ICOM

Marine Products

World's Slimmest Buoyant DSC Transceiver

VHF MARINE TRANSCEIVER with DSC

IC‒M93D EURO

FEATURES

- 2.3" large high visibility LCD
- Slim buoyant DSC transceiver
- Intuitive user interface
- Built-in class D DSC with a CH70 receiver
- Float'n flash and MOB auto set function
- Integrated GNSS receiver
- Active noise canceling

• IPX7 waterproof • Navigation function • 50 waypoint memories • Dual watch and Tri-watch functions • Favorite channel function • AquaQuake™ prevents audio degradation from a water-logged speaker • Supports 4-digit channels
* Available functions may be subject to local regulations.

Supplied Accessories
• BP-285 battery pack • BC-220 battery charger
• BC-123SE/SUK* AC adapter • MB-133 belt clip
• FA-SC59V antenna • Hand strap
* May differ depending on version.

Slim, Stylish, Powerful VHF with Professional Features

VHF MARINE TRANSCEIVERS

IC‒M73EURO PLUS
IC‒M73EURO

FEATURES

- Last call voice recording*
- Active noise canceling* reduces background noise by up to 90%
- Bass Boost Function*
- IPX8 advanced waterproofing
- 6 W RF output, 700 mW loud audio
- 17 hours of long lasting operating time with BP-245H
  * ⊕PLUS available in IC-M73EURO PLUS version only.

• Dual watch and Tri-watch functions • Instant access to Ch 16 and call channel • AquaQuake™ prevents audio degradation of speaker • Auto power save • Priority and normal scan • Tag scan and favorite channel function • Optional speaker-microphones, HM-167/HM-202 • Supports 4-digit channels
* Available functions may be subject to local regulations.

Supplied Accessories
• BP-245H battery pack • BC-210 battery charger
• BC-123SE* AC adapter • MB-103 belt clip
• FA-S64V* antenna • CP-25H* cigarette lighter cable
• Hand strap
* May differ or not supplied, depending on version.

"Clear Voice Boost", and it Floats

VHF MARINE TRANSCEIVER

IC‒M35

FEATURES

- Buoyant
- Noise canceling microphone
- Automatic volume adjustment
- Voice boost and mute functions
- Large buttons and easy to grip
- 6 W RF output, 700 mW loud audio
- IP57 dust-protection and waterproof

• Dual watch and Tri-watch functions • Instant access to Ch 16 and call channel • AquaQuake™ prevents audio degradation from a water-logged speaker • 2-step power save • Auto scan function • Tag scan and favorite channel function • Optional speaker-microphone, HM-165 • Supports 4-digit channels
* Available functions may be subject to local regulations.

Supplied Accessories
• BP-252 battery pack • BP-251* battery case
• BC-173 battery charger • BC-147SE* AC adapter
• MB-109 belt clip • FA-SC58V antenna • Hand strap
* May differ or not supplied, depending on version.

Metallic Gray

Marine Blue

Pearl White

Buoyant, Stylish and Easy to Use

VHF MARINE TRANSCEIVER
IC‑M25EURO

FEATURES

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

• IPX7 waterproof protection • Dual watch and Tri-watch function • Instant access to Ch 16 and call channel • Favorite channel function • Auto scan function* • AquaQuake™ prevents audio degradation from a water-logged speaker • 2 step power save • Built-in 3 hours rapid charger (with BC-217SE) • Optional speaker-microphone, HM-213 • Supports 4-digit channels
* Available functions may be subject to local regulations.

Supplied Accessories
• BC-217SE* USB charger • MB-133 belt clip
• FA-SC59V antenna • Hand strap • Battery cell is built-in
* May differ or not supplied, depending on version.

Marine and PMR Hybrid for Professional Use on Water/Land

VHF MARINE TRANSCEIVER
IC‑M85E

FEATURES

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

• Built-in CTCSS and DTCS tones • IP67 dust-tight and waterproof protection • Dual watch and Tri-watch functions • Instant access to Ch 16 and call channel • Aqua-Quake™ prevents audio degradation from a water-logged speaker • Tag scan and favorite channel function • 14 hours of long battery life (TX: RX: Standby=5:5:90.) • Self check function • MIL-STD rugged construction • Internal VOX capability for hands-free operation • Variety of audio accessories • Supports 4-digit channels
* Available functions may be subject to local regulations.

Supplied Accessories
• BP-290 battery pack • BC-227 rapid charger • BC-123SE* AC adapter
• MBB-3 belt clip • FA-SC58V antenna • Hand strap
* May differ or not supplied, depending on version.

ATEX Intrinsically Safe Marine Transceiver

VHF MARINE TRANSCEIVER
IC‑M87ATEX

FEATURES

- ATEX intrinsically safe type approval (Approved classes: II2G Ex ib IIA T3 Gb)
- Tough and compact body
- Marine and land channel groups
- 22 programmable land channels
- Built-in Voice Scrambler

• Dual watch and Tri-watch functions • Instant access to Ch 16 and call channel • Auto power save • Auto scan function • Tag scan function • Optional speaker-microphone, HM-138 • Supports 4-digit channels

DO NOT use the transceiver with any other equipment not specified in the option list (Pages 9–10). Please ask your dealer to ensure the ATEX rating is acceptable for the intended place of use.

Supplied Accessories
• BP-227AX battery pack • BC-152N battery charger
• BC-147SE* AC adapter • MB-86 belt clip
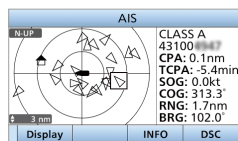• FA-S59V antenna • Hand strap
* Not supplied depending on version.

