ICOM

Business Radio Solutions

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

No matter what your communication needs may be, we have the system for you. We go beyond the 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 analogue, digital, wireless LAN, LTE to satellite as a true comprehensive wireless communications company.

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.

LTE Radio

Icom's LTE radio system provides instantaneous, wide area communication using an LTE (4G) and 3G network*. It doesn't require its own repeaters or IP network, therefore reducing the cost of building, and maintaining a wide area radio network. It enables full-duplex communication, which allows telephone style conversations as well as various types of calls such as individual, group and all call just like a traditional two-way radio, too.

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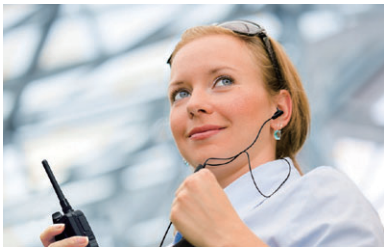
WLAN Radio

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, LTE 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 radio.

Licence-Free Radio

PMR446 licence-free radios can be used to improve your business or to just keep in touch with family and friends. There are no subscription charges or licence applications, PMR446 radios are ready to use right out of the box. Icom introduced the first digital licence-free dPMR446 radio in the industry. Digital offers higher audio clarity and security.

Real-Time Communications Across the Globe

- **One-to-many communications**
- **Total global coverage, including the poles*[1]**
- **Real-time, low-latency communication with the Iridium® LEO (Low Earth Orbit) satellite network**
- **Emergency key on the top panel**
- **IP67 dust-tight and submersible protection**
- **1500 mW of powerful audio**
- **14.5 hours of long lasting battery life*[2]**
- **Private conversations with AES 256-bit encryption**
- **Interoperability with conventional radios and IP phones through the optional VE-PG4, RoIP gateway*[3]**

- Short Data Message
- Voice Recording function
- Multiple language display (English, Chinese, French, Japanese, and Spanish)
- Built-in Bluetooth® capability
- Integrated GPS receiver shows a caller's position information on the display
- SMA type antenna connector
- AquaQuake™ function clears any water ingress that may penetrate the speaker grill of the radio
- USB charging (USB Micro-B type) and charging with a supplied rapid charger available
- Dimensions*[4] (W × H × D): 57.8 × 135 × 32.8 mm
- Weight (approximate): 360 g (with BP-300, FA-S102U)

*1 A subscription contract is required for using the IC-SAT100. Depending on the country or region, carrying and/or use of the IC-SAT100 may be prohibited.

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

*3 Optional connection cable (OPC-2412) is required to connect to the VE-PG4.

*4 Projections are not included.

Docking Station (Optional accessories)
For in-vehicle and in-building applications
The image below is showing a connection example with,
- IC-SAT100
- BC-247 Charging cradle
- AH-40 Satellite antenna
- HM-222 Speaker-microphone

The product image shown above is for illustration purpose only. Actual product may vary.

iridium® connected

ICOM

LISTENING
60405970
6.0 km NW
ICOM7
TG List | Ignore

IC-SAT100

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

Full-Duplex Communication

Our LTE Radios provide full-duplex conversation, which allow users to talk and receive at the same time. This allows smooth, telephone-like conversations.

One-to-many Communication

Unlike mobile cell phones, IP503H/IP501M users can immediately start talking to all the radios in the same talkgroup, with just a push of a (PTT) transmit button.

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 LTE radio supports 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.
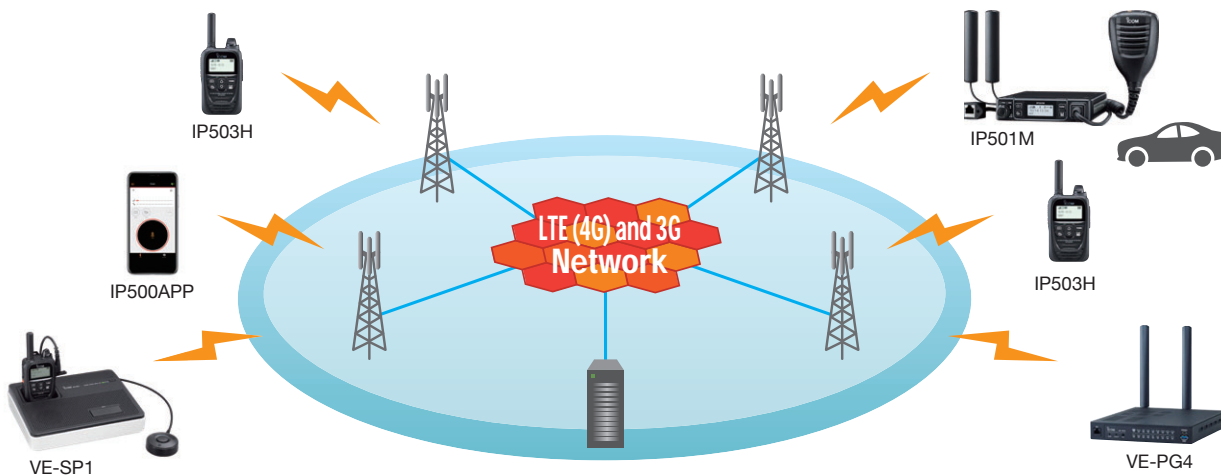
IP503H

Compact and Durable LTE Handheld

- 900 mW loud and high quality audio with wideband, near lossless G.726 vocoder • 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
- Full-Duplex communication • 17 hours battery life (with BP-272)
- Provisioning/FOTA (Firmware Over-the-Air)

IP501M

Mobile LTE Radio Interoperable with the IP503H

- Built-in Bluetooth® capability and GPS • Text message reception and preprogrammed message transmission • 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 • Both 12 and 24 volt compatible
- Provisioning/FOTA (Firmware Over-the-Air)

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 IP100H can access the nearest access point, and roam between access points.

