ICOM

60th Anniversary

Professional Radios

A COMPREHENSIVE RANGE OF PROFESSIONAL RADIO SOLUTIONS THAT FLEXIBLY MEET YOUR NEEDS

No matter what your communication needs may be, we have the system for you. We go beyond traditional VHF and UHF two-way radios providing peace of mind and keep you connected anywhere and at anytime. Icom continues developing innovative solutions in response to diversifying user needs and can now offer a wide range of two-way radio platforms from analog, digital, wireless LAN, LTE to satellite as a true comprehensive wireless communications company.

IP Radio – LTE & Hybrid

Icom's IP radio (LTE) provides instantaneous, wide area communication using an LTE (4G) and 3G network*. It enables full-duplex communication, which allows telephone style conversations. The Hybrid IP radio can receive both communications from an LTE radio group and IDAS™ (or analog) group.

* 3G service availability depends on the network operator. Network coverage provided by a custom SIM card.

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 where there are no mobile phones or landline network infrastructure. Even if terrestrial network infrastructure is rendered unusable by human or natural disasters, Satellite PTT can provide a stable back-up, independent from other networks.

P25 Radio

Icom P25 radios meet public safety customers' demanding needs and afford them the opportunity to make the most of their budgets, with cost-effective digital two-way radio communications products. Communicating with Icom's P25 radios using conventional analog, digital, or mixed mode operation as well as optional Phase 1 and Phase 2 trunking allows customers the ability to upgrade their fleet at their own pace.

Digital Radio

IDAS™ is Icom's digital land mobile radio system using the NXDN™ or dPMR™ common air interface. IDAS™ offers a complete system of handheld radios, mobile radios, repeaters, network interface/trunking controllers, remote communicator, system manager software and various accessories. IDAS™ is a proven total digital solution that system owners or operators can grow into as their time and budgets allow.

Analog Radio

Radio technologies and know-how cultivated for over 60 years have been applied to professional analog radio products. Rugged, waterproof, easy to use, clear and powerful audio in a compact design, Icom's analog products provide high performance and reliable communication. They are cost effective solutions that you can rely on and help you improve productivity and efficiency.

RoIP Gateway

The VE-PG4 is a versatile Radio over IP Gateway device that provides a seamless solution interconnecting various communication systems irrespective of standards and distance such as satellite PTT radio, LTE radio, WLAN radio, IDAS™ digital radio, analog radio, IP phones and more. The VE-PG4 works as a general IP backbone converting received audio to transmit from other radios.
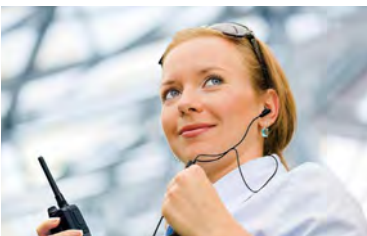
IP Radio – WLAN

Wireless LAN radio requires no licence to use and allows you to have simultaneous full-duplex communications over a WLAN network. It offers secure communications with encryption and different types of calls such as individual, all, area, priority, group, status calls and short data messaging. You can also connect an IP phone or conventional radio equipment when using it with the RoIP gateway.

Innovative IP Radios (LTE) with Licensed Professional Radio Mode

The hybrid IP radio, IP730D and IP740D can receive both communications from an IP radio group and IDAS™ (or analog) group. This radio provides nationwide coverage over LTE networks and conventional VHF/UHF professional radio mode (IDAS™ digital/analog mode).

HYBRID
LTE ✕ IDAS

Talk Listen ™
Simultaneous

Check the Icom website for more information.

IP730D/IP740D

Hybrid Handheld IP Radio for Local & Nationwide Communications

• Simultaneous TalkListen™ in LTE Mode • 1500 mW of powerful audio*1 • IP67 waterproofing and dust-tight • 24 hours of long lasting battery life*2 • Emergency Call, Lone Worker and Man Down functions • Digital Voice Recording/Playback • Vibration alert function • Built-in Bluetooth® capability depending on version • GPS Data Transmission capability in LTE mode
• AquaQuake™ function (Also see page 11 for IDAS™ features)

*1 At 10% audio distortion
*2 LTE Mode, TX : RX : standby = 5 : 5 : 90. The battery life may be shorter, depending on the distance with the cellular station or the signal strength.
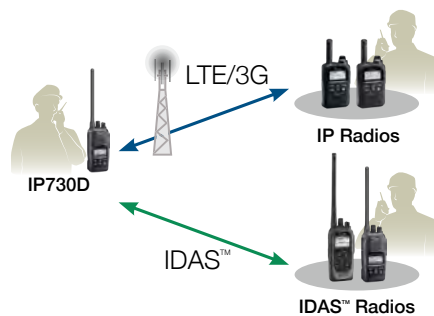
Dual Mode Operation with Main and Sub PTT Buttons

The IP730D series has two PTT buttons for main PTT and sub PTT. You can use one for LTE communication and the other for an IDAS™/Analog channel to answer the call.

Expand an existing IDAS™ system with an LTE network

LTE/3G
IP Radios
IP730D
IDAS™
IDAS™ Radios

Communication redundancy, when network congestion occurs or network service is temporarily unavailable

LTE/3G
IDAS™
IP730D   IP730D
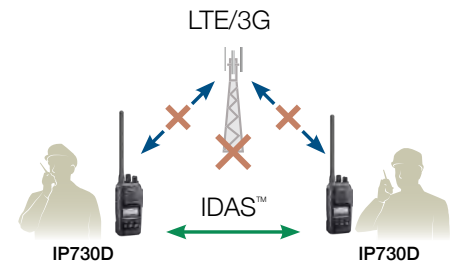
Bridge Function

The Bridge function* relays received IDAS™ digital audio to the IP radio group, while transferring the IP radio conversations to the IDAS™ group.

* When using the Bridge function, operating time will be shorter and output power of the radio is reduced to 1 W. The Bridge function may be prohibited in some countries. Please check the legal requirements in your country before using this function.

IDAS™ Group ⟷ IP730D ⟷ LTE Group

IDAS™
LTE/3G
IDAS™ Radios   IP730D   IP Radios

* Network coverage provided by a custom SIM card. Service availability depends on the country.

Icom IP740D
Talkgroup 1
Address | Function

iCOM

IP ADVANCED RADIO SYSTEM

3

IP Radios – LTE

Instant Wide Area Coverage Over an LTE (4G) and 3G Network*

Simultaneous TalkListen™

Talk Listen™ Simultaneous

Icom's IP Radios provide Simultaneous TalkListen™, which allow users to talk and listen at the same time. This allows smooth, telephone-like conversation, or the ability to break into a call if required.

Multiple-user Communication

Multiple users in the call groups can initiate calls instantaneously. This removes the need to wait for available channels to communicate.

One-to-many Communication

Unlike mobile cell phones, IP radio users can immediately start talking to all the radios in the same talkgroup, with just a push of a "PTT" transmit button.

* Network coverage provided by a custom SIM card.
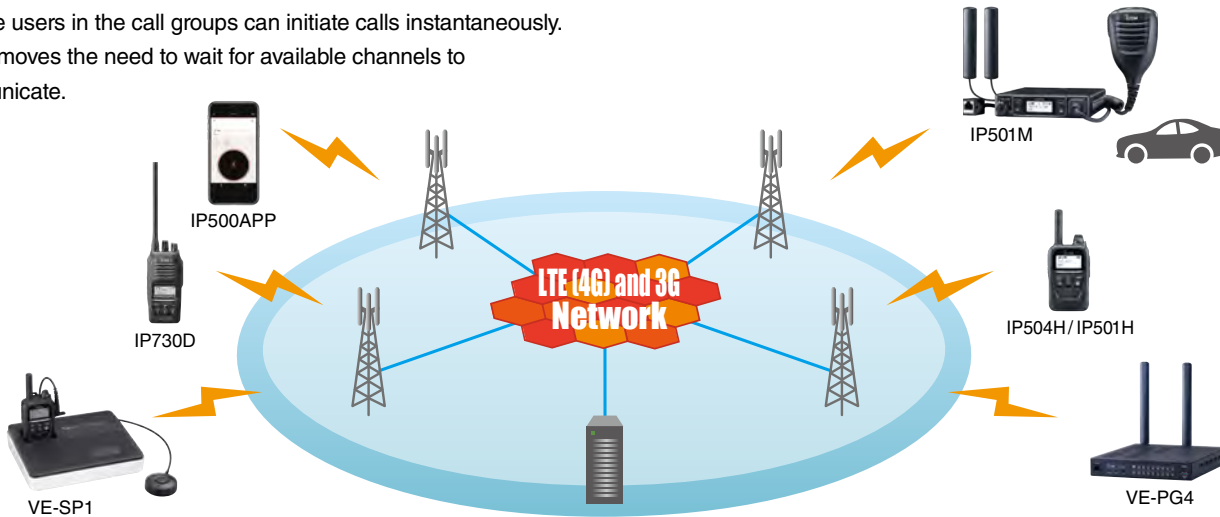 3G service availability depends on the network operator.

IP500APP

IP730D

IP501M

LTE (4G) and 3G Network

IP504H / IP501H

VE-SP1

VE-PG4

IP504H/IP501H(USA)/IP503H(EXPORT)

Compact and Durable IP Handheld

- 900 mW loud and high quality audio (IP504H/IP503H) • IP67 dust-tight and waterproof
- Emergency Call, Lone Worker and Man Down functions • Voice Record/Playback functions
- Vibration Alert function notifies of incoming calls • Built-in Bluetooth® capability depending on version and GPS • Simultaneous TalkListen™ function • 17 hours battery life (with BP-272)
- Provisioning/FOTA (Firmware Over-the-Air)

Photo shows IP501H

IP501M

Mobile IP Radio Interoperable with the IP504H / IP501H

- Built-in Bluetooth® capability (depending on version) and GPS   • Preprogrammed message transmission and reception • An Ethernet port for data communication (The optional VE-PG4 is required.) • Emergency call and Lone Worker functions • Noise Cancelling function (TX only)
- IP54 • D-SUB 25-PIN connector with the optional OPC-2407 cable for interfacing other devices and various controls • Simultaneous TalkListen™ function • Provisioning/FOTA (Firmware Over-the-Air)

VE–SP1

Dispatch Converter

- Portable operation with eight LR6 (AA) cells • Built-in loudspeaker and high sensitivity external microphone
- Charges the radio when using the AC adapter

* The IP radio is not supplied.

IP500APP

iOS™/Android™ Application to Communicate with IP Radios*

- Full-Duplex communication • Short text message • Voice Recording/Playback function
- Address book • TX/RX history

* IP500APP for iOS™: iOS™ version 12 or later
  IP500APP for Android™: Android™ version 8.0 or later
  IP500APP service may not be available depending on the country.

4

Real-Time Communications Across the Globe

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.

Iridium® satellite

Iridium® satellite

Iridium® satellite

LAN cable

IC-SAT100

IC-SAT100M

IC-SAT100

IC-SAT100

IC-SAT100M

LAN cable

RoIP gateway VE-PG4

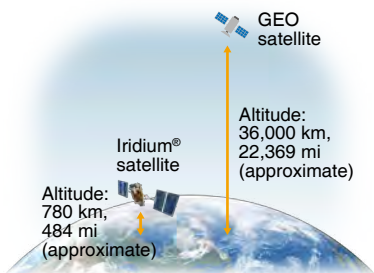| RoIP | ···· IDAS™ ···· Analog Transceiver ···· Other Communication Systems |
IP Transceivers	···· WLAN Transceiver ···· IP Transceiver
IP Phone system	
External Equipment	···· USB Drive ···· Microphone ···· PA System ···· Sensors

One-to-Many Communications

Unlike satellite phones, IC-SAT100/M users can immediately start talking to all the radios in the same talkgroup, with just a push of the transmit (PTT) button.

Total Global Coverage, including the Poles[1]
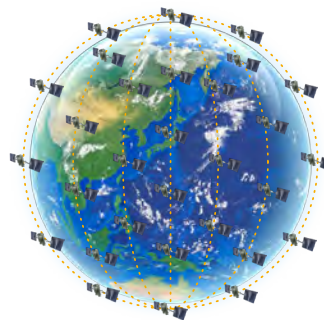
The Iridium® satellite network covers the entire globe including both poles, and can provide wide area global communications anywhere on the planet.

Real-Time, Low-Latency Communication

GEO satellite

Altitude: 36,000 km, 22,369 mi (approximate)

Iridium® satellite

Altitude: 780 km, 484 mi (approximate)

Using 66 Low Earth Orbit (LEO) Iridium® satellites, the IC-SAT100/M provides low-latency communication, and broader, more reliable network coverage, compared to Geosynchronous Equatorial Orbit (GEO) satellites.

Conventional Radios and IP Phones Interconnection[2]

With a VE-PG4 RoIP gateway, the IC-SAT100/M can interconnect with an IP phone, IP, WLAN, IDAS™ digital (Type-D multi-site trunking and conventional systems.) and analog transceivers.