4.3 inch Colour TFT LCD, Built-in AIS Receiver and Flexible Remote Control Configurations

VHF MARINE TRANSCEIVER

IC-M605EURO

NMEA 2017 Product Award Recipient

AIS plotter

AIS target list

Night mode

FEATURES

- **Wide viewing angle, high contrast 4.3 inch colour TFT LCD**
- **Remote control with up to three COMMAND HEAD™/COMMANDMIC™**
- **Integrated AIS receiver (AIS RX data can be output through NMEA 0183-HS)**
- **NMEA 2000™ connectivity** • **Intuitive user interface**
- **Class leading receiver performance (Selectivity and IMD: 80 dB typ.)**
- **Active noise canceling** • **Last call voice recording for two minutes**
- **Voice scrambler with optional UT-112** • **15 W loud audio and 30 W two-way hailer**
- **Integrated GNSS receiver (GPS, GLONASS and SBAS)** • **Built-in Class D DSC**

• NMEA 0183-HS (High Speed) Version 1.01 connectivity (38.4 kbps) • IPX8 advanced waterproof (1m depth water for 60 minutes) • Fog horn • Dual watch and Tri-watch functions • Instant access to Ch 16 and Call channel • Tag scan and favorite channel functions • Aqua-Quake™ prevents audio degradation from a water-logged speaker • Priority scan function • Display and keypad backlighting • External speaker connection • Supports 4-digit channels

Flexible Remote Controll Configurations

The IC-M605EURO can be remotely controlled with up to three COMMAND HEAD™/COMMANDMIC™. All functions (including Distress) of the IC-M605EURO can be controlled with the RC-M600. With the RC-M600 and/or HM-229B/W* connected, the IC-M605EURO provides an intercom system allowing two way private communications.

*Optional connection cable, OPC-2384 is required.

Installation Example

HM-229B/W

Flybridge

IC-M605EURO

Cockpit

RC-M600 — Salon

RC-M600 — Bedroom

Full Remote Control from Optional Command Station

COMMAND HEAD™

RC-M600

Space-Saving Compact Body for Daily Operations

REMOTE-CONTROL MICROPHONES

HM-229B/W

• Black and white colour version

* Photo shows HM-229B.

Fixed Mount VHF and AIS Receiver Combo with NMEA 2000™ Connectivity

VHF MARINE TRANSCEIVER
IC-M506EURO

AIS plotter

AIS target list

Functions menu

COMMANDMIC™,
HM-195 series capable

FEATURES

- Integrated AIS Receiver
- 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-195B/SW
- IPX8 advanced waterproof (1 m depth for 60 minutes)
- Built-in Class D DSC

• Dual watch 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 • Option voice scrambler UT-112 • Large dot-matrix display • Rear panel microphone version • Supports 4-digit channels

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Easy-to-Use and Even Easier to Hear!

VHF MARINE TRANSCEIVER
IC-M423G
(With GPS Receiver)

COMMANDMIC™,
HM-195 series capable

FEATURES

- Intuitive user interface and white backlight display
- Active noise canceling reduces background noise by up to 90%
- 10 W loud audio, public address and foghorn
- Optional COMMANDMIC™, HM-195GB/GW
- Integrated GPS receiver simplifies wiring • Built-in Class D DSC

• IPX7 waterproof • Dual watch 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 • RX speaker function • Black and super white colour version • Speaker-microphone, HM-205B/SW • Supports 4-digit channels

VHF Fixed Mount Transceivers

Black Box Transceiver When Space is at a Premium

VHF MARINE TRANSCEIVER

IC−M400BB

FEATURES

- **Space saving, fully functional VHF/DSC** • **Built-in Class D DSC**
- **Controlled by COMMANDMIC™ HM-195B/SW/GB/GW*** • **Intuitive user interface**
- **Active noise canceling reduces background noise by up to 90%**
- **10 W loud audio, public address and foghorn** • **IPX7 waterproof**

• Dual watch 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 • Display and keypad backlighting • External speaker connection • RX speaker function • Supports 4-digit channels

* HM-195B/SW/GB/GW may be sold separately, depending on version.

Top Performance Ultra Compact VHF

VHF MARINE TRANSCEIVER

IC−M330GE
(With GPS Receiver)

VHF MARINE TRANSCEIVER

IC−M330E
(without GPS Receiver)

Supplied GPS antenna
(IC-M330GE)

Photo shows IC-M330GE
Available in black or white.

FEATURES

- **Ultra compact body (W×H×D; 156.5 × 66.5 × 110.1 mm)** • **Built-in Class D DSC**
- **Uncompromised receiver performance (Selectivity and IMD: more than 70 dB)**
- **Intuitive user interface** • **Dynamic clear audio from bass to treble**
- **Easy-to-read full dot-matrix display** • **GPS receiver built-in with supplied GPS antenna (IC-M330GE)**

• IPX7 waterproof • Dual watch 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 • Supports 4-digit channels

COMMANDMIC™

Full Remote Control Capability

REMOTE-CONTROL MICROPHONES

HM−195GB/GW
(White backlight LCD)

HM−195B/SW
(Amber backlight LCD)

Above photo shows HM-195GB
Available in black or super white.

FEATURES

- **Full control 2nd station capability for IC-M506EURO or M423G**
- **Remote-Controller head for IC-M400BB**
- **Intercom function with IC-M506EURO or M423G**
- **Distress button on the rear panel**

AIS Transponder and AIS Receiver

Fully Capable Class B AIS Transponder

CLASS B AIS TRANSPONDER

MA−500TR

FEATURES

- **Class B AIS transponder** • **MXG-5000S GPS receiver***
- **CPA and TCPA collision-risk management**
- **AIS target call with Icom VHF transceivers**

* The MXG-5000S may be sold separately, depending on country.

IP ADVANCED RADIO SYSTEM

Full-Duplex Communication That Works Over a Wireless LAN and IP Network

System Features

Wireless Communication System among Ship Crews

By installing wireless access points, the IP advanced radio system can flexibly deploy along the IP network and communicate throughout in the vessel. The IP100H can access the nearest access point and can roam between access points.

