JUE-250
FleetBroadband

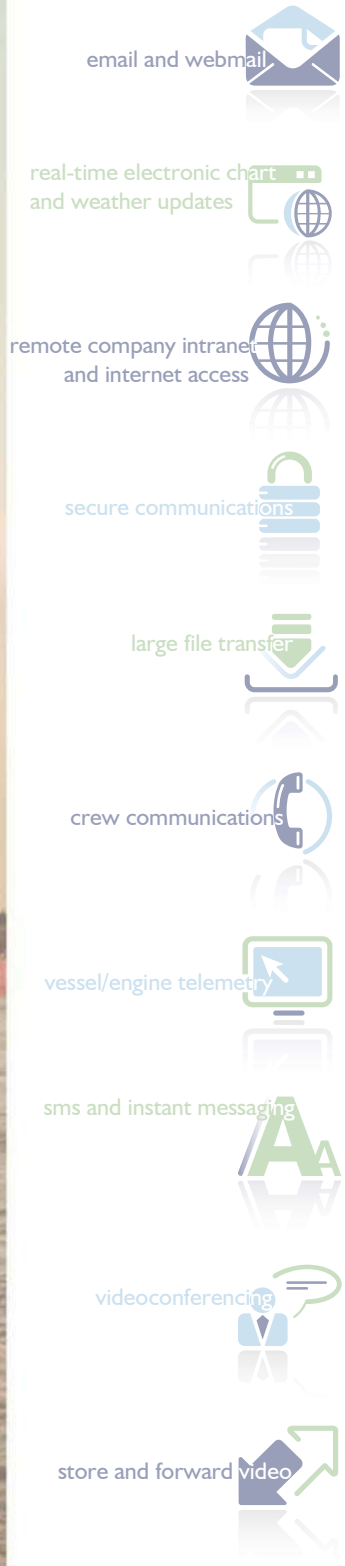
– introducing pioneering solutions for the next-generation FleetBroadband communication service

Upgrade path™ from JRC Fleet 33
Reliable broadband data and voice
Dedicated compact solution
Cost-effective performance and flexibility
Takes your vessel into future standards

JUE-250 FleetBroadband – performance features

Unique features

- The JUE-250, a pioneering next-generation satellite communication terminal, delivers the most advanced maritime service available, fully contributing to the operational efficiency of vessel and crew.



Meet the challenges with FleetBroadband

FleetBroadband gives you faster, more cost-effective access to broadband services, offering seafarers an affordable voice and data option, while providing your vessel with a coverage area of millions of square miles. It is more powerful than any other solution on the market, allowing you to have the capability to reach peak performance and gain a competitive edge.

Simultaneous access

This next-generation solution offers an unparalleled range of services to suit all types and tonnages of vessels. The service provides simultaneous voice and broadband data through a compact antenna, allowing you to run online operation systems, whilst still having access to email, intranet and voice calls – a significant improvement to both operational and social use.

Cost-effective service

With FleetBroadband, performance and flexibility do not come at a high price. Existing JRC Fleet 33 customers can utilise our dedicated upgrade path™ to make global voice and broadband data more accessible than ever before. You will achieve greater operational efficiencies and significantly reduce the cost of both business and crew communications.

Optimal connectivity

Enhanced connectivity, based on 3G standards, provides constant, simultaneous access to voice and high-speed data in a compact solution, designed specifically for the marine environment.

Standard IP for email, internet and intranet access via a secure VPN connection, at speeds up to 284 kbps and **streaming IP** guaranteed data rates up to 128 kbps.

JUE-250 FleetBroadband – developed for maximum ease of use

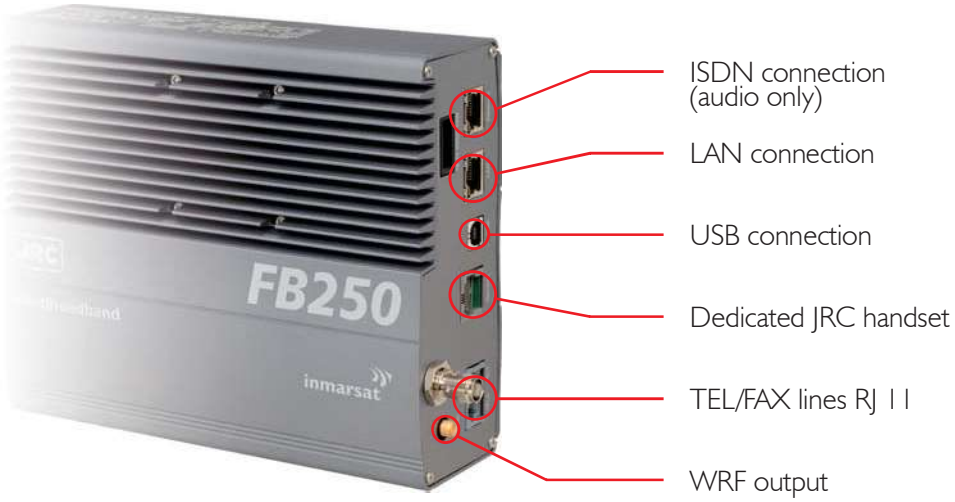
Upgrade path™ – exclusively by JRC

The existing JUE-33 Inmarsat Fleet 33 is fully compatible and specifically designed to meet the industry-changing FleetBroadband services. This makes it necessary to replace only the main unit rather than obtaining a completely new system. This unique, cost-effective feature will provide seamless ocean coverage from 76° North to 76° South – all via a single main unit upgrade.