*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.

iridium® connected

IC-SAT100
Compact Handheld

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

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

FA-S103U   AH-40

BC-247   HM-222H

Docking Station for In-Vehicle Use

IC-SAT100M
In-Building and Vehicle Use

- Easy wiring works between the antenna unit (with RF unit) and main unit using a LAN cable (Cat 5e)*[1]
- Power supply requirement: 13.2 V/26.4 V DC
- Antenna unit with RF unit: IP67, Main unit: IP54, Microphone: IP55 • 1500 mW audio output
- Voice Recording function • Short Data Message
- Built-in Bluetooth® capability depending on version
- Integrated GPS receiver • AES 256-bit encryption
- Multiple language display
- For vehicle use, optional AH-40 must be used for optimal performance and environmental resilience.

*[1] User supplied LAN cable is required to replace the supplied 20 m, 65.6 ft LAN cable. Maximum 100 m, 328 ft.
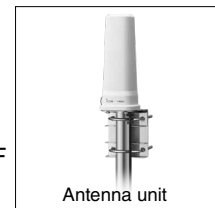
Antenna unit

Microphone ▶

◀ Main unit

Types of External Antennas for IC-SAT100

By replacing the IC-SAT100 antenna with an external antenna, satellite communication is possible even from a vehicle or building. Select the most suitable antenna according to the installation location and application.

AH-40
1.5~6.5 m
4.9~21.3 ft
For Vehicle and 1 Story buildings*[1]*[4]

AH-38
10~20 m
32.8~65.6 ft
For 2 to 6 Story Buildings*[2]*[4]

AH-41
Max. 169 m
Max. 554.5 ft
For 7 to 50 Story Buildings*[3]*[4]

IC-SAT100M In-Building Use

You can flexibly install the IC-SAT100M and the antenna unit (with RF unit) with only a LAN cable (Maximum 100 m, 328 ft).*[5]

20~100 m
65.5~328 ft — LAN

For 7 to 50 Story Buildings*[4]*[5]

*[1] Optional OPC-2422 coaxial cable (5 m, 16.4 ft) is required for more than 1.5 m, 4.9 ft extension.
*[2] Optional OPC-2113 or user supplied coaxial cable is separately required. Cable loss requirement is less than 3.4 dB loss at 1621 MHz.
*[3] Optional OPC-2462 or user supplied coaxial cable is separately required. Cable loss requirement is 12.5 - 13.0 dB loss at 1621 MHz.
*[4] The distance from the main unit to the antenna is a rough guideline. The height of the building is an estimate assuming that the height of one floor is 3.5 m, 11.5 ft .
*[5] User supplied LAN cable is required to replace the supplied 20 m, 65.6 ft LAN cable. Connect your PoE injector or switch to extend the distance between the main unit and the antenna unit. (802.3at compatible)

Check the Icom website for more information.

6

Full-Duplex Communication That Works Over a Wireless IP Network

Wireless Communication System

By deploying access points across an existing IP network, the WLAN radio system allows you to communicate from anywhere in a facility. The IP110H can access the nearest access point, and roam between access points.

Simultaneous TalkListen™ Function

The Simultaneous TalkListen™ function provides full-duplex one-to-many communication which users can talk and receive at the same time like a telephone style conversation.

Individual, Group, All or Area Communication

Staff spread across multiple rooms can communicate seamlessly. The WLAN radio can receive short data messages with a vibration alert from a PC installed with IP100FS.

Interconnect between IDAS™ and IP Phone Systems

With the VE-PG4 RoIP gateway, the WLAN radio system can interconnect with an IP phone system as well as digital, analog, LTE, and satellite radio systems.

dPMR™ mode 2, NXDN™ conventional or Type-D multi-site trunking

IP Phone System

External equipment (Public Address System)

RoIP Gateway VE-PG4

Controller IP1100CV*

IP110H

Access Point

IP Network (Private or VPN)

Access Point

Internet (VPN)

Access Point

Remote Communicator IP100FS

Access Point

IP110H

Access Point

IP110H

* The VE-PG4 has a built-in controller function (equivalent to the IP1100CV function), capable of controlling up to 50 terminals.

The figures leave out some equipment, such as a network switch, to simplify the information.

IP110H

Compact Wireless LAN Radio with Simultaneous TalkListen™ Function

• Licence-free wireless LAN radio using IEEE 802.11 a/b/g/n/ac standards (2.4 GHz and 5 GHz)*
• WPA/WPA2/WPA-PSK/WPA2-PSK/WEP security • IP67/IP54 • 1000 mW loud audio
• Voice recorder function • Vibration alert function • Motion/Stationary Detection, Man Down and Lone Worker functions for emergency call • Text message reception • Status messages • 20 hours battery life • USB Type-C™ charging • Provisioning/FOTA (Firmware Over-the-Air)
* Authorized frequency range and channels may differ depending on the country.

IP100FS

Remote Communicator

• Obtain location information of each IP110H
• Can be installed on a Windows™ tablet PC as well as laptop PC

IP1100CV

WLAN Transceiver Controller

• Capable of controlling up to 300 units WLAN radios (including IP100FS)
• 2.5 Gbps WAN Port and VPN Router function
• Up to 500 call addresses for individual and group calls
• Calls can be recorded to an external USB device

P25 Handheld Radios / Mobile Radios / Software

IC−F7000 Series

P25 Conventional and Trunking, Smallest and Lightest of Its Class

• P25 Phase 1/2 Trunking capabilies • 1024 channels • IP68
• Color display • Integrated GPS • Bluetooth® capability depending on version • microSD card slot • Voice recording • OTAP • USB connector • Active noise canceller • FIPS certified AES/DES encryption*1 • ARC4 40-bit software encryption • OTAR • 14 hours battery life (with BP-284) • Motion/Stationary sensor • Man down/Lone worker
• Vibration alert • Voice announcement • 1300 mW loud audio
• Link Layer Authentication function*2 (also known as P25 Radio Authentication)
*1 Optional   *2 Available soon

IC−F7500 Series

P25 Conventional and Phase 1/2 Trunking Rugged Mobile Radio with Superior Class Leading Audio

• P25 Phase 1/2 Trunking capabilies • 1024 channels
• Flexible configurations with detachable front panel • IP55
• Color display • Integrated GPS • Bluetooth® capability depending on version
• microSD card slot • Voice recording • OTAP • USB connector
• Active noise canceller • FIPS certified AES/DES encryption*1 • ARC4 40-bit software encryption • OTAR • Lone worker • Voice announcement
• Link Layer Authentication function*2 (also known as P25 Radio Authentication)
*1 Optional   *2 Available soon

CS−OTPM2

Easily Reconfigure Radios with Over-the-Air Programming

• Radios can be reconfigured in a short period of time by transmitting only the updates
• Up to 10,000 sessions are logged for review and rescheduling • Both original and new data can be kept in the radios until the OTAP process is completed
• System operator can change language setting of CS-OTPM2
• Manages up to 100,000 radios
 * Compatible models: IC-F7000/IC-F7500 series

IDAS™ Digital Radios

IDAS™ ICOM DIGITAL ADVANCED SYSTEM
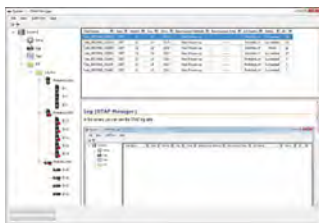
Flexible Digital Migration Solutions with Advanced IP Network Integration

Multiple-site Configurations

IDAS™ systems provide various digital radio solutions from simple peer to peer operation between two radios, up to multi-site wide area networks. Further coverage is enhanced with IP interconnection.

Digital Clarity

By adopting the industry standard AMBE+2™ Vocoder and advanced FEC (Forward Error Correction) coding, IDAS™ systems provide improved communication quality, clarity and reliability.

Effective System Management

Simple and efficient management is critical for systems of any size. IDAS™ provides effective system management with such features as OTAP and administration applications.

NXDN™/dPMR™ Protocol Choice

The IDAS™ digital radio system has two protocol choices, NXDN™ or dPMR™. Both protocols are open digital radio standards using 6.25 kHz FDMA narrowband technology. With this flexible choice, the IDAS™ radio system allows for interoperability with other manufacturers equipment to add to/replace existing NXDN™ and/or dPMR™ systems.

System Scalability According to Communication Traffic and Coverage

Depending on the communication traffic and coverage, an IDAS™ radio system can be expanded from single site conventional to multi-site trunking, to match your communication needs.

Multi-site Conventional

Type-D Multi-site Trunking
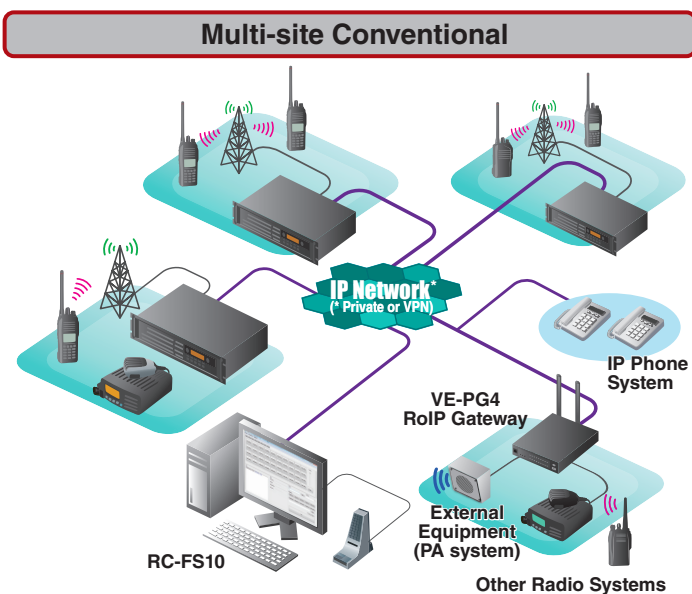
- 6.25 kHz digital migration
- Digital/analog mixed mode operation
- Up to 16 IDAS™ repeater sites connection over an IP network
- Telephone interconnection (with VE-PG4)
- Subscriber voting and system receiving voting
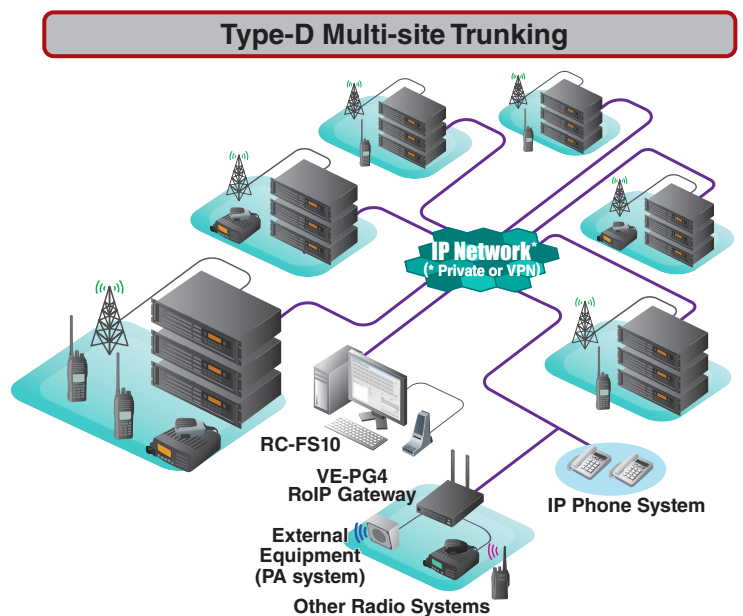
- Distributed channel system which does not use a dedicated control channel
- Up to 30 channels per site and up to 48 sites connection over an IP network*
- Up to 60,000 individual IDs and 60,000 group IDs with fleet management
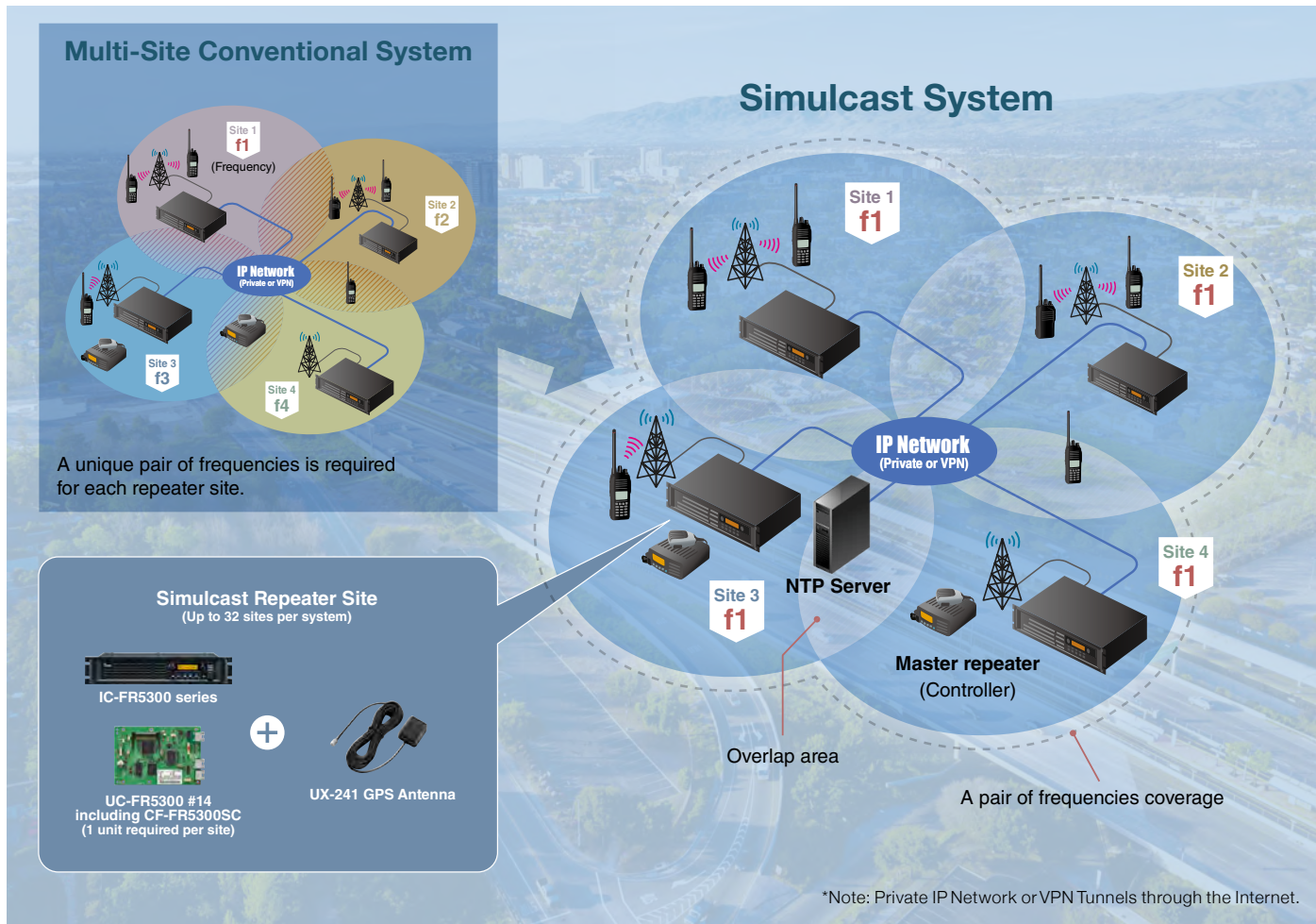- Telephone interconnection (with VE-PG4)

* Talkgroup call is limited to 16 sites maximum.