Individual, Group or Area Communication

The IP100H/IP100FS can make individual call, group conference call, all call and area call. Crews spread across multiple rooms and cabins can communicate seamlessly. The IP communication terminal can receive Short Data Messages with a vibration alert from a PC installed IP100FS.

Hands-free, Full-duplex Communication

With optional earphone-mic or headset HS-102 or HS-85*, the IP100H user can simultaneously talk and receive like a phone call. Hands-free operation allows your staff to carry out other tasks at the same time.
* Either HM-153LS, HM-166LS, HS-102 with OPC-2359 or HS-85 with OPC-2144 is required.

Interconnect between VHF Marine Transceiver and Public Address System

With the VE-PG3 RoIP gateway, the IP advanced radio system can interconnect with a VHF marine transceiver, other radio system and a public address system.
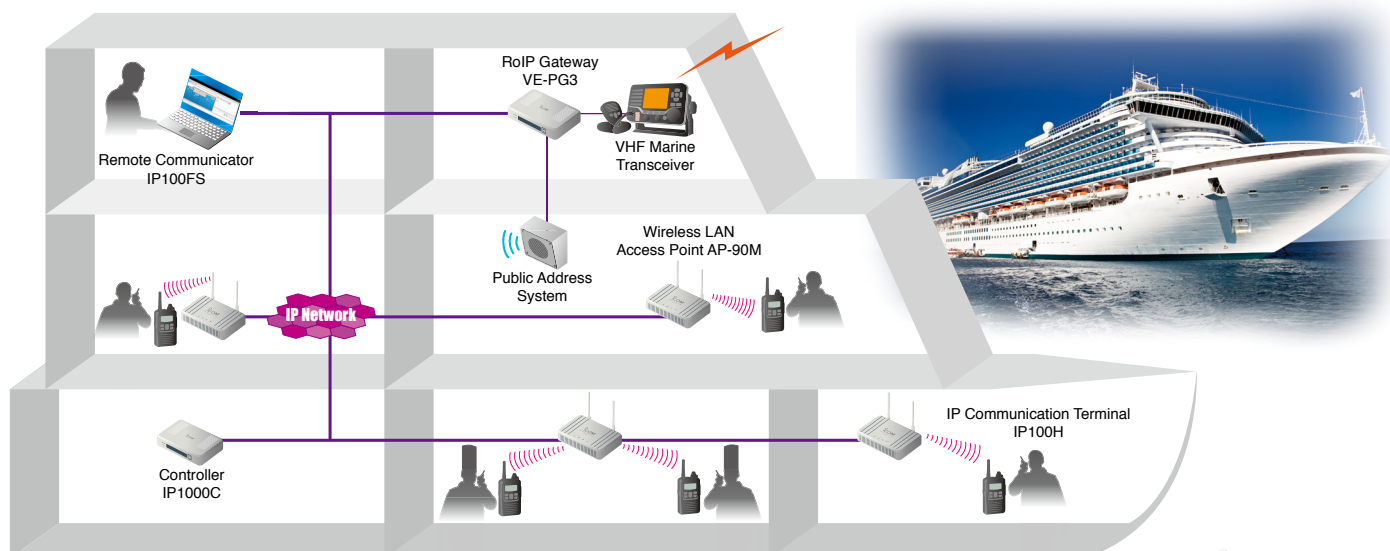
IP Communication Terminal
IP100H

- Licence-free communication terminal using IEEE 802.11 a/b/g/n standards
- WPA-PSK or WPA2-PSK encryption
- IPX7 waterproof (1 m depth water for 30 minutes)
- Compact 58 × 95 × 26.4 mm body and 205 g (approximate) lightweight
- 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 using access points
- Can be installed to a Windows® based tablet PC as well as laptop PC

Wireless LAN Access Point
AP-90M

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

Controllor
IP1000C

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

RoIP Gateway
VE-PG3

- Interconnects IP advanced radio system and other radio system*
- Public address system connection
- Telephone interconnection with IP phone and PSTN lines
*Interconnection with VHF marine radio may be prohibited in some countries. Please confirm legal requirements in your country before installation.

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 Colour TFT LCD

VHF MARINE TRANSCEIVER
GM600

MED

Day mode

Night mode

GREEN : NORMAL
RED BLINK : ERROR

PS-310 DC-DC converter

Reliable Long Distance MF/HF Communication

MF/HF MARINE TRANSCEIVER
GM800

MED
(Type approval pending as of December 2017.)

ICOM
AUTOMATIC ANTENNA TUNER
AT-141

MADE IN JAPAN

7

FEATURES

- **Meets VHF GMDSS requirements for SOLAS ships**
- **Certified for European Maritime Equipment Directive (MED)**
- **ITU Class A DSC (Meets ITU-R M.493-13)**
- **Large and high contrast 4.3-inch colour 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 handset, HS-98 (#16) • IPX7 waterproof for front panel
- Dual watch 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) • Supports 4-digit channels

Day mode

Night mode
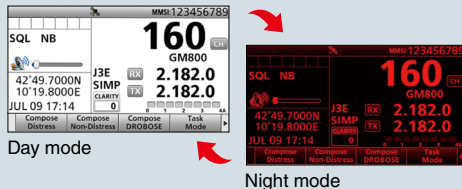
FEATURES

- **Meets MF/HF GMDSS requirements for SOLAS ships**
- **Will meet European Maritime Equipment Directive (MED*1)**
- **ITU Class A DSC (Meets ITU-R M.493-13)**
- **Large and high contrast 4.3-inch colour TFT LCD**
- **Intuitive user interface for straightforward operation**
- **Dedicated DSC watch receiver for continuous scanning of the six distress channels**
- **Optional automatic antenna tuner, AT-141**

- 125 W*2 (PEP) output power • 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
- Supplied handset, HS-98 (#17) • IPX7 waterproof for controller
- Maximum 160 programmable channels • Program scan, channel scan and channel resume scan
- Unified design with GM600 (VHF)

*1 Type approval pending as of December 2017.
*2 85 W (PEP) 1.6–3.999 MHz
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 antenna tuner, AT-141.

