



Global Wireless Communications Company

Icom Inc.— first launched as an amateur radio manufacturing company—has become a comprehensive wireless communications company that provides the world market with various radios for land, marine, and air. Besides the general radios, we have been expanding our business with wireless LAN devices and LTE radio systems that cover wider areas using the LTE network. Most recently, we have developed a new satellite PTT communications product, which enables secure communications, even in disasters.

LAND MOBILE



MARINE

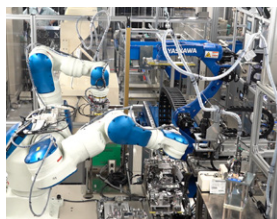


AVIONICS

AMATEUR

Made in Japan and Reliability

Icom is a rare example of a Japanese electronics manufacturer that has been keeping its production base in Japan. Since 2018, we have been working on fully automating the production lines of our factories, and are actively investing in making them the latest smart factories, incorporating state-of-the-art technologies and robotic systems.



Leading the Marine Radio Industry

Icom has been the world benchmark in the marine radio industry by continuously introducing “world firsts” – the first submersible radios, the first Li-ion powered radios and the first floating radios. The IC-M605 has received the NMEA Best VHF Radio Product Award for 2017, 2018 and 2019.





VHF Handheld Transceivers



Slim, Floating DSC Transceiver with Integrated GPS Receiver

VHF MARINE TRANSCEIVER with DSC **IC-M93D**

FEATURES

- 2.3-inch large high visibility LCD
- Slim floating DSC transceiver
- Intuitive user interface
- Built-in Class H DSC with a CH70 receiver
- Float'n Flash and MOB Auto Set functions
- Integrated GPS receiver
- Active noise canceling

• IPX7 submersible protection • Navigation function
• 50 waypoint memories • Weather Alert function • Dualwatch and Tri-watch functions • Favorite Channel function • AquaQuake™ prevents audio degradation from a water-logged speaker • Optional HM-228/HM-165 speaker-microphones

Included Accessories

- BP-285 battery pack • BC-220 rapid charger
- BC-123SA/SE* AC adapter • MB-133 belt clip
- FA-SC59V antenna • CP-25H cigarette lighter cable
- Hand strap * Depending on the transceiver version.



Photo shows FA-S59V antenna version.

1.5 m Submersible, 6 Watt VHF with Professional Features

VHF MARINE TRANSCEIVERS **IC-M73 PLUS** **IC-M73**

FEATURES

- Last call voice recording*
- Active noise canceling*
- Bass Boost function*
- IPX8 Submersible Plus™ (1.5 m/ 30 min.)
- 6 W RF output, 700 mW loud audio
- 17 hours of long lasting operating time with the BP-245H

* Available in IC-M73 PLUS version only.

• Dualwatch and Tri-watch functions • Instant access to Ch 16 and Call channel • Weather Alert function (USA Version only) • AquaQuake™ • Auto power save • Auto Scan function • Priority and normal scan • Tag Scan and Favorite Channel functions • Optional HM-167/HM-202 speaker-microphones

Included Accessories

- BP-245H battery pack • BC-210 rapid charger
- BC-123SA/SE* AC adapter • MB-103 belt clip
- FA-S59V or FA-S64V* antenna • CP-25H cigarette lighter cable
- Hand strap * Depending on the transceiver version.



6 Watt VHF with Float'n Flash and 12 Hours of Operation

VHF MARINE TRANSCEIVER **IC-M37**

FEATURES

- Large keys and easy-to-grip design
- 6 W RF output power
- 700 mW audio output
- More than 12 hours* of long-lasting operating time with the BP-296
- Channel History function stores the last five channels
- Float'n Flash function

* TX : RX : Standby = 5 : 5 : 90.

• IP57 dust-protection and submersible protection
• Low Battery Alert function • Voice Loud and Mute functions
• Dualwatch and Tri-watch functions • Instant access to Ch 16 and Call channel • Weather Alert functions (USA Version only) • AquaQuake™ • Favorite Channel function • Optional HM-213 speaker-microphone • Supports 4-digit channels

Included Accessories

- BP-296 battery pack • BC-235 desktop charger
- BC-217SA/SE* AC adapter • MB-133 belt clip
- FA-SC59V antenna • Hand strap
- * Depending on the transceiver version.



VHF Handheld Transceivers



Marine Blue

Metallic Gray

Pearl White

Three Color Choices, Smart, Fast USB Charging

VHF MARINE TRANSCEIVER **IC-M25**

FEATURES

- Slim body, lightweight and high performance
- Large LCD and intuitive user interface
- Micro-B USB charging
- Floating with blinking red LED light
- 11 hours of long operating time
- 5 W RF output, 550 mW clear audio

• IPX7 submersible protection • Dualwatch and Tri-watch functions • Instant access to Ch 16 and Call channel • Weather Alert function (USA Version only) • AquaQuake™ • 2-step power save • Auto Scan function • Tag Scan and Favorite Channel Functions • 3 hour rapid charging (with the BC-217SA/SE*) • Optional HM-213 speaker-microphone

Included Accessories

• BC-217SA/SE* USB charger • MB-133 belt clip
• FA-SC59V antenna • Hand strap • Battery cell is built-in
* Depending on the transceiver version.



A Marine and Land Mobile Radio Combined in One

VHF MARINE TRANSCEIVER **IC-M85**

FEATURES

- Compact and lightweight
- Marine and land channel groups
- 100 programmable land channels
- Built-in Voice Scrambler
- Automated emergency alarm with Man Down, Lone Worker and MOB Alarm functions
- 700 mW loud audio
- Built-in CTCSS and DTCS tones

• IP67 dust-tight and submersible protection • Dual-watch and Tri-watch functions • Instant access to Ch 16 and Call channel • Weather Alert function • AquaQuake™ • Auto power save • Tag Scan and Favorite Channel functions • 14 hours of long battery life (TX: RX: Standby=5:5:90.) • MIL-STD rugged construction • Internal VOX capability for hands-free operation • Variety of audio accessories • Supports 4-digit channels

Included Accessories

• BP-290 battery pack • BC-227 rapid charger • BC-123SA/SE* AC adapter
• MBB-3 belt clip • FA-SC58V antenna • Hand strap
* Depending on the transceiver version.



Intrinsically Safe Radio



Intrinsically Safe Radio with 5 Watt Power Output



VHF MARINE TRANSCEIVER **IC-M85UL**

FEATURES

- 5 W output power for hazardous locations
- Intrinsically safe:
Class I, Division 1, Groups C D; Class II, Division 1, Groups E F G; Class III. T3C.
- Non-incendive: Class I, Division 2, Groups A B C D.
- Ambient temperature: -20°C (-4°F) \sim $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$)
- Standards of safety: ANSI/TIA-4950-A ANSI/UL 121201
- Marine and land channel groups (land mobile channels for USA: 2 W)
- 700 mW powerful audio
- Man over board, man down, and lone worker alarms

• IP67 dust-tight and submersible protection • Built-in CTCSS and DTCSS tones
• Dualwatch and Tri-watch functions • Instant access to Ch 16 and Call channel • Auto power save
• Auto Scan function • Tag Scan function • Optional HM-184UL speaker-microphone • Supports 4-digit channels

DO NOT use the transceiver with any other equipment not specified in the option list (Pages 15–16). Please ask your dealer to ensure the rating is acceptable for the intended place of use.

Included Accessories

• BP-292UL battery pack • BC-227 rapid charger • BC-123SA/SE* AC adapter • MBB-3 belt clip • FA-SC58V antenna
• Hand strap * Depending on the transceiver version.



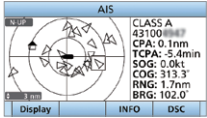


VHF Fixed Mount Transceivers

Premium Grade Modern Fixed Mount Radio Class D DSC, AIS Receiver and Remote Control



VHF MARINE TRANSCEIVER **IC-M605**



AIS plotter

TARGET LIST (93)			
MMSI/Name	RNG	BRG	
DAIEMARU NO.3	3.3	154	
GYOKO MARU	3.4	147	
MIRAI E	3.4	249	
TOKUYO MARU NO.21	3.5	259	

