



Business Radio Solutions

Australian Edition





IP Radio & Hybrid IP Radio

Icom's IP radio system provides instantaneous, wide area communication using an LTE (4G) 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 analogue) group.

* Service availability depends on the country. 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.



WLAN Radio

Wireless LAN radio requires no licence to use and allows you to have several 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, conferences, status calls and short data messaging. You can also connect an IP phone or conventional radio equipment when using it with the RoIP gateway.



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.



Analogue Radio

Radio technologies and know-how cultivated for over 50 years have been applied to professional analogue radio products. Rugged, waterproof, easy to use, clear and powerful audio in a compact design, Icom's analogue 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, a versatile Radio over IP Gateway provides a seamless solution interconnecting various communication systems irrespective of standards and distance such as satellite PTT radio, IP radio, WLAN radio, IDAS™ digital radio, analogue radio, IP phone and more. The VE-PG4 works as general IP backbone converting received audio to transmit from other radios/protocols.



UHF CB Radio

The Australian wilderness presents a vast array of conditions for the avid adventurer. One of the most important safety tools in these situations is a reliable radio communications unit. The Icom range of UHF CB equipment is based on tough military specifications and offers some of the most advanced features in communications today. Icom UHF CB – built tough like the Australian landscape.

IP Radios – Hybrid



Innovative IP Radios with Licensed Professional Radio Mode

The IP730D and IP740D are dual mode “Hybrid” radios that provide nationwide coverage over LTE networks and conventional VHF/UHF professional radio mode (IDAS™ digital/analogue mode.) It receives both communication modes and transmits either or both modes.

IP730D/IP740D

Hybrid Handheld IP Radio for Local & Nationwide Communications

- Simultaneous TalkListen™ in LTE Mode • 1500 mW of powerful audio*¹
- IP67 waterproof 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
- GPS Data Transmission capability in LTE mode • AquaQuake™

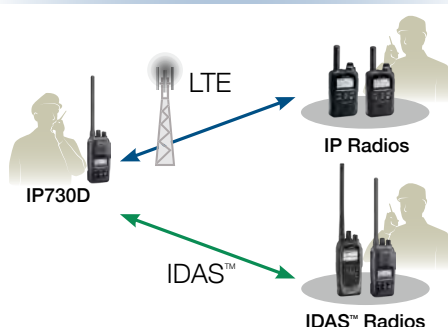
*¹ At 10% audio distortion

*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. (Also see IDAS™ page for more information)

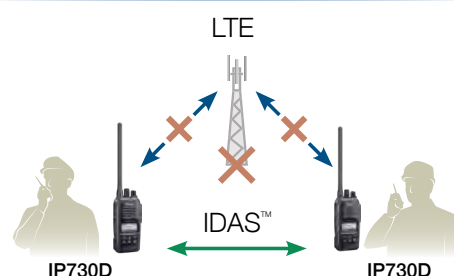
Dual Mode Operation with Main and Sub PTT Buttons

The IP730D series has a Sub PTT button, in addition to the Main PTT button. It provides smooth dual mode operation with independent PTT buttons for each LTE mode and IDAS™ mode.

Expand an existing IDAS™ system with an LTE network



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



Bridge Function*

The Bridge function* is an innovative feature that allows handheld radio users to achieve an audio bridge between the LTE mode and IDAS™ mode easily.

* 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



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



IP Radios – LTE

Wide Area Coverage Over an LTE (4G) Network

Simultaneous TalkListen™



The Simultaneous TalkListen™ provides full-duplex one-to-many communication, which allows users to talk and receive at the same time. This results in a smooth, telephone-like conversations.

Exceptional Stability and Availability

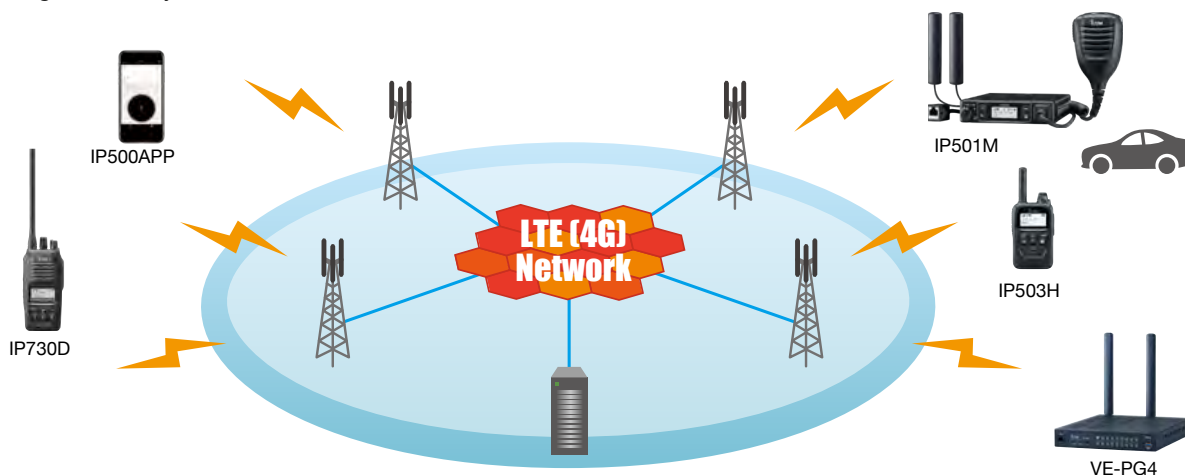
The system server is placed within a secured closed network, and shielded from potential attacks. Its operation relies on a custom SIM that is isolated from the Internet, making it more reliable than regular PoC systems that use the Internet.

Multiple-user Communication

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

Priority Interrupt Calling

Our IP radios support group calls with three or more people. In case of an emergency, you can break into an on-going call to transmit an important message.



IP503H

Compact and Durable IP Handheld

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



IP503H Lite

IP Handheld

* Compatible with the Icom Multi-Carrier LTE Solution.



IP501M

Mobile IP Radio Interoperable with the IP503H

- Built-in Bluetooth® capability 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™
- Provisioning/FOTA (Firmware Over-the-Air)



IP500APP

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

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

* IP500APP for Android™: Android™ version 8.0 or later

IP500APP for iOS™: iOS™ version 12 or later
IP500APP service may not be available.



IP Radios – WLAN

Simultaneous TalkListen™ that Works over Wireless LAN

Communication System Using Wireless LAN

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

Simultaneous TalkListen™

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



Individual, Group,

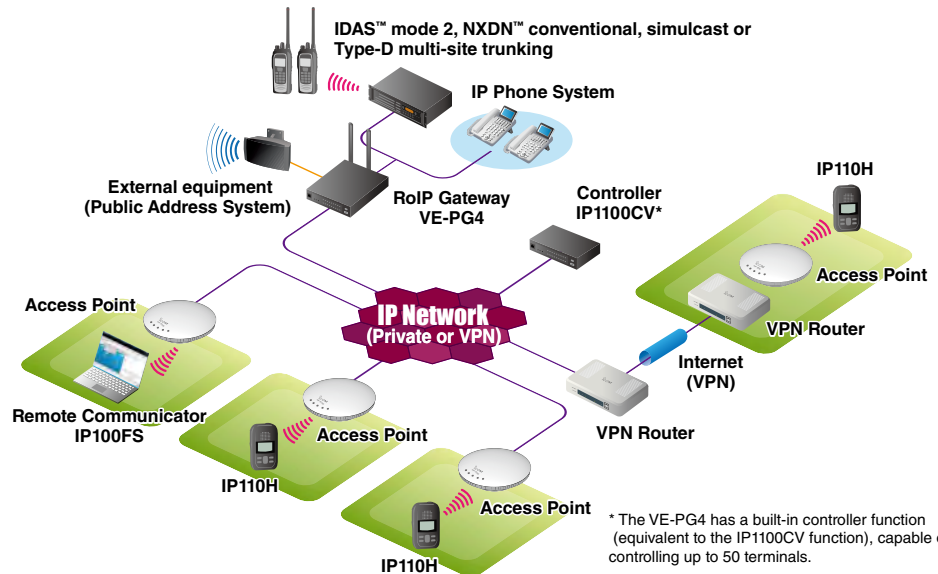
All or Area Communication

Staff spread across multiple rooms can communicate simultaneously. The IP110H can send and receive short data messages with a vibration alert from another unit*.

* Send preprogrammed message from the IP110H. Free texting from a 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, analogue radio and IDAS™ conventional, simulcast and Type-D multi-site trunking system.

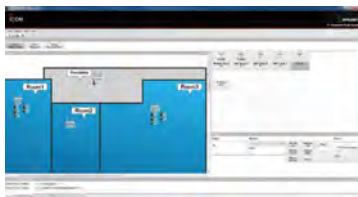


IP110H

Compact Wireless LAN Radio with Simultaneous TalkListen™

- Licence-free wireless LAN radio using IEEE 802.11 a/b/g/n/ac standards (2.4 GHz and 5 GHz)*
- WPA2/WPA Enterprise as well as Personal 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 • 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

- Send and receive voice, status and text message calls with WLAN radios
- Obtain location information of each radio based on connecting access point
- Can be installed on a Windows™ 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.
- Call recording function can record communication audio to an external USB flash drive

* The VE-PG4 has a built-in controller function capable of controlling up to 50 units.