MED

SURVIVAL CRAFT 2-WAY RADIO
IC-GM1600E

GMDSS Portable for Survival Craft

FEATURES

- **Meets strict environmental requirements for GMDSS**
- **2 W output power for long lasting battery**
- **Primary (non-rechargeable) lithium battery pack, BP-234**
- **Highly visible yellow-coloured body**

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

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

Options for VHF Handheld Transceivers

BATTERY CASES / BATTERY PACKS / DESKTOP CHARGER

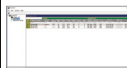| MODEL NAME	BP-291 LR6 (AA)×5 cells	BP-251*1 LR03 (AAA)×5 cells	BP-227AX (Li-ion) 7.4 V/1850 mAh (min.) 1950 mAh (typ.) For Intrinsically Safety	BP-285 (Li-ion) 7.2 V/1485 mAh (min.) 1570 mAh (typ.)	BP-245H (Li-ion) 7.2 V/2100 mAh (min.) 2200 mAh (typ.)	BP-252 (Li-ion) 7.4 V/940 mAh (min.) 980 mAh (typ.)	BP-290 (Li-ion) 7.2 V/1910 mAh (min.) 2010 mAh (typ.)	BP-234 (Lithium) 9.0 V/3300 mAh (non-rechargeable)	BC-220 Rapid charger
IC-M93D EURO				✔					✔
IC-M73EURO					✔				
IC-M35		✔				✔			
IC-M25EURO*2									
IC-M85E	✔						✔		
IC-M87ATEX			✔						
IC-GM1600E						✔ (On-board use only)		✔ (For survival craft)	

*1 The IC-M35 floats when used with most common brand AAA batteries. Battery weight varies by manufacturer. Please check your IC-M35 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-M25EURO, the user cannot replace the battery cell.

DESKTOP CHARGERS

MODEL NAME	BC-210 Rapid charger	BC-162 Rapid 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-119N Rapid charger	BC-152N Regular charger
IC-M93D EURO									
IC-M73EURO	✔								
IC-M35		✔	✔						
IC-M25EURO									
IC-M85E				✔	✔	✔	✔		
IC-M87ATEX								✔*3 (Use with AD-100)	✔*3
IC-GM1600E			✔ (On-board use only)						

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

MULTI-CHARGERS / AC ADAPTERS / USB CHARGER

MODEL NAME	BC-214*4 Rapid charger	BC-197*5 Rapid charger	BC-121N Rapid charger	BC-123SE/SUK 12 V/1 A	BC-145SE/SUK 16 V/0.93 A	BC-147SE 12 V/250 mA	BC-157S 12 V/7.5 A	BC-228 15 V/4 A	BC-217SE 5 V/1 A
IC-M93D EURO	✔ (Use with AD-133)			✔ (Use with BC-220)			✔ (Use with BC-214)		
IC-M73EURO		✔ (Use with AD-129)		✔ (Use with BC-210)			✔ (Use with BC-197)		
IC-M35				✔ (Use with BC-162)	✔ (Use with BC-162)	✔ (Use with BC-173)			
IC-M25EURO									✔
IC-M85E	✔ (Use with AD-132N)			✔ (Use with BC-219N, BC-225 or BC-227)			✔ (Use with BC-214)	✔ (Use with BC-226)	
IC-M87ATEX			✔*3 (Use with AD-100)		✔ (Use with BC-119N)	✔ (Use with BC-152N)	✔ (Use with BC-121N)		
IC-GM1600E						✔ (Use with BC-173, On-board use only)			

*4 Either AD-133 or AD-132N is supplied with the BC-214, depending on version. *5 AD-129 is supplied with the BC-197, depending on version.

CHARGER ADAPTERS / CIGARETTE LIGHTER CABLES / DC POWER CABLES / READER SOFTWARE / SPEAKER MICROPHONES

MODEL NAME	AD-100 AD-132N*4 AD-133*4 AD-129*5 (Photo shows AD-100)	CP-25H	CP-23L	OPC-515L	OPC-656	RS-BC225	HM-228 Waterproof	HM-165 Waterproof	HM-202 Waterproof
IC-M93D EURO	✔ (Use AD-133 with BC-214)	✔ (Use with BC-220)			✔ (Use with BC-214)		✔	✔	
IC-M73EURO	✔ (Use AD-129 with BC-197)	✔ (Use with BC-210)		✔ (Use with BC-210)	✔ (Use with BC-197)				✔
IC-M35								✔	
IC-M25EURO									
IC-M85E	✔ (Use AD-132N with BC-214)	✔ (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-M87ATEX	✔ (Use AD-100 with BC-119N/121N)								
IC-GM1600E									

9

Options for VHF Handheld Transceivers

MODEL NAME	SPEAKER-MICROPHONES					TIE-CLIP MICROPHONE	HEADSETS		
	HM-167 Waterproof	HM-213 Waterproof	HM-222 Waterproof	HM-236 Waterproof	HM-138 Waterproof	HM-163MC	HS-94 Earhook type with boom microphone	HS-95 Behind-the-head type	HS-97 Throat microphone type
IC-M93D EURO									
IC-M73EURO	✔								
IC-M35									
IC-M25EURO		✔							
IC-M85E			✔	✔		✔	✔ (Use with VS-5MC)	✔ (Use with VS-5MC)	✔ (Use with VS-5MC)
IC-M87ATEX					✔				
IC-GM1600E									