AIS target list



Night mode



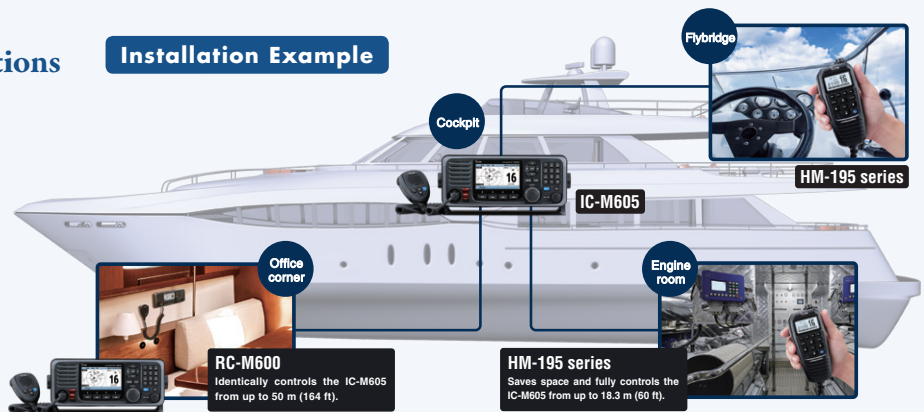
FEATURES

- Wide viewing angle, high contrast 4.3-inch color TFT LCD
- Remote control with up to three COMMAND HEAD™/COMMANDMIC™
- **AIS** Integrated AIS receiver* • Built-in Class D DSC
- NMEA 2000™ connectivity • Intuitive user interface
- Class leading receiver performance (Selectivity and IMD: more than 80 dB)
- Active noise canceling • Last call voice recording for two minutes
- 30 W two-way hailer • Optional SP-37 horn speaker
- Integrated GPS receiver (GPS, GLONASS and SBAS), 5 m cable and antenna supplied
- NMEA 0183-HS (High Speed) Version 1.01 connectivity (38.4 kbps) • IPX8 submersible plus™ (1m depth water for 60 minutes) • DSC Multi-task function • RX Hailer and Automatic Foghorn functions • Dualwatch and Tri-watch functions • Instant access to Ch 16 and Call channel • Tag Scan and Favorite Channel functions • AquaQuake™ prevents audio degradation from a water-logged speaker • Priority Scan function • Display and keypad backlighting • External speaker connection • Optional UT-112/A voice scrambler
- **AIS** AIS receiver unit is an option, depending on the transceiver version

Flexible Remote Control Configurations

The IC-M605 can be remotely controlled with up to three COMMAND HEAD™/COMMANDMIC™. The COMMAND HEAD™ provides identical operation with the IC-M605 and the COMMANDMIC™ allows you to use all functions including distress of the IC-M605. The Intercom function among the IC-M605, COMMAND HEAD™ and COMMANDMIC™ is convenient for internal conversation.

Installation Example



Identical Operation from Optional Full-sized Controller

COMMAND HEAD™ **RC-M600**



Space-Saving Compact Body

COMMANDMIC™ **HM-195GB/GW** (White Backlight LCD) **HM-195B/SW** (Amber Backlight LCD)



* Photo shows HM-195GB.



VHF Fixed Mount Transceivers

VHF and AIS Receiver Combo with NMEA 2000™ Connectivity

VHF MARINE TRANSCEIVER **IC-M506**



HM-195GB
COMMANDMIC™, HM-195 series capable

FEATURES

- AIS** Integrated AIS receiver*
- AIS** **NMEA 2000™** connectivity*
 - 2 minutes Last Call voice recording
 - Intuitive user interface
 - Active noise canceling
- 15 W loud audio and 25 W two-way hailer
- Optional COMMANDMIC™, HM-195 series
- IPX8 Submersible Plus™ (1 m depth for 60 minutes)
- Built-in Class D DSC
 - * **AIS** **NMEA 2000™** AIS receiver, NMEA 2000™ interface units are options, depending on the version.
- Dualwatch and Tri-watch functions
- Instant access to Ch 16 and Call channel
- Weather Alert function (USA Version only)
- Tag Scan and Favorite Channel functions
- AquaQuake™
- Display and keypad backlighting
- External speaker connection
- Option UT-112/A voice scrambler
- Large dot-matrix display
- Rear panel microphone version

Easy-to-Use and Even Easier to Hear

VHF MARINE TRANSCEIVER **IC-M424G** (With GPS Receiver)



HM-195GB
COMMANDMIC™, HM-195 series capable

FEATURES

- Intuitive user interface
- Active noise canceling
- 10 W loud audio, public address and foghorn
- Optional COMMANDMIC™, HM-195 series
- IPX7 submersible
- Black and Super White color versions
- Integrated GPS receiver simplifies wiring
- Built-in Class D DSC
- Dualwatch and Tri-watch functions
- Instant access to Ch 16 and Call channel
- Weather Alert function (USA Version only)
- Tag Scan and Favorite Channel functions
- AquaQuake™
- Display and keypad backlighting
- External speaker connection
- RX speaker function

Black Box Transceiver When Space is at a Premium

VHF MARINE TRANSCEIVER **IC-M400BB**



IC-M400BB and HM-195B

FEATURES

- Space-saving, fully functional VHF/DSC
- Controlled by COMMANDMIC™ HM-195 series*
- Intuitive user interface
- Active noise canceling
- 10 W loud audio, public address and foghorn
- IPX7 submersible (Both IC-M400BB and HM-195 series)
- Built-in Class D DSC
 - * HM-195 series may be sold separately, depending on the transceiver version.
- Dualwatch and Tri-watch functions
- Instant access to Ch 16 and Call channel
- Weather Alert function (USA Version only)
- Tag Scan and Favorite Channel functions
- AquaQuake™
- Display and keypad backlighting
- External speaker connection
- RX Speaker function



VHF Fixed Mount Transceivers

Top Performance Ultra Compact VHF

VHF MARINE TRANSCEIVER

IC-M330G

(With GPS Receiver)

VHF MARINE TRANSCEIVER

IC-M330

(Without GPS Receiver)



Supplied GPS antenna (IC-M330G).



Photo shows IC-M330G black version.



Photo shows IC-M330G white version.

FEATURES

- Dynamic, clear audio from bass to treble
- Built-in Class D DSC
- Uncompromised receiver performance (Selectivity and IMD: more than 70 dB)
- Intuitive user interface
- Built-in GPS receiver with a supplied GPS antenna (IC-M330G)
- Easy-to-read full dot-matrix display
- IPX7 submersible (1 m depth for 30 minutes)

• Dualwatch and Tri-watch functions • Instant access to Ch 16 and Call channel • Weather Alert function (USA Version only) • Tag Scan and Favorite Channel functions • AquaQuake™ • Priority Scan function • Display and keypad backlighting • External speaker connection • Black or white color version • Supports 4-digit channels

- Ultra compact body (35 % smaller than the IC-M424G)



Size comparison between the IC-M330G and IC-M424G

High Quality, Excellent Performance

VHF MARINE TRANSCEIVER

IC-M220

(Non-FCC model)



FEATURES

- Compact body for easy installation in limited space
- Powerful front mount speaker
- Built-in Class D DSC
- HM-237B detachable hand microphone supplied
- IPX7 submersible construction

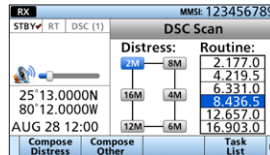
• AquaQuake™ • Common NMEA interface for external GPS/NAV connection • Tag Scan and Favorite Channel functions • Dualwatch and Tri-watch functions • Priority Scan function • Display and keypad backlighting • External speaker connection



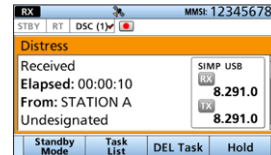
MF/HF Marine Transceivers

Long Range Communications Beyond the Horizon

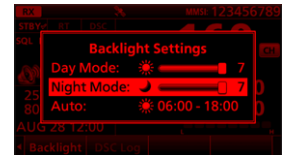
MF/HF MARINE TRANSCEIVER **IC-M803**



DSC scan screen



Example of received Distress screen



Night mode screen



FEATURES

- Built-in Class E DSC
- Distress button for an emergency
- Wide viewing angle, high contrast 4.3-inch color TFT LCD
- Intuitive user interface
- Integrated GPS receiver (GPS, GLONASS and SBAS), 5 m cable and antenna supplied

• 150 W (PEP) of powerful RF output • Optional AT-140 automatic antenna tuner • IPX7 submersible remote controller head • 0.5–29.999 MHz continuous receiver coverage • NMEA 0183 Version 4.10 data input/output (4800–38400 bps) • DSC Multi-task function • Channel scan, Channel Resume scan and Program scan • Display and keypad backlighting • External speaker connection

- Instant Replay function automatically saves the received audio
- Advanced RF direct sampling system
- Ready for HF E-mail operation*
- Matching design with the IC-M605 VHF marine transceiver

* Please consult with an HF e-mail provider for details.

Reliable MF/HF Radio covering All ITU HF Marine Channels

MF/HF MARINE TRANSCEIVER **IC-M710** (Non-FCC model)



FEATURES

- Alphanumeric readout for programming channel names and quick access to channels
- 150 W* full duty operation
- A total of 1136 channels
- Rugged construction for withstanding harsh use

* 60 W (PEP) above the 24 MHz band.

Simplified Radio Telephone with 150 Watt Duty Operation

SSB RADIO TELEPHONE **IC-M700PRO** (Non-FCC model)



FEATURES

- Quick channel selection with two large knobs
- 150 W* full duty operation
- Rugged construction for withstanding harsh use
- Large, easy-to-read green LCD

* 60 W (PEP) above the 24 MHz band.



Marine Radars

12.1-inch Color Radar with Simplified ARPA, 3D View and Plot Function

COLOR TFT MARINE RADAR

MR-1220 Series

(Non-FCC model)

- **MR-1220R4** (with 2 ft, 4 kW radome scanner)
- **MR-1220T4** (with 4 ft, 4 kW open array scanner)
- **MR-1220T6** (with 4 ft, 6 kW open array scanner)
- **MR-1220T6L** (with 6.5 ft, 6 kW open array scanner)

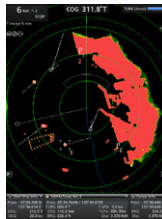


FEATURES

Collision Risk Management Functions

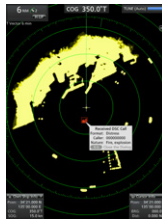
Simplified ARPA (Automatic Radar Plotting Aids) Function*1

When a target enters within the set watch area, the ARPA function automatically tracks the target on the radar echo. Up to 20 targets can be automatically tracked (or up to ten targets can be tracked when manually set). By selecting one of the targets, the target information such as position, course, speed, CPA, TCPA, bearing, and distance is shown on the lower side of the display.