IDAS™ Simulcast System

Wide Area Coverage on a Single Pair of Frequencies

The IDAS™ Simulcast (NXDN™ protocol) synchronizes multiple repeater sites* for seamless wide area repeater coverage using just a pair of frequencies. Each repeater site in the system is simply composed of only a network controller, GPS antenna and repeater. A PPS (Pulse Per Second) signal from the GPS and an NTP server are used to synchronize the downlink signals.

* The maximum number of sites for an IDAS™ Simulcast system is 32.

Multi-Site Conventional System

Site 1 **f1** (Frequency)
Site 2 **f2**
Site 3 **f3**
Site 4 **f4**
IP Network (Private or VPN)

A unique pair of frequencies is required for each repeater site.

Simulcast Repeater Site
(Up to 32 sites per system)

IC-FR5300 series

UC-FR5300 #14 including CF-FR5300SC (1 unit required per site)

UX-241 GPS Antenna

Simulcast System

Site 1 **f1**
Site 2 **f1**
Site 3 **f1**
Site 4 **f1**
IP Network (Private or VPN)
NTP Server
Master repeater (Controller)
Overlap area
A pair of frequencies coverage

*Note: Private IP Network or VPN Tunnels through the Internet.

Ideal 6.25 kHz FDMA Technology for Simulcast

6.25 kHz FDMA technology has a lower symbol rate than other technologies, so it has an advantage regarding voice quality degradation due to latency.

Seamless Coverage

Simulcast repeaters transmit a signal on the same frequency and at the same time with GPS synchronization. Using the digital signal, the IDAS™ simulcast system can greatly reduce signal degradation in overlapping areas.
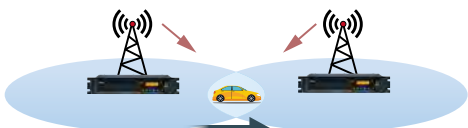
Repeaters transmit a downlink signal in sync at the same frequency.

Scalability and Flexibility

Installation and maintenance of a simulcast system could not be easier. You can effortlessly expand the coverage area by just adding repeaters. Those repeaters can be integrated into the network with simple setup (no reprogramming of radio terminals is necessary).

Abundant IDAS™ Radio Lineup

All NXDN™ compatible IDAS™ radio terminals can be used on the IDAS™ simulcast system. In addition, the radio terminals wait for a call without scanning, so the battery consumption can be reduced.

IDAS™ Handheld Radios

IC–F3400D/IC–F4400D Series

IDAS™ The Smart Digital Solution

• 1024 channels • IP68 • Color display
• Integrated GPS • Bluetooth® capability depending on version • microSD card slot
• Voice recording • OTAP • OAA • USB connector • Active noise canceller
• AES*/DES encryption • 16.5 hours battery life (with BP-284) • Motion/Stationary sensor
• Man down/Lone worker • Vibration alert • Voice announcement • 1300 mW loud audio
* Optional

Conventional **Simulcast** **Single/Multi-Site Trunking (Optional)**

IP730D/IP740D

Hybrid Handheld IP Radio for Local & Nationwide Communications

• 128 channels/8 zones • Rotary encoder
• DTMF code transmission with optional DTMF microphone, HM-245T
• OTAP function • Up to 500 ID numbers for IDAS™ mode • 1500 mW loud audio (10% distortion)
• Individual, Group and All calls • Talk back • CTCSS and DTCS for analog mode

Conventional **Simulcast**

IC–F52D/IC–F62D

5 W Power Pack, Super Compact Body

• 512 channels • IP67 • Full dot matrix display for 14 characters with status icons
• Bluetooth® capability depending on version • Voice recording • OTAP • OAA
• Active noise canceller • 18.5 hours battery life (with BP-294) • Motion/Stationary sensor
• Man down/Lone worker • Vibration alert • Voice announcement • 1300 mW loud audio

Conventional **Simulcast** **Single/Multi-Site Trunking (Optional)**

IC–F1100D/IC–F2100D Series

Compact, Waterproof and Superiour Audio Clarity

• 128 channels (16 channels for non-display models) • IP67 • Motion/Stationary sensor
• Man down/Lone worker • 18 hours battery life (with BP-280) • 1500 mW loud audio • OAA
• Voice announcement

Conventional **Simulcast** **Single-Site Trunking**

IDAS™ Intrinsically Safe Radios

IC–F52D–UL/IC–F62D–UL

UL Approved Intrinsically Safe Digital Radio

• 512 channels • IP67 • Bluetooth® capability depending on version • Voice recording • OTAP • OAA • Active noise canceller • 10 hours battery life (with BP-292UL) • Motion/Stationary sensor • Man down/Lone worker • Vibration alert • Voice announcement • 800 mW loud audio

Conventional   **Simulcast**

Single/Multi-Site Trunking (Optional)

UL Classification Rating
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) to +60°C (+140°F)
Intrinsically Safe when used with BP-292UL battery pack.

DO NOT use the transceiver with any other equipment not specified in the option list (Pages 23–28).
Please ask your dealer to ensure the UL Classification rating is acceptable for the intended place of use.

IDAS™ Mobile Radios

IC-F5400D/IC-F6400D
Superb Performance and a Comprehensive Range of Features

- 1024 channels • Flexible configurations with detachable front panel • IP55 • Color display
- Integrated GPS • Bluetooth® capability depending on version
- microSD card slot • Voice recording • OTAP • OAA • USB connector • Active noise canceller
- AES*/DES encryption • Lone worker • Voice announcement

* Optional

Conventional   **Simulcast**   **Single/Multi-Site Trunking (Optional)**

IC-F5330D/IC-F6330D
Vehicle and In-Building Use Radio with PoE Connection

- 128 channels • NXDN™ Type-D single-site trunking • Flexible Power over Ethernet (PoE) connection between RF unit and remote control microphone* • High contrast, wide viewing angle, negative type display • Bluetooth® capability depending on version • Emergency and Lone Worker functions • Status and short data message (SDM) • Optional D-SUB connector cable.

* Up to 100 m, 328 ft Ethernet cable

Conventional   **Simulcast**   **Single-Site Trunking**

IC-F5130D/IC-F6130D
Digital Standard Mobile Tranceiver

- 128 channels • NXDN™ Type-D single-site trunking • High contrast, wide viewing angle, black background display • Emergency and Lone Worker functions
- Integration with the VE-PG4 • Status and short data message (SDM) • Optional D-SUB connector cable • GPS receiver connection with optional ACC cable
- Bluetooth® capability with optional UT-137A

Conventional   **Simulcast**   **Single-Site Trunking**
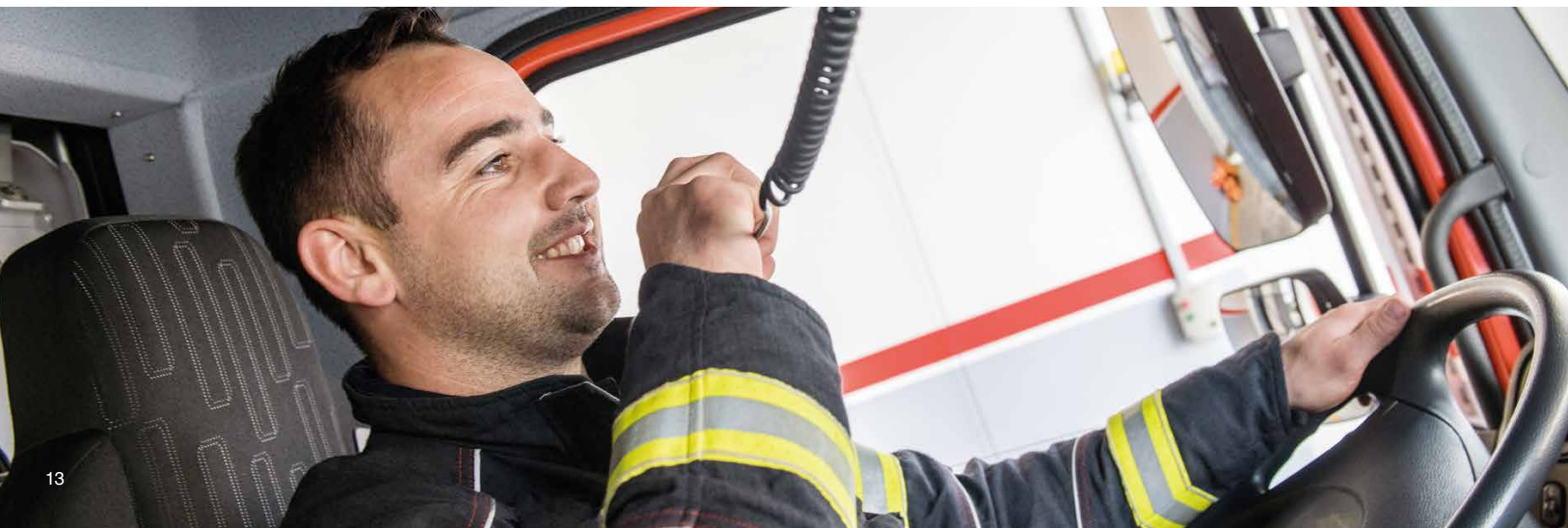
IC‒FR5300/IC‒FR6300

Two Channels in One Box Repeater, Compatible with the Affordable, Low-Complexity Digital Simulcast

• Digital conventional mode and analog FM with auto selection • 50 W at 50%, 25 W at 100% duty cycle operation (Ambient temperature: 25°C) • With the optional UC-FR5300 #14 network controller and GNSS antenna, the IC-FR5300/IC-FR6300 can be compatible with digital simulcast systems • Optional network controllers for multi-site conventional or trunking system configuration • "Two channels in one box" configuration with optional UR-FR5300/UR-FR6300

RC‒FS10

Virtual Radio/PC Dispatch
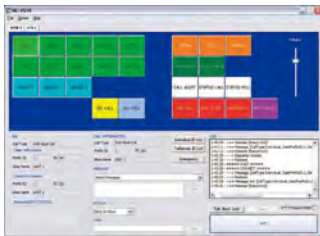
• PC remote communicator for IDAS™ conventional, NXDN™ Type-D multi-site trunking and analog radio systems (VE-PG4 is required for analog radio systems.) • Up to eight different IDAS™ and analog radio systems can be programmed • Up to 40 programmable buttons. Short data message, status and DTMF can be sent • Caller ID, called ID, name and call type information are displayed • Optional HM-152 or SM-26 microphone

RS‒MGR1

Enhance System Management for NXDN™ Type-D Trunking Systems
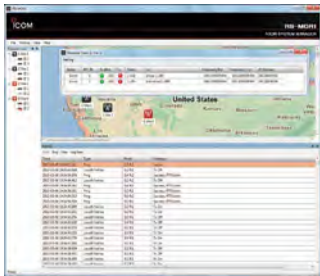
• Provides real-time monitoring, system alerts and log search functions • Repeater properties show condition summary, system information, interface (traffic statistics), repeater condition details and ping status of each repeater • Registration log, communication log, traffic log and search log can be searched and downloaded with extensive filter settings

CS‒OTPM1

Easily Reconfigure Radios with Over-The-Air Programming
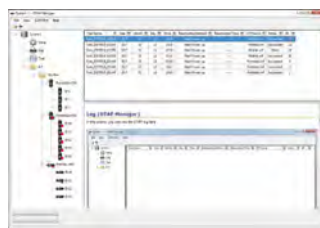
• Remotely reconfigure radios while in the field • Radios can be reconfigured in a short period of time by transmitting only the updates • Single programming data can transmit to a whole fleet with only one click • Up to 10,000 sessions are logged for review and rescheduling
• Manages up to 100,000 radios

