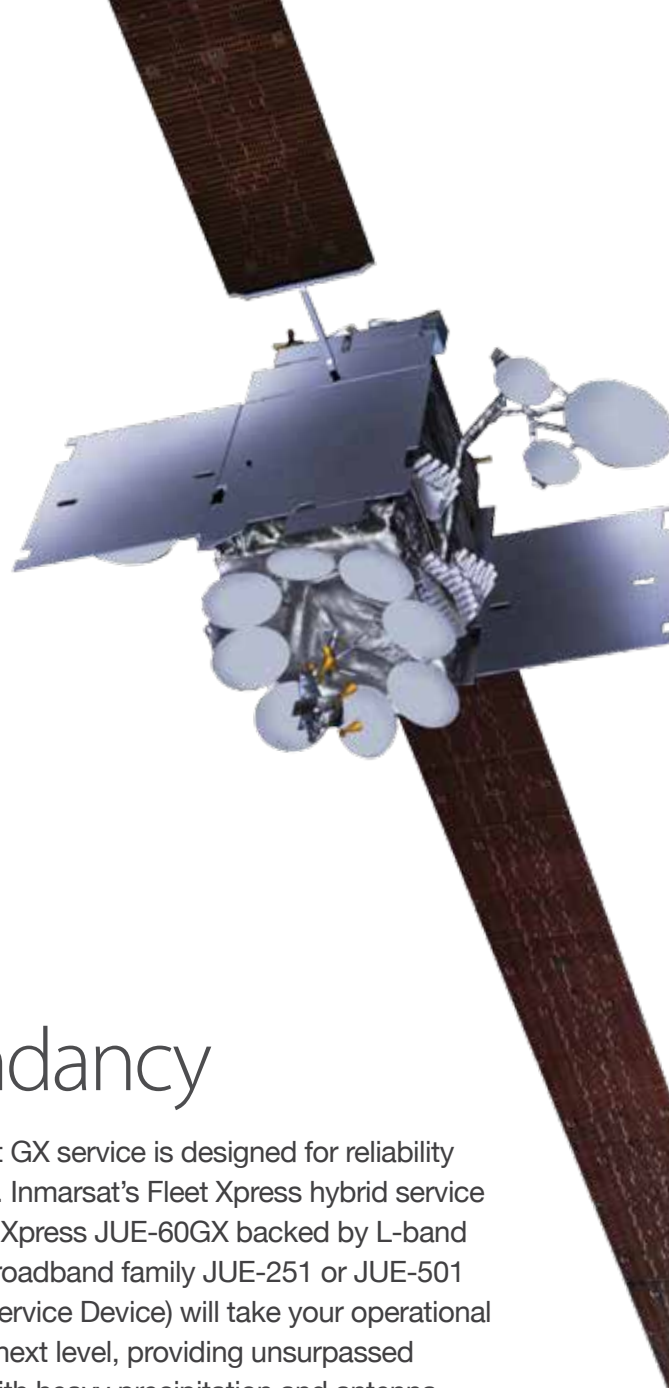
A rich history

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.
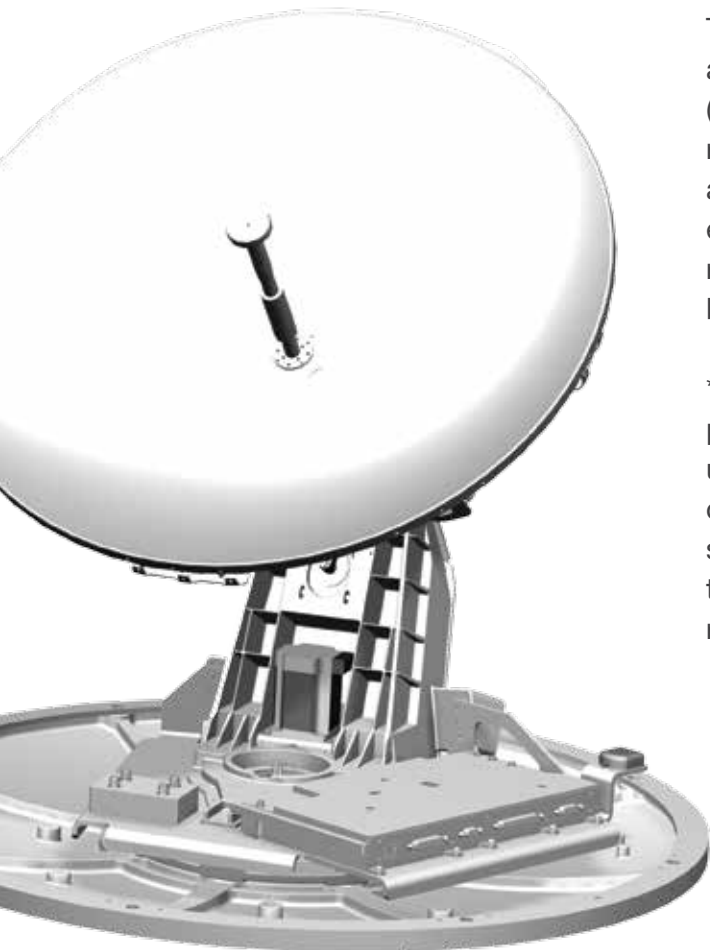
Global Xpress,
Fast, Faster, Fastest

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 GX 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 GX 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.