DSC (Digital Selective Calling) Information Function*1

When connected to a DSC radio, and a DSC call is received, the received message is transferred to the MR-1220. Up to 20 DSC messages can be plotted on the radar echo.



AIS (Automatic Identification System) Overlay Function*1

When connected to an external AIS device (including Icom IC-M605 and, IC-M506 AIS), up to 100 AIS target icons are overlaid on the radar echo.

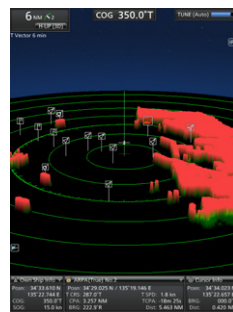


- 12.1-inch color TFT display (600 × 800 dots)
- 3D Display function
- Plot function tracks your route on the radar echo*1
- An external buzzer*2 can be connected for warning predicted collision
- Multi-language interface (English, Indonesian, Korean, Malay, Russian, Spanish, Thai and Vietnamese)
- True Trail function*1
- TLL (Target Latitude Longitude) function*1
- Optional UX-234 video output unit for connection with an external display
- Stabilized head up mode*1

*1 External bearing, speed, position, waypoint, variation, AIS and DSC data is (are) required, when you use these functions.

*2 User supplied.

Credits: This product includes "zlib," "libusb," "freetype," "portmap," "ncurses," and "libjpeg" open source software, and is licensed according to the open source software license. This product is based in part on the work of "Eric Young (eay@cryptsoft.com)," and "Independent JPEG Group."



3D Display function (Night mode)



Video output (UX-234 required)

Scanner Unit Selections



SC-T60L:
6.5 ft open array scanner (6 kW)
for MR-1220T6L



SC-T60:
4 ft open array scanner (6 kW)
for MR-1220T6



SC-T40:
4 ft open array scanner (4 kW)
for MR-1220T4



SC-R40:
2 ft radome scanner (4 kW)
for MR-1220R4



Marine Radars

Simplified ARPA, AIS Target Plotting and DSC Information Display

COLOR TFT MARINE RADAR

MR-1010R II



2 ft Radome Scanner



FEATURES

- 10.4-inch color TFT display (480 × 640 dots)
- 36 NM range, 4 kW radome scanner
- Intuitive user interface
- Multi-language interface (English, Spanish, Vietnamese, Indonesian, Korean and Thai)
- AIS Overlay and Favorite AIS functions*1

- Simplified ARPA (Automatic Radar Plotting Aids) function*1
- DSC Information function*1
- True Trail function*1
- TLL (Target Latitude Longitude) function*1
- Optional UX-252 video output unit for connection with an external display

*1 External bearing, speed, position, waypoint, variation, AIS and DSC data is (are) required, when you use these functions.



Class B AIS Transponder

Navigation Function and NMEA 2000™ Connectivity



CLASS B AIS TRANSPONDER MA-510TR



FEATURES

- Navigation function guides you to the specified waypoints or AIS targets
- Wide viewing angle and high-luminance 4.3-inch color IPS TFT display
- NMEA 2000™, NMEA 0183/-HS connectivity
- Compatible with 12 V and 24 V power sources
- Man OverBoard (MOB) function
- AIS data can be output from a USB cable connector*1
- Silent mode switches off the AIS transmitter for security and privacy
- You can pick up AIS targets on the display and send Individual DSC Calls*2
- Multi-language interface (English, French, Indonesian, Spanish and Vietnamese)
- Collision Alarm function
- Anchor Watch function
- GPS antenna supplied (WAAS, EGNOS, MASA and GAGAN)

*1 A third party application and a connection cable are required.

*2 A compatible Icom VHF radio (IC-M605, IC-M506, IC-M424, IC-M400BB or IC-M330) is required.

GMDSS

Global Maritime Distress and Safety System

The Global Maritime Distress and Safety System (GMDSS) is the international radio safety system for ships mandated by the International Maritime Organization (IMO). The GMDSS system provides automated distress alerting and distress communication service with location information.

Class A DSC VHF Radio with Wide Viewing Angle Color TFT LCD

VHF MARINE TRANSCEIVER

GM600

(Non-FCC model)



PS-310 DC-DC converter

Reliable Long Distance MF/HF Communication

MF/HF MARINE TRANSCEIVER

GM800

(Non-FCC model)

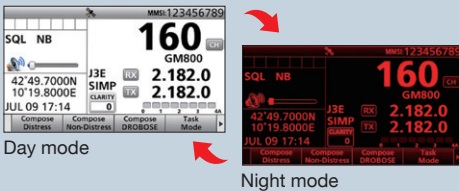




FEATURES

- Meets VHF GMDSS requirements for SOLAS ships
- Certified for European Maritime Equipment Directive (MED)
- ITU Class A DSC
- Large and high contrast 4.3-inch color TFT LCD
- Intuitive user interface for straightforward operation
- 10 W audio output power with external speaker
- Dedicated DSC watch receiver for continuous Channel 70 monitoring
- Printer connector (D-SUB 25-pin) • VDR (Voyage Data Recorder)/External speaker connector
- IEC 61162-1 input/output • Superior sound quality with a wide frequency range and a flat frequency response
- Optional HS-98 (#16) handset • IPX7 submersible for front panel
- Dualwatch and Tri-watch functions • Instant access to Ch 16 and Call channel
- Tag Scan and Favorite Channel functions • Priority Scan function
- Unified design with GM800 (MF/HF)

Please Note: PS-310 MUST BE USED with GM600 for MED certification compliance.



Day mode

Night mode

FEATURES

- Meets MF/HF GMDSS requirements for SOLAS ships
- Certified for European Maritime Equipment Directive (MED)
- ITU Class A DSC
- Large and high contrast 4.3-inch color TFT LCD
- Intuitive user interface for straightforward operation
- Dedicated DSC watch receiver for continuous scanning of the six distress channels
- AT-141 automatic antenna tuner

- Output power: 150 W* PEP into 50 Ω (at radio terminal) • Built-in 24 V DC-DC converter
- Parallel printer port • External SP connector
- IEC 61162-1 input/output • Superior sound quality with a wide frequency range and a flat frequency response
- HS-98 (#17) supplied handset • IPX7 submersible for controller
- Maximum 160 programmable channels • Program scan, channel scan and channel resume scan
- Unified design with GM600 (VHF)

* 125 W (4.0–27.5 MHz) (at tuner-output), 85 W (1.6–3.999 MHz) (at tuner-output)

All stated features, appearances, screen shots and specifications may be subject to change without notice.

Please Note: The complete GMDSS installation for MF/HF DSC (Class A) and telephony additionally requires the optional AT-141 antenna tuner.



SURVIVAL CRAFT 2-WAY RADIO

IC-GM1600

GMDSS Portable for Survival Craft

FEATURES

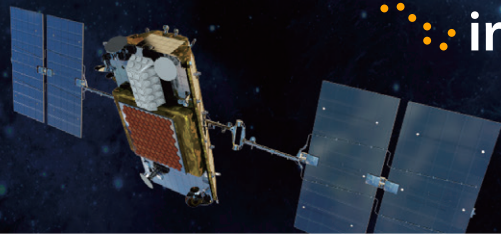
- Meets strict environmental requirements for GMDSS
- 2 W output power and long lasting battery
- BP-234 primary (non-rechargeable) lithium battery pack
- Highly visible yellow-colored body

- Instant access to Ch 16 and Call channel • Auto power save • 4-step battery indicator

Included Accessories

- BP-252 battery pack • BC-173 regular charger
- BC-147SA/SE* AC adapter • MB-103Y belt clip
- FA-S61V antenna (Fixed type) • Neck strap
- * Depending on the transceiver version.

Satellite PTT Radios



What is Satellite PTT?