* Compatible models: IC-F3400D/IC-F4400D series   IC-F52D/IC-F62D   IC-F52D-UL/IC-F62D-UL
  IC-F5400D/IC-F6400D

Analog Radios

IC-F1000/IC-F2000 Series

Slim, Compact Dimensions with IP67 Waterproofing

• 128 channels (16 channels for the non-display model) • Motion/Stationary sensor
• Man down/Lone worker • 14 hours battery life (with BP-279) • 1500 mW loud audio
• Voice announcement • 16 codes inversion voice scrambler

IC-F3000/IC-F4000 Series

Affordable, High Performance Radio

• 16 channels • IP54 • Lone worker function • 14 hours battery life (with BP-264) • Built-in 2-Tone, 5-Tone, CTCSS and DTCS • 800 mW (typ.) loud audio speaker • Internal VOX capability for hands-free operation

IC-F200

Professional Radio for Compact Size and Easy Operation

• 16 channels • Compact and lightweight • IP54 / MIL810G • 15 hours operation (with BP-304A)
• USB Type-C™ charging • 600 mW loud and clear audio • Built-in CTCSS and DTCS
• Emergency call button on the top of the panel • VOX function for hands-free operation

IC-F5020/IC-F6020 Series
IC-F5010/IC-F6010 Series

Hardworking Mobile Radios

• 2 models for display or non-display • 128 channels (IC-F5020/IC-F6020 series) or 8 channels (IC-F5010/IC-F6010 series) • Lone worker function • 4 W (typical) front mounted speaker
• External device connection with optional ACC cable

HF Radio

IC-F8101

A Professional HF, All in One Package

• 2G ALE (Automatic Link Establishment), MIL-STD-188-141B compatible • 125 W* PEP output power (* J3E/A1A modes depending on the transceiver version) • 100% duty cycle operation (SSB voice TX) • IP54 • 2400 bps MELPe/TWELP Vocoder and 256-bit AES encryption* with RapidM TC4-LP (* The function availability depending on the transceiver version)

MURS License-Free Radios

IC-V10MR

**Professional Grade License-Free Radio
Slim, Compact Dimensions with IP67 Waterproofing**

- 5 MURS frequencies   • 2 W RF output power • 2-Tone, MDC, CTCSS and DTCS capabilities
- IP67 waterproof • 16 hours battery life (with BP-279) • 1500 mW loud audio
- Built-in Motion sensor • Lone Worker and Man Down functions • Up to 2 miles in a work site*
- Download free programming software

IC-V3MR

Rugged, Loud and Reliable Professional License-Free Radio

- 5 MURS frequencies • 2 W RF output power • 2-Tone, MDC PTT ID, CTCSS and DTCS capabilities
- IP54 Water and Dust protection • 24 hours battery life (with BP-298)
- 1500 mW loud audio from internal speaker
- 1500 mW audio output from optional BTL speaker-microphone, HM-222HLWP
- Lone Worker function • Up to 2 miles in a work site* • Download free programming software

* Communication range may differ depending on operating environment or weather conditions, etc.

Canada GMRS/FRS License-Free Radio

IC-U20GM

Perfect Radio for Restaurants and Retail Shops Enhances Hospitality

- 22 Canada GMRS/FRS channels • Compact and lightweight
- IP54 / MIL810G • 19 hours operation (with BP-304A)
- USB Type-C™ charging • 600 mW loud and clear audio
- Built-in CTCSS and DTCS
- VOX function for hands-free operation

PMR 446 License-Free Radio (for EUROPE/EXPORT only)

IC-U20SR

Perfect Radio for Restaurants and Retail Shops Enhances Hospitality

- 16 PMR 446 channels • Compact and lightweight • IP54 / MIL810G
- 21 hours operation (with BP-304A) • USB Type-C™ charging • 600 mW loud and clear audio
- Built-in CTCSS and DTCS • Emergency call button on the top of the panel
- Smart-ring function to check communication range • Alert-ring function for emergency situation
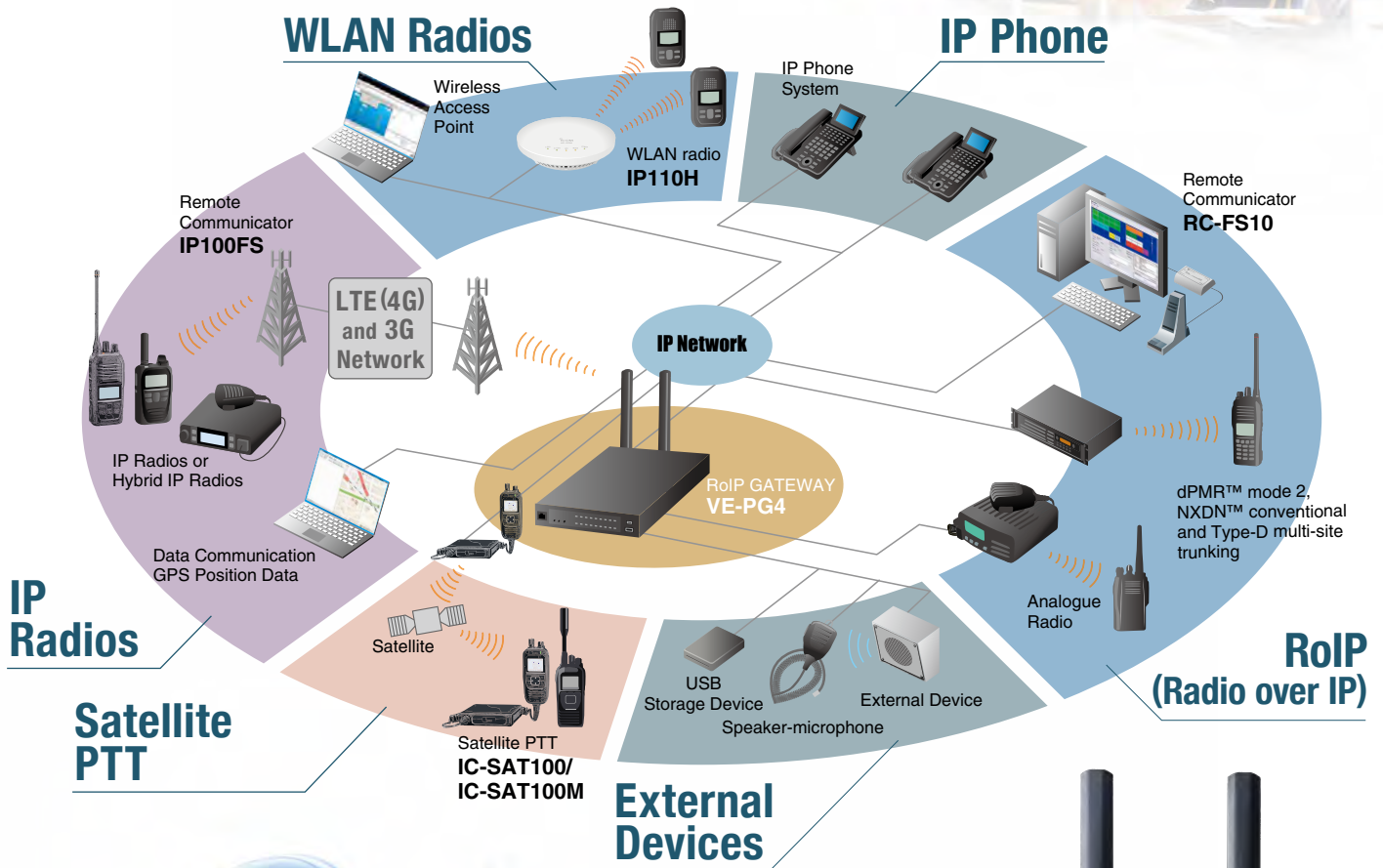- VOX function for hands-free operation

RoIP Gateway

Radio Gateway — Link LTE Radios to Digital/Analog Radios, Satellite PTT Radios, WLAN Radio, IP Phone and More

The VE-PG4 is a versatile RoIP (Radio over IP) gateway unit, which seamlessly interconnects various communication systems. The built-in LTE module* provides virtually nationwide communication coverage.

* Service availability depends on the country. Network coverage provided by a custom SIM card.

Communication Links

WLAN Radios

Wireless Access Point

WLAN radio
IP110H

IP Phone

IP Phone System

Remote Communicator
IP100FS

LTE (4G) and 3G Network

IP Network

Remote Communicator
RC-FS10

IP Radios or Hybrid IP Radios

RoIP GATEWAY
VE-PG4

dPMR™ mode 2, NXDN™ conventional and Type-D multi-site trunking

Data Communication GPS Position Data

IP Radios

Satellite

Satellite PTT
IC-SAT100/ IC-SAT100M

Analogue Radio

Satellite PTT

USB Storage Device

External Device

Speaker-microphone

RoIP (Radio over IP)

External Devices

VE−PG4

P25 Radio Feature Comparison

	IC-F7000 SERIES		IC-F7500 SERIES	
	IC-F7010T/S IC-F7020T/S	IC-F7040T/S	IC-F7510 IC-F7520	IC-F7540
Frequency Range	136–174 MHz 380–470 MHz 450–512 MHz	769–869 MHz	136–174 MHz 380–470 MHz 450–512 MHz	769–869 MHz
Channels	1024		1024	
Channel Spacing	12.5/25 kHz	12.5/20/25 kHz	12.5/25 kHz	12.5/20/25 kHz
Dimensions[1] (mm; in) (W × H × D; Projections are not included)	53.6 × 123.5 × 38.2; 2.1 × 4.9 × 1.5		174 × 55 × 150; 6.9 × 6.6 × 1.6	
Weight[1] (approx.)	355 g, 12.5 oz	345 g, 12.2 oz	1500 g, 3.3 lb	
RF Output Power (High)	5 W	3 W	50 W (VHF), 45 W (UHF)	30/35 W (700/800 MHz)
IP Rating	IP68		IP55	
Operating Time[1][2] (hours)	14		N/A	
Display	Color LCD		Color LCD	
Keypad	Yes		Yes	
AF Output Power	1300 mW typ.		4 W typ.	
Analog Conventional	Yes		Yes	
P25 Conventional	Yes		Yes	
P25 Trunking — Phase 1 (FDMA)	Optional		Optional	
P25 Trunking — Phase 2 (TDMA)	Optional		Optional	
Encryption — AES	Optional		Optional	
Encryption — DES	Optional		Optional	
Encryption — ARC4	Optional		Optional	
FIPS 140-2 Level 1	Optional		Optional	
P25 Link Layer Authentication	Yes (Available soon)		Yes (Available soon)	
P25 Conventional Voting Scan	Optional		Optional	
P25 Packet Data Service	Optional		Optional	
OTAP Function	Optional		Optional	
CTCSS/DTCS Encoder/Decoder	Yes		Yes	
2-Tone Encoder/Decoder	Yes		Yes	
DTMF Autodial	Yes		Yes	
Analog Voice Scrambler (Inversion)	Yes		Yes	
MDC 1200	Yes		Yes	
Front Panel Programming	Optional		Optional	
Man Down	Yes		No	
Lone Worker	Yes		Yes	
Voice Announcement	Yes		Yes	
Vibration Alert	Yes		No	
Voice Recorder	Yes		Yes	
Bluetooth® Capability	Yes		Yes	
GPS Receiver	Yes		Yes[3]	
Front Panel Separation	N/A		Optional	
COMMANDMIC™ Capability	N/A		Yes	

[1] With standard battery pack [2] Conventional mode. 5:5:90 duty cycle, power save ON [3] UX-241 antenna is required.