Flexible interfacing

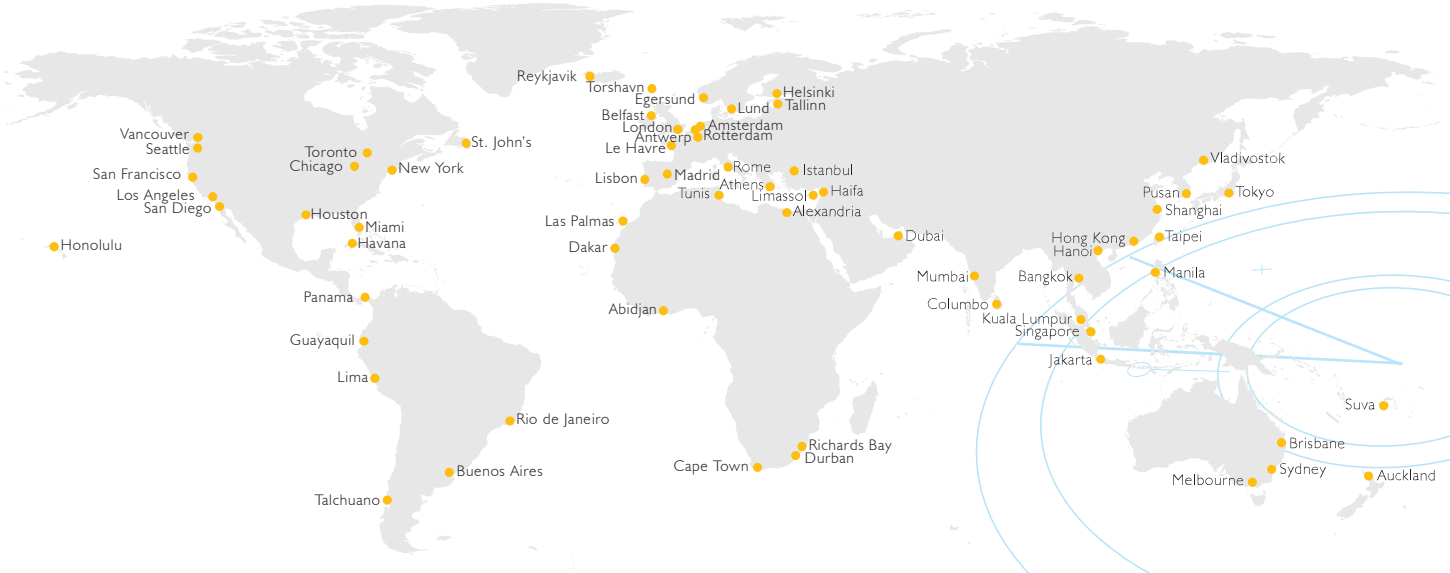
JRC's JUE-250 terminal has been developed for maximum flexibility. It features a reliable industry standard interfacing field that can be integrated with navigational equipment. No gyro or GPS input is required and by having JRC's proven no cable unwrap system integrated, operational efficiency is guaranteed.

This below deck unit enables users to have optimal connectivity no matter what the conditions or your position at sea.



JRC StarNetwork™

JRC has been providing sales and support of products since 1915. Today, JRC offers comprehensive assistance through its organisation, in partnership with a worldwide StarNetwork™ of over 270 fully trained and qualified partners and agents, assisting you 24 hours a day, 7 days a week and 365 days a year.



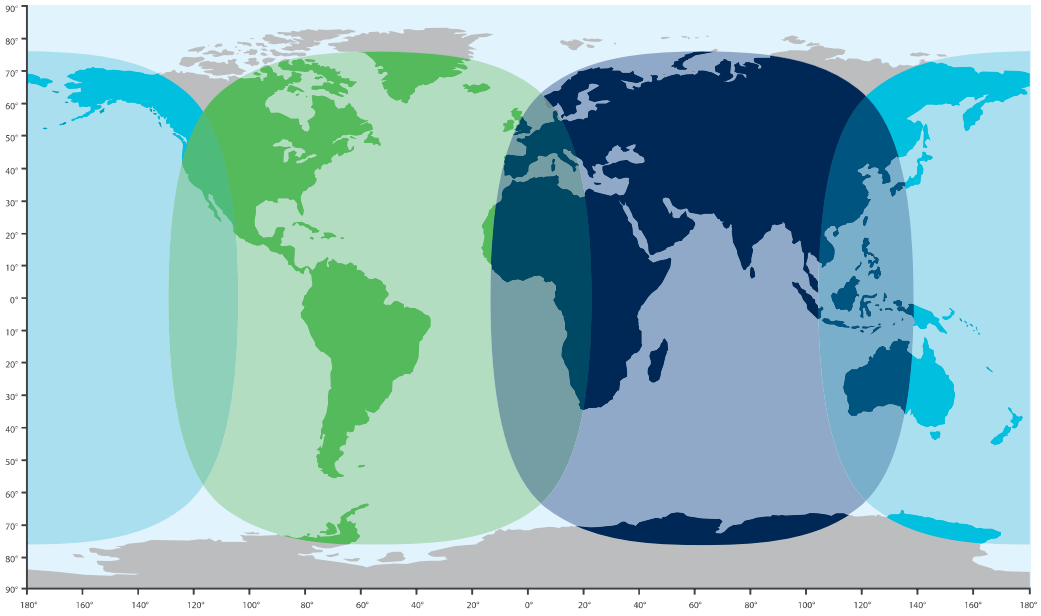
t for keeping in touch with home

JUE-250 FleetBroadband – coverage and flexibility

Inmarsat and JRC, strong together

Inmarsat has been the leading communication provider of satellite services for nearly 30 years, playing an integral role in the lives of seafarers. The Inmarsat Fleet services and JRC terminals have become the standard for deep-sea ships. Now, Inmarsat enhances its maritime portfolio with the launch of FleetBroadband and together with JRC's next-generation solution we can deliver reliable communications and safety services, contributing to the operational efficiency of vessel and crew.