MODEL NAME	PTT SWITCH CABLE	EARPHONES							ACC ADAPTERS
	VS-5MC Manual PTT/VOX operation	EH-15B	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
IC-M93D EURO									
IC-M73EURO									
IC-M35									
IC-M25EURO									
IC-M85E	✔	✔ (Use with HM-163MC)	✔ (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)	✔
IC-M87ATEX									
IC-GM1600E									

MODEL NAME	ACC ADAPTERS	BELT CLIPS		BELT HANGERS			CARRYING CASES		ANTENNAS
	AD-135 3.5 mm jack earphone adapter	MB-86 MB-136 Swivel type	MB-98 MB-103/103Y MB-109 MB-133 MBB-3 Alligator	MB-96N Swivel type	MB-96F Fixed type	MB-96FL Long type	LC-187 Charging is possible while the case is attached	LC-188	FA-S59V FA-S64V FA-SC58V FA-SC59V
		Photo shows MB-86	Photo shows MB-109						FA-S59V (left) & FA-S64V (right)
IC-M93D EURO			✔ (Use MB-133)		✔	✔			FA-SC59V
IC-M73EURO		✔ (Use MB-86)	✔ (Use MB-103)	✔	✔	✔			FA-S59V or FA-S64V
IC-M35			✔ (Use MB-109)						FA-SC58V
IC-M25EURO			✔ (Use MB-133)						FA-SC59V
IC-M85E	✔	✔ (Use MB-136)	✔ (Use MBB-3)	✔	✔	✔	✔	✔	FA-SC58V
IC-M87ATEX		✔ (Use MB-86)	✔ (Use MB-98)		✔				FA-S59V
IC-GM1600E			✔ (Use with MB-103Y)						Fixed type

✔ : Applicable   : Not applicable

The IC-M87 ATEX Intrinsically Safe model 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.

Options for Fixed Mount Transceivers

VHF FIXED MOUNT TRANSCEIVERS

MODEL NAME	HAND MICROPHONES			COMMAND HEAD™	COMMANDMIC™			HORN SPEAKER	HANDSET
	HM-205B/RB/W Speaker microphone	HM-235B/W	HM-214V	RC-M600	HM-229B/W	HM-195B/SW	HM-195GB/GW	SP-37	HS-98 (#16)
IC-M605EURO	✔ (Use with HM-205RB)			✔	✔			✔	
IC-M506EURO	✔					✔	✔	✔	
IC-M423G	✔					✔	✔	✔	
IC-M400BB						✔	✔	✔	
IC-M330GE		✔						✔	
IC-M330E		✔						✔	
GM600			✔						✔

MODEL NAME	CONNECTION CABLE	EXTENSION CABLES			DC-DC CONVERTER	FLUSH MOUNT KITS	VOICE SCRAMBLER	GPS ANTENNA
	OPC-2384 12-pin to 8-pin for use with COMMANDMIC	OPC-2377 10 m; 32.8 ft cable	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 / PS-310 (#02) 12 V input	MB-75 MB-132 MBF-5	UT-112 Total of 32 voice scramble codes available	UX-241
IC-M605EURO	✔ (Use with HM-229B/W)	✔ (Use with RC-M600)	✔ (Use with HM-229B/W, HM-205RB)	✔ (For use with HM-205RB)		✔ (Use with MB-132, MB-75)	✔	✔
IC-M506EURO			✔ (Use with COMMANDMIC)	✔ (For use with rear mic version)		✔ (Use with MB-132, MB-75)	✔	
IC-M423G			✔ (Use with COMMANDMIC)			✔ (Use with MB-132)		
IC-M400BB			✔ (Use with COMMANDMIC)					
IC-M330GE						✔ (Use with MBF-5)		
IC-M330E						✔ (Use with MBF-5)		
GM600					✔			

AIS TRANSPONDER

MODEL NAME	FLUSH MOUNT KITS		GPS RECEIVER
	MB-75	MB-132	MXG-5000S
MA-500TR	✔	✔	✔

MF/HF FIXED MOUNT TRANSCEIVER

MODEL NAME	HAND MICROPHONE	HANDSET	EXTERNAL SPEAKER	ANTENNA TUNER	SHIELDED CONTROL CABLE	MOUNTING BRACKET
	HM-214H	HS-98 (#17)	SP-24E	AT-141 IP56	OPC-1465 10 m; 32.8 ft	MB-108
GM800	✔	✔	✔	✔	✔ (Use with AT-141)	✔

✔ : Applicable   : Not applicable

Options for IP Advanced Radio System

MODEL NAME	BATTERY PACKS		BATTERY CASE	RAPID CHARGER	MULTI-CHARGER	SPEAKER-MICROPHONES		EARPHONE-MICROPHONES	
	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-211 + BC-157S	HM-183LS Submersible	HM-186LS	HM-153LS	HM-166LS
IP100H	✔	✔	✔	✔	✔	✔	✔	✔	✔

MODEL NAME	HEADSETS (Full-duplex operation)		HEADSETS (Simplex operation)			PLUG ADAPTER CABLES		PTT SWITCH CABLES	
	HS-102 Earphone type	HS-85 Over-the-head type with PTT switch	HS-94 Earhook type with boom microphone	HS-95 Behind-the-head type	HS-97 Throat microphone type	OPC-2006LS For VOX operation	OPC-2144 Slim L-type plug	OPC-2359	OPC-2328 For manual PTT operation
IP100H	✔ (Use with OPC-2359)	✔ (Use with OPC-2144)	✔ (Use with OPC-2006LS or OPC-2328)	✔ (Use with OPC-2006LS or OPC-2328)	✔ (Use with OPC-2006LS or OPC-2328)	✔	✔	✔	✔