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IDAS™ Handheld Radio Feature Comparison

	IC-F3400D/IC-F4400D SERIES	IP730D IP740D	IC-F52D IC-F62D	IC-F1100D/IC-F2100D SERIES		IC-F52D-UL IC-F62D-UL
	IC-F3400DT/DS IC-F4400DT/DS	IP730D IP740D	IC-F52D IC-F62D	IC-F1100DT/DS IC-F2100DT/DS	IC-F1100D IC-F2100D	IC-F52D-UL IC-F62D-UL
Frequency Range	136–174 MHz; 380–470 MHz; 450–512 MHz	136–174 MHz; 350–470 MHz; 400–520 MHz	136–174 MHz; 350–400 MHz; 400–470 MHz; 450–512 MHz; 450–520 MHz	136–174 MHz; 350–400 MHz; 400–470 MHz; 450–520 MHz		136–174 MHz; 350–400 MHz; 400–470 MHz; 450–512 MHz; 450–520 MHz
Channels	1024*1	128	512	128		512
Digital Channel Spacing	6.25/12.5 kHz	6.25 kHz	6.25/12.5 kHz	6.25 kHz		6.25/12.5 kHz
Dimensions*2 (mm; in) (W × H × D; Projections are not included)	53.6 × 123.5 × 29.3; 2.1 × 4.9 × 1.2	61.7 × 140.5 × 42.8; 2.4 × 5.5 × 1.7	56 × 91.5 × 36.5; 2.2 × 3.6 × 1.4	52.2 × 111.8 × 34.1; 2.1 × 4.4 × 1.3 (DT) 52.2 × 111.8 × 29.4; 2.1 × 4.4 × 1.2 (DS)	52.2 × 111.8 × 29.4; 2.1 × 4.4 × 1.2	56 × 92 × 34.1; 2.2 × 3.6 × 1.3
Weight*2 (approx.)	340 g, 12.0 oz (VHF) 335 g, 11.8 oz (UHF)	320 g, 11.3 oz	270 g, 9.5 oz	280 g, 9.9 oz (DT) 270 g, 9.5 oz (DS)	260 g, 9.2 oz	270 g, 9.5 oz
RF Output Power (High)	5 W	5 W	5 W	5 W (VHF), 4 W or 5 W* (UHF) *Depending on the version		5 W
IP Rating	IP68	IP67	IP67	IP67		IP67
Operating Time*2*3 (hours)	16.5	24 (LTE mode) 13 (IDAS mode)	18.5	18		10
Display	Yes	Yes	Yes	Yes	No	Yes
Keypad	Yes	Limited	Yes	Yes	No	Yes
AF Output Power (internal SP)	1300 mW typ.	1500 mW typ. (10% distortion)	1300 mW typ.	1500 mW typ.		800 mW typ.
Intrinsically Safe	No	No	No	No		UL
Encryption — DES	Yes	No	No	No		No
Encryption — AES	Optional	No	No	No		No
Voice Scrambler (Digital)	Yes	Yes	Yes	Yes		Yes
Voice Scrambler (Analog)*4	Yes (Inversion)	No	Yes (Inversion)	No		Yes (Inversion)
OTAP (Over-the-Air Programming)	Optional	Yes (Over LTE)	Optional	No		Optional
CTCSS/DTCS Encoder/Decoder	Yes	Yes	Yes	Yes		Yes
2-Tone Encoder/Decoder	Yes	No	Yes	Yes		Yes
5-Tone Encoder/Decoder	Yes	No	Yes	Yes		Yes
DTMF Autodial	Yes	Yes (With optional HM-245T)	Yes	Yes		Yes
MDC 1200	Yes	No	Yes	Yes*5		Yes
Man Down	Yes	Yes	Yes	Yes		Yes
Motion Detection Sensor	Yes	Yes	Yes	Yes		Yes
Lone Worker	Yes	Yes	Yes	Yes		Yes
Voice Announcement	Yes	No	Yes	Yes		Yes
Vibration Alert	Yes	Yes	Yes	No		Yes
Voice Recorder	Yes	Yes	Yes	No		Yes
Bluetooth® Capability	Yes	Yes	Yes	No		Yes
GPS Receiver	Yes	Yes	External	External		No
Multi-Site Conventional	Yes	Yes	Yes	Yes		Yes
Type-D Single-site Trunking	Optional	No	Optional	Yes		Optional
Type-D Multi-site Trunking	Optional	No	Optional	No		Optional

IDAS™ Mobile Radio Feature Comparison

	IC-F5400D IC-F6400D	IC-F5330D IC-F6330D	IC-F5130D IC-F6130D
	IC-F5400D IC-F6400D	IC-F5330D IC-F6330D	IC-F5130D IC-F6130D
Frequency Range	136–174 MHz	136–174 MHz	136–174 MHz
	380–470 MHz 450–512 MHz	400–520 MHz	400–520 MHz
Channels	1024*1	128	128
Digital Channel Spacing	6.25/12.5 kHz	6.25kHz	6.25 kHz
Dimensions (mm; in) (W × H × D; Projections are not included)	174 × 55 × 150; 6.9 × 2.2 × 5.9	150 × 45 × 148; 5.9 × 1.8 × 5.8	150 × 45 × 151.8; 5.9 × 1.8 × 6.0
Weight (approx.)	1.5 kg, 3.3 lb	1.2 kg, 2.6 lb (Main unit) 250 g, 8.8 oz (Microphone)	1.23 kg, 2.7 lb
RF output power (High)	50 W (VHF) 45 W (UHF)	50 W (VHF) 45 W (UHF)	50 W (VHF) 45 W (UHF)
IP Rating	IP55	IPX4 (Microphone)	N/A
Display	Yes	Yes (Mic.)	Yes
Keypad	Yes	Yes (Mic.)	Yes
AF Output Power (internal SP)	4 W typ.	1.5 W typ. (Mic.)	4 W typ.
Encryption **DES**	Yes	No	No
AES	Optional	No	No
Voice Scrambler (Digital)	Yes	Yes	Yes
Voice Scrambler (Analog)*4	Yes (Inversion)	No	No
OTAP (Over-the-Air Programming)	Optional	No	No
CTCSS/DTCS **Encoder/Decoder**	Yes	Yes	Yes
2-Tone **Encoder/Decoder**	Yes	Yes	Yes
5-Tone **Encoder/Decoder**	Yes	Yes	Yes
DTMF Autodial	Yes	Yes	Yes
MDC 1200	Yes	Yes*5	Yes*5
Lone Worker	Yes	Yes	Yes
Voice Announcement	Yes	No	No
Voice Recorder	Yes	No	No
Bluetooth® Capability	Yes	Yes*6	Optional
GPS Receiver	Yes*7	No	No
Front Panel Separation	Optional	No	No
Multiple Controller Capability	Yes	No	No
COMMANDMIC™ Capability	Yes	Yes	No
I/O Control Port	USB, D-SUB	Optional*8	Optional*8
Multi-Site Conventional	Yes	Yes	Yes
Type-D Single-site Trunking	Optional	Yes	Yes
Type-D Multi-site Trunking	Optional	No	No

*1 Upgrade licence (ISL-CHEX) required to enable 4000 channel capacity.
*2 With standard battery pack
*3 IDAS : Conventional mode, 5:5:90 duty cycle, power save ON, LTE : Depending on the condition of LTE signal strength When using the Bridge function, operating time will be shorter and output power of the IP730D/IP740D is reduced to 1 W.
*4 Inversion type voice scrambler is not compatible with UT-109R/UT-110R voice scrambler.
*5 PTT ID, emergency call, radio check (RX) and stun/revive (RX)
*6 Depending on the version.
*7 UX-241 antenna is required.
*8 D-SUB. Digital modulation input is not available even when using accessory cables.

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Analog Radio Feature Comparison

	HANDHELD RADIOS					MOBILE RADIOS		MURS RADIOS	
	IC-F1000T IC-F2000T	IC-F1000S IC-F2000S	IC-F1000 IC-F2000	IC-F3001/3 IC-F4001/3	IC-F200	IC-F5021/3/3H IC-F6021/3/3H	IC-F5011/3/3H IC-F6011/3/3H	IC-V10MR	IC-V3MR
Frequency Range	136–174 MHz 335–380 MHz 400–470 MHz 450–512 MHz 450–520 MHz			136–174 MHz 350–400 MHz 400–470 MHz 450–512 MHz 450–520 MHz	450–470 MHz	136–174 MHz 400–470 MHz 450–512 MHz 450–520 MHz		151.820, 151.880, 151.940, 154.570, 154.600 MHz	151.820, 151.880, 151.940, 154.570, 154.600 MHz
Channels	128	128	16	16	16	128	8	16	16
Channel Spacing	12.5/25 kHz			12.5/25 kHz, 15/30 kHz	12.5 kHz	12.5/25 kHz, 15/30 kHz		11.25/20 kHz	11.25/20 kHz
Dimensions*¹ (mm; in) (W × H × D; Projections are not included)	52.2 × 111.8 × 24.5; 2.1 × 4.4 × 1.0			56 × 97 × 36.4; 2.3 × 4.4 × 1.4	94 × 50 × 26.7; 3.7 × 2.0 × 1.1	150 × 40 × 167.5; 5.9 × 1.6 × 6.6 (50/45 W) 150 × 40 × 117.5; 5.9 × 1.6 × 4.6 (50/45 W)		52.2 × 111.8 × 24.5; 2.1 × 4.4 × 1.0	56 × 97 × 36.4; 2.3 × 4.4 × 1.4
Weight*¹ (approx.)	240 g, 8.5 oz			270 g, 9.5 oz	157 g, 5.5 oz	1.1 kg, 2.4 lb (50/45 W) 0.8 kg, 1.8 lb (25 W)		240 g, 8.5 oz	270 g, 9.5 oz
RF output power (High) — VHF	5 W			5 W	–	50 W (F5021/3H) 25 W (F5023)	50 W (F5011/3H) 25 W (F5013)	2W	2 W
RF output power (High) — UHF	4 W			4 W	2.0 W or less	45 W (F6021/3H) 25 W (F6023)	45 W (F6011/3H) 25 W (F6013)		
IP Rating	IP67			IP54	IP54	N/A		IP67	IP54
Operating Time*² (hours)	14			20 (w/ BP-265) 14 (w/ BP-264)	15	N/A		16	24
Display	Yes	Yes	No	No	Yes	Yes	LED lighting	No	No
Keypad	Full	Limited	No	No	Limited	Yes		No	No
AF Output Power (internal SP)	1500 mW typ.			800 mW typ.	600 mW typ.	4 W typ.		1500 mW typ.	1500 mW typ.
Voice Scrambler	Yes (Inversion)			No	No	No		No	No
CTCSS/DTCS Encoder/Decoder	Yes			Yes	Yes	Yes		Yes	Yes
2-Tone Encoder/Decoder	Yes			Yes	No	Yes		Yes	Yes
5-Tone Encoder/Decoder	Yes			Yes	No	Yes		No	No
DTMF Autodial	Yes			Yes	No	Yes		Yes	Yes
MDC 1200	Yes*³			Yes*⁵	No	Yes*⁶		Yes*³	Yes*⁵
Man Down	Yes			No	No	No		Yes	No
Lone Worker	Yes			Yes	Yes	Yes		Yes	Yes
Motion Detection Sensor	Yes			No	No	No		Yes	No
Voice Announcement	Yes			No	Yes	No		Yes	No
Stun/Kill/Revive	Yes*⁴			Yes*⁴	No	Yes*⁴		Yes*⁴	Yes*⁴
Remote Monitor	Yes*⁴			Yes*⁴	No	Yes*⁴		Yes*⁴	Yes*⁴

*¹ With standard battery pack
*² 5:5:90 duty cycle, power save ON
*³ PTT ID, emergency (TX/RX), radio check (RX), stun/revive (RX), transmit status messages only
*⁴ RX only
*⁵ PTT ID and emergency only
*⁶ PTT ID, emergency (TX/RX), radio check (RX), stun/revive (RX) only

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

Satellite PTT & IP Radios – LTE, Hybrid & WLAN Feature Comparsion

	SATELLITE PTT	
	IC-SAT100	**IC-SAT100M**
Frequency Range	1616–1626.5 MHz	1616–1626.5 MHz
Talkgroups	15 (Max.)	15 (Max.)
Dimensions (mm; in) (W × H × D; Projections are not included)	57.8 × 135 × 32.8; 2.3 × 5.3 × 1.3	Antenna unit (with RF unit): 76.8 × 200 × 76.8; 3 × 7.9 × 3, Main unit: 125 × 29 × 156.5; 4.9 × 1.1 × 6.2
Weight (approximate)	360 g, 12.7 oz (with BP-300 and antenna)	Antenna unit (with RF unit): 500 g, 1.1 lb Main unit with microphone: 1.2 kg, 2.6 lb
IP Rating	IP67	IP67 (Antenna unit (with RF unit)), IP55 (mic), IP54 (main unit)
Operating Time (Hours)	14.5	–
Display	Yes	Yes
Keypad	Limited	Limited
AF Output Power (Internal SP)	1500 mW typical	1500 mW typical
Encryption AES	Yes	Yes
Vibration Alert	Yes	N/A
Voice Recorder	Yes	Yes
Bluetooth® Capability	Yes	Yes
GPS Receiver	Yes	Yes
Short Data Message	Yes	Yes
Emergency Call	Yes	Yes
PoE Capability	–	Yes
I/O Control Port	USB, 14-PIN ACC	D-SUB, LAN, Ignition sense

	WLAN RADIO
	IP110H
Network (USA Versions) WLAN	IEEE 802.11 a/b/g/n/ac 2.4–2.4835 GHz, 5.15–5.35, 5.47–5.85 GHz
Dimensions (mm; in) (W × H × D; Projections are not included)	57 × 96.9 × 25.1 ; 2.2 × 3.8 × 1.0
Weight (approximate)	146 g, 5.2 oz
IP Rating	IP67 / IP54
Operating Time (Hours)	20
Display	Yes
Keypad	Limited
AF Output Power (Internal SP)	1000 mW
Provisioning/FOTA	Yes
Man Down	Yes
Lone Worker	Yes
Vibration Alert	Yes
Voice Recorder	Yes
Bluetooth® Capability	Yes
GPS Receiver	No
Short Data Message	Yes
Emergency Call	Yes
I/O Control Port	–