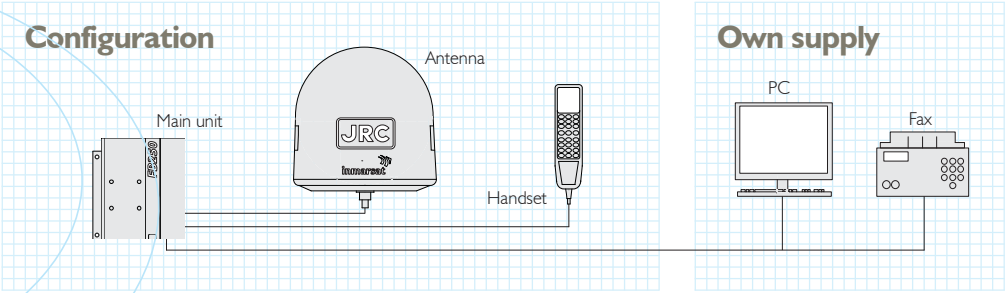
- **FleetBroadband coverage**



The map depicts Inmarsat's expectations of coverage, but does not represent a guarantee of service. The availability of service at the edge of coverage areas fluctuates depending on various conditions. The launch date of the F-3 satellite will be determined in due course. FleetBroadband coverage May 2007.

Total system flexibility

JRC's JUE-250 is a dedicated compact solution, which shares the same simple configuration as the JUE-33 Fleet 33, allowing for an easy setup. This concept also reduces the installation costs as only a single coax cable will be used between the antenna and the below deck unit. This next-generation service is for the new-build and retrofit markets and is available as a full system or an upgrade path™. It is also possible to connect your own supplied hardware, such as a computer and fax.

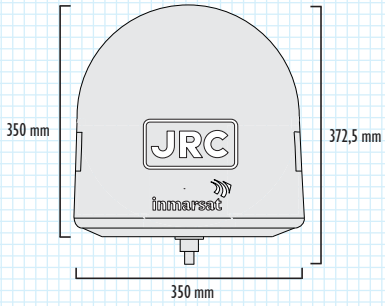


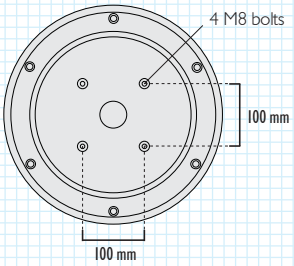
JRC Japan Radio Co., Ltd.

JUE-250 FleetBroadband – dimensions and weights

Dimension drawings - Antenna

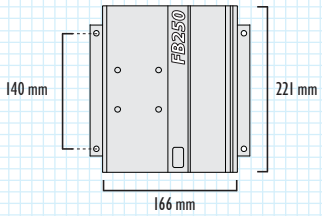
GSC-451 Weight 7,4 kg

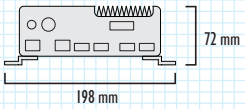




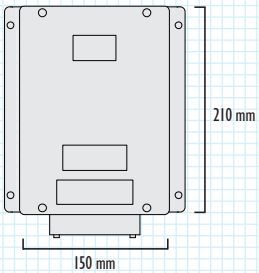
Dimension drawings - Main unit, Power supply unit

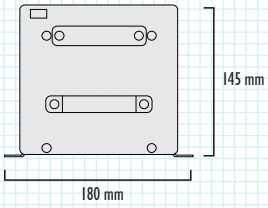
GSC-452 Weight 4 kg





NBD-577C[1] Weight 5,4 kg

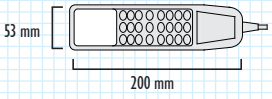


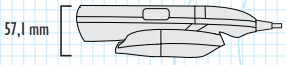


[1]optional

Dimension drawings - Handset

NQW-248 Weight 0,5 kg





JUE-250 FleetBroadband – specifications

Model		JUE-250
Inmarsat type approved		√
Frequency		
	Transmit	1626.5MHz - 1660.5MHz
	Receive	1525.0MHz - 1559.0MHz
Communication		
	Voice	4kbps and digital 3.1kHz audio
	Fax	group 3 fax via 3.1kHz audio
	Data	standard IP: 284kbps / streaming IP: 128kbps
	SMS	standard 3G (up to 160 characters)
Antenna		
	Type	flat diameter 30cm (approx)
	Polarisation	right-hand circular
	Beam width	30° at 3dB down
	Pointing	electrical beam tracking with 3-axis stabilisation
	Enclosure	AES radome (diameter 0.35m)
Primary power		
	Voltage	DC 24V (-20% +30%)
	Consumption	[120VA] max
Environmental conditions		
	Ambient condition	temperature: antenna -25°C +55°C
		temperature: main unit -15°C +55°C
	Relative humidity	+40°C up to 95%
	Icing	up to 25mm
	Precipitation	up to 100mm/hour
	Wind	up to 100 knots in operation
		up to 120 knots in survival
	Vibration	at 2-13.2Hz amplitude ±1mm ±10%
		at 13.2-100Hz max acceleration 7m/s²
Coverage		
	Azimuth	360°
	Elevation	5° to 90°
Ship's motion		
	Roll	±30°/8 sec
	Pitch	±10°/6 sec
	Yaw	±8°/50 sec
	Surge	±0.2g
	Sway	±0.2g
	Heave	±0.5g
	Turning rate	6°/sec
	Headway	30 knots
Tuning		1.25kHz
E.I.R.P.		+15.1dBW +1/-2dB
G/T		-15.5dB/K or more
Optional items		
Power supply unit		NBD-577C (AC 110/220V to DC 24V)

All specifications are subject to change without notification.