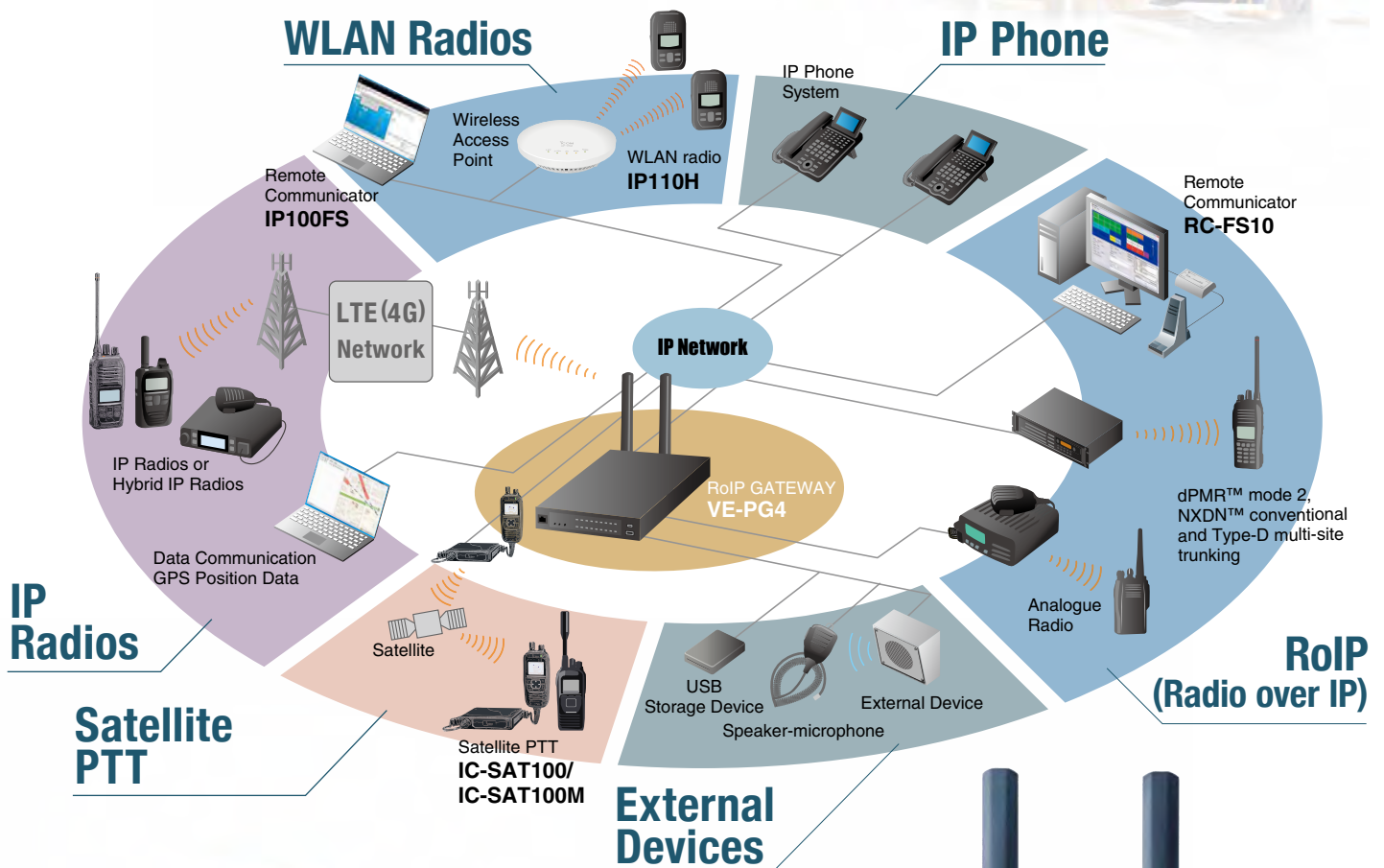
RoIP Gateway

Bridging Communication Gaps, This Radio over Gateway Device Links Diverse Voice Communication Systems and Frequencies

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

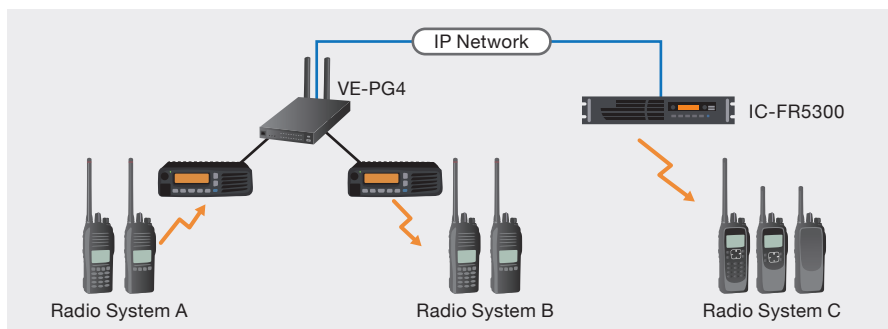
* Service availability depends on the country. Network coverage provided by a custom SIM card.

Communication Links



VE-PG4

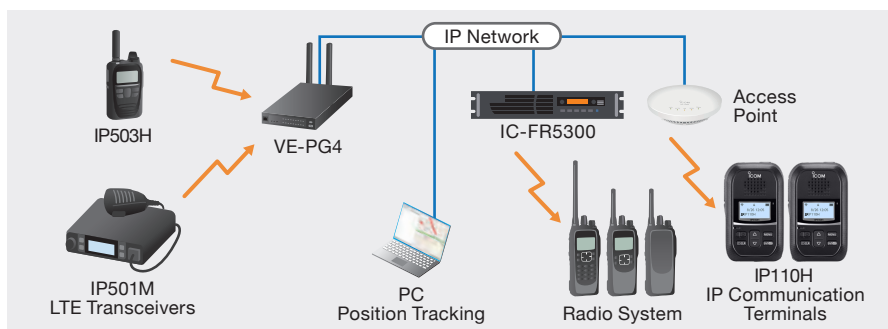
Bridge Connection between Radio Systems



The VE-PG4 interconnects with two or more radio systems, even when the systems are using different bands and different categories. All received audio is bridged to opposing radio system, so a radio user can talk to all connected radio users. The built-in digital voice converter converts analog audio to IDAS™ compatible digital audio.

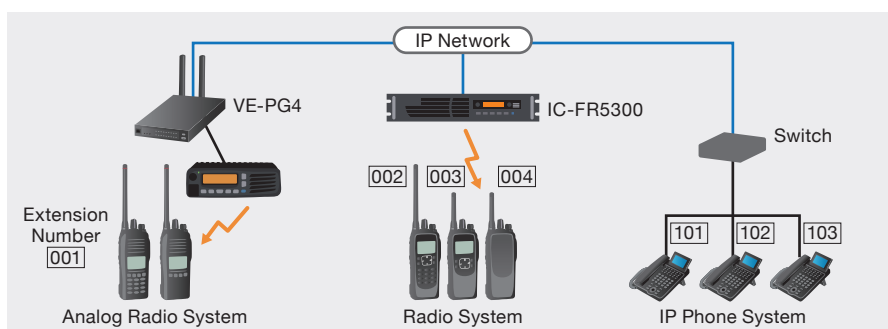
* Cross band/cross category operation may be prohibited in some countries. Please check the legal requirements in your country before installation.

LTE Transceiver Gateway



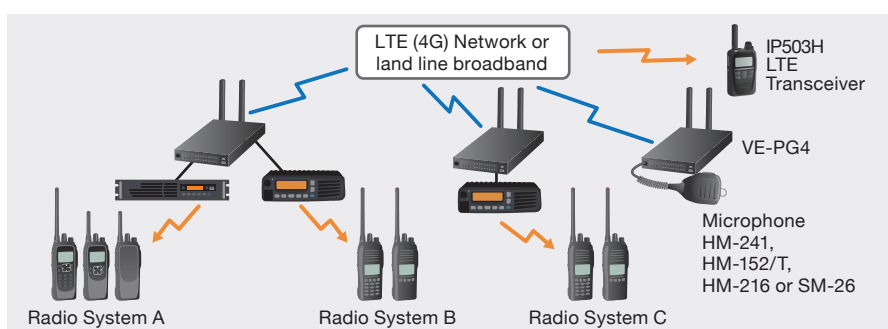
By installing a custom SIM card to the built-in LTE module, the VE-PG4 can interconnect IP503H/IP501M LTE transceivers with conventional radio systems and IP10H IP communication terminals. GPS position information from the LTE transceivers can be received and transferred to a PC.

IP Phone Interconnect



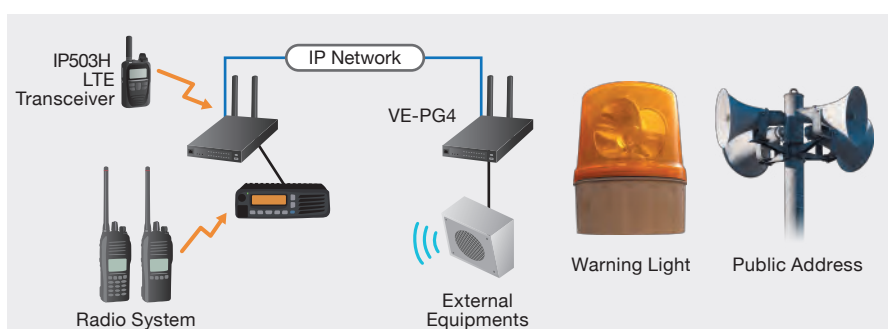
The built-in Simplified SIP server can assign extension numbers to IDAS™ radio terminals, IP advanced radio terminals, and groups of analog radio users as well as IP phones. A radio user can initiate phone calls. Phone users can make individual or group calls to connected radio users.

Multi-site Connection between VE-PG4s



Two or more VE-PG4s can be connected through LAN or LTE (4G) networks. The communication area can be flexibly expanded, and dispersed radio sites can be connected, regardless of distance or radio system used.

External Equipment Connection



Public address system, siren, warning light and other external devices can be connected to the VE-PG4. When detecting an emergency signal, users can start emergency notification from either a digital transceiver, IP transceiver or public address system.

Real-Time Communications Across the Globe

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

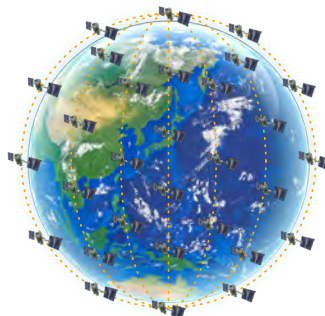


One-to-Many Communications



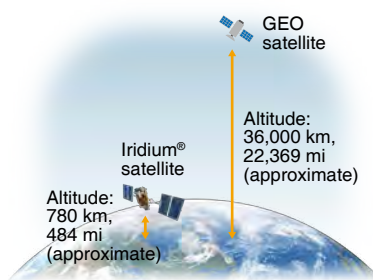
Unlike satellite phones, IC-SAT100/M users can immediately start talking to all the radios in the same talkgroup, with just a push of the transmit (PTT) button.

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



The satellite PTT radio uses Low Earth Orbit (LEO) Iridium® satellites, offering low-latency communication compared to Geosynchronous Equatorial Orbit (GEO) satellites, which orbit at an altitude approximately 50 times higher.

Conventional Radios and IP Phones Interconnection*²



With a VE-PG4 RoIP gateway, the IC-SAT100/M can interconnect with an IP phone system, IP, LTE, IDAS™ digital (dPMR™ mode 2, NXDN™ conventional, Simulcast and Type-D multi-site trunking) and analogue transceivers.

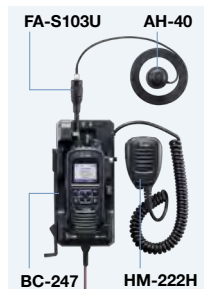
*¹ Subscription contracts are required for using the IC-SAT100/M. Depending on the country or region, carrying and/or use of the IC-SAT100/M may be prohibited.

*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.