MODEL NAME	AC ADAPTERS		AUDIO CONNECTION CABLES	REMOTE COMMUNICATOR	DIGITAL VOICE CONVERTER	ACCESS POINT MANAGER	DESKTOP MICROPHONE	HAND MICROPHONE	MICROPHONE ADAPTER
	BC-207S 12 V/3.5 A	BC-147SE 12 V/250 mA	OPC-2273* For VHF radio OPC-2276* For HM-152 or SM-26 * 5 m; 16.4 ft — Photo shows OPC-2276	RC-FS10	CT-24	RS-AP3	SM-26	HM-152	CT-23
IP100FS		✔					✔ (Use with CT-23)	✔ (Use with CT-23)	✔
AP-90M	✔					✔			
IP1000C									
VE-PG3	✔		✔	✔	✔		✔ (Use with OPC-2276)	✔ (Use with OPC-2276)	

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

Specifications for VHF Handheld Transceivers

		IC-M93D EURO	IC-M73EURO	IC-M35	IC-M25EURO	IC-M85E	IC-M87ATEX	IC-GM1600E
Frequency range (Unit: MHz)		Tx: 156.000–161.450, 156.000–161.600* Rx: 156.000–163.425 CH70: 156.525 (* For only HOL version)	Tx: 156.000–161.450 Rx:156.000–163.425	Tx: 156.000–161.450 Rx:156.000–163.425	Tx: 156.000–161.450 Rx:156.000–163.425	Tx: 156.000–161.450 Rx:156.000–163.425 Tx/RX: 136–174 (PMR)	Tx: 156.000–161.450 Rx:156.000–163.425 Tx/RX: 146–174 (PMR)	Tx/Rx: 156.300–156.875
Dimensions (projections not included; W × H × D)		57.0 × 144.6 × 38.5 mm	52.5 × 125 × 30 mm	62 × 139.5 × 43 mm	56.6 × 134.2 × 30.5 mm	56 × 92 × 29 mm	62 × 97 × 39 mm	65 × 145 × 44 mm
Weight (approx.)		300 g (With BP-285, FA-SC59V and MB-133)	320 g (With BP-245H, MB-103 and FA-S64V)	295 g (With BP-252, MB-109 and FA-SC58V)	220 g (With MB-133 and FA-SC59V)	246 g (With BP-290, FA-SC58V and MBB-3)	280 g (With BP-227AX)	385 g (With BP-234)
Current drain	**Transmit (High)**	1.5 A	1.5 A typical	1.5 A typical	2.3 A (at 3.7 V DC)	1.5 A	0.7 A typical	1.0 A/0.7 A (2 W/1 W)
	Max. audio	250 mA typ. (External SP) 450 mA typ. (Internal SP)	250 mA typ. (External SP) 450 mA typ. (Internal SP)	200 mA typ. (External SP) 300 mA typ. (Internal SP)	300 mA typ. (External SP) 200 mA typ. (Internal SP)	450 mA	200 mA typical	200 mA typical
Sensitivity (at 20 dB SINAD; emf)		–6 dBµ typical	–4 dBµ typical	–2 dBµ typical	–6 dBµ typical	–4 dBµ emf typ. (Marine) –4 dBµ emf typ. (PMR: Wide) –2 dBµ emf typ. (PMR: Narrow)	–2 dBµ typical (Marine) –4 dBµ typical (PMR)	–2 dBµ typical
Intermodulation rejection		68 dB	68 dB	68 dB	68 dB	68 dB (Marine) 65 dB (PMR)	68 dB (Marine) 65 dB (PMR)	68 dB
Audio output power (10% distortion)	**External SP**	200 mW (8 Ω load)	200 mW (8 Ω load)	200 mW (8 Ω load)	200 mW typ. (4 Ω load)	700 mW typ. (8 Ω load @ 1 kHz)	200 mW (8 Ω load)	200 mW (8 Ω load)
	Internal SP @1 kHz	900 mW typ. (12 Ω load)	700 mW typ. (8 Ω load)	700 mW typ. (16 Ω load)	550 mW typ. (12 Ω load)	700 mW typ. (12 Ω load)	350 mW typ. (8 Ω load)	350 mW typ. (8 Ω load)
RF output power		5 W/1 W/0.5 W* (* For only FRG version)	6 W/3 W/1 W/0.5 W* (* For only FRG version)	6 W/1 W/0.5 W* (* For only FRG version)	5 W/1 W/0.5 W* (* For only FRG version)	5 W/3 W/1 W	1 W	2 W/1 W
Operating time (approx.)*		9 hours (with BP-285)	Plus version 17 hours Basic version 20 hours (with BP-245H)	8 hours (with BP-252)	11 hours (with built-in battery)	14 hours (with BP-290)	19 hours (with BP-227AX)	Specified as IMO Res. MSC.149(77)
Waterproof 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.)	IP67 (1 m depth/30 min.)	IPX7 (1 m depth/30 min.)	Specified as IMO Res. MSC.149(77)
Integrated GNSS receiver		✔	–	–	–	–	–	–
Float'n Flash		✔	–	Buoyant only	✔	–	–	–

Measurements made in accordance with EN 302-885 for IC-M93D EURO. EN 301-178 for IC-M73EURO, IC-M35 and IC-M25EURO. EN 301-178 or EN 300 086 for IC-M85E and M87ATEX PMR. EN 301-178-2, EN 300 086 or IEC61097-12 for IC-GM1600E.
* Typical operation, Tx:Rx:Stand-by=5:5:90

ATEX Intrinsically Safe versions

Approved classes

The approved rating is II2G Ex ib IIA T3 Gb.
Special conditions for use: • Must be used with BP-227AX
Approved accessories: • Speaker-microphone HM-138
Either the jack cover or HM-138 must be attached to the connector.
EN 60079-0: 2012 + A11: 2013, EN 60079-11: 2012

Please Note: The optional chargers are not approved as intrinsically safe.
The battery should only be charged in non hazardous areas.
The battery should only be changed in non hazardous areas.
Ambient operating temperature: –20°C to +55°C
DO NOT use the transceiver with any other equipment not specified in the option list (Pages 2).