For further information please contact:

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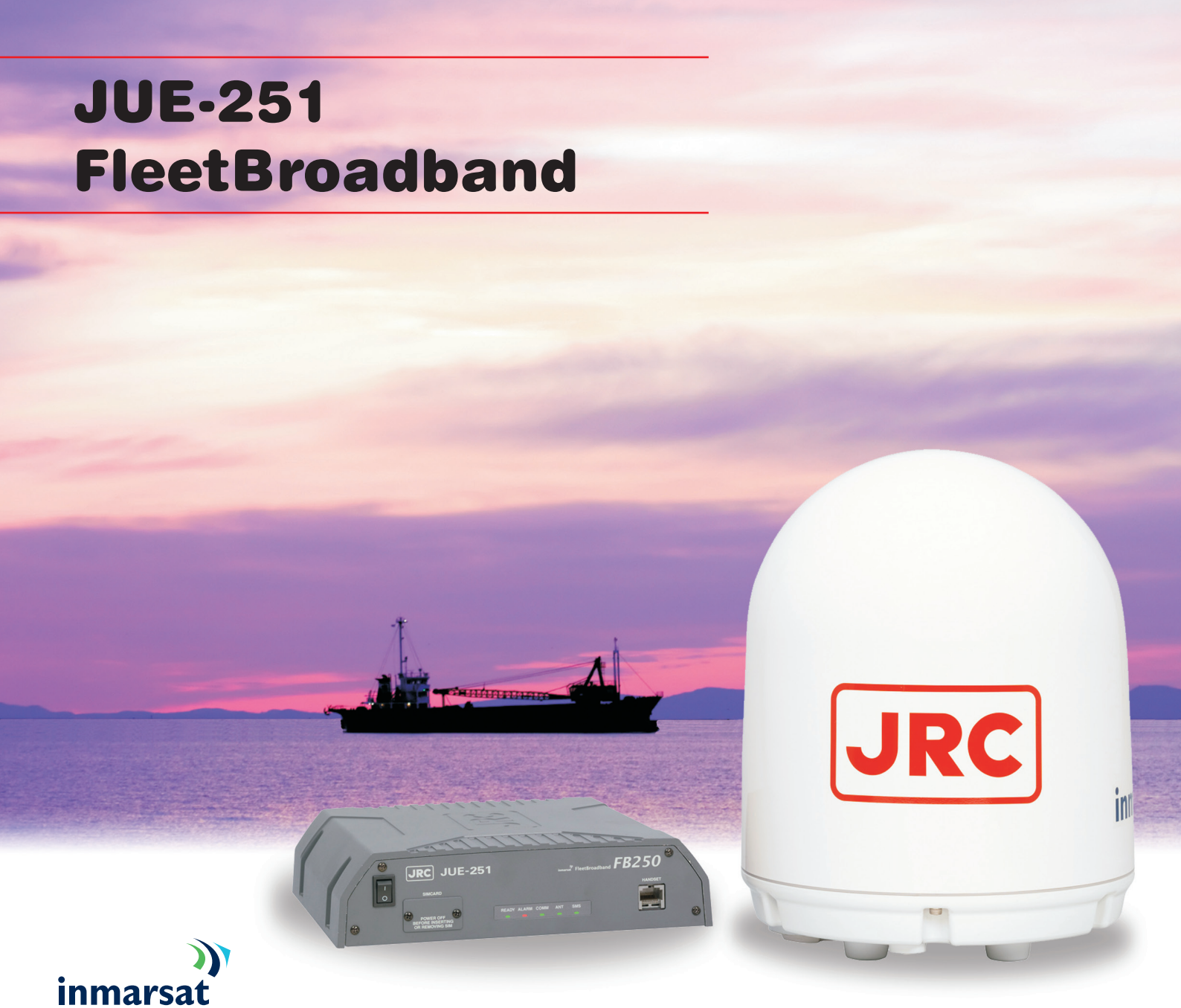
JUE-251
FleetBroadband



inmarsat

– the second generation JRC FB250 brings a whole new level of communication to the bridge

All-new antenna design
Ready for all Inmarsat FB services
Advanced integrated web interface
Single coax installation
Wide range of interfaces as standard

Features

Features

The JUE-251 continues the success of its predecessor, featuring a reliable industry standard interface and an advanced network router in a compact design.

All-new antenna design New

Our company's long experience of design has lead to an all-new antenna - inside and out. It features a two-axis control and the base of the dome is carved from one solid piece of aluminum, making it stable and durable.

By adapting to the latest technologies, the size of the antenna is slightly reduced and has a weight reduction of 40% - while keeping it robust and easy to install.

No gyro or GPS input is required and it benefits from having no cable under the antenna, which means there is no need for "cable unwrap" maneuvers to free cable that has become twisted as the device moves to locate the satellite.

Using the same cable management philosophy as other current JRC Inmarsat products, a single coax cable is used between the antenna and main unit allowing for easy installation.

About FleetBroadband

Based on 3G standards, FleetBroadband provides constant, simultaneous access to voice and high-speed data, capable of supporting always-on broadband connectivity at speeds up to 284kbps and streaming IP data rate of up to 128kbps.

It allows users to send and receive SMS messages of up to 160 characters, a feature that is proven popular with crew who are familiar with texting from their GSM mobiles while on shore.