IC-SAT100

Compact Handheld

- IP67 waterproof 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
 - SMA type antenna connection
 - USB charging • Integrated GPS receiver
 - AES 256-bit encryption for security
 - Multiple language display
 - Compatible with Iridium Extreme PTT mode
- * TX : RX : standby = 5 : 5 : 90.



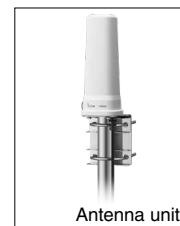
Docking Station
for In-Vehicle Use

IC-SAT100M

In-Building and In-Vehicle Use

- As the RF unit is housed in the antenna unit, wiring between the antenna and main unit can be done flexibly using a LAN cable (Cat 5e)*1
- For a vehicle use, optional AH-40 must be used for optimal performance and environmental resilience
- 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
- Integrated GPS receiver • AES 256-bit encryption
- Multiple language display (English, Chinese, French, Japanese, and Spanish)
- Compatible with Iridium Extreme PTT mode

*1 User supplied LAN cable is required to replace the supplied 20 m LAN cable. Maximum 100 m.



Antenna unit



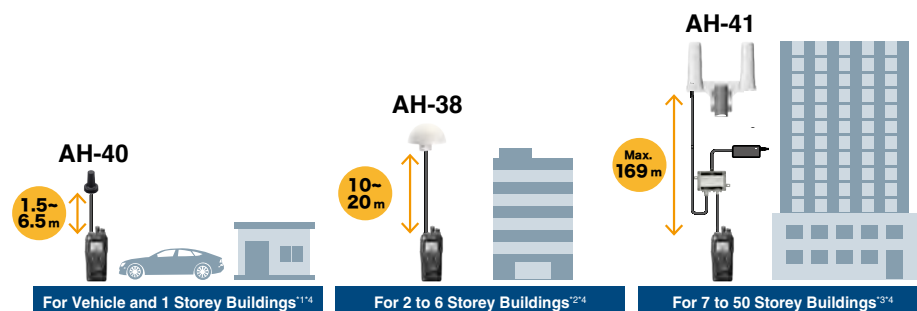
Microphone ▶



◀ 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. Due to the built-in amplifier in the AH-41, it can be possible to extend the reach of coaxial cables over longer distances.



*1 Optional OPC-2422 coaxial cable (5 m) is required for more than 1.5 m 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.

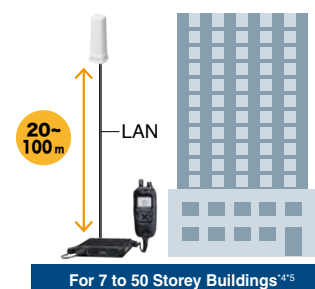
*4 The distance from the main unit to the antenna is a rough guideline.

The height of the building is an estimate assuming that the height of one floor is 3.5 m.

*5 User supplied LAN cable is required to replace the supplied 20 m LAN cable.

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).^{*5}



Check the Icom website for more information.



IDAS™ Digital Radios



Flexible Analogue And Digital Solutions with Advanced IP Network Integration

User-Friendly Digital System That is Simple Yet Powerful

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.

Crystal-Clear Digital Audio Outshines Analogue Audio

By adopting the industry standard AMBE+2™ Vocoder and advanced FEC (Forward Error Correction) coding, the IDAS™ system provides improved communication quality, that is clearer than analogue radio systems.

Simplified Control for Ease of System Management

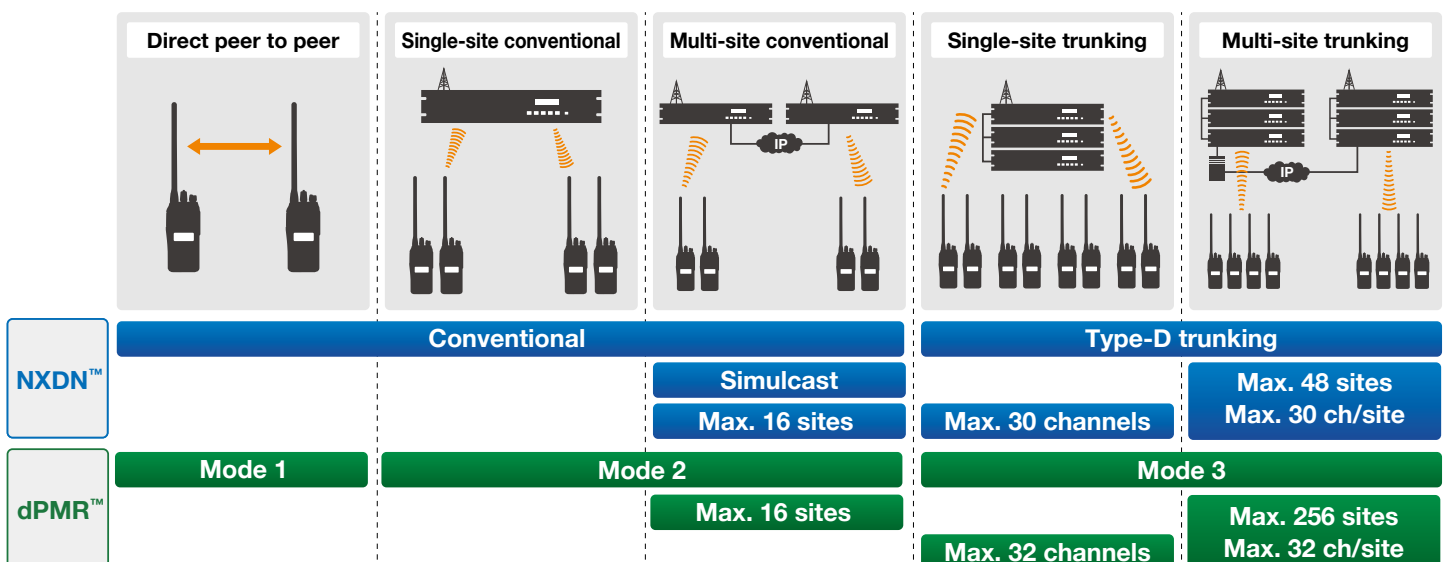
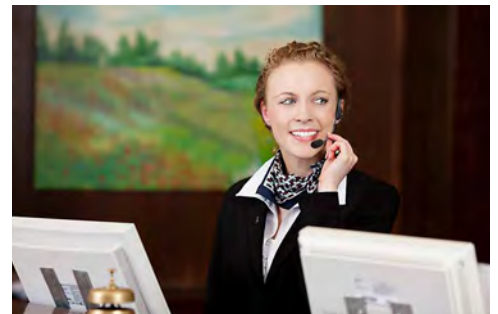
Simple and efficient management is critical for systems of any size. IDAS™ provides simplified control for ease of system management with such features as OTAP and administration applications.

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 IDA™ radio system allows for interoperability with other manufacturers equipment to add to/replace existing NXDN™ and/or dPMR™ systems. Some models support NXDN™ 12.5 kHz mode for compatibility with other manufacturers.

System Scalability According to Communication Traffic and Coverage

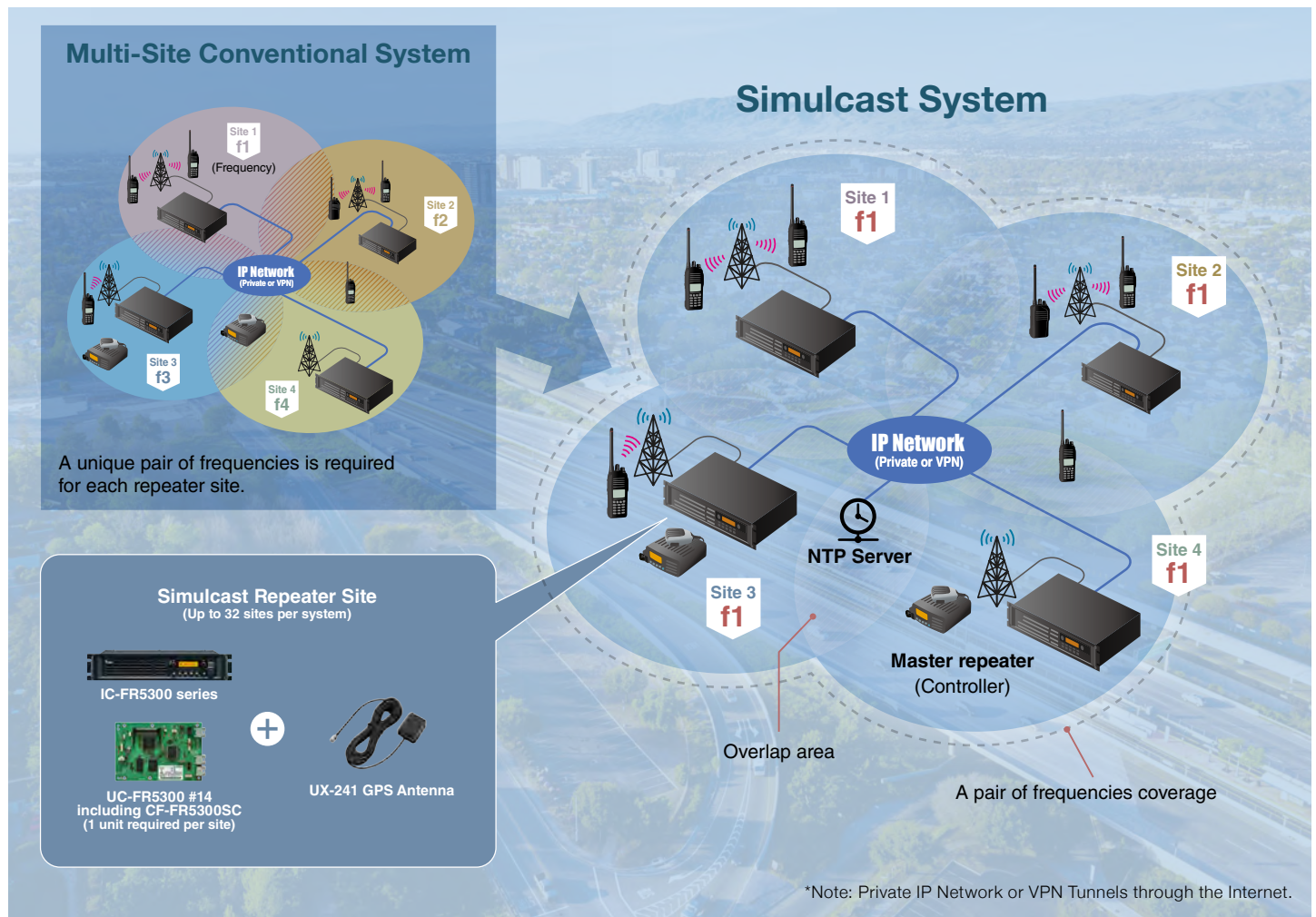
Depending on the communication traffic and coverage, an IDAS™ radio system can be expanded from single site conventional to simulcast conventional or multi-site trunking, to meet changing communication system requirement. One notable feature is that you don't have to use your own microwave or similar equipment because the requirement for the IP line in the backbone is flexible.