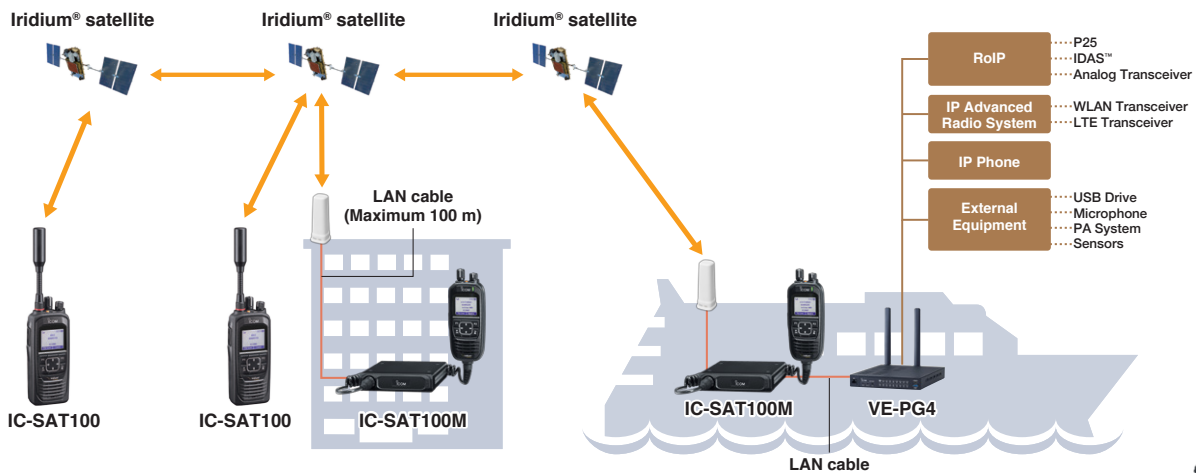
SATELLITE PTT (Push-To-Talk) is a two-way radio system that uses the Iridium® satellite network. It can be used as a communication tool in remote, isolated areas and the sea where there are no mobile phones or communications infrastructure. Even if the terrestrial network infrastructure is rendered unusable by human or natural disasters, SATELLITE PTT can provide a stable back-up, independent from other networks.

One-to-Many Communications

Total Global Coverage, including the Poles*1

Real-Time, Low-Latency Communication

Conventional Radios and IP Phones Interconnection *2



SATELLITE PTT IC-SAT100

- Emergency key on the top panel
- IP67 dust-tight and submersible protection
- 1500 mW of powerful audio
- 14.5 hours of long lasting battery life*3
- Short Data Message
- Voice Recording function
- Built-in Bluetooth® capability
- SMA type antenna connection
- USB charging
- AES 256-bit encryption for security

SATELLITE PTT IC-SAT100M

- Satellite communication in-vehicle and in-building
- LAN cable (maximum 100m) connects antenna and main unit
- Supplied multi-functional speaker-microphone
- Power supply requirement: 13.2 V/26.4 V DC
- Antenna: IP67, microphone: IP55, main unit: IP54
- 1500 mW powerful audio output
- Short Data Message
- Voice Recording function
- Built-in Bluetooth® capability
- AES 256-bit encryption for security



*1 Subscription contracts are required for using the IC-SAT100/M. Depending on the country or region, carrying and/or use of the IC-SAT100/M may be prohibited.

*2 Optional VE-PG4 RoIP gateway and OPC-2412 connection cable are required for the IC-SAT100. Optional VE-PG4 RoIP gateway and a LAN cable are required for the IC-SAT100M.

*3 TX : RX : standby = 5 : 5 : 90.

WLAN Radios



System Features

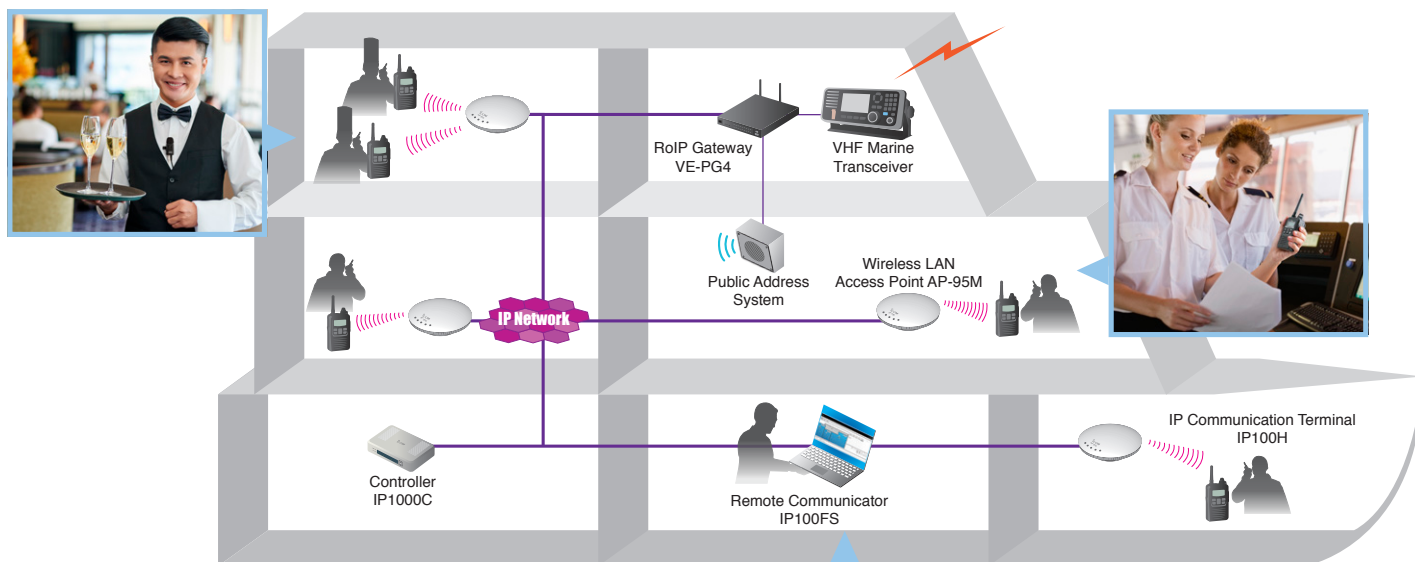
IP ADVANCED RADIO SYSTEM

Wireless Communication System among Ship Crews

Individual, Group or Area Communication

Hands-free, Full-duplex Communication with Optional Earphone-mic or Headset

Interconnection between VHF Marine Transceiver and Public Address System



IP COMMUNICATION TERMINAL

IP100H

- License-free communication terminal using IEEE 802.11 a/b/g/n standards
- WPA-PSK or WPA2-PSK encryption
- IPX7 submersible (1 m depth water for 30 minutes)
- Compact 58 × 95 × 26.4 mm (2.3 × 3.7 × 1.0 in) body and 205 g (7.2 oz, approximate) light weight
- Vibration Alert function for incoming calls
- Tested to the MIL-STD 810G specifications
- Emergency function



REMOTE COMMUNICATOR SOFTWARE

IP100FS

(Supplied with USB flash drive for use as a USB hardware key)

- The IP100FS can communicate with IP communication terminals from a PC
- The IP100FS can obtain location information of each IP100H based on connection to access points
- Can be installed on a Windows® based tablet PC as well as laptop PC



WIRELESS LAN ACCESS POINT

AP-95M

- IEEE 802.11 a/b/g/n/ac compliant
- PoE (Power over Ethernet) capability
- Optional RS-AP3, access point management software



CONTROLLER

IP1000C

- The IP1000C controls all terminal configurations and voice traffic
- Capable of controlling up to 100 terminals (including IP100FS)



RoIP GATEWAY

VE-PG4

- Versatile radio over IP gateway linking land mobile radios, IP communication terminals, IP phone systems and external devices
- Wireless LAN IP Advanced Radio System controller (Equivalent to the IP1000C function) built-in, capable of controlling up to 50 IP communication terminals
- IDAS™ Conventional and NXDN™ Type-D multi-site trunking connection



Optional Accessories for VHF Handheld Transceivers

MODEL NAME	BATTERY PACKS							BATTERY CASES	
	BP-292UL (Li-ion) 7.2 V/1910 mAh (min.) 2010 mAh (typ.)	BP-285 (Li-ion) 7.2 V/1485 mAh (min.) 1570 mAh (typ.)	BP-245H (Li-ion) 7.2 V/2100 mAh (min.) 2250 mAh (typ.)	BP-296 (Li-ion) 3.6 V/2200 mAh (min.) 2350 mAh (typ.)	BP-252 (Li-ion) 7.4 V/940 mAh (min.) 980 mAh (typ.)	BP-290 (Li-ion) 7.2 V/1910 mAh (min.) 2010 mAh (typ.)	BP-234 (Lithium) 9.0 V/3300 mAh (non-rechargeable)	BP-297*1 LR03 (AAA) × 3 cells	BP-291 LR6 (AA) × 5 cells
IC-M93D		✓							
IC-M73			✓						
IC-M37				✓				✓	
IC-M25*2									
IC-M85						✓			✓
IC-M85UL	✓								
IC-GM1600					(On-board use only)		(For survival craft)		

*1 The IC-M37 floats when used with most common brand AAA batteries. Battery weight varies by manufacturer. Please check your IC-M37 for buoyancy in a shallow area first when using AAA batteries.

*2 As the Lithium-ion battery cell (3.7 V 1500 mAh) is built-in to the IC-M25, the user cannot replace the battery cell.