Ready for (latest) Inmarsat services:

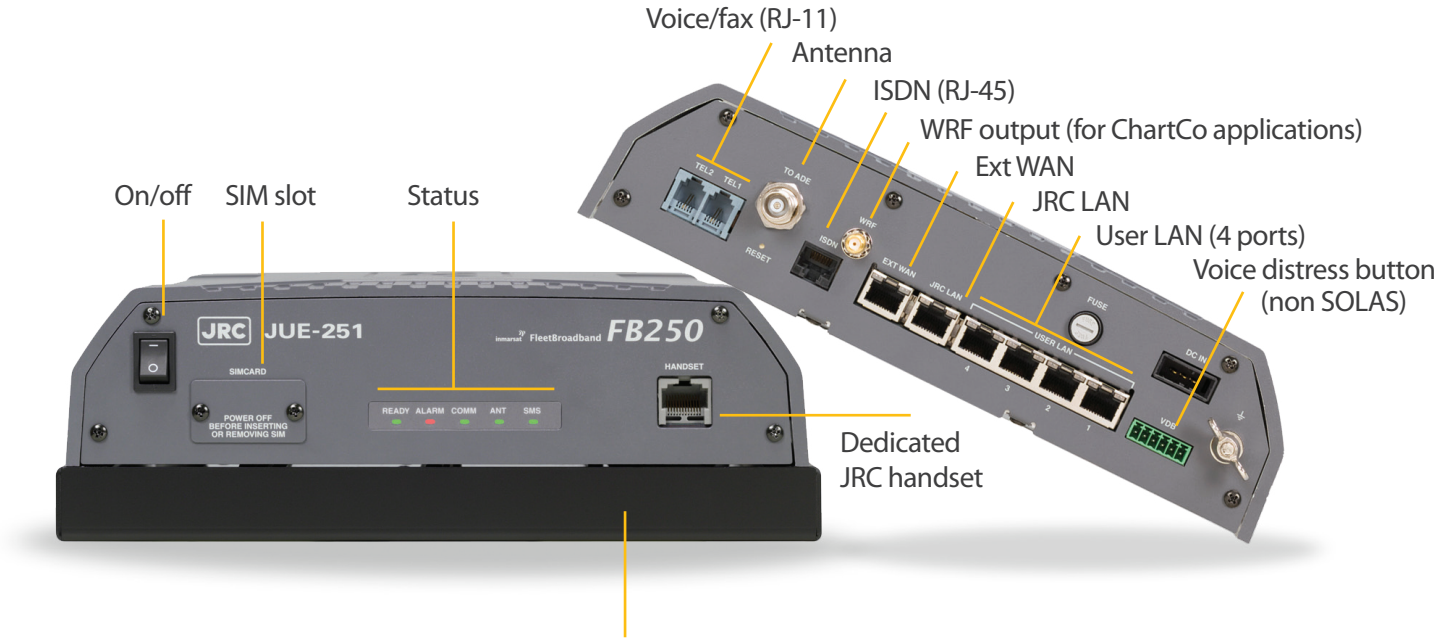
- ✓ Non SOLAS voice distress[1]
- ✓ Multi voice function[1]
- ✓ Ancillary terrestrial component
- ✓ Alphasat
- ✓ 505 emergency calling

1. Expected support end 2013

Interfacing

Advanced interfacing

With JRC's new JUE-251 main unit comes a whole new set of reliable interfacing, such as a dedicated non SOLAS voice distress port and an integrated WAN selector between JRC's main unit and other communication devices, which switches the unit to a secondary network when the primary network is disconnected.



Crew installation

With crew installation possible, you will save on installation charges and time in port - while keeping the same warranty conditions as before.

Optional junction board New

In addition to the standard interface, JRC offers an optional junction board packed with a range of additional features. It has 4 telephone/fax lines (RJ-11), 4 external buzzers, 1 voice distress button , gyro and GPS input, remote power switch and multi-purpose dry contact ports.

Satellite blocking New

The JUE-251 integrates a blockage setting which allows you to register up to 6 blocking areas such as the radar mast or funnel. When the line of sight to the satellite coincides with any of the pre registered blocking areas, the operator can easily recognize that there is a blockage and can take necessary action such as course change, to restore the connection.

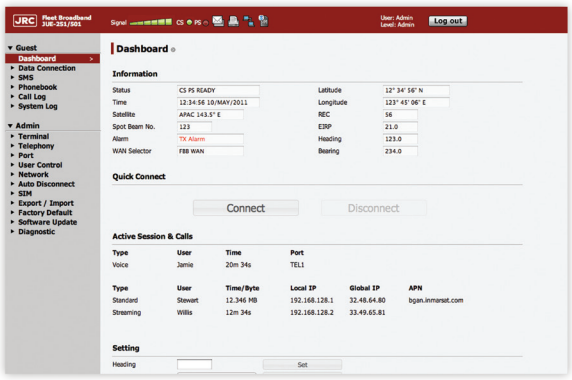
Remote Maintenance System (RMS) New

The JUE-251 supports RMS access over a dedicated JRC IP connection, which allows for remote maintenance of supported equipment via the Inmarsat satellite link. Additionally, JRC's new Inmarsat C model, the JUE-87, can be used to poll the status of the JUE-251 from the shore, should the ships IP data connection be unavailable. jrceurope.com/rms

Flexibility

Advanced web interface New

The JUE-251 Inmarsat FleetBroadband comes with an advanced web interface, built in as standard. This dedicated (Windows based) user interface brings together all operations. Think of it as the hub of your system - view everything and fully manage all operations with a few clicks.