Applicable gas and vapor types

Temp.	T1	T2	T3
Class IIA	Acetone, Ethane, Ethylacetate, Ammonia, Benzene, Acetic acid, Carbon monoxide, Methanol, Propane, Toluene	Ethyl alcohol, i-amyl acetate, n-butan, n-butyl alcohol	Benzine, Diesel-fuel, Aviation-fuel, Heating-oils, n-hexane

* Please ensure the IC-M87 ATEX rating is acceptable for the intended place of use.

Specifications for Fixed Mount Transceivers

VHF FIXED MOUNT TRANSCEIVERS

		IC-M605EURO	IC-M506EURO	IC-M423G	IC-M400BB	IC-M330GE	IC-M330E	GM600
Frequency range		Tx: 156.000–161.600 MHz Rx: 156.000–163.425 MHz CH 70: 156.525 MHz AIS 1: 161.975 MHz AIS 2: 162.025 MHz	Tx: 156.000–161.450 MHz Rx: 156.000–163.425 MHz CH 70: 156.525 MHz AIS 1: 161.975 MHz AIS 2: 162.025 MHz	Tx: 156.000–161.450 MHz Rx: 156.000–163.425 MHz CH 70: 156.525 MHz	Tx: 156.000–161.450 MHz Rx: 156.000–163.425 MHz CH 70: 156.525 MHz	Tx: 156.000–162.000 MHz Rx: 156.000–163.425 MHz CH70: 156.525 MHz		Tx: 156.025–161.600 MHz Rx: 156.025–162.000 MHz CH70: 156.525 MHz
Power supply requirement		13.8 V DC (10.8–15.6 V DC)	13.8 V DC (10.8–15.6 V DC)	13.8 V DC (10.8–15.6 V DC)	13.8 V DC (10.8–15.6 V DC)	13.8 V DC (10.8–15.6 V DC)		24 V DC (21.6–31.2 V DC)*[1]
Dimensions (projections not included; W × H × D)		274 × 114 × 121.5 mm	178.9 × 113.9 × 113.8 mm	180 × 82 × 119.9 mm	IC-M400BB 216 × 79 × 125 mm HM-195B/SW 67.5 × 144.5 × 37 mm	156.5 × 66.5 × 110.1 mm		274 × 114 × 121.5 mm
Weight (approx.)		1.7 kg	1.3 kg	1.2 kg	IC-M400BB 830 g HM-195B/SW 400 g	730 g		1.6 kg
Current drain	Transmit (High)	5.5 A	5.5 A	5.5 A	5.5 A	5 A		3.3 A*[1]
	Max. audio	5 A typ. (Ext SP, RX hailer ON) 7 A max. (Ext SP, RX hailer ON, HM-229×3)	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		2.0 A*[1]
Sensitivity	**Main** (20 dB SINAD) **DSC** (1% BER)	−10 dBμ emf typ. −4 dBμ emf typ.	−5 dBμ emf typ. −4 dBμ emf typ.	−5 dBμ emf typ. −4 dBμ emf typ.	−5 dBμ emf typ. −4 dBμ emf typ.	−5 dBμ emf typ. −5 dBμ emf typ.		−7 dBμ emf typ. −7 dBμ emf typ.
Intermodulation	**Main** **DSC** (1% BER)	80 dB typ. More than 68 dBμ emf	More than 75 dB More than 68 dBμ emf	More than 68 dB More than 68 dBμ emf	More than 68 dB More than 68 dBμ emf	More than 70 dB More than 68 dBμ emf		More than 75 dB 73 dBμ emf
Audio output power (10% dist./4 Ω load)		More than 15W. (External speaker)	15 W (External speaker)	More than 10 W (External speaker)	More than 2 W (HM-195B/SW) More than 10 W (RX Speaker)	More than 2 W		10 W (External speaker) 2 W (Internal speaker)
RF output power		25 W/1 W	25 W/1 W	25 W/1 W	25 W/1 W	25 W/1 W		25 W/1 W
NMEA interface		NMEA 2000, NMEA 0183/0183-HS × 2	NMEA 2000/0183	NMEA 0183	NMEA 0183	NMEA 0183		IEC 61162-1
AIS Receiver		Built-in	Built-in	–	–	–		–
GPS Receiver		Built-in	External	Built-in	External	Built-in	External	External

Measurements made in accordance with EN 301 025-2, -3 for IC-M605EURO, IC-M506EURO, IC-M423G, IC-M400BB, IC-M330GE and IC-M330E. EN301 925 for GM600. *[1] With PS-310 (#01)

AIS TRANSPONDER

	MA-500TR
Frequency range	161.975, 162.025 MHz (default), 156.025–162.025 MHz
Type of emission	16K0GXW (GMSK)
Power supply requirement	12.0 V DC (9.6–15.6 V)
Dimensions (projections not included; W × H × D)	165 × 110 × 123 mm
Weight (approx.)	1.0 kg
Current drain Transmit	1.5 A
Receive	0.7 A
Sensitivity (20% error rate)	−110 dBm
Intermodulation rejection	65 dB
RF output power	2 W

Measurements made in accordance with IEC62287-1.