MODEL NAME	DESKTOP CHARGERS								USB CHARGER
	BC-220 Rapid charger	BC-210 Desktop charger	BC-235 Desktop charger	BC-173 Regular charger	BC-219N Rapid charger	BC-225 Intelligent rapid charger	BC-226 Connectable type. Connects up to six BC-226 units.	BC-227 Rapid charger	BC-217S*4 5 V/1 A
IC-M93D	✓								
IC-M73		✓							
IC-M37			✓						(Use with BC-235)
IC-M25									✓
IC-M85					✓	✓	✓	✓	✓
IC-M85UL							✓*3	✓*3	
IC-GM1600				(On-board use only)					

MODEL NAME	MULTI-CHARGERS			AC ADAPTERS				CIGARETTE LIGHTER CABLES
	BC-214 Rapid charger	BC-197 Rapid charger	BC-238*5 Rapid charger	BC-123S*4 12 V/1 A	BC-147S*4 12 V/250 mA	BC-157S 12 V/7.5 A	BC-228 15 V/4 A	CP-25H
IC-M93D	(Use #12/#13, AD-133 included)			(Use with BC-220)		(Use with BC-214)		(Use with BC-220)
IC-M73		(Use #32/#33, AD-129 included)		(Use with BC-210)		(Use with BC-197)		(Use with BC-210)
IC-M37			(AD-138 included)					
IC-M25								
IC-M85	(Use #22/#23, AD-132N included)			✓(Use with BC-219N, BC-225 or BC-227)		(Use with BC-214)	(Use with BC-226)	
IC-M85UL				(Use with BC-227)			(Use with BC-226)	(Use with BC-227)
IC-GM1600					✓(Use with BC-173, On-board use only)			

*3 The battery charger must not be used in an explosive atmosphere.

*4 BC-123/BC-147/BC-217SA for USA plug, SE for Europe plug, SV for Australia plug.

*5 DC power cable is supplied with the BC-238, depending on the transceiver version.

☑ : Applicable ☐ : Not applicable

Some options may not be available in some countries. Please ask your dealer for details.

Optional Accessories for VHF Handheld Transceivers

MODEL NAME	CIGARETTE LIGHTER CABLES	DC POWER CABLES		READER SOFTWARE	SPEAKER-MICROPHONES				
	CP-23L	OPC-515L	OPC-656	RS-BC225	HM-184UL Submersible	HM-228 Submersible	HM-165 Submersible	HM-202 Submersible	HM-167 Submersible
IC-M93D			(Use with BC-214)			✓	✓		
IC-M73		(Use with BC-210)	(Use with BC-197)					✓	✓
IC-M37									
IC-M25									
IC-M85	(Use with BC-219N, or BC-227)	(Use with BC-219N, BC-225 or BC-227)	(Use with BC-214)	(Use with BC-225)					
IC-M85UL	(Use with BC-227)	(Use with BC-227)			✓				
IC-GM1600									








MODEL NAME	SPEAKER-MICROPHONES			TIE-CLIP MICROPHONE	HEADSETS			PTT SWITCH CABLE	EARPHONES
	HM-213 Submersible	HM-222 Submersible	HM-236 Submersible	HM-163MC	HS-94 Earhook type with boom microphone	HS-95 Behind-the-head type	HS-97 Throat microphone type	VS-5MC Manual PTT/VOX operation	EH-15B 2.5 mm plug
IC-M93D									
IC-M73									
IC-M37	✓								
IC-M25	✓								
IC-M85		✓	✓	✓	(Use with VS-5MC)	(Use with VS-5MC)	(Use with VS-5MC)	✓	(Use with HM-163MC)
IC-M85UL									
IC-GM1600									








MODEL NAME	EARPHONES					ACC ADAPTERS		BELT CLIPS	
	SP-26 Tube earphone	SP-27 Tube earphone	SP-28	SP-29	SP-32 Tube earphone adapter	SP-40	AD-118 6-Pin Hirose plug adapter	AD-135 3.5 mm jack earphone adapter	MB-86 MB-136 Photo shows MB-86
IC-M93D									
IC-M73									(Use MB-86)
IC-M37									
IC-M25									
IC-M85	(Use with HM-163MC)	(Use with HM-222 or AD-135)	(Use with HM-163MC)	(Use with HM-222 or AD-135)	(Use with EH-15B)	(Use with HM-222 or AD-135)	✓	✓	(Use MB-136)
IC-M85UL									(Use MB-136)
IC-GM1600									(Use MB-86)





MODEL NAME	BELT CLIPS	BELT HANGERS			CARRYING CASES			ANTENNAS
	MB-103/103Y MB-133 MBB-3 Photo shows MB-133	MB-96N	MB-96F	MB-96FL Long type	LC-187 Charging is possible while the case is attached.	LC-188	LC-191 Charging is possible while the case is attached.	FA-S59V FA-S64V FA-SC58V FA-SC59V
IC-M93D	(Use MB-133)		✓	✓				FA-SC59V
IC-M73	(Use MB-103)	✓	✓	✓				FA-S59V or FA-S64V
IC-M37	(Use MB-133)							FA-SC59V
IC-M25	(Use MB-133)							FA-SC59V
IC-M85	(Use MBB-3)	✓	✓	✓	✓	✓		FA-SC58V
IC-M85UL	(Use MBB-3)	✓	✓	✓			✓	FA-SC58V
IC-GM1600	(Use MB-103Y)	✓	✓	✓				Fixed type

The IC-M85UL version should only be used with the specified Intrinsically Safe approved options. Some options may not be available in some countries. Please ask your dealer for details.

Optional Accessories for VHF Fixed Mount Transceivers

MODEL NAME	HAND MICROPHONES				COMMAND HEAD™	COMMANDMIC™		HANDSET	HORN SPEAKER
	HM-205B/RB/SW Speaker microphone	HM-235B/W	HM-237B	HM-214V	RC-M600 HM-205RB and 10 m; 32.8 ft cable supplied	HM-195B/SW 6.1 m; 20 ft cable supplied	HM-195GB/GW 6.1 m; 20 ft cable supplied	HS-98 (#16)	SP-37
IC-M605	 (HM-205RB)								
IC-M506	✓				✓	✓	✓		✓
IC-M424G	✓					✓	✓		✓
IC-M400BB						✓	✓		✓
IC-M330G		✓							✓
IC-M330		✓							✓
IC-M220			✓	(Same as supplied)					✓
GM600				✓				✓	

MODEL NAME	CONVERSION CABLE	EXTENSION CABLES				DC-DC CONVERTER	FLUSH MOUNT KITS	VOICE SCRAMBLER
	OPC-2384 12-pin to 8-pin Required for IC-M605 and COMMANDMIC connection	OPC-2377 10 m; 32.8 ft cable for use with COMMAND HEAD	OPC-1541 6.1 m; 20 ft cable for use with COMMANDMIC and rear microphone connection	OPC-1000 6.1 m; 20 ft cable for use with rear microphone connection	PS-310 #01 24 V input #02 12 V input	MB-75 MB-132 MBF-5	UT-112/A Total of 32 voice scramble codes available	
IC-M605	 (Use with HM-195)	 (Use with RC-M600)	 (Use with HM-195, HM-205RB)	 (Use with HM-205RB)		 Photo shows MB-75		
IC-M506			✓ (Use with HM-195, rear mic version)	✓ (For use with rear mic version)		✓ (Use MB-75 or MB-132)	✓	
IC-M424G			✓ (Use with HM-195)			✓ (Use MB-132)		
IC-M400BB			✓ (Use with HM-195)					
IC-M330G						✓ (Use MBF-5)		
IC-M330						✓ (Use MBF-5)		
IC-M220						✓ (Use MBF-5)		
GM600					✓			

MODEL NAME	AIS RECEIVER UNITS		NMEA2000 INTERFACE	GPS ANTENNA
	UX-251	UX-231	UX-232	UX-241
IC-M605	 ✓* (Installed, depending on version)		 ✓*	 ✓ (Same as supplied)
IC-M506		✓* (Installed, depending on version)	✓* (Installed, depending on version)	
IC-M424G				
IC-M400BB				
IC-M330G				
IC-M330				
IC-M220				
GM600				

* See configuration chart (right).

IC-M605 & M506 Configuration Variations

	Microphone connection	NMEA 2000	AIS Receiver
IC-M605 AIS	Both front and rear configurable	NMEA 2000/ NMEA 0183	Integrated AIS Receiver
IC-M605	Both front and rear configurable	NMEA 2000/ NMEA 0183	Not included* ²
IC-M506 AIS	Front Mic	NMEA 2000/ NMEA 0183	Integrated AIS Receiver
	Rear Mic		
IC-M506 PLUS	Front Mic	NMEA 2000/ NMEA 0183	Not included* ³
	Rear Mic		
IC-M506	Front Mic	NMEA 0183* ¹	Not included* ³

*¹ Optional UX-232 is required for NMEA 2000.

*² Optional UX-251 is required for AIS receiver.

*³ Optional UX-231 is required for AIS receiver.