Below are just a few of the many features available:

1 by 1 NAT	Diagnostics	MAC filter	Remote activate	Usage restriction
Always active	DMZ host	Multi voice	Routing table	User control
Auto disconnect	Dynamic DHCP	PBX	SIM configure	VLAN
Blockage indication	Export	Phonebook	SMS	VPN (IPsec)
Call log	Import	Port forward	Static DHCP	WAN filter
Dashboard	IP masquerade	PPPoE	Supplementary	WAN profile
Data connection	LAN group	Proxy DNS	System log	WAN selector

Voice distress button New

The JUE-251 will support Inmarsat's voice distress service with an optional voice distress button, connected directly to the main unit. A voice distress call has the priority and pre-emption over any calls on the Inmarsat satellite network, guaranteed to get through to an appropriate Maritime Rescue Coordination Center (MRCC). The service is not currently GMDSS compliant .

What's standard?

- Antenna
- Main unit
- Handset
- Antenna cable (30 m)
- Power cable (5 m)
- Manuals
- Inspection result
- CD
- Installation parts
- Spares

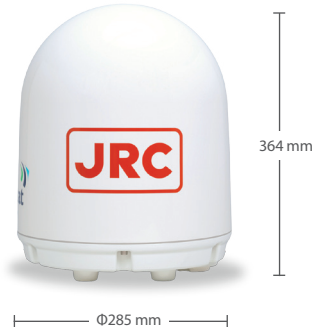
What's optional?

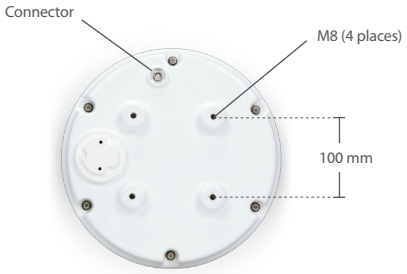
Antenna cable	15, 30 (std), 35, 40, 45, 50, 70, 100 m
Junction board	CQD-2243
Power supply	NBD-904
External buzzer	NCE-6824A (max 4)
Voice distress button	NQE-3301 (max 2)
Fax	(Brother FAX-2820)
Power transformer fax	DD-118525 (100V), DD-118584 (115V)
EMC filter for fax	RSHN-2003 (for 230V direct coupling)
Telephone	NQW-132B (max 6)
Telephone junction box	NQE-3058C (max 10)
Handset extension cable	7ZCSC0291 (5 m)
Gyro interface box	NQA-2066A

Weight and dimensions

Antenna New

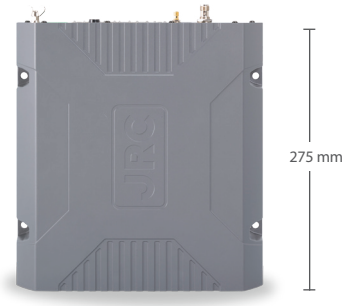
GSC-251 Weight 4,7 kg





Main unit New

GSC-252 Weight 4,5 kg

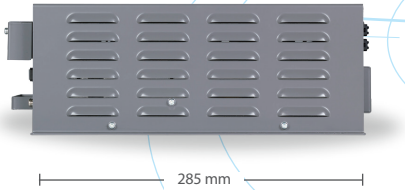


Handset

NQW-267 Weight 0,5 kg

Power supply option New

NBD-904 Weight 2,6 kg



Specifications

	JUE-251
Inmarsat type approved	✓
RoHS	✓
Frequency New	Transmit 1626.5–1660.5 MHz, 1668.0–1675.0 MHz receive 1518.0–1559.0 MHz
Voice/fax	4 kbps voice, G3 fax
Data	Streaming IP: 8, 16, 32, 64, 128 kbps, standard IP: 284 kbps, SMS: 3G (up to 160 characters)
Antenna type New	24 cm flat diameter, 2 axis control system, AES enclosure
Beam width	40° in 3dB direction
Power	21.6–31.2V DC (optional PSU 90–264V AC)
Consumption	Less than 160W
Power output PoE New	Up to 15.4W per port (total 32W max)
Antenna environmental	Infrared: 500W/m², ultraviolet: 54W/m², icing 25mm, precipitation: 100mm/hr, wind: 100kn
Ship's motion	Roll: ±30°/8 sec, pitch: ±10°/6 sec, yaw: ±8°/50 sec, surge: ±0.2g, sway: ±0.2g, heave: ±0.5g, rate of turn (ROT): ±6°/sec, headway: 30kn
E.I.R.P.	+15.1dBW +1/–2dB (class 9)
G/T	–15.5dB (class 9)
Handset	1 port (main unit)
RJ11 telephone/fax	2 ports (main unit), 4 ports (optional junction board)
LAN	6 ports (main unit) 1 port: JRC LAN, 1 port: EXT WAN, 4 ports: free use and support PoE
ISDN	1 port for 3.1k audio only (INS/ETSI) (main unit)
External GPS input	IEC61162–1 (optional junction board)
GPS output	Via LAN
External gyro input[1]	1 port (optional junction board)
WRF output	1 port (main unit)
External buzzer	4 ports (optional junction board)
Distress button New	1 port (main unit), 1 port (optional junction board) for non SOLAS distress
Antenna connector	1 port – TNC female (main unit)
External in/out	Alarm output via JRC LAN (main unit), remote power switch control, incoming call output, incoming call acknowledge input (optional junction board)
SIM card	1 slot with protective cover (main unit)
Ambient conditions	Operating temperature: –25° to 55°C (antenna, main unit) –15° to 55°C (handset) Storage temperature: –40° to 80°C IP protection rate: IP56 (antenna), IP22 (main unit), IPX0 (handset) Relative humidity: 0% to 95% non–condensing

1. Gyro interface required when gyro signal is SYNC or STEP

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JUE-500
FleetBroadband

inmarsat

– with the new JRC JUE-500 FleetBroadband FB500 onboard communication has never been this fast

Quality voice and high-speed data
Proven antenna design
Single coax installation
Dedicated compact solution
Wide range of interfaces as standard

JUE-500 FleetBroadband – performance features

Unique features

- The JUE-500 FleetBroadband FB500, the latest-generation maritime communication solution from JRC, is compactly designed, easy to install and puts high-speed connectivity right at your fingertips.