IDAS™ Simulcast System

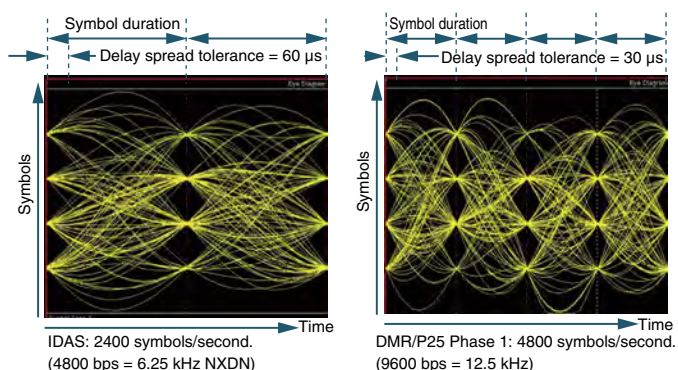
Wide Area Coverage on a Single Pair of Frequencies

The IDAS™ Simulcast (NXDN™ protocol) system links multiple repeater sites* through an IP network, synchronizing them with precise GPS signals. This enables a single pair of frequency licenses to cover a wider area. Even in urban areas where obtaining new frequency licenses is difficult, it's feasible to establish a multi-site, wide-area system, keeping license costs lower. In certain situations, only the IDAS Simulcast system can fulfill specific requirements. * The maximum number of sites for an IDAS™ Simulcast system is 32.



Ideal 6.25 kHz FDMA Technology for Simulcast

The IDAS™ Simulcast system transmits digital voice and data at 4800 bps using 4-Level FSK and 6.25 kHz very narrow bandwidth FDMA technology. With a symbol duration of about 420 microseconds (μ s), the system experiences minimal Inter-Symbol Interference (ISI).



Consequently, the IDAS Simulcast system boasts a delay spread tolerance of approximately 60 μ s. In contrast, a DMR/P25 Phase 1 system has a delay spread tolerance of about 30 μ s, leading to a reduction in coverage radius by a similar amount.

Simplified Setup and Flexible Adjustments

Compared to other simulcast systems, IDAS™ Simulcast can initially start with a more straightforward setup. If issues arise, adjustments to the overlap and range between repeaters can be made later on.

Any IDAS™ Radio Can Be Employed

No extra technical requirements are needed on the IDAS™ transceiver to utilize IDAS™ Simulcast. The transceiver can receive simulcast through the same process used for handling received multipath interference. Therefore, any IDAS™ transceiver can be employed for IDAS™ simulcast.

IDAS™ Handheld Radios



IC-F3400D/F4400D Series

Flagship Excellence with Colour Display and Versatile Features

- 1024 channels • IP68 • Colour display • Integrated GPS
- Bluetooth® capability • microSD card slot • Voice recording • OTAP • OAA
- USB connector • Active noise canceller • AES/DES encryption*
- 10 hours battery life (with BP-303) • Motion/Stationary sensor • Man down/Lone worker
- Vibration alert • Channel announcement • 1300 mW loud audio • Compatible with Analogue



* Licence key upgrade required



IP730D/IP740D

IDAS™ and LTE Hybrid 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
- Individual, Group and All calls • Talk back • CTCSS and DTCS for analogue mode
- Compatible with Analogue



IC-F52D/F62D

Powerful and Compact, 5 W Model with Advanced Features

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



* Licence key upgrade required



IC-F1100D/F2100D Series

Budget-Friendly Handheld with/without Keypad and LCD Variations

- 128 channels (16 channels for IC-F1100D/F2100D) • IP67 • Motion/Stationary sensor
- Man down/Lone worker • 18 hours battery life (with BP-280) • 1500 mW loud audio • OAA
- Channel announcement • Compatible with Analogue





IDAS™ Mobile Radios

IC-F5400D/F6400D

Flagship Excellence with Versatile Configuration and Colour Display



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

NXDN™

Conventional

Single/Multi-Site Trunking (Optional)

dPMR™

Mode 1

Mode 2

Mode 3 (Optional)

IC-F5330D/F6330D

CommandMic™ Remote Control with Ethernet Cable Connection



- 128 channels • NXDN™ Type-D single-site trunking • Flexible Power over Ethernet (PoE) connection*1 between RF unit and CommandMic™ • High contrast, wide viewing angle, black background display • Bluetooth® capability*2 • Emergency and Lone Worker functions
- Remote monitor • Status and short data message (SDM) • Optional D-SUB connector cable
- Power ON/OFF (Stand-by) from the CommandMic™ • GPS receiver connection with optional ACC cable
- Compatible with Analogue

NXDN™

Conventional

Single-Site Trunking

*1 Up to 100 m Ethernet cable *2 Depending on version

IC-F5130D/F6130D

Digital Standard Mobile Transceiver



- 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 • Compatible with Analogue

NXDN™

Conventional

Single-Site Trunking

IC-FR5300/FR6300



Compatible with Analogue and IDAS™ ALL Modes Including Simulcast

- Digital conventional mode and analogue FM with auto selection • 25 W at 100% duty cycle operation (Ambient temperature: 25°C) • Compatible with digital simulcast system with the optional UC-FR5300 #14 network controller and GPS antenna • Multi-site conventional or trunking system configuration • “Two channels in one box” configuration with optional UR-FR5300/UR-FR6300

NXDN™

For dPMR™ protocol mode operation, use the IC-FR5100/FR6100 repeater.



IC-F1000/F2000 Series

Big Sound, Small Package! Unmatched 1500 mW Audio and Features

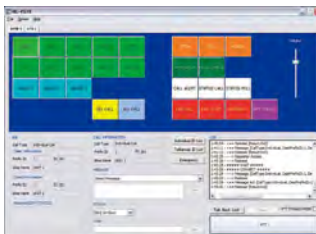
- 128 channels (16 channels for the non-display model) • Motion/Stationary sensor
- Man down/Lone worker • 20 hours battery life (with BP-280) • 1500 mW loud audio
- Channel announcement • 16 code inversion voice scrambler

IC-F5023



Features, Performance, Value For the Everyday LMR User

- VHF Mobile Transceiver • 128 channels (separated into 8 memory zones)
- Front Mounted Speaker
- 6 Programmable Buttons • MIL Grade Rugged Construction • Optional Internal Units
- Most Popular Signalings Built-in • MDC 1200 Compatible • Wide Frequency Coverage
- Multiple 2-Tone, Multiple 5-Tone • Radio Kill, Stun and Revive • Lone Worker Function
- Mode Dependent Scan • TX Channel Setting and Talk Back Function



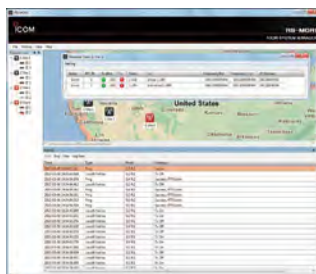
RC-FS10

Virtual Radio/PC Dispatch

- PC remote communicator for dPMR™ mode 2, NXDN™ conventional, Type-D multi-site trunking and analogue radio systems (VE-PG4 is required for analogue radio systems.)
- Up to eight different IDAS™ and analogue 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

NXDN™

dPMR™

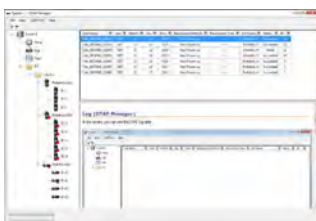


RS-MGR1

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 a search log can be searched and downloaded with extensive filter setting

NXDN™



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 be shared with a whole fleet with only one click • Up to 10,000 sessions are logged for review and rescheduling
- Manages up to 100,000 radios

NXDN™

dPMR™

For IC-F3400D, IC-F52D and IC-F5400D series.



VHF P25 DIGITAL Ten-key Type **IC-F7010T** VHF P25 DIGITAL Simple-key Type **IC-F7010S**
UHF P25 DIGITAL Ten-key Type **IC-F7020T** UHF P25 DIGITAL Simple-key Type **IC-F7020S**

IC-F7010 Series IC-F7020 Series

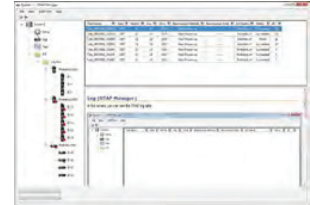
P25 Conventional and Trunking, Smallest and Lightest of Its Class

- P25 Phase 1/2 Trunking capabilities • 1024 channels • IP68
- Color display • Integrated GPS • Bluetooth® capability depending on version
- microSD card slot • Voice recording • OTAP • USB connector • Active noise canceller
- 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

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



VHF P25 DIGITAL **IC-F7510** VHF P25 DIGITAL **IC-F7520**

IC-F7510 IC-F7520

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

- P25 Phase 1/2 Trunking capabilities • 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 • 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

UHF CB Handheld Radios / Mobile Radios



IC-41PRO

80+ Channel UHF CB Transceiver

- Enhanced Audio Output Power • 80+ Channels
- 5W RF Output Power
- Waterproof and Dustproof construction equivalent to IP67
- Long Battery Life • Easy Channel Rotation • Compact Size

Available Colours



IC-410PRO

80+ Channel UHF CB Transceiver



IC-455

80+ Channel UHF CB Transceiver

- Loud, Clear & Easy-to-Use • Seven-Colour backlight LCD
- Noise Reduction, Audio Equalizer & Voice Changer
- Voice Recorder & Instant Play Back • Supports Both 12V/24V DC Power Sources
- Dynamic Group Scan for Keeping Group Communication
- Loud Speaker-Microphone with Auto Volume Control
- IP54 Water Resistance & Dust Protection



- 1W/ 5W/ 25W Output Power
- 80+ Channels
- Active Noise Cancel Microphone
- CB/Commercial Use



Satellite PTT, IP Radio & Hybrid IP Radio Feature Comparison

	SATELLITE PTT	
	IC-SAT100	IC-SAT100M
Frequency Range	1616–1626.5 MHz	1616–1626.5 MHz
Talkgroups	15 (Max.)	15 (Max.)
Dimensions (W × H × D; Projections are not included)	57.8 × 135 × 32.8 mm	Antenna unit (with RF unit): 76.8 × 200 × 76.8 mm, Main unit: 125 × 29 × 156.5 mm
Weight (approximate)	360 g	Antenna unit (with RF unit): 600 g, Main unit with microphone: 1.2 kg
IP Rating	IP67	IP67 (Antenna unit (with RF unit)), IP55 (mic), IP54 (main unit)
Operating Time (Hours)	14.5	N/A
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	N/A	Yes
I/O Control Port	USB, 14-PIN ACC	D-SUB, LAN, Ignition sense