GPS RECEIVER

	MXG-5000S
Receiving frequency	1575.42 MHz
Receiving channels	66
Receiving code	L1, C/A-codes, SPS
Satellite differential type (SBAS)	WAAS, EGNOS, MSAS, GAGAN
Time to first fix Cold start	40 Sec. typ.
Warm start	4 Sec. typ.
Power supply	4.75–5.25 V DC (Supplied from MA-500TR or MXP-5000)
Dimensions (projections not included)	78 × 96.5 mm (Diameter × Height)
Weight (approx.)	460 g
Usable temperature range	−20°C to +60°C
Cable length (approx.)	10 m; 32.8 ft

MF/HF FIXED MOUNT TRANSCEIVER

		GM800
Frequency range		Tx: 1.6–27.5000 MHz (ITU marine channels) Rx: 0.5–29.9999 MHz (continuously) DSC: 2.1875, 4.2075, 6.3120, 8.4145, 12.5770, 16.8045 MHz
Current drain	Tx/Rx	J3E (USB/LSB*), H3E* (AM), J2B* (AFSK), F1B (FSK), A1A* (CW)
	DSC	F1B
Power supply requirement		24 V DC (21.6–31.2 V DC)
Dimensions (projections not included; W × H × D)	Main unit	367 × 95 × 260 mm
	Controller	274 × 114 × 86 mm
Weight (approx.)	Main unit	8.6 kg
	Controller	760 g
Current drain	Transmit (Max. power)	Less than 20 A (at 1.1 kHz and 1.7 kHz two tones)
	Receive (Max. audio)	Less than 3.0 A
Sensitivity	J3E, A1A (20 dB SINAD)	16 dBμV emf (1.6–3.999 MHz) 11 dBμV emf (4.0–29.999 MHz)
	J2B, F1B (1% error rate)	3 dBμV emf (1.6–2.099 MHz) 0 dBμV emf (2.1–27.5 MHz)
	H3E (20 dB SINAD)	30 dBμV emf (1.6–3.999 MHz)
	DSC (J2B) (1% error rate)	0 dBμV emf
RF output power		125 W (4.0–27.5 MHz) (at AT-141 output power) 85 W (1.6–3.999 MHz) (at AT-141 output power)

* Receive only.

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Specifications for IP Advanced Radio System

	IP100H
Wireless standards	IEEE 802.11 a/b/g/n
Frequency coverage*	2.4–2.4835 GHz, 5.15–5.35, 5.47–5.85 GHz
Dimensions (W×H×D; projections not included)	58 × 95 × 26.4 mm ; 2.3 × 3.7 × 1.0 in (with BP-271)
Weight (approx.)	205 g; 7.2 oz (with BP-271 and antenna)
RF output power	Less than 10 mW/MHz
Voice Codec	G.711μ-law (64 kbps)
AF output power — Internal SP	400 mW (typ., 16Ω at 10% distortion)
AF output power — External SP	200 mW (typ., 8Ω at 10% distortion)
Security	WEP (64/128-bit), WPA-PSK (TKIP/AES), WPA2-PSK (TKIP/AES)
Operating time (1:1:8 duty cycle)	More than 20 hours (with BP-271)

* Authorized frequency range and channels may differ depending on country.

	AP-90M
Power supply	12V DC ±10% or PoE (IEEE802.3af compatible)
Dimensions (W×H×D; projections not included)	120 × 29 × 103 mm ; 4.7 × 1.1 × 4.1 in
Weight (approx.)	300 g; 10.6 oz (Main unit only)
Wired LAN	RJ-45 connector × 1 1000BASE-T/100BASE-TX/ 10BASE-T (Auto MDI/MDI-X)
Wireless LAN	IEEE 802.11 a/b/g/n/ac
Frequency coverage*	2.4–2.4835 GHz, 5.15–5.35, 5.47–5.85 GHz
Data rates (theoretical value)	11 Mbps, 54 Mbps, 300 Mbps, 866.7 Mbps
Security	WEP (64/128/152-bit), WPA, WPA2, WPA-PSK, WPA2-PSK

* Authorized frequency range and channels may differ depending on country.

	IP100FS
Operating system	Windows® 10 (32-bit/64-bit), Windows® 8/Windows® 8.1 (32-bit/64-bit) Windows® 7 (32-bit/64-bit) SP1 or later, (Except for Windows® RT)
CPU	Intel® Core™ 2 Duo Processor E6600/ 2.4 GHz or better
Memory	2 GB or higher
Hard disk space	1 GB of disk space (for saving log files)
Audio	DirectSound compatible audio (Frequency response up to 20 kHz, sampling rate 48 kHz)
Display resolution	1920×1080 pixel recommended 1024×768 pixel minimum
Other	USB 2.0 port, 10 Mbps or faster Ethernet interface, speaker, microphone or headset

	IP1000C
Power supply	100–240 V AC (with supplied AC adapter)
Dimensions (W×H×D; projections not included)	232 × 38 × 168 mm; 9.1 × 1.5 × 6.6 in
Weight (approx.)	750 g; 1.7 lb (Main unit only)
LAN	RJ-45 connector × 4 1000BASE-T/100BASE-TX/ 10BASE-T (AUTO MDI/MDI-X)
USB	Standard A receptacles ×2
Maintenance console	RS-232C (RJ-11) connector

	VE-PG3
Power supply	12 V DC ±10%, 16 W Max. (with supplied AC adapter)
Operating temperature range	0˚C to +40˚C; 32˚F to +104˚F
Operating humidity	5% to 95% RH
Dimensions (W×H×D) (Projections are not included)	232 × 38 × 168 mm; 9.1 × 1.5 × 6.6 in
Weight (main unit only)	800 g; 1.76 lb (approx.)
Regulatory compliance	FCC (Part 15 Class B/Part 68), TIA 868-B ICES-003, ICCS-03 CE Mark, ETSI ES 203 021, ETSI EG 201 121 (Advisory Note)
LAN/WAN	RJ-45 connectors ×2 10BASE-T/100BASE-TX
Telephone set	RJ-11 connector ×1
Telephone line	RJ-11 connector ×2
Transceiver/repeater	Quick connectors ×2
External equipment	Quick connectors ×2
USB	Standard A receptacle ×2