Antenna design

The base of the dome is carved from one solid piece of aluminium, making it stable and durable. JRC adapted its proven three-axis control. The antenna size is greatly reduced by using the latest technologies.

Our company's long experience of antenna design ensured the antenna is robust and easy to install. No gyro or GPS input is required and it benefits from having no cable under the radome, which means there is no need for 'cable unwrap' maneuvers to free cable that has become twisted as the device moves to locate the satellite.

These and more features make the electronics and mechanical design of the JRC JUE-500 as advanced on the inside as it is on the outside.

At "work" at the same time

FleetBroadband provides simultaneous access to high quality voice and high-speed data, along with email, fax and SMS messaging. A captain can download the latest weather and navigational charts. At the same time, crew can do all the things online that they normally do at home, such as sending emails, accessing social networking sites, calling friends and family – a vital resource for maintaining morale when away at sea for potentially months on end.

High speed

Based on 3G standards, FleetBroadband will provide constant, simultaneous access to voice and high-speed data, capable of supporting always-on broadband connectivity at speeds up to 432kbps and streaming IP data rate of up to 256kbps.

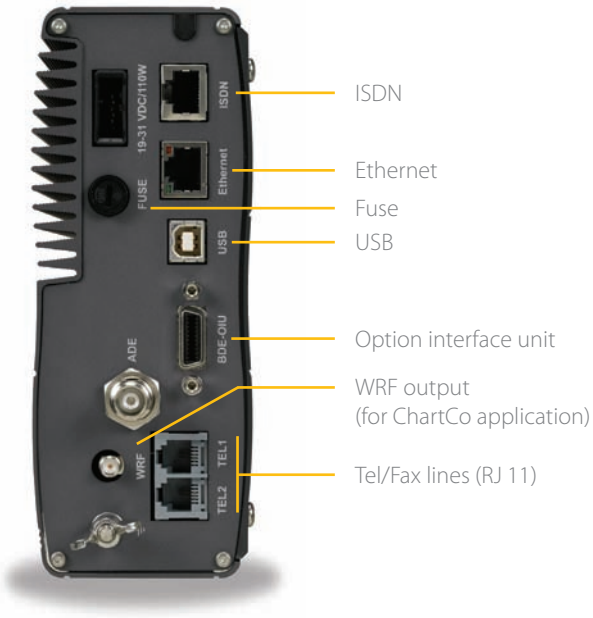
Additionally, it allows users to send and receive SMS messages of up to 160 characters, a feature that is proven popular with crew who are used of texting from their GSM mobiles while on shore.

JUE-500 FleetBroadband – developed for maximum ease of use

Easy to install

With the antenna set inside a beautifully designed radome cover, ranging just over 60 cm and a compact below deck terminal, finding a space on your vessel for your new FleetBroadband FB500 shouldn't be a problem.

It has the same cable management philosophy resembling other Inmarsat products that JRC is offering, allowing for an easy installation as only a single coax cable is used between antenna and terminal.



Applications

The JRC JUE-500 supports an extensive range of commercially available, off-the-shelf software, as well as specialised user applications. It is ideal for:

- Email and webmail
- Real-time electronic chart and weather updates
- Remote company intranet and internet access
- Secure communications
- Large file transfer
- Crew communications
- Vessel/engine telemetry
- SMS and instant messaging
- Videoconferencing
- Store and forward video

JRC StarNetwork™

JRC has been providing sales and support of products since 1915. Today, JRC offers comprehensive assistance through its organisation, in partnership with a worldwide StarNetwork™ of over 270 fully trained and qualified partners and agents, assisting you 24 hours a day, 7 days a week and 365 days a year.

JRC one-call™

One number to call
With JRC you can go anywhere and if you need our support, simply call us at +81 3 3492 9201, anytime.