	IP Radios – LTE & Hybrid				
	IP730D/IP740D	**IP504H**	**IP501H**	**IP503H**	**IP501M**
Network (USA Versions) LTE (4G)	B2, B4, B12	B2, B4, B5, B12, B13, B14, B25, B26, B41, B66, B71	B2, B4, B5, B17	B1, B3, B7, B8, B20	B2, B4, B12
3G	B2, B5	–	B2, B5	B1, B8	B2, B5
Dimensions (mm; in) (W × H × D; Projections are not included)	61.7 × 140.5 × 42.8; 2.4 × 5.5 × 1.7	59 × 95 × 32; 2.3 × 3.7 × 1.3	59 × 95 × 32; 2.3 × 3.7 × 1.3	59 × 95 × 32; 2.3 × 3.7 × 1.3	125 × 29 × 156; 4.9 × 1.1 × 6.1
Weight (approximate)	320 g, 11.3 oz	TBD	240 g, 8.5 oz	240 g, 8.5 oz	840 g, 1.9 lb (main unit)
IP Rating	IP67	IP67	IP67	IP67	IP54
Operating Time (Hours)	24 (LTE mode), 13 (IDAS mode)	17	17	17	–
Display	Yes	Yes	Yes	Yes	Yes
Keypad	Limited	Limited	Limited	Limited	Limited
AF Output Power (Internal SP)	1500 mW typ. (10% distortion)	900 mW (10% distortion)	400 mW (10% distortion)	900 mW (10% distortion)	4 W (Extrenal SP)
Provisioning/FOTA	Yes	Yes	Yes	Yes	Yes
Man Down	Yes	Yes	Yes	Yes	–
Lone Worker	Yes	Yes	Yes	Yes	Yes
Vibration Alert	No	Yes	Yes	Yes	–
Voice Recorder	Yes	Yes	Yes	Yes	Yes
Bluetooth® Capability	Yes	Yes	Yes	Yes	Yes
GPS Receiver	Yes	Yes	Yes	Yes	Yes
Short Data Message	Yes (LTE mode)	Yes	Yes	Yes	Yes
Emergency Call	Yes	Yes	Yes	Yes	Yes
I/O Control Port	–	–	–	–	LAN, Ignition sense, D-SUB (optional)

Optional Accessories for Handheld Radios

MODEL NAME	BATTERY PACKS								
	BP-292UL Li-ion 7.2 V/1910 mAh (min.) 2010 mAh (typ.)	BP-300 Li-ion 7.2 V/2200 mAh (min.) 2350 mAh (typ.)	BP-303 Li-ion 7.2 V/3200 mAh (min.) 3350 mAh (typ.)	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-307 Li-ion 7.2 V/3050 mAh(min.) 3150 mAh (typ.)	BP-284 Li-ion 7.2 V/3070 mAh (min.) 3210 mAh (typ.)	BP-294 Li-ion 7.2 V/3050 mAh (min.) 3150 mAh (typ.)	BP-290 Li-ion 7.2 V/1910 mAh (min.) 2010 mAh (typ.)
IC-SAT100		✔							
IP730D, IP740D			✔						
IP501H, IP504H, IP503H				✔	✔	✔			
IP110H									
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S							✔		
IC-F3400DT/DS, IC-F4400DT/DS							✔		
IC-F52D, IC-F62D								✔	✔
IC-F1100DT/DS/D, IC-F2100DT/DS/D									
IC-F52D-UL, IC-F62D-UL	✔								
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR									
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR									
IC-F200, IC-U20GM, IC-U20SR									

MODEL NAME	BATTERY PACKS						BATTERY CASES		
	BP-280 Li-ion 7.2 V/2280 mAh (min.) 2400 mAh (typ.)	BP-279 Li-ion 7.2 V/1485 mAh (min.) 1570 mAh (typ.)	BP-278 Li-ion 7.2 V/1130 mAh (min.) 1190 mAh (typ.)	BP-265 Li-ion 7.2 V/2100 mAh (min.) 2250 mAh (typ.)	BP-298 Li-ion 7.2 V/2100 mAh (min.) 2250 mAh (typ.)	BP-304A Li-ion 3.6 V/2270 mAh (min.) 2350 mAh (typ.)	BP-305 LR6 (AA) ×5 cells	BP-291 LR6 (AA) ×5 cells	BP-263 LR6 (AA) ×6 cells
IC-SAT100									
IP730D, IP740D							✔		
IP501H, IP504H, IP503H									
IP110H									
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S									
IC-F3400DT/DS, IC-F4400DT/DS									
IC-F52D, IC-F62D								✔	
IC-F1100DT/DS/D, IC-F2100DT/DS/D	✔	✔	✔						
IC-F52D-UL, IC-F62D-UL									
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR	✔ (For IC-F1000/IC-F2000series) *1	✔	✔ (For IC-F1000/IC-F2000series) *1						
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR				✔ (For IC-F3001/IC-F4001series) *2	✔ (For IC-V3MR)				✔
IC-F200, IC-U20GM, IC-U20SR						✔			

MODEL NAME	CHARGERS / CRADLES							
	BC-241*4 Rapid charger	BC-219N*4 Rapid charger	BC-225*4 Intelligent charger	BC-226 Rapid charger Connectable type	BC-227*4 Rapid charger	BC-213*4 Rapid charger	BC-262 Charging cradle	BC-264 Battery charger
IC-SAT100	✔							
IP730D, IP740D				✔	✔			
IP501H, IP504H, IP503H								
IP110H								
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S		✔	✔		✔			
IC-F3400DT/DS, IC-F4400DT/DS		✔	✔	✔	✔			
IC-F52D, IC-F62D		✔	✔	✔	✔			
IC-F1100DT/DS/D, IC-F2100DT/DS/D						✔		
IC-F52D-UL, IC-F62D-UL				✔ *3	✔ *3			
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR						✔		
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR								
IC-F200, IC-U20GM, IC-U20SR							✔	✔ *5

*1 Except IC-V10MR   *2 Except IC-V3MR   *3 The battery charger, BC-226, or BC-227 **must not be used** in an explosive atmosphere. *4 AC adapter supplied, depending on charger version.
*5 Either AC adapter, BC-263A or USB cable (Type-C to Type A) supplied, depending on charger version.
The IC-F52D-UL/IC-F62D-UL models should only be used with the specified approved options.

Optional Accessories for Handheld Radios

MODEL NAME	CHARGERS / CRADLES						READER SOFTWARE
	BC-193*4 Rapid charger for BP-265	BC-240*4 Rapid charger for BP-298	BC-202IP3L Connectable type Connects up to six BC-202IP3L units.	BC-202IP2*4 Rapid charger with smart charging function	BC-218*4 Rapid charger with Bluetooth® function	BC-257*4 Charger stand Connects up to four BC-257 units.	RS-BC225 Intelligent charger software for Windows™ PC
IC-SAT100							
IP730D, IP740D							
IP501H, IP504H, IP503H			✔	✔	✔		
IP110H						✔ (Use with OPC-2480*6 /BC-228)	
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S							✔ (Use with BC-225)
IC-F3400DT/DS, IC-F4400DT/DS							✔ (Use with BC-225)
IC-F52D, IC-F62D							✔ (Use with BC-225)
IC-F1100DT/DS/D, IC-F2100DT/DS/D							
IC-F52D-UL, IC-F62D-UL							
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR							
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR	✔ (For IC-F3001/IC-F4001series)*2	✔ (For IC-V3MR)					
IC-F200, IC-U20GM, IC-U20SR							

MODEL NAME	MULTI-CHARGERS / CRADLES			AC ADAPTERS					
	BC-214N*4 Either AD-130 AD-132N or AD-140 is supplied with the BC-214N.	BC-211*4	BC-268 Charging cradle BC-228 is supplied with the BC-268.	BC-242 12 V/1 A	BC-123S*5 12 V/1A L-shape plug	BC-123S*5 12 V/1 A straight plug for BC-226/BC-202IP3L single unit	BC-157S 12 V/7.5 A	BC-228 15 V/4 A	BC-207S 12 V/4.2 A
IC-SAT100	✔ (#30/31, AD-140 installed)			✔ (Use with BC-241)			✔ (Use with BC-214N)		
IP730D, IP740D	✔ (#62/63, AD-132N installed)				✔ (Use with BC-227)	✔ (Use with BC-226)	✔ (Use with BC-214N)	✔ (Use with BC-226)	
IP501H, IP504H, IP503H		✔ (AD-127 installed)			✔ (Use with BC-202IP2)	✔ (Use with BC-202IP3L)	✔ (Use with BC-211)	✔ (Use with BC-202IP3L)	✔ (Use with BC-218)
IP110H								✔ (Use with BC-257)	
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S	✔ (#62/63, AD-132N installed)				✔ (Use with BC-225, BC-227 or BC-219N)		✔ (Use with BC-214N)		
IC-F3400DT/DS, IC-F4400DT/DS	✔ (#62/63, AD-132N installed)				✔ (Use with BC-225, BC-227 or BC-219N)	✔ (Use with BC-226)	✔ (Use with BC-214N)	✔ (Use with BC-226)	
IC-F52D, IC-F62D	✔ (#62/63, AD-132N installed)				✔ (Use with BC-225, BC-227 or BC-219N)	✔ (Use with BC-226)	✔ (Use with BC-214N)	✔ (Use with BC-226)	
IC-F1100DT/DS/D, IC-F2100DT/DS/D	✔ (#42/43, AD-130 installed)			✔ (Use with BC-213)	✔ (Use with BC-213)		✔ (Use with BC-214/N)		
IC-F52D-UL, IC-F62D-UL					✔ (Use with BC-227)			✔ (Use with BC-226)	
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR	✔ (#42/43, AD-130 installed)			✔ (Use with BC-213)	✔ (Use with BC-213)		✔ (Use with BC-214/N)		
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR	✔ (#27/28, AD-139 installed for IC-V3MR)			✔ (Use with BC-240 for IC-V3MR)	✔ (Use with BC-191)				
IC-F200, IC-U20GM, IC-U20SR			✔ (Use with BC-228)					✔ (Use with BC-268)	

MODEL NAME	AC ADAPTERS	CHARGER CABLES			DC POWER CABLES	SPEAKER-MICROPHONES		
	BC-263A 5 V/1 A (USB Type-C™)	CP-23L For 12 V DC	CP-22 With DC-DC CONVERTER	CP-25H For 12 V DC	OPC-515L	HM-245T With SUB PTT button IP67	HM-236 IP67	HM-184UL IP67
IC-SAT100								
IP730D, IP740D		✔ (Use with BC-227)			✔ (Use with BC-227)	✔	✔	
IP501H, IP504H, IP503H		✔ (Use with BC-218)	✔ (Use with BC-218)	✔ (Use with BC-202IP3L)				
IP110H								
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S		✔ (Use with BC-219N or BC-227)			✔ (Use with BC-219N, BC-225 or BC-227)			
IC-F3400DT/DS, IC-F4400DT/DS		✔ (Use with BC-219N or BC-227)			✔ (Use with BC-219N, BC-225 or BC-227)			
IC-F52D, IC-F62D		✔ (Use with BC-219N or BC-227)			✔ (Use with BC-219N, BC-225 or BC-227)			
IC-F1100DT/DS/D, IC-F2100DT/DS/D		✔ (Use with BC-213)						
IC-F52D-UL, IC-F62D-UL		✔ (Use with BC-227)			✔ (Use with BC-227)			✔
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR		✔ (Use with BC-213)						
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR		✔ (Use with BC-193 or BC-240)			✔ (Use with BC-193 or BC-240)			
IC-F200, IC-U20GM, IC-U20SR	✔ (Use with IC-F200 and IC-U20GM)							

*5 BC-123SA for USA plug, SE for EURO plug, SV for Australia plug, and SUK for UK plug.
*6 OPC-2480 is a USB Type-C™ cable, which is supplied with the IP110H.