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.

Core module

The JRC JUE-60GX Global Xpress solution core module (made by iDirect) is placed in the terminal, fitted below deck. For optimal connectivity, two separate coax cables with a maximum length of 60 meters are used for transmitting and receiving signals.
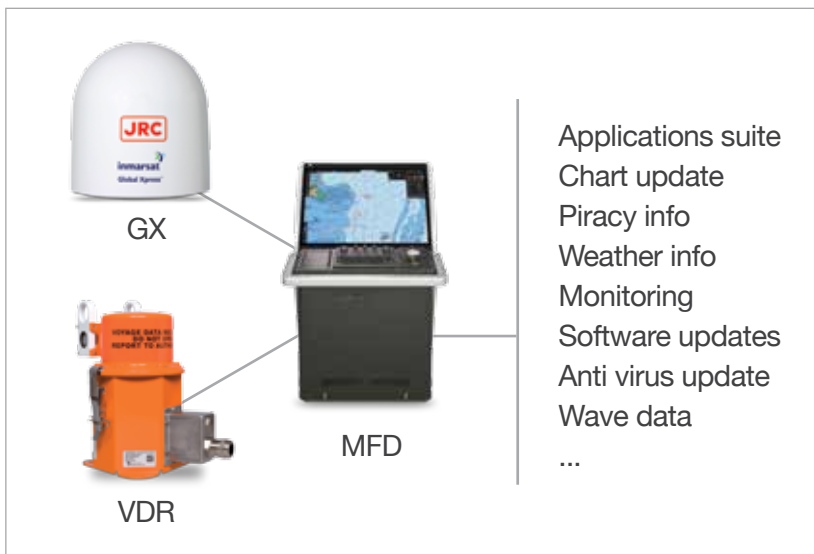
Dual coax (TX & RX)
Cable up to 60m

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.

Seamless integration

GX

VDR

MFD

Applications suite
Chart update
Piracy info
Weather info
Monitoring
Software updates
Anti virus update
Wave data
...

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).

GX and JRC, in the cloud

JRC is developing its first and very own 'shared space' for our users, aimed at economy, safety and welfare. Global Xpress 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.
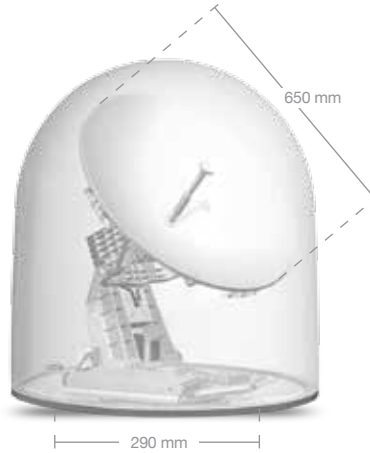
With secure connections the ship-owner can even keep accurate track of his fleet's movements and fuel consumption and advise the captain where necessary in order to save cost, improve safety of the ship and care of cargo and crew. Onboard equipment can monitor installed devices remotely, prevent faults and advise possible maintenance issues so as to be ready at the quay with the correct spares for the ship's arrival in port. Crew applications with high-speed connectivity for relaxation and for communications with friends and family are available through GX. All from the cloud.
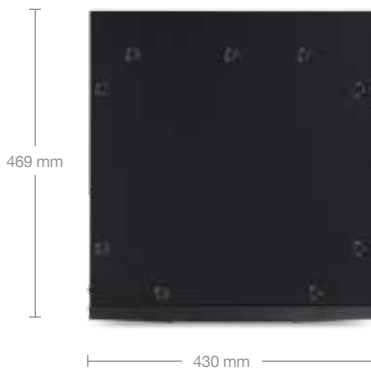
Tech Specs

Antenna [RoHS]
NTG-428 Weight 44 kg

923 mm
650 mm
842 mm
290 mm

Downlink freq 19.2 to 20.2 GHz
Uplink freq 29 to 30 GHz
Block up convertor 5W
Elevation range -20 to 115°
Azimuth range 360°
Temperature: -25° to 55°C

Terminal [RoHS]
NTF-329 Weight 8 kg

469 mm
430 mm
88 mm

Ethernet IEEE802.3, 100Mbit/s
2x NSD LAN + 1x JRC LAN
GPS/gyro input (IEC61162-1/2)
Suitable for 19-inch rack
Temperature: -15° to 55°C
Power 100V to 240V AC (300VA)

In the box

Antenna
Terminal

Option

Radome heater (for ice class)

Cables

Coax	TX/RX
5D	TX up to 50m
	RX up to 35m
10D	TX 50 to 60m
	RX 35 to 60m

Fleet Xpress

Consists of;
JUE-60GX Global Xpress
JUE-251 or 501 FleetBroadband
Network Service Device (NSD)

www.jrc.am

Centers of Excellence
Houston, Rotterdam, Singapore, Tokyo