	IP RADIOS/HYBRID IP RADIO				WLAN RADIO
		IP730D/IP740D	IP503H	IP501M	IP110H
Network (EUR/EXP Versions)	LTE (4G)	B1, B3, B5, B7, B8, B28	B1, B3, B5, B7, B8, B28	B1, B3, B5, B7, B8, B28	WLAN: IEEE 802.11 a/b/g/n/ac 2.4–2.4835 GHz, 5.15–5.35, 5.47–5.85 GHz
Dimensions (W × H × D; Projections are not included)		61.7 × 140.5 × 42.8 mm	59 × 95 × 32 mm	125 × 29 × 156 mm	57 × 96.9 × 25.1 mm
Weight (approximate)		320 g	240 g	840 g	146 g
IP Rating		IP67	IP67	IP54	IP67 / IP54
Operating Time (Hours)		24 (LTE mode) 13 (IDAS mode)	17	N/A	20
Display		Yes	Yes	Yes	Yes
Keypad		Limited	Limited	Limited	Limited
AF Output Power (Internal SP)		1500 mW typ. (10% distortion)	900 mW	4 W (Extrenal SP)	1000 mW
Simultaneous TalkListen™		Yes	Yes	Yes	Yes
Man Down		Yes	Yes	N/A	Yes
Lone Worker		Yes	Yes	Yes	Yes
Vibration Alert		No	Yes	N/A	Yes
Voice Recorder		Yes	Yes	Yes	Yes
Bluetooth® Capability		Yes	Yes	Yes	Yes
GPS Receiver		Yes	Yes	Yes	No
Short Data Message		Yes (LTE mode)	Yes	Yes	Yes
Emergency Call		Yes	Yes	Yes	Yes
Provisioning/FOTA		Yes	Yes	Yes	Yes



IDAS™ Handheld & Hybrid IP Radio Feature Comparison

	IC-F3400D/IC-F4400D SERIES		IP730D IP740D	IC-F52D IC-F62D	IC-F1100D/IC-F2100D SERIES		
	IC-F3400DT/DPT IC-F4400DT/DPT		IP730D IP740D	IC-F52D IC-F62D	IC-F1100DT IC-F2100DT	IC-F1100DS IC-F2100DS	IC-F1100D IC-F2100D
LTE (4G) Network	No		LTE (4G): B1, B3, B5, B7, B8, B28 W-CDMA: B1, B5	No	No		
Frequency Range	136–174 MHz		136–174 MHz	136–174 MHz	136–174 MHz		
	380–470 MHz, 450–520 MHz		450–520 MHz	400–470MHz, 450–520 MHz	400–470MHz, 450–520 MHz		
Channels	1024*1		128	512	128	128	16
Digital Channel Spacing	6.25/12.5*2 kHz		6.25 kHz	6.25/12.5*2 kHz	6.25 kHz		
Dimensions*3 (W × H × D; Projections are not included)	53.6 × 123.5 × 29.3 mm		61.7 × 140.5 × 42.8 mm	56 × 91.5 × 29 mm	52.2 × 111.8 × 34.1 mm	52.2 × 111.8 × 29.4 mm	
Weight*3 (approx.)	340 g (VHF) 335 g (UHF)		320 g	230 g	277 g	266 g	258 g
RF output power (High)	5 W		5 W	5 W	5 W		
IP Rating	IP68		IP67	IP67	IP67		
Operating Time*3*4 (Hours)	16.5		24 (LTE mode) 13 (IDAS mode)	13	18		
Display	Yes		Yes	Yes	Yes	Yes	No
Keypad	Full		Limited	Limited	Full	Limited	No
AF Output Power (Internal SP)	1300 mW typ.		1500 mW typ. (10% distortion)	1500 mW typ.	1500 mW typ.		
Encryption	DES (4-key)	Yes	No	No	No		
	DES (64-key)	Optional	No	No	No		
	AES	Optional	No	No	No		
Voice Scrambler (Digital)	Yes		Yes	Yes	Yes		
Voice Scrambler (Analogue)*5	Yes		No	Yes	No		
OTAP (Over-the-Air Programming)	Yes*14		Yes (Over LTE)	Yes*14	No		
CTCSS/DTCS Encoder/Decoder	Yes		Yes	Yes	Yes		
2-Tone Encoder/Decoder	Yes		No	Yes	Yes		
5-Tone Encoder/Decoder	Yes		No	Yes	Yes		
DTMF	Yes		Yes	Yes	Yes		
MDC 1200	Yes		No	Yes	Yes*15		
BIIS 1200	Yes		No	Yes	Yes*6		
Man Down	Yes		Yes	Yes	Yes		
Motion Detection Sensor	Yes		Yes	Yes	Yes		
Lone Worker	Yes		Yes	Yes	Yes		
Channel Announcement	Yes		No	Yes	Yes		
Vibration Alert	Yes		Yes	Yes	No		
Voice Recorder	Yes		Yes	Yes	No		
Bluetooth® Capability	Yes		Yes	Yes	No		
GPS Receiver	Yes		Yes	No	No		
Short Data Message	Yes		No	Yes	Yes*8		
Status Message	Yes		No	Yes	Yes*8		
Emergency Call	Yes		Yes	Yes	Yes		
Stun/Kill/Revive	Yes		No	Yes	Yes*9		
Remote Monitor	Yes		No	Yes	Yes*9		
NXDN™*10	Conventional	Yes	Yes	Yes	Yes		
	Multi-Site Conventional	Yes	Yes	Yes	Yes		
	Simulcast	Yes	Yes	Yes	Yes		
	Type-D Trunking	Optional	No	Optional	Single Site only		
dPMR™*10	Mode 1/ Mode 2	Yes	No	Yes	Yes		
	Mode 2 Multi-site	Yes	No	Yes	Yes		
	Mode 3 Trunking	Optional	No	Optional	No		



UHF CB Feature and P25 Radio Feature Comparison

	IC-41PRO	IC-410PRO	IC-455	
Frequency Range	476.4250 MHz - 477.4125 MHz (CB)	476.4250 MHz - 477.4125 MHz (CB)	476.425-477.4125 MHz (CB)	
	450 MHz - 520 MHz (programmable)	450 MHz - 520 MHz (programmable)	450 - 520 MHz (RX only)	
Number of conventional channels	128	128	Max 256 Channels /8 Banks	
Dimensions (W x H x D; Projections are not included)	52.2 x 111.8 x 30.3mm (with BP-280)	150 x 40 x 117.5 mm	Main Unit: 125 x 29x 160 mm	
			HM-244: 62.1 x 101.5 x 30.5 mm	
Weight (approx.)	270 g (with BP-280 and MB-133)	800 g (approx.)	344 g (Main unit)	
			535 g (Main unit with HM-244)	
Type of emission	W: 16K0F3E (25.0kHz) (CB) N: 8K50F3E (12.5kHz) (CB)	W: 16K0F3E (25.0kHz) (CB) N/W: 8K50F3E / 16K0F3E (12.5kHz/25kHz) (LMR)	-	
Antenna impedance	50 Ω	50 Ω	50 Ω	
Input impedance (MIC)	2.2k Ω	-	600 Ω	
Output impedance (audio)	8 Ω	-	4 Ω	
Intermediate frequency	1st 46.35 MHz, 2nd 450 kHz	-	1st 49.95 MHz, 2nd 450 kHz	
Power supply voltager	7.5 V DC	-	13.8 or 27.6 V DC nominal (Negative ground)	
Current drain (approx.)	Receive stand-by 80 mA	Receive stand-by 300 mA	RX Stand-by	13.8 V DC 500 mA
	Receive max.audio 300 mA (INT SP)	Receive max audio 1200 mA	RX Max Audio	27.6 V DC 300 mA
	Transmit Hi (5W) 1.7 A (CB)	Transmit (25W) 7.0 A	TX (5W output)	13.8 V DC 1500 mA
		Transmit (5W) 4.0 A		27.6 V DC 1000 mA
Output power	5 W	1W/ 5W CB	5 W/1 W (selectable)	
		1W/ 5W/ 25W (LMR)		
Modulation	Variable reactance frequency modulation	Variable reactance frequency modulation	Variable reactance frequency modulation	
Maximum permissible deviation	±2.5 kHz (N)	±2.5 kHz (N)	±2.5 kHz	
	±5.0 kHz (W)	±5.0 kHz (W)		
Frequency error	±2.5 ppm	± 2.5 ppm	± 2.5 ppm	
Spurious emissions	70 dB min	-	-30 dBm max. (5 W: 67 dBc)	
Adjacent channel power	60 dB min 69 dB typ. (N)	-	-16 dBm max. (5 W: 53 dBc)	
	70 dB min 74 dB typ. (W)	-		
Audio harmonic distortion	1.0% typ. @ AF 1 kHz 40 % Deviation (W)	-	1% typical (60% deviation)	
	1.5% typ. @ AF 1 kHz 40 % Deviation (N)	-		
Limiting characteristic of modulator	60 % ~ 100 % of max. devatio	-	-	
			CB (476.425-477.4125 MHz)	RX (400-520MHz) (Except CB (476.425 - 477.4125 MHz)
Sensitivity	0.25µV typ. @ 12 dB SINAD	0.25µV typ. @ 12 dB SINAD	0.22 µV typica	0.25 µV typica
Audio power output	1.5 W typ. @ 5 % dist. with 8Ω	4.0 W typ. @ 5 % dist. With 4Ω	5.0 W typ. @ 10 % dist. With 4Ω	-
Adjacent channel selectivity	40 dB min 56 dB typ.(N)	-	68 dB typical	-
	70 dB min 73 dB typ.(W)	-		-
Spurious response	70 dB min	-	80 dB typical	-
Intermodulation	70 dB min 73 dB typ.	-	72 dB typica	-
Hum and Noise (without CCITT Filter)	34 dB min 43 dB typ. (N)	-	48 dB typical	45 dB typical
	40 dB min 49 dB typ. (W)	-		
Squelch sensitivity	0.25µV typ.		0.2 µV typical (Threshold)	0.25 µV typica

		IC-F7000 SERIES	IC-F7500 SERIES
		IC-F7010T/S IC-F7020T/S	IC-F7510 IC-F7520
Frequency Range		136-174 MHz	136-174 MHz
		380-470 MHz 450-512 MHz	380-470 MHz 450-512 MHz
Channels		1024	1024
Channel Spacing		12.5/25 kHz	12.5/25 kHz
Dimensions *1 (W x H x D; Projections are not included)		53.6 x 123.5 x 38.2mm	174 x 55 x 150mm
Weight (approx.)		355 g	1500 g
RF Output Power (High)		5 W	50 W (VHF), 45 W (UHF)
IP Rating		IP68	IP55
Operating Time*1*2(hours)		14	N/A
Display		Colour LCD	Colour 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
	Phase 2 (TDMA)	Optional	Optional
Encryption	AES	Optional	Optional
	DES	Optional	Optional
	ARC4	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.
All stated specifications and features are subject to change without notice or obligation.