Optional Accessories for MF/HF Transceivers

MODEL NAME	HAND MICROPHONES		HANDSET	EXTERNAL SPEAKERS		FLUSH MOUNT KIT	MOUNTING BRACKET	FOLDED DIPOLE ANTENNA
	HM-214H	HM-180	HS-98 (#17)	SP-24	SP-24E	MB-75	MB-108	AH-710
GM800	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IC-M803	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IC-M710	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IC-M700PRO	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

MODEL NAME	ANTENNA MATCHERS		ANTENNA TUNERS			SHIELDED CONTROL CABLES		FILTER
	MN-100	MN-100L	AT-130	AT-140 IP56	AT-141 IP56	OPC-1465 10 m; 32.8 ft	OPC-566 10 m; 32.8 ft	FL-100 Bandwidth: 500 Hz/-6 dB CW/FSK narrow
GM800	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (Use with AT-141)	<input type="checkbox"/>	<input type="checkbox"/>
IC-M803	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> (Use with AT-140)	<input type="checkbox"/>	<input type="checkbox"/>
IC-M710	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> (Use with AT-130)	<input checked="" type="checkbox"/>
IC-M700PRO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> (Use with AT-130)	<input checked="" type="checkbox"/>

Optional Accessories for AIS Transponder

MODEL NAME	FLUSH MOUNT KITS		GPS RECEIVER
	MB-75	MB-132	MXG-5000S
MA-510TR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Optional Accessories for Marine Radars

MODEL NAME	VIDEO OUTPUT UNITS		SYSTEM CABLES		RADOME SCANNER	OPEN ARRAY SCANNERS		
	UX-234	UX-252	OPC-2339 20 m (65.6 ft)	OPC-2340 30 m (98.4 ft)	SC-R40 2 ft (4 kW)	SC-T40 4 ft (4 kW)	SC-T60 4 ft (6 kW)	SC-T60L 6.5 ft (6 kW)
MR-1220	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MR-1010RII	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>










: Applicable : Not applicable








Some options may not be available in some countries. Please ask your dealer for details.

Optional Accessories for Satellite PTT Radios

	BATTERY PACK	RAPID CHARGER	MULTI-CHARGER	SPEAKER-MICROPHONE	TIE-CLIP MICROPHONE	ACC ADAPTERS		EARPHONES	
MODEL NAME	BP-300 (Li-ion) 7.2 V/2200 mAh (min.) 2350 mAh (typ.) 	BC-241 + BC-242 	BC-214N* + BC-157S 	HM-222 With 3.5 mm jack Submersible 	HM-163MC With 2.5 mm jack 	AD-135 3.5 mm jack earphone adapter 	AD-118 For use with Hirose plug accessory 	EH-15B 2.5 mm plug 	SP-32 Tube earphone adapter 
IC-SAT100	✓	✓	✓	✓	✓	✓	✓	✓ (Use with HM-163MC)	✓ (Use with EH-15B)

* The AD-140 charger adapters are supplied with the BC-214N, depending on the charger version.










	EARPHONES					PTT SWITCH CABLE	HEADSETS		
MODEL NAME	SP-26 2.5 mm plug 	SP-27 3.5 mm plug 	SP-28 2.5 mm plug 	SP-29 3.5 mm plug 	SP-40 3.5 mm plug 	VS-5MC For manual PTT, VOX operation 	HS-94 Earhook type with boom microphone 	HS-95 Behind-the- head type 	HS-97 Throat micro- phone type 
IC-SAT100	✓ (Use with HM-163MC)	✓ (Use with HM-222 or AD-135)	✓ (Use with HM-163MC)	✓ (Use with HM-222 or AD-135)	✓ (Use with HM-222 or AD-135)	✓	✓ (Use with VS-5MC)	✓ (Use with VS-5MC)	✓ (Use with VS-5MC)







	HEADSET	BELT CLIP	ANTENNAS		DOCKING STATION	CABLES	
MODEL NAME	VS-3 Bluetooth® headset 	MBB-5 	FA-S102U 	AH-40 Satellite + GPS antenna (1.5 m, 4.92 ft) 	BC-247* Charging cradle 	OPC-656 DC power cable. 	OPC-2422 Coaxial cable for AH-40 (5 m, 16.4 ft) 
IC-SAT100	✓	✓	✓	✓	✓	✓ (Use with BC-214N)	✓










* Comes with DC power cable, AC adapter and adapter cable (DC to AC).

	HEADSET	EXTERNAL SPEAKERS			ANTENNA	CABLES	
MODEL NAME	VS-3 Bluetooth® headset 	SP-30 	SP-35 2 m, 6.5 ft 	SP-35L 6 m, 19.6 ft 	AH-40 Satellite + GPS antenna (1.5 m, 4.92 ft) 	OPC-2422 Coaxial cable for AH-40 (5 m, 16.4 ft) 	OPC-2429 Extension cable for use with supplied speaker microphone (20 m; 65.6 ft) 
IC-SAT100M	✓	✓	✓	✓	✓	✓	✓

Optional Accessories for IP Advanced Radio System

	BATTERY PACKS		BATTERY CASE	RAPID CHARGERS		MULTI-CHARGER	SPEAKER-MICROPHONES		EARPHONE-MICROPHONES
MODEL NAME	BP-271 (Li-ion) 7.4 V/1150 mAh (min.) 1200 mAh (typ.) 	BP-272 (Li-ion) 7.4 V/1880 mAh (min.) 2000 mAh (typ.) 	BP-273 LR6 (AA) × 3 cells 	BC-202 + BC-123SA/SE 	BC-202IP2 + BC-123SA/SE 	BC-211 + BC-157S 	HM-183LS Submersible 	HM-186LS 	HM-153LS 
IP100H	✓	✓	✓	✓	✓	✓	✓	✓	✓

	EARPHONE-MICROPHONES	HEADSET (Full-duplex operation)	HEADSETS (Simplex operation)			PLUG ADAPTER CABLE	PTT SWITCH CABLES	
MODEL NAME	HM-166LS 	HS-102 Earphone type 	HS-94 Earhook type with boom microphone 	HS-95 Behind-the- head type 	HS-97 Throat micro- phone type 	OPC-2006LS For VOX opera- tion 	OPC-2359 	OPC-2328 For manual PTT operation 
IP100H	✓	(Use with OPC-2359)	(Use with OPC-2006LS or OPC-2328)	(Use with OPC-2006LS or OPC-2328)	(Use with OPC-2006LS or OPC-2328)	✓	✓	✓

	AC ADAPTERS		AUDIO CONNECTION CABLES						ACCESS POINT MANAGER
MODEL NAME	BC-207S 12 V/4.2 A 	BC-147S 12 V/250 mA 	OPC-2273 For IC-M605 5 m; 16.4 ft 	OPC-2275 For mobile transceiver 5 m; 16.4 ft 	OPC-2276 For HM-152 or SM-26 5 m; 16.4 ft 	OPC-2389 For RS-232 serial connection 5 m; 16.4 ft 	OPC-2390 For IC-FR5100 series 5 m; 16.4 ft 	OPC-2412 For IC-SAT100. 5 m; 16.4 ft 	RS-AP3 
IP100FS		(Use with CT-23)							
AP-95M	✓								✓
VE-PG4			✓	✓	✓	✓	✓	✓	

	DESKTOP MICROPHONE	HAND MICROPHONE	MICROPHONE ADAPTER
MODEL NAME	SM-26 	HM-152 	CT-23 
IP100FS	(Use with CT-23)	(Use with CT-23)	✓
AP-95M			
VE-PG4	✓	✓	

Some options may not be available in some countries. Please ask your dealer for details.

Specifications for VHF Handheld Transceivers

	IC-M93D	IC-M73	IC-M37	IC-M25
Frequency range (Unit: MHz)	Tx: 156.025–157.425 Rx: 156.050–163.275 CH 70: 156.525	Tx: 156.025–157.425 Rx: 156.050–163.275	TX: 156.025–157.425 RX: 156.050–163.275	Tx: 156.025–157.425 Rx: 156.050–163.275
Dimensions (W x H x D; Projections not included)	57 x 144.6 x 38.5 mm; 2.2 x 5.7 x 1.5 in	52.5 x 125 x 30 mm; 2.1 x 4.9 x 1.2 in	59.7 x 140.5 x 38.7 mm, 2.4 x 5.5 x 1.5 in	56.6 x 134.2 x 30.5 mm; 2.2 x 5.3 x 1.2 in
Weight (approx.)	300 g; 10.6 oz (With BP-285, MB-133 and FA-SC59V)	320 g; 11.3 oz (With BP-245H, MB-103 and FA-S59V)	293 g, 10.3 oz (with BP-296, antenna and belt clip)	220 g; 7.8 oz (With MB-133 and FA-SC59V)
Current drain	Transmit (High)	1.5 A	2.75 A	2.3 A (at 3.7 V DC)
	Max. audio	450 mA typical (Internal SP) 250 mA typical (External SP)	450 mA typical (Internal SP) 250 mA typical (External SP)	400 mA (Internal SP) 200 mA (External SP)
Sensitivity (at 12 dB SINAD)	0.25 µV typical	0.22 µV typical	0.25 µV typical	0.25 µV typical
Intermodulation rejection	70 dB typical	70 dB typical	70 dB typical	70 dB typical
Audio output power (10% distortion)	900 mW typical (Internal SP) 350 mW typical (External SP)	700 mW typical (Internal SP) 350 mW typical (External SP)	700 mW typical (Internal SP) 300 mW typical (External SP)	550 mW typical (Internal SP) 300 mW typical (External SP)
RF output power	5/1 W	6/3/1 W	6/1 W	5/1 W
Operating time (approx.)*1	9 hours (with BP-285)	17 hours (PLUS version) 20 hours (Basic version) (with BP-245H)	12 hours (with BP-296)	11 hours (with built-in battery)
Submersible protection	IPX7 (1 m depth/30 min)	IPX8 (1.5 m depth/30 min)	IP57 (1 m depth/30 min)	IPX7 (1 m depth/30 min)
Integrated GPS receiver	✓	–	–	–
Float'n Flash	✓	–	✓	✓