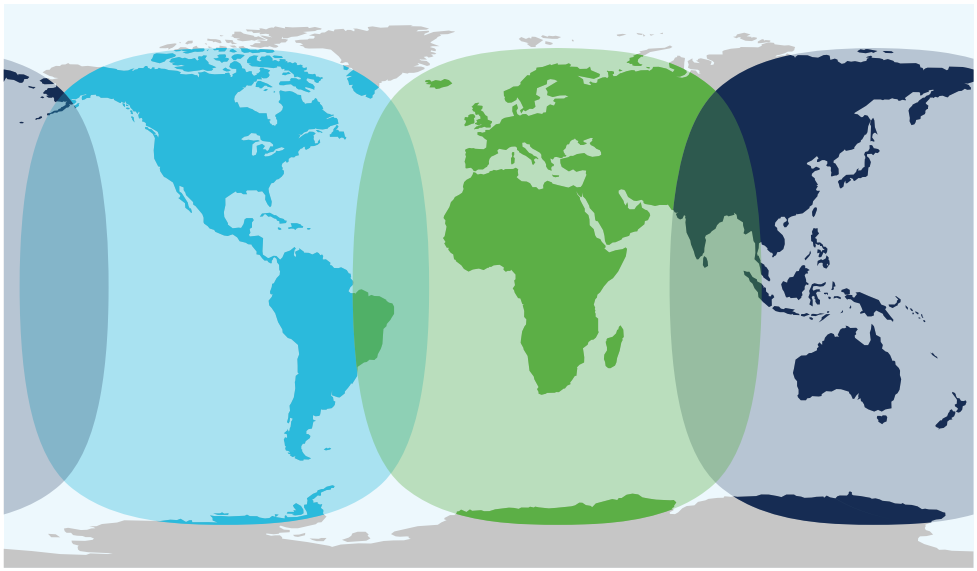
onnectivity right at your fingertips

JUE-500 FleetBroadband – system flexibility

Global coverage

The JRC FB500 is the latest in a long range of Inmarsat products and will take your vessel into the IP era. Delivered via the most advanced commercial communication satellites ever launched by Inmarsat, voice, fax and high-speed data connectivity is globally available through the JRC FB500 solution, except for the extreme polar regions.

FleetBroadband coverage



I-4 Americas I-4 EMEA I-4 Asia-Pacific

This map depicts Inmarsat's expectations of coverage, but does not represent a guarantee of service. The availability of service at the edge of coverage areas fluctuates depending on various conditions.

Flexible interfacing

Besides the reliable interfacing field on the below deck terminal, JRC offers an optional option interface unit, packed with a range of additional features. It has 4 telephone lines (RJ-11), 4 configurable LAN ports, 4 external buzzers, own JRC launchpad, built-in gyro interface and GPS signal input and output.

What's standard in the box?

1. Antenna
2. Below deck unit
3. Handset
4. Cables
5. Manuals
6. Software CD
7. Installation parts
8. Spare parts
9. SIM card case

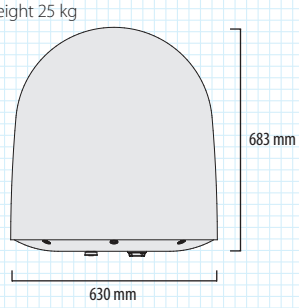
Which cables?

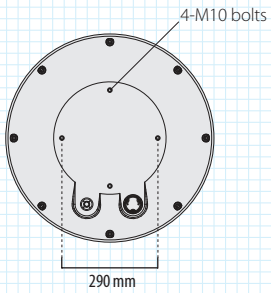
Antenna to below deck unit	50 m
Power cable (for below deck unit)	5 m

JUE-500 FleetBroadband – dimensions and weights

Dimension drawings - Antenna

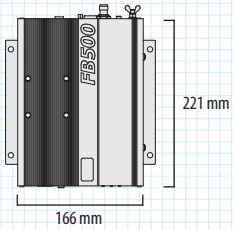
GSC-501 Weight 25 kg

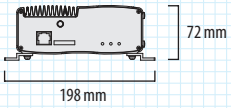




Dimension drawings - Below deck unit

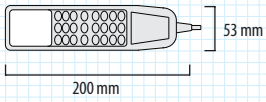
GSC-502 Weight 2,2 kg

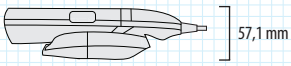




Dimension drawings - Handset

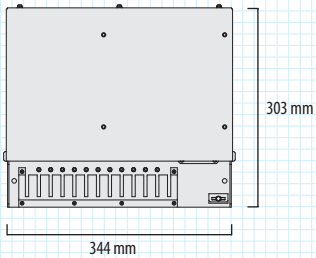
NQW-267 Weight 0,5 kg





Dimension drawings - Option interface unit[1]

NQA-2217 Weight 5 kg



[1]optional

JUE-500 FleetBroadband – specifications

Model		JUE-500
Inmarsat type approved		√
Frequency		
	Transmit	1626.5 to 1660.5 MHz
	Receive	1525.0 to 1559.0 MHz
Communication		
	Standard IP	up to 432 kbps
	Streaming IP	up to 256 kbps
	Voice	4 kbps
	Audio	64 kbps 3.1 kHz (for fax and analogue modem)
	ISDN	64 k/56 kbps for ISDN video phone, G4 fax
Antenna		
	Type	54 cm flat diameter
	Polarisation	right-hand circular
	Beam width	11° in 3 dB down direction
	Radome	GRP
Power		
	Voltage	19V to 31V DC
		100/110V or 220V AC (if connected to external PSU)
	Current	≤2 A
	Maximum	≤4.5 A (transmitting)
Ambient conditions		
	Temperature	antenna -25° to 55°C, below deck unit -15° to 55°C
	Relative humidity	0% to 95% non-condensing
	Solar radiation	infrared 500 watts/m^2, ultraviolet 54 watts/m^2
	Icing	up to 25 mm
	Precipitation	up to 100 mm/h
	Wind	up to 100 knots in operation
Ship's motion		
	Roll	+30°/8 sec
	Pitch	+10°/6 sec
	Yaw	+8°/50 sec
	Surge	+0.2 g
	Sway	+0.2 g
	Heave	+0.5 g
	Turning rate	+6°/ sec (1°/s^2)
	Headway	30 knots
E.I.R.P.		+22.0 dBW +1/-2 dB
G/T		-7.0 dBK
Optional items		
Telephone		NQW-132B
Fax (Brother)		FAX-2820
Power transformer for fax (100V to 230V)		DD-118525
EMC filter for fax (direct coupling 230V)		RSHN-2003
Option interface unit		NQA-2217
Power supply		NBD-577C
Telephone junction box		NQE-3058B

All specifications are subject to change without notification.

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