IDAS™ Mobile Radio & Analogue Radio Feature Comparison

	IC-F5400D/IC-F6400D SERIES	IC-F5330D IC-F6330D	IC-F5130D IC-F6130D	IC-F5023
	IC-F5400D/DP IC-F6400D/DP	IC-F5330D IC-F6330D	IC-F5130D IC-F6130D	IC-F5023
Frequency Range	136–174 MHz 380–470 MHz, 450–520 MHz	136–174 MHz 400–520 MHz	136–174 MHz 400–520 MHz	136–174 MHz
Channels	1024*1	128	128	128/8
Digital Channel Spacing	6.25/12.5**	6.25 kHz	6.25 kHz	12.5/25 kHz
Dimensions (W × H × D; Projections are not included)	174 × 55 × 150 mm	150 × 45 × 161.8 mm (Main unit) 134.8 × 60.8 × 35.5 mm (Mic)	150 × 45 × 151.8 mm	150 × 40 × 117.5 mm
Weight (approx.)	1.5 kg	1.2 kg (Main unit) 250 g (Mic)	1.23 kg	0.8 kg
RF output power (High)	25 W	25 W	25 W	25 W
IP Rating	IP55	IPX4 (Mic)	N/A	N/A
Display	Yes	Yes	Yes	Yes
Keypad	Yes	Yes	Yes	Yes
AF Output Power (Internal SP)	4 W typ.	1.7 W typ.	4 W typ.	4 W typ.
Encryption	DES (4-key)	Yes	No	No
	DES (64-key)	Optional	No	No
	AES	Optional	No	No
Voice Scrambler (Digital)	Yes	Yes	Yes	No
Voice Scrambler (Analogue)*5	Yes	No	No	Yes
OTAP (Over-the-Air Programming)	Yes*14	No	No	No
CTCSS/DTCS Encoder/Decoder	Yes	Yes	Yes	Yes
2-Tone Encoder/Decoder	Yes	Yes	Yes	Yes
5-Tone Encoder/Decoder	Yes	Yes	Yes	Yes
DTMF	Yes	Yes	Yes	Yes
MDC 1200	Yes	Yes*15	Yes*15	Yes*15
BIIS 1200	Yes	Yes*6	Yes*6	No
Lone Worker	Yes	Yes	Yes	Yes
Channel Announcement	Yes	No	No	No
Voice Recorder	Yes	No	No	No
Bluetooth® Capability	Yes	Yes*11	Optional	No
GPS Receiver	Yes*12	No	No	No
Short Data Message	Yes	Yes	Yes	No
Status	Yes	Yes	Yes	No
Emergency Call	Yes	Yes	Yes	Yes
Stun/Kill/Revive	Yes	Yes*9	Yes*9	Yes*9
Remote Monitor	Yes	Yes*9	Yes*9	No
Front Panel Separation	Optional	No	No	No
Multiple Controller Capability	Yes	No	No	No
CommandMic™ Capability	Yes	Yes	No	No
I/O Control Port	USB, D-SUB, Ignition sense	Ignition sense, D-SUB option*13	Ignition sense, D-SUB option*13	D-SUB option
NXDN™ *10	Conventional	Yes	Yes	No
	Multi-Site Conventional	Yes	Yes	No
	Simulcast	Yes	Yes	No
	Type-D Trunking	Optional	Single site only	No
dPMR™ *10	Mode 1/ Mode 2	Yes	No	No
	Mode 2 Multi-site	Yes	No	No
	Mode 3 Trunking	Optional	No	No

	ANALOGUE HANDHELD RADIOS		
	IC-F1000T IC-F2000T	IC-F1000S IC-F2000S	IC-F1000 IC-F2000
Frequency Range	136–174 MHz 400–470 MHz, 450–520 MHz		
Channels	128	128	16
Channel Spacing	12.5, 20, 25 kHz		
Dimensions *16 (W × H × D; Projections are not included)	52.2 × 111.8 × 30.3 mm		
Weight *16 (approx.)	270 g		
RF output power (High)	5 W		
IP Rating	IP67		
Operating Time *17 (Hours)	20		
Display	Yes	Yes	No
Keypad	Full	Limited	No
AF Output Power (Internal SP)	1500 mW typ.		
Voice Scrambler	Yes		
CTCSS/DTCS (Encoder/Decoder)	Yes		
2-Tone (Encoder/Decoder)	Yes		
5-Tone (Encoder/Decoder)	Yes		
DTMF	Yes		
MDC 1200	Yes*20		
BIIS 1200	Yes*18		
Man Down	Yes		
Lone Worker	Yes		
Motion Detection Sensor	Yes		
Channel Announcement	Yes		
Status Message	No		
Emergency Call	Yes		
Stun/Kill/Revive	Yes*19		
Remote Monitor	Yes*19		

*16 With standard battery pack

*17 5:5:90 duty cycle, power save ON

*18 PTT ID and emergency call

*19 RX only

*20 PTT ID, emergency (TX/RX), radio check (RX), stun/revive (RX), transmit status messages only

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

*1 Upgrade licence (ISL-CHEX) required to enable 4000 channel capacity.

*2 NXDN™ only

*3 With standard battery pack

*4 IDAS™ : Conventional mode, 5:5:90 duty cycle, power save ON
LTE : Depending on the condition of LTE signal strength

*5 Inversion type voice scrambler is not compatible with UT-109R/UT-110R voice scrambler.

*6 PTT ID and emergency call

*7 PTT ID only

*8 The non-display model beeps and its LED indicator blinks when receiving a message.

*9 RX only

*10 Default factory setting (Protocol) differs, depending on the radio model.

*11 Depending on versions

*12 UX-241 antenna is required.

*13 D-SUB. Digital modulation input is not available even when using accessory cables.

*14 CS-OTPM1 OTAP Manager Software is separately required to send the OTAP data to the transceivers.

*15 PTT ID, emergency call, radio check (RX), and stun/revive (RX).

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

Optional Accessories for Handheld Radios

BATTERY PACKS										
MODEL NAME	BP-303 (Li-ion) 7.2 V/3200 mAh (min.) 3350 mAh (typ.) 	BP-307 (Li-ion) 7.2 V/3050 mAh (min.) 3150 mAh (typ.) 	BP-272 (Li-ion) 7.4 V/1880 mAh (min.) 2000 mAh (typ.) 	BP-300 (Li-ion) 7.2 V/2200 mAh (min.) 2350 mAh (typ.) 	BP-294 (Li-ion) 7.2 V/3050 mAh (min.) 3150 mAh (typ.) 	BP-280 (Li-ion) 7.2 V/2280 mAh (min.) 2400 mAh (typ.) 	BP-305 LR6 (AA) x5 cells 	BP-291 LR6 (AA) x5 cells 	BP-284 (Li-ion) 7.2 V/3070mAh (min.) 3210 mAh (typ.) 	BP-279 Li-ion 7.2 V/1485 mAh (min.) 1570 mAh (typ.) 
IP730D IP740D	✓						✓			
IP503H		✓	✓							
IC-SAT100				✓						
IC-F3400DT/DS IC-F4400DT/DS	✓								✓	
IC-F52D IC-F62D					✓			✓		
IC-F1100DT/DS/D IC-F2100DT/DS/D						✓				✓
IC-F1000/T/S IC-F2000/T/S						✓				✓
IC-F7010T/S IC-F7020T/S								✓		
IC-41PRO						✓				✓

DESKTOP CHARGERS									CHARGER STAND	CHARGER BRACKET
MODEL NAME	BC-226 Connectable type. Connects up to six BC-226 units. 	BC-227*2 Compact rapid charger 	BC-202IP2*2 Rapid charger with smart charging function 	BC-218*2 Rapid charger cradle with Blue- tooth® 	BC-241*2 Rapid charger 	BC-219N*2 Rapid charger 	BC-225*2 Intelligent charger 	BC-213*2 Rapid charger 	BC-257 Connects up to four BC-257 units. 	MB-130 
IP730D IP740D	✓ (Use with BC-123S/BC-228)	✓								
IP503H			✓	✓						
IP110H									✓ (Use with OPC-2480/BC-228)	
IC-SAT100					✓					
IC-F3400DT/DS IC-F4400DT/DS	✓ (Use with BC-123S/BC-228)	✓								
IC-F52D IC-F62D	✓ (Use with BC-123S/BC-228)	✓				✓	✓			
IC-F1100DT/DS/D IC-F2100DT/DS/D								✓		✓ (Use with BC-213)
IC-F1000/T/S IC-F2000/T/S								✓		✓ (Use with BC-213)
IC-F7010T/S IC-F7020T/S		✓				✓	✓	✓ (Use with OPC-2480/BC-228)		
IC-41PRO							✓			✓ (Use with BC-213)