	IC-M85	IC-M85UL	IC-GM1600
Frequency range (Unit: MHz)	TX: 156.025–157.425 RX: 156.050–163.275 TX/RX: 136–174 (LMR)	TX: 156.025–157.425 RX: 156.050–163.275 LMR: TX/RX 136–174	TX/RX: 156.300–156.875
Dimensions (W x H x D; Projections not included)	56 x 92 x 29 mm; 2.2 x 3.6 x 1.1 in	56 x 92 x 34.1 mm; 2.2 x 3.6 x 1.3 in	65 x 145 x 44 mm; 2.6 x 5.7 x 1.7 in
Weight (approx.)	246 g; 8.7 oz (with BP-290, FA-SC58V and MBB-3)	285 g; 9.9 oz (With BP-292UL, FA-SC58V, MBB-3)	385 g; 13.6 oz (With BP-234)
Current drain	Transmit (High)	1.5 A (at 5 W) 0.9 A (at 2 W)*2	1.0 A (at 2 W) 0.7 A (at 1 W)
	Max. audio	450 mA	200 mA
Sensitivity (at 12 dB SINAD)	0.25 µV typical	0.25 µV typical	0.25 µV typical (USA version)
Intermodulation rejection	70 dB typical	70 dB typical	70 dB (USA version), 68 dB (GEN version)
Audio output power (10% distortion)	700 mW typical (Internal SP) 700 mW typical (External SP)	700 mW typical (Internal SP) 700 mW typical (External SP)	350 mW typical
RF output power	5/3/1 W 2/1 W*2	5/3/1 W 2/1 W*2	2/1 W
Operating time (approx.)*1	14 hours (with BP-290)	11 hours (with BP-292UL)	Specified as IMO A.809 (19)
Submersible protection	IP67 (1 m depth/30 min)	IP67 (1 m depth/30 min)	Specified as IMO A.809 (19)
Integrated GPS receiver	–	–	–
Float'n Flash	–	–	–

Measurements made in accordance with TIA/EIA603 for IC-M93D, M73, M37, M25, M85 and M85UL. TIA/EIA603 and FCC Part 80.271 for IC-GM1600.

*1 Typical operation, Tx:Rx:Stand-by=5:5:90 *2 Land mobile channels for USA Version.

Specifications for VHF Fixed Mount Transceivers

	IC-M605	IC-M506	IC-M424G	IC-M400BB	IC-M330G	IC-M330	IC-M220	GM600
Frequency range (Unit: MHz)	Tx: 156.025–161.600 Rx: 156.050–163.275 CH70: 156.525 AIS1,2: 161.975, 162.025	Tx: 156.025–157.425 Rx: 156.050–163.275 CH70: 156.525 AIS1,2: 161.975, 162.025	Tx: 156.025–157.425 Rx: 156.050–163.275 CH70: 156.525	Tx: 156.025–157.425 Rx: 156.050–163.275 CH70: 156.525	TX: 156.025–157.425 RX: 156.050–163.275 CH70: 156.525	TX: 156.025–161.600 RX: 156.050–163.275 CH70: 156.525	TX: 156.025–157.425 RX: 156.050–163.275 CH70: 156.525	Tx: 156.025–161.600 Rx: 156.025–162.000 CH70: 156.525
Power supply requirement	13.8 V DC ±15%	13.8 V DC ±15%	13.8 V DC ±15%	13.8 V DC ±15%	13.8 V DC ±15%	13.8 V DC ±15%	13.8 V DC ±15%	24 V DC (21.6–31.2 V DC)*2
Dimensions (W x H x D; Projections not included)	274 x 114 x 121.5 mm; 10.8 x 4.5 x 4.8 in	178.9 x 113.9 x 113.8 mm; 7.0 x 4.5 x 4.5 in	180 x 82 x 119.9 mm; 7.1 x 3.2 x 4.7 in	216 x 79 x 125 mm; 8.5 x 3.1 x 4.9 in	156.5 x 66.5 x 110.1 mm; 6.2 x 2.6 x 4.3 in	156.5 x 66.5 x 110.1 mm; 6.2 x 2.6 x 4.3 in	156.5 x 66.5 x 110.1 mm; 6.2 x 2.6 x 4.3 in	274 x 114 x 121.5 mm; 10.8 x 4.5 x 4.8 in
Weight (approx.)	1.51 kg; 3.3 lb	1.4 kg; 3.1 lb	1.2 kg 2.6 lb	Main unit 830 g; 1.8 lb HM-195 400 g; 14.1 oz	730 g; 1.6 lb	700 g; 1.5 lb (With HM-237B)	700 g; 1.5 lb (With HM-237B)	1.6 kg; 3.5 lb
Current drain	Transmit (High)	6 A	5.5 A	5.5 A	5.5 A	5 A	5 A	3.3 A*2
	Max. audio	5 A typ. (Ext SP, RX hailer ON) 8 A Max. (Ext SP, RX hailer ON, HM-195 x 3)	5 A typ. (Ext SP, RX hailer ON) 1.5 A (Internal SP)	5 A typ. (Ext SP, RX SP ON) 1.5 A (Internal SP)	3.5 A	1 A	1.2 A	2.0 A*2
Sensitivity (at 12 dB SINAD)	0.22 µV typical	0.22 µV typical	0.22 µV typical	0.22 µV typical	0.22 µV typical	0.22 µV typical	0.22 µV typical	-7 dBµV emf typ. (20 dB SINAD)
Intermodulation rejection	More than 80 dB	More than 75 dB	More than 70 dB	More than 70 dB	More than 70 dB	More than 63 dB	More than 63 dB	More than 75 dB (Main)
Audio output power (10% distortion/4Ω load)	15 W (External SP)	15 W (External SP)	10 W typ. (External SP)	10 W (External SP) 2 W (HM-195 series)	4.5 W typical (External SP)	4.5 W typical	4.5 W typical	10 W (External SP)
RF output power	25/1 W	25/1 W	25/1 W	25/1 W	25/1 W	25/1 W	25/1 W	25/1 W
NMEA interface	NMEA 2000, NMEA 0183/0183-HS x 2	NMEA 2000*/0183	NMEA 0183	NMEA 0183	NMEA 0183	NMEA 0183	NMEA 0183	IEC 61162-1
AIS receiver	Built-in*1	Built-in*1	–	–	–	–	–	–
Built-in GPS receiver	Yes	–	Yes	–	Yes	–	–	–

Measurements made in accordance with TIA/EIA 603 for IC-M605, M506, M424G, M400BB, M330G, M330, M220 and EN301 925 for GM600. *1 Depending on version. *2 With PS-310 (#01)