✔ : Applicable   : Not applicable

Optional Accessories for Handheld Radios

SPEAKER-MICROPHONES

MODEL NAME	HM-222H BTL speaker-microphone[7] IP68	HM-184H IP67	HM-168LWP Waterproof connector IP67	HM-158LA	HM-159LA	HM-222HLWP BTL speaker-microphone[6] IP68	HM-222HLS BTL speaker-microphone	HM-183LS IPX7	HM-186LS
IC-SAT100	✔								
IP730D, IP740D	✔	✔							
IP501H, IP504H, IP503H							✔ (For IP504H and IP503H)	✔	✔
IP110H									
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S	✔								
IC-F3400DT/DS, IC-F4400DT/DS	✔								
IC-F52D, IC-F62D	✔								
IC-F1100DT/DS/D, IC-F2100DT/DS/D			✔	✔	✔	✔			
IC-F52D-UL, IC-F62D-UL									
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR			✔	✔	✔	✔			
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR				✔	✔	✔			
IC-F200, IC-U20GM, IC-U20SR								✔	✔

MODEL NAME	SPEAKER-MICROPHONES			EARPHONE-MICROPHONES					TIE-CLIP MICROPHONES
	HM-186PI	HM-215 IP67	HM-228	HM-153LA	HM-166LA	HM-153LS	HM-166LS	HM-179PI	HM-238MC With SUB PTT button
IC-SAT100									
IP730D, IP740D									✔
IP501H, IP504H, IP503H		✔ (Use with BC-218)				✔	✔		
IP110H	✔		✔					✔	
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S									
IC-F3400DT/DS, IC-F4400DT/DS									
IC-F52D, IC-F62D									
IC-F1100DT/DS/D, IC-F2100DT/DS/D				✔	✔				
IC-F52D-UL, IC-F62D-UL									
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR				✔	✔				
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR									
IC-F200, IC-U20GM, IC-U20SR						✔	✔		

MODEL NAME	TIE-CLIP MICROPHONES	HEADSETS							PTT SWITCH CABLES
	HM-163MC	HS-94 Earhook type with boom microphone	HS-94LWP Earhook type with waterproof connector	HS-95 Behind-the-head type	HS-95LWP Behind-the-head type with waterproof connector	HS-97 Throat microphone type	HS-102 Earphone type	VS-3 Bluetooth® headset	VS-4MC For manual PTT operation
IC-SAT100	✔	✔ (Use with VS-5MC)		✔ (Use with VS-5MC)		✔ (Use with VS-5MC)		✔	
IP730D, IP740D	✔	✔ (Use with VS-5MC)		✔ (Use with VS-5MC)		✔ (Use with VS-5MC)		✔	
IP501H, IP504H, IP503H	✔*9 (Use with OPC-2006LS or OPC-2328)	✔*9 (Use with OPC-2006LS or OPC-2328)		✔*9 (Use with OPC-2006LS or OPC-2328)		✔*9 (Use with OPC-2006LS or OPC-2328)	✔ (Use with OPC-2359)	✔	
IP110H		✔*9 (Use with OPC-2133)		✔*9 (Use with OPC-2133)		✔*9 (Use with OPC-2133)		✔	
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S	✔*8	✔*10 (Use with VS-4MC or VS-5MC)		✔*10 (Use with VS-4MC or VS-5MC)		✔*10 (Use with VS-4MC or VS-5MC)		✔	✔*1 (Use with HS-94, HS-95 or HS-97)
IC-F3400DT/DS, IC-F4400DT/DS		✔ (Use with VS-4MC)		✔ (Use with VS-4MC)		✔ (Use with VS-4MC)			✔ (Use with HS-94, HS-95 or HS-97)
IC-F52D, IC-F62D	✔	✔ (Use with VS-5MC)		✔ (Use with VS-5MC)		✔ (Use with VS-5MC)		✔	
IC-F1100DT/DS/D, IC-F2100DT/DS/D		✔ (Use with VS-4LA or OPC-2004LA)	✔	✔ (Use with VS-4LA or OPC-2004LA)	✔	✔ (Use with VS-4LA or OPC-2004LA)			
IC-F52D-UL, IC-F62D-UL									
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR		✔ (Use with VS-4LA or OPC-2004LA)	✔	✔ (Use with VS-4LA or OPC-2004LA)	✔	✔ (Use with VS-4LA or OPC-2004LA)			
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR		✔ (Use with VS-4LA or OPC-2004LA)		✔ (Use with VS-4LA or OPC-2004LA)		✔ (Use with VS-4LA or OPC-2004LA)			
IC-F200, IC-U20GM, IC-U20SR		✔ (Use with OPC-2328 or OPC-2006)		✔ (Use with OPC-2328 or OPC-2006)		✔ (Use with OPC-2328 or OPC-2006)			

*7 Increased speaker-microphone volume depends on the combination of the transceiver and microphone. Ask your dealer for possible combination.
*8 For IC-F7040T/S only.   *9 HS-94, HS-95 and HS-97 headsets are simplex mode operation only.   *10 VS-4MC for IC-F7010/IC-F7020 series, VS-5MC for IC-F7040 series.

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Optional Accessories for Handheld Radios

MODEL NAME	PTT SWITCH CABLES				PLUG ADAPTER CABLES			EARPHONES	
	VS-5MC For manual PTT, VOX operation	VS-4LA For manual PTT operation	OPC-2328 For manual PTT operation	OPC-2359	OPC-2004LA For VOX operation	OPC-2006LS For VOX operation	OPC-2133 For VOX operation	EH-15B 2.5 mm plug	SP-26 2.5 mm plug
IC-SAT100	✔ (Use with HS-94, HS-95 or HS-97)							✔ (Use with HM-163MC)	✔ (Use with HM-163MC)
IP730D, IP740D	✔ (Use with HS-94, HS-95 or HS-97)							✔ (Use with HM-163MC or HM-238MC)	✔ (Use with HM-163MC or HM-238MC)
IP501H, IP504H, IP503H			✔ (Use with HS-94, HS-95 or HS-97)	✔ (Use with HS-102)		✔ (Use with HS-94, HS-95 or HS-97)			
IP110H							✔ (Use with HS-94, HS95 and HS-97)		
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S	✔*12 (Use with HS-94, HS-95 or HS-97)							✔*11 (Use with HM-163MC)	✔*11 (Use with HM-163MC)
IC-F3400DT/DS, IC-F4400DT/DS									
IC-F52D, IC-F62D	✔ (Use with HS-94, HS-95 or HS-97)							✔ (Use with HM-163MC)	✔ (Use with HM-163MC)
IC-F1100DT/DS/D, IC-F2100DT/DS/D		✔ (Use with HS-94, HS-95 or HS-97)			✔ (Use with HS-94, HS-95 or HS-97)				
IC-F52D-UL, IC-F62D-UL									
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR		✔ (Use with HS-94, HS-95 or HS-97)			✔ (Use with HS-94, HS-95 or HS-97)				
IC-F3001, IC-F3003, IC-F4001, IC-F4003, IC-V3MR		✔ (Use with HS-94, HS-95 or HS-97)			✔ (Use with HS-94, HS-95 or HS-97)				
IC-F200, IC-U20GM, IC-U20SR			✔ (Use with HS-94, HS-95, HS-97)		✔ (Use with HS-94, HS-95, HS-97)				

MODEL NAME	EARPHONES						ACC ADAPTERS		CHARGER BRACKET
	SP-27 3.5 mm plug	SP-28 2.5 mm plug	SP-29 3.5 mm plug	SP-32 Tube earphone adapter	SP-40 3.5 mm plug	SP-16PIBW	AD-118 Allows you to use 6-pin Hirose plug accessories	AD-135 3.5 mm jack earphone adapter	MB-130
IC-SAT100	✔ (Use with HM-222H or AD-135)	✔ (Use with HM-163MC)	✔ (Use with HM-222H or AD-135)	✔ (Use with EH-15B)	✔ (Use with HM-222H or AD-135)		✔	✔	
IP730D, IP740D	✔ (Use with HM-222H, HM-245T or AD-135)	✔ (Use with HM-163MC or HM-238MC)	✔ (Use with HM-222H, HM-245T or AD-135)		✔ (Use with HM-222H, HM-245T or AD-135)			✔	
IP501H, IP504H, IP503H									
IP110H						✔			
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S	✔*12 (Use with HM-222H or AD-135)	✔*12 (Use with HM-163MC)	✔*12 (Use with HM-222H or AD-135)	✔*12 (Use with EH-15B)	✔*12 (Use with HM-222H or AD-135)		✔	✔*12	
IC-F3400DT/DS, IC-F4400DT/DS								✔	
IC-F52D, IC-F62D	✔ (Use with HM-222H or AD-135)	✔ (Use with HM-163MC)	✔ (Use with HM-222H or AD-135)	✔ (Use with EH-15B)	✔ (Use with HM-222H or AD-135)		✔	✔	
IC-F1100DT/DS/D, IC-F2100DT/DS/D									✔ (Use with BC-213)
IC-F52D-UL, IC-F62D-UL									
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR									✔ (Use with BC-213)
IC-F3001, IC-F3003, IC-F4001, IC-F4003, IC-V3MR									✔ (Use with BC-193)
IC-F200, IC-U20GM, IC-U20SR									

MODEL NAME	BELT HANGERS			BELT CLIPS		MOUNT BASE	BRACKET ADAPTOR	CARRYING CASES	
	MB-96N Swivel type	MB-96F Fixed type	MB-96FL Long type	MB-135 MB-133 MB-127 MB-124 MB-94R MBB-1 MBB-3 MBB-5 Alligator type (Photo shows MB-133)	MB-136 MB-93 Swivel type (Photo shows MB-93)	MBF-1 For use with BC-218	MBA-7 For use with BC-218	LC-195*13	LC-191*13
IC-SAT100				✔ (Use MBB-5)					
IP730D, IP740D	✔	✔	✔	✔ (Use MB-133)	✔ (Use MB-136)			✔	
IP501H, IP504H, IP503H				✔ (Use MB-135)		✔ (Use with MBA-7)	✔ (Use with MBF-1)		
IP110H				✔ (Use MBB-1)					
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S	✔	✔	✔	✔ (Use MB-133)	✔ (Use MB-136)				
IC-F3400DT/DS, IC-F4400DT/DS	✔	✔	✔	✔ (Use MB-133)	✔ (Use MB-136)				
IC-F52D, IC-F62D	✔	✔	✔	✔ (Use MBB-3)	✔ (Use MB-136)				
IC-F1100DT/DS/D, IC-F2100DT/DS/D				✔ (Use MB-133)					
IC-F52D-UL, IC-F62D-UL	✔	✔	✔	✔ (Use MBB-3)	✔ (Use MB-136)				✔
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR				✔ (Use MB-133)					
IC-F3001, IC-F3003, IC-F4001, IC-F4003, IC-V3MR				✔ (Use MB-124)					
IC-F200, IC-U20GM, IC-U20SR				✔ (Use MB-127)					

*10 VS-4MC for IC-F7010/IC-F7020 series, VS-5MC for IC-F7040 series. *11 For IC-F7010/IC-F7020 series only
*12 For IC-F7040T/S only. *13 Charging is possible while the case is attached.

✔ : Applicable   ☐ : Not applicable

Optional Accessories for Handheld Radios

MODEL NAME	CARRYING CASES					DOCKING STATION
	LC-184*13	LC-187*13 For use with BP-290	LC-188 For use with BP-290	LC-183*13 For use with BP-271	LC-185*13 For use with BP-272	BC-247*14 Charging cradle
IC-SAT100						✔
IP730D, IP740D						
IP501H, IP504H, IP503H				✔	✔	
IP110H						
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S	✔					
IC-F3400DT/DS, IC-F4400DT/DS	✔					
IC-F52D, IC-F62D		✔	✔			
IC-F1100DT/DS/D, IC-F2100DT/DS/D						
IC-F52D-UL, IC-F62D-UL						
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR						
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR						
IC-F200, IC-U20GM, IC-U20SR						

MODEL NAME	ANTENNAS					CUT ANTENNAS		HIGH GAIN ANTENNAS
	FA-S81V 136–150 MHz FA-S82V 148–162 MHz FA-S83V 160–174 MHz FA-S81U 380–430 MHz FA-S82U 430–480 MHz FA-S83U 470–520 MHz	FA-SC25V 136–150 MHz FA-SC55V 150–174 MHz FA-SC25U 400–430 MHz FA-SC57U 430–470 MHz FA-SC72U 470–520 MHz	FA-SC28V 148–162 MHz FA-SC29V 160–174 MHz	FA-SC01U 350–400 MHz FA-SC02U 330–380 MHz FA-SC03U 380–430 MHz	FA-S100U 760–870 MHz	FA-S67VC 136–174 MHz FA-S76UC 380–520 MHz	FA-SC61VC 136–174 MHz FA-SC61UC 380–520 MHz	FA-SC62V 150–160 MHz FA-SC63V 155–165 MHz
IC-SAT100								
IP730D, IP740D		✔	✔	✔			✔	✔
IP501H, IP504H, IP503H								
IP110H								
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S	✔					✔	✔	
IC-F3400DT/DS, IC-F4400DT/DS	✔						✔	
IC-F52D, IC-F62D		✔ (Except FA-SC55V)	✔	✔ (Use FA-SC01U)			✔	✔
IC-F1100DT/DS/D, IC-F2100DT/DS/D		✔	✔	✔ (Use FA-SC01U or FA-SC02U)			✔	
IC-F52D-UL, IC-F62D-UL		✔ (Except FA-SC55V)	✔	✔ (Use FA-SC01U)			✔	✔
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR		✔	✔ (Use FA-SC28V for IC-V10MR)	✔ (Use FA-SC02U)			✔	✔
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR		✔	✔ (Use FA-SC28V for IC-V3MR)	✔ (Use FA-SC01U or FA-SC03U)			✔	✔
IC-F200, IC-U20GM, IC-U20SR								

MODEL NAME	STUBBY ANTENNAS			SATELLITE + GPS ANTENNAS			
	FA-S81VS 136–150 MHz FA-S82VS 148–162 MHz FA-S83VS 160–174 MHz FA-S81US 400–450 MHz FA-S82US 450–490 MHz	FA-SC26VS 136–144 MHz FA-SC27VS 142–150 MHz FA-SC56VS 150–162 MHz FA-SC57VS 160–174 MHz FA-SC26US 400–450 MHz FA-SC73US 450–490 MHz	FA-S103U Quick release connecter	FA-S102U	AH-38 OPC-2113 or user supplied coaxial cable required.	AH-40 1.5 m; 16.4 ft cable length	AH-41*15 OPC-2462 or user supplied coaxial cable required.
IC-SAT100			✔	✔	✔	✔	✔
IP730D, IP740D		✔					
IP501H, IP504H, IP503H							
IP110H							
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S	✔						
IC-F3400DT/DS, IC-F4400DT/DS	✔						
IC-F52D, IC-F62D		✔					
IC-F1100DT/DS/D, IC-F2100DT/DS/D		✔					
IC-F52D-UL, IC-F62D-UL		✔					
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR		✔					
IC-F3001, IC-F3003 IC-F4001, IC-F4003, IC-V3MR		✔					
IC-F200, IC-U20GM, IC-U20SR							

*13 Charging is possible while the case is attached.
*14 Comes with DC power cable, AC adapter and adapter cable (DC to AC). *15 Supplied with 1.5 m, 4.9 ft coaxial cable, power box, AC adapter and mounting kit.