MULTI-CHARGERS				AC ADAPTERS					DC POWER CABLE	READER SOFTWARE
MODEL NAME	BC-214N*2 Rapid multi-charger 	BC-211*2 Rapid multi-charger 	BC-123SV*4 12 V/1 A L-shape type 	BC-123SV*4 12 V/1 A Straight plug type for BC-226/ BC-202IP3L single unit 	BC-228 15 V/4 A For BC-226/BC-202IP3L/ BC-257 multiple connection 	BC-157S 12 V/7.5 A 	BC-207S 12 V/4.2 A 	BC-242 12 V/1 A 	OPC-515L 	RS-BC225 
IP730D IP740D	✓ (#63, AD-132N installed)		✓ (Use with BC-227)	✓ (Use with BC-226)	✓ (Use with BC-226)	✓ (Use with BC-214N)			✓ (Use with BC-227)	
IP503H		✓ (AD-127 installed)	✓ (Use with BC-202IP2)	✓ (Use with BC-202IP3L)	✓ (Use with BC-202IP3L)	✓ (Use with BC-211)	✓ (Use with BC-218)			
IP110H					✓ (Use with BC-257)					
IC-SAT100	✓ (#31, AD-140 installed)					✓ (Use with BC-214N)		✓ (Use with BC-241)		
IC-F3400DT/DS IC-F4400DT/DS	✓ (#63, AD-132N installed)		✓ (Use with BC-227)	✓ (Use with BC-226)	✓ (Use with BC-226)	✓ (Use with BC-214N)			✓ (Use with BC-219N, BC-225 or BC-227)	
IC-F52D IC-F62D	✓ (#63, AD-132N installed)		✓ (Use with BC-219N, BC-225 or BC-227)	✓ (Use with BC-226)	✓ (Use with BC-226)	✓ (Use with BC-214N)			✓ (Use with BC-219N, BC-225 or BC-227)	✓ (Use with BC-225)
IC-F1100DT/DS/D IC-F2100DT/DS/D	✓ (#43, AD-130 installed)		✓ (Use with BC-213)			✓ (Use with BC-214N)		✓ (Use with BC-213)		
IC-F1000/T/S IC-F2000/T/S	✓ (#43, AD-130 installed)		✓ (Use with BC-213)			✓ (Use with BC-214N)		✓ (Use with BC-213)		
IC-F7010T/S IC-F7020T/S	✓ (#63, AD-132N installed)		✓ (Use with BC-219N, BC-225 or BC-227)			✓ (Use with BC-214N)			✓ (Use with BC-219N, BC-225 or BC-227)	✓ (Use with BC-225)
IC-41PRO	✓ (#41, AD-130 installed)			✓		✓ (Use with BC-157S)		✓		

	SPEAKER-MICROPHONES						EARPHONE-MICROPHONES		SPEAKERPHONE UNIT
MODEL NAME									
IP503H		✓	✓	✓ (Use with BC-218)					✓
IP110H					✓	✓			
IC-F1100DT/DS/D IC-F2100DT/DS/D	✓						✓	✓	
IC-F1000/T/S IC-F2000/T/S	✓						✓	✓	
IC-41PRO	✓						✓	✓	

*2 AC adapter may be supplied depending on version.

* BC-123SA for USA plug. SE for EURO plug. SV for Australia plug. SUK for UK plug.

☒ : Applicable
 ☐ : Not applicable

Optional Accessories for Handheld Radios

MODEL NAME	CIGARETTE LIGHTER CABLES			SPEAKER-MICROPHONES						
	CP-23L	CP-22 With DC-DC converter	CP-25H For 12 V DC	HM-245T With SUB PTT button 	HM-222H High power audio 	HM-236 	HM-184H 	HM-222HLWP High power audio 	HM-168LWP 	HM-158LA
IP730D IP740D	✓ (Use with BC-227)			✓	✓	✓	✓			
IP503H	✓ (Use with BC-218)	✓ (Use with BC-218)	✓ (Use with BC-202IP3L)							
IC-SAT100					✓					
IC-F3400DT/DS IC-F4400DT/DS	✓ (Use with BC-227)				✓					
IC-F52D IC-F62D	✓ (Use with BC-219N or BC-227)				✓					
IC-F1100DT/DS/D IC-F2100DT/DS/D	✓ (Use with BC-213)									
IC-F1000T/S IC-F2000T/S	✓ (Use with BC-213)							✓	✓	✓
IC-F7010T/S IC-F7020T/S	✓ (Use with BC-219N or BC-227)				✓			✓	✓	✓
IC-41PRO	✓ (Use with BC-213)							✓	✓	✓

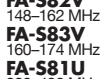
MODEL NAME	EARPHONE-MICROPHONES			TIE-CLIP MICROPHONES		HEADSETS			
	HM-153LS	HM-166LS	HM-179PI	HM-238MC With SUB PTT button	HM-163MC	VS-3 Bluetooth® headset	HS-94 Earhook type with boom microphone	HS-95 Neck-arm type	HS-97 Throat microphone type
IP730D IP740D				✓	✓	✓	✓* ⁹ (Use with VS-5MC)	✓* ⁹ (Use with VS-5MC)	✓* ⁹ (Use with VS-5MC)
IP503H	✓	✓				✓	✓* ⁹ (Use with OPC-200LS or OPC-233S)	✓* ⁹ (Use with OPC-200LS or OPC-233S)	✓* ⁹ (Use with OPC-200LS or OPC-233S)
IP110H			✓			✓	✓* ⁹ (Use with OPC-2133)	✓* ⁹ (Use with OPC-2133)	✓* ⁹ (Use with OPC-2133)
IC-SAT100					✓	✓	✓ (Use with VS-5MC)	✓ (Use with VS-5MC)	✓ (Use with VS-5MC)
IC-F3400DT/DS IC-F4400DT/DS							✓ (Use with VS-4MC)	✓ (Use with VS-4MC)	✓ (Use with VS-4MC)
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-F1000T/S IC-F2000T/S							✓ (Use with VS-4MC or VS-5MC)	✓ (Use with VS-4LA or OPC-2004LA)	✓ (Use with VS-4LA or OPC-2004LA)
IC-F7010T/S IC-F7020T/S					✓	✓	✓ (Use with VS-4LA or OPC-2004LA)	✓ (Use with VS-4LA or OPC-2004LA)	✓ (Use with VS-4LA or OPC-2004LA)
IC-41PRO							✓ (Use with VS-4LA or OPC-2004LA)	✓ (Use with VS-4LA or OPC-2004LA)	✓ (Use with VS-4LA or OPC-2004LA)

MODEL NAME	HEADSETS			EARPHONES					
	HS-102 Earphone type	HS-94LWP Earhook type with waterproof connector	HS-95LWP Neck-arm type with waterproof connector	EH-15B	SP-26 Tube earphone	SP-27 Tube earphone	SP-28	SP-29	SP-40
IP730D IP740D				✓ (Use with HM-238MC or HM-163MC)	✓ (Use with HM-238MC or HM-163MC)	✓ (Use with HM-245T, HM-222H or AD-135)	✓ (Use with HM-238MC or HM-163MC)	✓ (Use with HM-245T, HM-222H or AD-135)	✓ (Use with HM-245T, HM-222H or AD-135)
IP503H	✓ (Use with OPC-2359)								
IC-SAT100				✓ (Use with HM-163MC)	✓ (Use with HM-163MC)	✓ (Use with HM-222H or AD-135)	✓ (Use with HM-163MC)	✓ (Use with HM-222H or AD-135)	✓ (Use with HM-222H or AD-135)
IC-F3400DT/DS IC-F4400DT/DS									
IC-F52D IC-F62D				✓ (Use with HM-163MC)	✓ (Use with HM-163MC)	✓ (Use with HM-222H or AD-135)	✓ (Use with HM-163MC)	✓ (Use with HM-222H or AD-135)	✓ (Use with HM-222H or AD-135)
IC-F1100DT/DS/D IC-F2100DT/DS/D		✓	✓			✓ (Use with HM-222HLWP)		✓ (Use with HM-222HLWP)	✓ (Use with HM-222HLWP)
IC-F1000T/S IC-F2000T/S		✓	✓			✓ (Use with HM-222HLWP)		✓ (Use with HM-222HLWP)	✓ (Use with HM-222HLWP)
IC-F7010T/S IC-F7020T/S				✓ (Use with HM-163MC)	✓ (Use with HM-163MC)	✓ (Use with HM-222H or AD-135)			
IC-41PRO		✓	✓						

	BRACKET ADAPTER	CARRYING CASES							ACC ADAPTERS		COAXIAL CABLES	DOCKING STATION
MODEL NAME	MBA-7 For use with BC-218 	LC-183*7 For use with BP-271 	LC-185*7 For use with BP-272 	LC-184 For IC-F3400DT/DS, F4400DT/DS 	LC-186 For IC-F3400D, F4400D 	LC-187*7 For use with BP-290 	LC-188 For use with BP-290 	LC-190*7 For use with BP-294 	AD118 Allows you to use 6-pin Hirose plug accessories 	AD135 3.5mm jack earphone adapter 	OPC-2462 For AH-41, 59 m 	BC-247*10 Charging cradle 
IP730D IP740D												
IP503H	✔ (Use with MBF-1)	✔	✔									
IC-SAT100											✔ (Use with AH-41)	✔
IC-F3400DT/DS IC-F4400DT/DS				✔	✔							
IC-F52D IC-F62D						✔	✔	✔				
IC-F1100DT/DS/D IC-F2100DT/DS/D												
IC-F1000/T/S IC-F2000/T/S												
IC-F7010T/S IC-F7020T/S				✔					✔	✔		

Optional Accessories for Handheld Radios

	ACC ADAPTERS		BELT CLIPS		BELT HANGERS			MOUNTBASE	EARPHONES	PTT SWITCH CABLES		
MODEL NAME	AD-118 Allows you to use 6-pin Hirose plug accessories 	AD-135 3.5 mm jack earphone adapter 	MB-136 MB-93 Swivel type  (Photo shows MB-93)	MB-135 MB-133 MB-124 MB-127 MBB-1 MBB-3 MBB-5 Alligator type 	MB-96N 	MB-96F 	MB-96FL 	MBF-1 For use with BC-218 	SP-16PIBW 	VS-5MC For manual PTT/VOX operation 	VS-4MC For manual PTT operation 	VS-4LA For manual PTT operation 
IP730D IP740D		✓	✓	✓ (Use MB-133)	✓	✓	✓			✓ (Use with HS-94, HS-95 or HS-97)		
IP503H				✓ (Use MB-135)				✓ (Use with MBA-7)				
IP110H				✓ (Use MBB-1)					✓			
IC-SAT100	✓	✓		✓ (Use MBB-5)						✓ (Use with HS-94, HS-95 or HS-97)		
IC-F3400DT/DS IC-F4400DT/DS	✓		✓	✓ (Use MB-133)	✓	✓	✓				✓ (Use with HS-94, HS-95 or HS-97)	
IC-F52D IC-F62D	✓	✓	✓	✓ (Use MBB-3)	✓	✓	✓			✓ (Use with HS-94, HS-95 or HS-97)		
IC-F1100DT/DS/D IC-F2100DT/DS/D				✓ (Use MB-133)								✓ (Use with HS-94, HS-95 or HS-97)
IC-F1000T/S IC-F2000T/S				✓ (Use MB-133)								✓ (Use with HS-94, HS-95 or HS-97)
IC-F7010T/S IC-F7020T/S				✓ (Use MB-133)	✓	✓	✓			✓ (Use with HS-94, HS-95 or HS-97)	✓ (Use with HS-94, HS-95 or HS-97)	
IC-41PRO				✓ (Use MB-133)								

	STRAP	ANTENNAS				CUT ANTENNAS		HIGH GAIN ANTENNAS	OPTION BOARD	ZONE COPY CABLES
MODEL NAME	MB-57L Long shoulder strap 	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-SC25V 136–150 MHz FA-SC55V 150–174 MHz FA-SC25U 400–430 MHz FA-SC57U 430–470 MHz	FA-SC25V 136–150 MHz FA-SC28V 148–162 MHz FA-SC29V 160–174 MHz FA-SC25U 400–430 MHz FA-SC57U 430–470 MHz 	FA-S102U Satellite + GPS antenna 	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 	UT-134**11 AES/DES encryption unit 	OPC-1870 Handheld to handheld OPC-2362 Handheld to mobile  (Photo shows OPC-1870)
IP730D IP740D	✓ (Use with LC-195)	✓	✓	✓			✓	✓		
IP503H	✓ (Use with LC-183 or LC-185)									
IC-SAT100					✓					
IC-F3400DT/DS IC-F4400DT/DS		✓				✓			✓	✓ (OPC-1870/OPC-2362)
IC-F52D IC-F62D				✓			✓	✓		✓ (OPC-1870)
IC-F1100DT/DS/D IC-F2100DT/DS/D				✓			✓	✓		
IC-F1000T/S IC-F2000T/S			✓	✓			✓	✓		
IC-F7010T/S IC-F7020T/S		✓				✓				✓

*11 Activation key, ISL-AKAE3 is needed for AES operation.