Specifications for MF/HF Fixed Mount Transceivers

		IC-M803	IC-M710	IC-M700PRO	GM800
Frequency range (Unit: MHz)		TX: 1.6–27.5000 RX: 0.5–29.9999 DSC: 2.1875, 4.2075, 6.3120, 8.4145, 12.5770, 16.8045	Tx: 1.6–27.5000 (ITU channels) Rx: 0.5–29.9999	Tx: 1.6–27.5000 (ITU channels) Rx: 0.5–29.9999	Tx: 1.6–27.5000 (ITU channels) Rx: 0.5–29.9999 (continuously) DSC: 2.1875, 4.2075, 6.3120, 8.4145, 12.5770, 16.8045
Type of emission	Tx/Rx	J3E (USB, LSB), J2B (AFSK), F1B (FSK), A1A (CW), H3E ¹ (AM)	J3E (USB/LSB), H3E (AM), J2B (AFSK), F1B (FSK), R3E, A1A (CW) ⁴	J3E (USB/LSB), H3E (AM), J2B (AFSK), F1B (FSK), R3E, A1A (CW) ⁴	J3E (USB/LSB ¹), H3E ¹ (AM), J2B ¹ (AFSK), F1B (FSK), A1A ¹ (CW)
	DSC	J2B	–	–	F1B
Power supply requirement		13.6 V DC ±15%	13.6 V DC ±15%	13.6 V DC ±15%	21.6–31.2 V DC (floating ground)
Dimensions (W×H×D; projections not included)	Main unit	240 × 94 × 238.4 mm, 9.4 × 3.7 × 9.4 in	291.4 × 116.4 × 315 mm; 11.5 × 4.6 × 12.4 in	291.4 × 116.4 × 315 mm; 11.5 × 4.6 × 12.4 in	367 × 95 × 269 mm; 14.4 × 3.7 × 10.6 in
	Controller	274 × 114 × 86 mm, 10.8 × 4.5 × 3.4 in	–	–	274 × 114 × 86 mm; 10.8 × 4.5 × 3.4 in
Weight (approx.)	Main unit	4.41 kg, 10.4 lb	7.8 kg; 17.2 lb	7.8 kg; 17.2 lb	8.6 kg; 19.0 lb
	Controller	760 g, 1.7 lb	–	–	760 g; 1.7 lb
Current drain	Transmit (Max. power)	30 A	30 A	30 A	Less than 20 A (at 1.1 and 1.7kHz two tones)
	Receive (Max. audio)	Less than 3.0 A	2.5 A	2.5 A	Less than 3.0 A
Sensitivity	J3E, A1A	30 dBµV emf ⁵ , 16 dBµV ⁷ (0.5–1.5999 MHz) 13 dBµV emf ⁵ , -1 dBµV ⁷ (1.6–1.7999 MHz) 8 dBµV emf ⁵ , -6 dBµV ⁷ (1.8–29.9999 MHz)	16 dBµ (0.5–1.5999 MHz) ⁸ 0 dBµ (1.6–1.7999 MHz) ⁸ -6 dBµ (1.8–29.9999 MHz) ⁸	16 dBµ (0.5–1.5999 MHz) ⁸ 0 dBµ (1.6–1.7999 MHz) ⁸ -9 dBµ typical (1.8–29.9999 MHz) ⁸	16 dBµV emf (1.6–3.999 MHz) ⁵ 11 dBµV emf (4.0–29.999 MHz) ⁵
	J2B, F1B	4 dBµV emf ⁵ , -10 dBµV ⁷ (1.6–1.7999 MHz) -1 dBµV emf ⁵ , -15 dBµV ⁷ (1.8–29.9999 MHz)	–	–	3 dBµV emf (1.6–2.099 MHz) ⁶ 0 dBµV emf (2.1–27.5 MHz) ⁶
	J2B, R3E	–	16 dBµ (0.5–1.5999 MHz) ⁸ 0 dBµ (1.6–1.7999 MHz) ⁸ -6 dBµ (1.8–29.9999 MHz) ⁸	16 dBµ (0.5–1.5999 MHz) ⁸ 0 dBµ (1.6–1.7999 MHz) ⁸ -9 dBµ typical (1.8–29.9999 MHz) ⁸	–
	H3E	44 dBµV emf ⁵ , 30 dBµV ⁷ (0.5–1.5999 MHz) 30 dBµV emf ⁵ , 16 dBµV ⁷ (1.6–1.7999 MHz) 24 dBµV emf ⁵ , 10 dBµV ⁷ (1.8–3.9999 MHz)	30 dBµ (0.5–1.5999 MHz) ⁷ 16 dBµ (1.6–1.7999 MHz) ⁷ 10 dBµ (1.8–29.9999 MHz) ⁷	30 dBµ (0.5–1.5999 MHz) ⁷ 16 dBµ (1.6–1.7999 MHz) ⁷ 7 dBµ typical (1.8–29.9999 MHz) ⁷	30 dBµV emf (1.6–3.999 MHz) ⁵
	DSC (J2B)	-6 dBµV emf ⁶	–	–	0 dBµV emf ⁶
RF output power		150, 100, 60, 20 W PEP (selectable)	150/60/20 W PEP (1.6–23.999 MHz) 60/20 W PEP (24.0–27.500 MHz)	150/60/20 W PEP (1.6–23.999 MHz) 60/20 W PEP (24.0–27.500 MHz)	150 W PEP into 50 Ω (at radio terminal) 85 W PEP (1.6–3.999 MHz) (at tuner-output) 125 W PEP (4.0–27.5 MHz) (at tuner-output)

*1 Receive only. *2 Receive only, depending on version. *3 Depending on version. *4 Available modes may differ depending on version. *5 20 dB SINAD *6 1% error rate *7 10 dB S/N *8 12 dB SINAD

Specifications for Satellite PTT Radios

HANDHELD TRANSCEIVER

		IC-SAT100
Dimensions (W × H × D; projections are not included)		57.8 × 135 × 32.8 mm, 2.3 × 5.3 × 1.3 in
Weight (Approximate)		360g, 12.7 oz (with BP-300 and antenna)
Display (W × H, approximate)		33 × 27 mm, 1.3 × 1.1 in (viewing area)
Operational temperature range		-30°C to +60°C, -22 °F to 140 °F
Audio output power	Internal speaker	1500 mW typical (At 5% distortion into an 8 Ω load)
	External speaker	1000 mW typical (At 5% distortion into an 8 Ω load)
Battery life (Approximate)		14.5 hours (TX : RX : standby = 5 : 5 : 90)
Submersible protection		IP67
Talkgroup		15 groups (Maximum)
Antenna connector		SMA

MOBILE TRANSCEIVER

		IC-SAT100M
Dimensions (W × H × D; projections are not included)	Antenna	76.8 × 200 × 76.8 mm, 3 × 7.9 × 3 in
	Main Unit	125 × 29 × 156 mm, 4.9 × 1.1 × 6.1 in
	Microphone	59.6 × 130.2 × 28.4 mm, 2.3 × 5.1 × 1.1 in
Weight (Approximate)		T.B.D.
Operational temperature range		-30°C to +60°C, -22 °F to 140 °F
Audio output power (5% dist)	Internal speaker	1500 mW typical (8 Ω load)
	External speaker	4 W typical (4 Ω load)
Power supply voltage		13.2 V / 26.4 V DC
Submersible protection		IP67 (Antenna), IP55 (Mic), IP54 (Main unit)
Talkgroup		15 groups (Maximum)
Antenna connector		SMA

Specifications for AIS Transponder

AIS TRANSPONDER

		MA-510TR
Frequency range		161.500–162.025 (AIS), 156.525 (DSC)
Type of emission		16K0G2B (GMSK) (AIS), 16K0G2B (DSC)
Power supply requirement		12 V or 24 V DC nominal (9.6–31.2 V)
Dimensions (W × H × D; Projections not included)		166.2 × 110 × 80 mm, 6.5 × 4.3 × 3.1 in
Weight (approx.)		700 g, 1.5 lb
Current drain	Transmit	1.5 A
	Receive	0.7 A
Sensitivity (20% error rate)		Less than -110 dBm
Intermodulation rejection		More than -36 dBm (AIS), More than -39 dBm (DSC)
RF output power		2 W

Measurements made in accordance with IEC62287-1.

Specifications for Marine Radars

DISPLAY UNIT	MR-1220				MR-1010RII
	MR-1220R4	MR-1220T4	MR-1220T6	MR-1220T6L	
Display	12.1-inch color TFT LCD				10.4-inch color TFT LCD
Resolution (H × V)	600 × 800 dots				480 × 640 dots
Minimum range	25 m; 82 ft (at 1/8 NM range)				25 m; 82 ft (at 1/8 NM range)
Maximum range	36 NM	48 NM	72 NM	72 NM	36 NM
Power supply requirement	12/24 V DC				10.2-42 V DC
Dimensions (W × H × D; projections not included)	301 × 323.5 × 119.2 mm; 11.9 × 12.7 × 4.7 in				301 × 323.5 × 119.2 mm; 11.8 × 12.7 × 4.7 in
Weight (approx.)	4.8 kg; 10.6 lb				4.3 kg; 9.5 lb
Usable temperature range	-15 °C to +55 °C; +5 °F to +131 °F				-15 °C to +55 °C; +5 °F to +131 °F
Power consumption (approx.)	60 W	70 W	80 W	90 W	55 W
Available scanner unit	2 ft (60 cm) radome	4 ft (120 cm) open array	4 ft (120 cm) open array	6.5 ft (200 cm) open array	2 ft (60 cm) radome

SCANNER UNIT	SC-R40 (MR-1220R4)	SC-T40 (MR-1220T4)	SC-T60 (MR-1220T6)	SC-T60L (MR-1220T6L)	MR-1010RII
Type	2 ft (60cm) radome	4 ft (120 cm) open array	4 ft (120 cm) open array	6.5 ft (200 cm) open array	2 ft (60 cm) radome
Peak output power	4 kW	4 kW	6 kW		4 kW
Rotation speed	24, 36 rpm typical	24, 36 rpm typical	22, 24, 36 rpm typical		24, 36 rpm typical
Beamwidth	Horizontal	2° typical	2° typical	1.2° typical	4° typical
	Vertical	22° typical	23° typical	23° typical	22° typical
Sidelobe	-22 dB typical	-24 dB typical	-24 dB typical	-27 dB typical	-22 dB typical
Transmission frequency	9410 MHz ±30 MHz	9410 MHz ±30 MHz	9410 MHz ±30 MHz		9410 MHz ±30 MHz
Dimensions (W × H × D; projections not included)	640 × 256 × 640 mm; 25.2 × 10.1 × 25.2 in	1217 (dia.) × 395 (H) mm; 47.9 (dia.) × 15.6 (H) in	1217 (dia.) × 395 (H) mm; 47.9 (dia.) × 15.6 (H) in	1995 (dia.) × 395 (H) mm; 78.5 (dia.) × 15.6 (H) in	640 × 256 × 640 mm; 25.2 × 10.1 × 25.2 in
Weight (approx.)	8 kg; 17.6 lb	18 kg; 39.7 lb	18 kg; 39.7 lb	20 kg; 44.1 lb	8 kg; 17.5 lb
Usable temperature range	-25 °C to +70 °C; -13 °F to +158 °F	-25 °C to +70 °C; -13 °F to +158 °F	-25 °C to +70 °C; -13 °F to +158 °F		-25 °C to +70 °C; -13 °F to +158 °F
Connection cable	15 m; 49.2 ft (OPC-2341)	20 m; 65.6 ft (OPC-2342)	20 m; 65.6 ft (OPC-2342)		15 m; 49.2 ft (OPC-2341)

All stated specifications are subject to change without notice or obligation.

Read all instructions enclosed with the product carefully and completely before using the product.

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