Optional Accessories for Handheld Radios

MODEL NAME	COAXIAL CABLES			ZONE COPY CABLES		APPLICATIONS		SPEAKERPHONE UNIT	PROGRAMMING SOFTWARE
	OPC-2422 For AH-40 (5 m; 16.4 ft)	OPC-2462 For AH-41 (59 m; 193.5 ft)	OPC-2113 For AH-38 (10 m; 32.8 ft)	OPC-1870 Handheld to handheld	OPC-2362 Handheld to mobile	RS-SAT100 For Android™ For iOS™	IP500APP LTE radio mobile application[16]	VE-SP1 (IP radio is not supplied.)	CS-V10MR CS-V3MR For Windows™
IC-SAT100	✔	✔	✔			✔			
IP730D, IP740D							✔		
IP501H, IP504H, IP503H							✔	✔	
IP110H									
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S				✔	✔				
IC-F3400DT/DS, IC-F4400DT/DS				✔	✔				
IC-F52D, IC-F62D				✔					
IC-F1100DT/DS/D, IC-F2100DT/DS/D									
IC-F52D-UL, IC-F62D-UL				✔					
IC-F1000/T/S, IC-F2000/T/S, IC-V10MR									✔ (Use CS-V10MR for IC-V10MR)
IC-F3001, IC-F3003, IC-F4001, IC-F4003, IC-V3MR									✔ (Use CS-V3MR for IC-V3MR)
IC-F200, IC-U20GM, IC-U20SR									

*16 For iOS™: iOS™ version 12 or later. For Android™: Android™ version 8.0 or later This service may not be available depending on the country/region.

Optional Accessories for Mobile Radios

MODEL NAME	HAND MICROPHONES									SPEAKER-MICROPHONE
	HM-239T with DTMF keypad	HM-220 Heavy-duty type IP54	HM-220T Heavy-duty type with DTMF keypad IP54	HM-221 IP55	HM-221T DTMF keypad type IP55	HM-152	HM-152T DTMF keypad type	HM-148G Heavy-duty type	HM-148T Heavy-duty type with DTMF keypad	HM-241
IC-SAT100M										
IP501M										✔
IC-F7510, IC-F7520, IC-F7540		✔	✔	✔	✔					
IC-F5400D, IC-F6400D		✔	✔	✔	✔					
IC-F5330D, IC-F6330D										
IC-F5130D, IC-F6130D	✔					✔	✔	✔	✔	
IC-F5021, IC-F5023/H, IC-F6021, IC-F6023/H						✔	✔	✔	✔	
IC-F5011, IC-F5013/H, IC-F6011, IC-F6013/H						✔	✔	✔	✔	

MODEL NAME	HANDS FREE MICROPHONE	EXTENSION CABLE	HEADSET	DESKTOP MICROPHONES		EXTERNAL SPEAKERS		SEPARATION KITS	
	HM-249	OPC-2500 Extension cable for HM-249	VS-3 Bluetooth® headset	SM-29	SM-26	SP-30	SP-35 With 2 m; 6.5 ft cable / SP-35L With 6 m; 19.7 ft cable	RMK-5	RMK-7 Dual-head
IC-SAT100M			✔			✔	✔		
IP501M	✔	✔ (Use with HM-249)	✔			✔	✔		
IC-F7510, IC-F7520, IC-F7540			✔	✔		✔	✔	✔ (Separation cable is required)	✔ (Separation cable is required)
IC-F5400D, IC-F6400D			✔	✔		✔	✔	✔ (Separation cable is required)	✔ (Separation cable is required)
IC-F5330D, IC-F6330D			✔			✔	✔		
IC-F5130D, IC-F6130D	✔	✔ (Use with HM-249)	✔ (Use with UT-137A)		✔	✔	✔		
IC-F5021, IC-F5023/H, IC-F6021, IC-F6023/H	✔	✔ (Use with HM-249)			✔	✔	✔		
IC-F5011, IC-F5013/H, IC-F6011, IC-F6013/H	✔	✔ (Use with HM-249)			✔	✔	✔		

✔ : Applicable   : Not applicable

Optional Accessories for Mobile Radios

MODEL NAME	COMMANDMIC™		SEPARATION CABLES		GPS ANTENNA	BLUETOOTH® UNIT	ACC CABLES	
	HM-218 Secondary controller for use with RMK-5 IP55	HM-230HB IP55	OPC-2367 8 m; 26.2 ft OPC-2366 5 m; 16.4 ft OPC-2365 3 m; 9.8 ft OPC-2364 1.9 m; 6.2 ft	OPC-2373 1.9 m; 6.2 ft OPC-2374 8 m; 26.2 ft	UX-241 5 m; 16.4 ft cable length	UT-137A	OPC-1939 D-SUB 15-pin type	OPC-2078 D-SUB 25-pin type
IC-SAT100M								
IP501M		✔						
IC-F7510, IC-F7520, IC-F7540	✔ (Separation cable is required)		✔ (Use with RMK-5 or RMK-7)	✔ (Use with HM-218)	✔			
IC-F5400D, IC-F6400D	✔ (Separation cable is required)		✔ (Use with RMK-5 or RMK-7)	✔ (Use with HM-218)	✔			
IC-F5330D, IC-F6330D							✔*18	✔*18
IC-F5130D, IC-F6130D						✔	✔*18	✔*18
IC-F5021, IC-F5023/H IC-F6021, IC-F6023/H							✔	✔
IC-F5011, IC-F5013/H IC-F6011, IC-F6013/H							✔	✔

MODEL NAME	ACC CABLES	ZONE COPY CABLES	MICROPHONE CABLES		SAT ANTENNA	COAXIAL CABLE	AC ADAPTER	APPLICATION	DC POWER CABLES
	OPC-2407 D-SUB 25-pin type	OPC-2362 Mobile to handheld	OPC-2355 2.5 m; 8.2 ft cable length	OPC-2429 For use with the supplied speaker microphone (2 m, 6.5 ft)	AH-40 Satellite + GPS antenna (1.5 m; 16.4 ft cable)	OPC-2422 For AH-40 (5 m; 16.4 ft)	BC-157S 12 V/7.5 A	RS-SAT100 For Android™ For iOS™	OPC-2479 3 m, 10 A (for 25 W) OPC-2478 3 m, 20 A (for 50 W)
IC-SAT100M				✔	✔	✔	✔	✔	
IP501M	✔		✔ (Use with HM-230HB or HM-241)						
IC-F7510, IC-F7520, IC-F7540		✔							
IC-F5400D, IC-F6400D		✔							
IC-F5330D, IC-F6330D									✔
IC-F5130D, IC-F6130D									✔
IC-F5021, IC-F5023/H IC-F6021, IC-F6023/H									
IC-F5011, IC-F5013/H IC-F6011, IC-F6013/H									

*18 Digital modulation input is not available even when using accessory cables.

Activation Keys for Handheld and Mobile Radios

MODEL NAME	ACTIVATION KEYS							
	ISL-P25TR APCO P25 Trunking Phase 1	ISL-P25P2 APCO P25 Trunking Phase 2	ISL-P25AES AES Encryption Activation Key	ISL-P25ARC4 40-bit Software Encryption	ISL-P25VS APCO P25 Conventional Voting Scan	ISL-P25DS APCO P25 Packet Data Service (GPS/Text)	ISL-P25FP Front Panel Programming	ISL-P25W 25 kHz Activation Key (for USA version transceivers)
IC-F7010T/S, IC-F7020T/S, IC-F7040T/S	✔	✔	✔ (Use with UT-134)	✔*	✔	✔	✔	✔
IC-F7510, IC-F7520, IC-F7540	✔	✔	✔ (Use with UT-134)	✔*	✔	✔	✔	✔

MODEL NAME	ACTIVATION KEYS				
	ISL-UGMTR NXDN™ Type-D Trunking Upgrade Key	ISL-AKAES AES Encryption Activation Key	ISL-CHEX Channel Expansion Key increases channel number up to 4000	ISL-AKSTM Dealer Set Mode Activation Key	ISL-AK25K 25 kHz Activation Key (for USA version transceivers)
IC-F3400DT/DS, IC-F4400DT/DS	✔	✔ (Use with UT-134)	✔	✔	✔
IC-F52D, IC-F62D	✔				✔
IC-F52D-UL, IC-F62D-UL	✔				✔
IC-F5400D, IC-F6400D	✔	✔ (Use with UT-134)	✔	✔	✔

*ISL-P25AES and UT-125 or UT-134 required

Optional Accessories for Repeaters

MODEL NAME	CHANNEL MODULES	NETWORK CONTROLLER	IDAS™ SOFTWARE			GPS ANTENNA	HAND MICROPHONE	DESKTOP MICROPHONE	EXTERNAL SPEAKER
	UR-FR5300 136–174 MHz, 50 W **UR-FR6300** 330–400, 400–470, 450–512, 450–520 MHz, 50 W	**UC-FR5300***	**CF-FR5000MC** Multi-site conventional software for UC-FR5300	**CF-FR5000MT** Type-D Multi-site trunking software for UC-FR5300	**CF-FR5300SC** Simulcast conventional software for UC-FR5300	**UX-241** 5 m; 16.4 ft cable length	**HM-152**	**SM-26**	**SP-35** 2 m; 6.5 ft cable **SP-35L** 6 m; 19.7 ft cable
IC-FR5300, IC-FR6300	✔	✔	✔ (Use with UC-FR5300)	✔ (Use with UC-FR5300)	✔ (Use with UC-FR5300)	✔	✔	✔	✔

* The following versions are available. #11: CF card not included (Type-D single-site trunking) #12: CF-FR5000MC included #13: CF-FR5000MT included #14: CF-FR5300SC included

Optional Accessories for RoIP Gateway and IP Products

MODEL NAME	AC ADAPTERS			AUDIO CONNECTION CABLES					
	BC-207S 12 V/4.2 A	**BC-236** 12 V/8.3 A	**BC-147S***1 12 V/0.25 A	**OPC-2273** For VHF marine transceiver 5 m; 16.4 ft	**OPC-2390** For IC-FR5000 series 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-2412** For IC-SAT100 5 m; 16.4 ft
VE-PG4		✔		✔	✔	✔	✔	✔	✔
IP100FS			✔ (Use with CT-23)						
RC-FS10			✔ (Use with CT-23)						
IP1100CV	✔	✔							

MODEL NAME	SPEAKER-MICROPHONE	HAND MICROPHONES			DESKTOP MICROPHONE	DIGITAL VOICE CONVERTER	MICROPHONE ADAPTER	MOUNTING BRACKET
	HM-241	**HM-152**	**HM-152T** DTMF keypad type	**HM-216** Short cable*3	**SM-26**	**CT-24** For more than five digital radio connections	**CT-23**	**MBF-6**
VE-PG4	✔	✔*2	✔*2	✔*2	✔*2	✔		✔
IP100FS		✔ (Use with CT-23 and BC-147S)			✔ (Use with CT-23 and BC-147S)		✔ (Use with SM-26 or HM-152)	
RC-FS10		✔ (Use with CT-23 and BC-147S)			✔ (Use with CT-23 and BC-147S)		✔ (Use with SM-26 or HM-152)	
IP1100CV								✔

*1 BC-147SA for the USA plug. SE for European plug. SV for Australian plug.
*2 The HM-152, HM-152T, HM-216 and SM-26 has no Speaker function. An external speaker is required to be connected to the VE-PG4 to hear received audio with these accessories.
*3 The HM-216 has a total of 490 mm cable length including a 300 mm curl code, while the HM-152 has a total of 900 mm cable length.

Optional Accessories for HF Radio

MODEL NAME	HAND MICROPHONE	REMOTE CONTROL MIC	SEPARATION KIT	SEPARATION CABLES	AUTOTUNING ANTENNA	EXTERNAL SPEAKERS	
	HM-193	**HM-192**	**RMK-6** For controller attached version	**OPC-608** 8 m; 26.2 ft **OPC-726** 5 m; 16.4 ft **OPC-607** 3 m; 9.8 ft **OPC-609** 1.9 m; 6.2 ft	**AH-740** 2.5–30 MHz Compact type	**SP-30**	**SP-35** With 2 m; 6.5 ft cable **SP-35L** With 6 m; 19.7 ft cable
IC-F8101	✔	✔	✔	✔	✔	✔	✔

MODEL NAME	GPS UNIT	GPS/MODEM CABLE	ANTENNA TUNER	SHIELDED CONTROL CABLE	MOUNTING BRACKET	COOLING FAN
	UX-248 Can be used with Enhanced version.	**OPC-2308**	**AT-140**	**OPC-2309** 10 m; 32.8 ft	**MB-126**	**CFU-F8100**
IC-F8101	✔	✔	✔	✔ (Use with AT-140)	✔	✔

Some options may not be available in some countries. Please ask your dealer for details.
Read all instructions enclosed with the transceiver carefully and completely before using the transceiver.

✔ : Applicable   : Not applicable   30

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