	STUBBY ANTENNAS		ONE-TOUCH CONNECTOR	EXTERNAL ANTENNAS			COAXIAL CABLES		SHORT MESSAGE APP
MODEL NAME	FA-S81VS 136–150 MHz FA-S82VS 148–162MHz 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 	AH-40 Magnetic mount antenna with 1.5 m cable 	AH-38 Passive antenna 	AH-41**9 Active antenna 	OPC-2113 For AH-38, 10 m 	OPC-2422 For AH-40, 5 m 	RS-SAT100 for Android™ for iOS™ 
IP730D IP740D		✓							
IC-SAT100			✓	✓	✓	✓	✓ (Use with AH-38)	✓ (Use with AH-40)	✓
IC-F3400DT/DS IC-F4400DT/DS	✓								
IC-F52D IC-F62D		✓							
IC-F1100DT/DS/D IC-F2100DT/DS/D		✓							
IC-F1000T/S IC-F2000T/S		✓							
IC-F7010T/S IC-F7020T/S	✓								
IC-41PRO		✓ (FASC72U,FASC73US)							

*9 Supplied with 1.5 m coaxial cable, power box, AC adapter and mounting kit.

Activation Keys for Handheld and Mobile Radios

	IDAS ACTIVATION KEYS					P25 ACTIVATION KEYS							
MODEL NAME	ISL-UGMTR NXDN™ Type-D trunking upgrade key (for NXDN™ protocol)	ISL-UGMD3 dPMR™ Mode 3 trunking upgrade key (for dPMR™ protocol)	ISL-AKAES AES encryption activation key	ISL-CHEX Channel expansion key increases channel number up to 4000	ISL-AK-STM Dealer set mode activation key	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 Program- ming	ISL-P25W 25 kHz Activa- tion Key (for USA version transceivers)
IC-F3400DT/DS IC-F4400DT/DS	✓	✓	✓(Use with UT-134)	✓	✓								
IC-F52D IC-F62D	✓	✓											
IC-F5400D IC-F6400D	✓	✓	✓(Use with UT-134)	✓	✓								
IC-F7010T/S IC-F7020T/S						✓	✓	✓(Use with UT-134)	✓*	✓	✓	✓	✓
IC-F7510 IC-F7520						✓	✓	✓(Use with UT-134)	✓*	✓	✓	✓	✓

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

Optional Accessories for Mobile Radios and Repeaters

	HAND MICROPHONES									SPEAKER-MICROPHONE
MODEL NAME	HM-239T with DTMF keypad IP54 	HM-221 IP55 	HM-221T with DTMF keypad IP55 	HM-220 Heavy-duty type IP54 	HM-220T Heavy duty type with DTMF keypad IP54 	HM-152 	HM-152T with DTMF keypad 	HM-148G Heavy-duty type 	HM-148T Heavy duty type with DTMF keypad 	HM-241 
IP501M										✓
IC-F5400D, IC-F6400D		✓	✓	✓	✓					
IC-F5130D, IC-F6130D	✓					✓	✓	✓	✓	
IC-FR5300, IC-FR6300						✓				
IC-F5023						✓	✓	✓		
IC-F7510, IC-F7520		✓	✓	✓	✓					
IC-410PRO						✓	✓			
IC-455										

MODEL NAME	HEADSET	DESKTOP MICROPHONES		EXTERNAL SPEAKERS		SEPARATION KITS		COMMANDMIC™	
	VS-3 Bluetooth® headset	SM-29	SM-26	SP-30	SP-35 2 m cable SP-35L 6 m cable	RMK-5	RMK-7 Dual head	HM-218 Secondary controller for use with RMK-5 IP55	HM-230HB IP55
IP501M	✓			✓	✓				✓
IC-SAT100M	✓			✓	✓				
IC-F5400D, IC-F6400D		✓		✓	✓	✓ (Separation cable is required)	✓ (Separation cable is required)	✓ (Separation cable is required)	
IC-F5330D, IC-F6330D	✓			✓	✓				
IC-F5130D, IC-F6130D	✓ (Use with UT-137A)		✓	✓	✓				
IC-FR5300, IC-FR6300			✓		✓				
IC-F5023			✓		✓				
IC-F7510, IC-F7520	✓	✓		✓	✓	✓ (Separation cable is required)	✓ (Separation cable is required)	✓ (Separation cable is required)	
IC-410PRO			✓		✓				
IC-455					✓				

MODEL NAME	HANDS-FREE MIC	EXTENSION CABLE	SEPARATION CABLES			MICROPHONE CABLES		ACC CABLES	
	HM-249	OPC-2500 EXTENSION CABLE FOR HM-249	OPC-2364 (1.9 m) OPC-2365 (3 m) OPC-2366 (5 m) OPC-2367 (8 m) For use with RMK-5 or RMK-7	OPC-2373 (1.9 m) OPC-2374 (8 m) For use with HM-218, COMMANDMIC™	OPC-609 (1.9 m) for use with RMK-3	OPC-2355 2.5 m	OPC-2429 2 m	OPC-1939 (15-pin) OPC-2078 (25-pin) (Photo shows OPC-1939)	OPC-2407 D-SUB 25-pin type
IP501M	✓	✓ (Use with HM-249)				✓ (Use with HM-230HB or HM-241)			✓
IC-SAT100M							✓		
IC-F5400D, IC-F6400D			✓	✓					
IC-F5330D, IC-F6330D								✓*12	
IC-F5130D, IC-F6130D	✓	✓ (Use with HM-249)						✓*12	
IC-FR5300, IC-FR6300									
IC-F5023	✓							✓	
IC-F7510, IC-F7520			✓	✓					
IC-410PRO	✓							✓	
IC-455									

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

Optional Accessories for Mobile Radios and Repeaters

	ZONE COPY CABLE	GPS ANTENNA	OPTION BOARDS		CHANNEL MODULES	NETWORK CONTROLLER	IDAS™ SOFTWARE		
MODEL NAME	OPC-2362 Mobile to handheld 	UX-241 5 m cable length 	UT-134 ^{*11} AES/DES encryption unit 	UT-137A Bluetooth® unit 	UR-FR5300 136-174 MHz, 25 W UR-FR6300 400-470 MHz, 25 W 	UC-FR5300 ^{*13} 	CF-FR5000MC Multi-site conventional 	CF-FR5000MT Type-D Multi-site trunking software 	CF-FR5300SC Simulcast Multi-site conventional software 
IC-F5400D, IC-F6400D	✓	✓	✓						
IC-F5130D, IC-F6130D				✓					
IC-FR5300, IC-FR6300		✓			✓	✓	✓ (Use with UC-FR5300)	✓ (Use with UC-FR5300)	✓ (Use with UC-FR5300)
IC-F7510, IC-F7520	✓	✓							

^{*11} Activation key, ISL-AKAE3 is needed for AES operation. Either Key Loader Software, CS-KLD2 or OTAR Manager Software, CS-OATR1 is needed separately.

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

	AC ADAPTER	EXTERNAL ANTENNA	COAXIAL CABLE	SHORT MESSAGE APP	DC POWER CABLE
MODEL NAME	BC-157S 12 V/7.5 A 	AH-40 Magnetic mount antenna with 1.5 m cable 	OPC-2422 5D-HFA, 5 m 	RS-SAT100 for Android™ for iOS™ 	OPC-2479 3 m, 10 A (for 25 W) OPC-2478 3 m, 20 A (for 50 W) OPC-2471 
IP501M					
IC-SAT100M	✓	✓	✓ (Use with AH-40)	✓	
IC-F5400D, IC-F6400D					
IC-F5330D, IC-F6330D					✓ (OPC-2479)
IC-F5130D, IC-F6130D					✓ (OPC-2479)
IC-410PRO					✓ (OPC-2471)

Optional Accessories for RoIP Gateway and IP Products

	AC ADAPTERS			SPEAKER-MICROPHONE	HAND MICROPHONES			DESKTOP MICROPHONE	MICROPHONE ADAPTER	DIGITAL VOICE CONVERTER	MOUNTING BRACKET
MODEL NAME	BC-207SV 12 V/4.2 A 	BC-236 12 V/8.3 A 	BC-147SV ^{*12} 12 V/0.33 A 	HM-241 	HM-152 	HM-152T DTMF keypad type 	HM-216 Short cable ^{*14} 	SM-26 	CT-23 	CT-24 	MBF-6 
VE-PG4	✓	✓		✓	✓ ^{*13}	✓ ^{*13}	✓ ^{*13}	✓ ^{*13}		✓	✓
IP100FS			✓ (Use with CT-23)		✓ (Use with CT-23 and BC-147S)			✓ (Use with CT-23 and BC-147S)	✓		
RC-FS10			✓ (Use with CT-23)		✓ (Use with CT-23 and BC-147S)			✓ (Use with CT-23 and BC-147S)	✓	✓ ^{*15} (Same as supplied)	
IP1100CV	✓	✓									✓

^{*12} BC-147SA for US plug. SE for EURO plug. SV for Australia plug.

^{*13} The HM-152, HM-152T, HM-216 and SM-26 have no speaker function. An external speaker is required to be connected to the VE-PG4 to hear received audio with these accessories.

^{*14} The HM-216 has a total of 490 mm cable length including a 300 mm curl cord, while the HM-152 has a total of 900 mm cable length.

^{*15} One CT-24 is supplied with the RC-FS10 and add CT-24 AMBE+2™ vocoder(s) to control other repeater site(s). Up to 8 repeaters can be controlled at one RC-FS10 installation.

Some accessories 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.