Hands-free, Full-duplex Communication

With an optional earphone-microphone or headset*, the IP100H user can simultaneously talk and receive like a phone. Hands-free operation allows your staff to carry out other tasks at the same time.

* For full-duplex operation, please use either HM-153LS, HM-166LS or HS-102 with OPC-2359.

Individual, Group, All or Area Communication

Staff spread across multiple rooms can communicate seamlessly. The IP communication terminal can receive short data messages with a vibration alert from a PC installed with IP100FS.
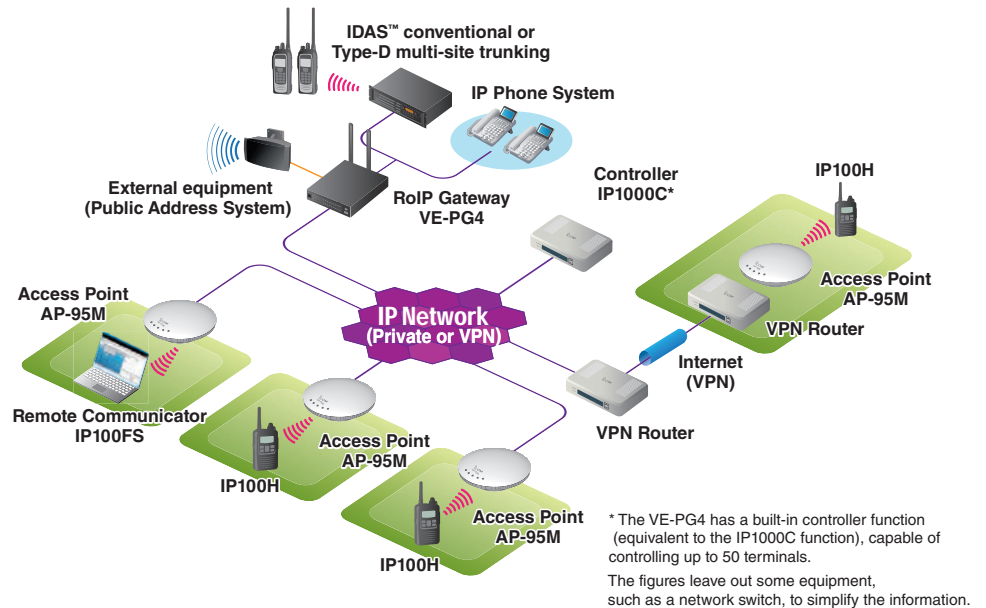
Interconnect between IDAS™ and IP Phone Systems

With the VE-PG4 RoIP gateway, the WLAN radio system can interconnect with an IP phone system, analogue radio and IDAS™ conventional and Type-D multi-site trunking system.

IDAS™ conventional or Type-D multi-site trunking

IP Phone System

External equipment (Public Address System)

RoIP Gateway VE-PG4

Controller IP1000C*

IP100H

Access Point AP-95M

Access Point AP-95M

IP Network (Private or VPN)

VPN Router

Internet (VPN)

Remote Communicator IP100FS

Access Point AP-95M

IP100H

VPN Router

Access Point AP-95M

IP100H

* The VE-PG4 has a built-in controller function (equivalent to the IP1000C function), capable of controlling up to 50 terminals.

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

IP100H

Compact and Professional Grade IP Communication Terminal

• Licence-free wireless LAN communication terminal using IEEE 802.11 a/b/g/n standards (2.4 GHz and 5 GHz*) • WPA-PSK/WPA2-PSK (TKIP/AES) authentication • IPX7 • Vibration alert function announces incoming calls • Text message reception and pre-programmed message transmission • Status messages • Emergency call function • 20 hours battery life (with BP-271) • Provisioning/FOTA (Firmware Over-the-Air)

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

AP–95M
Wireless LAN Access Point

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

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

IP100FS
Remote Communicator

• Obtain location information of each IP100H • Can be installed on a Windows®-based tablet PC as well as laptop PC

IP1000C
Controller

• The IP1000C controls all terminal configurations over the air
• Capable of controlling up to 100 terminals (including IP100FS)

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.

	Direct peer to peer	Single-site conventional	Multi-site conventional	Single-site trunking	Multi-site trunking
NXDN™		Conventional		Type-D trunking	
			Max. 16 sites	Max. 30 channels	Max. 48 sites / Max. 30 ch/site
dPMR™	Mode 1 or dPMR446	Mode 2		Mode 3	
			Max. 16 sites	Max. 32 channels	Max. 256 sites / Max. 32 ch/site
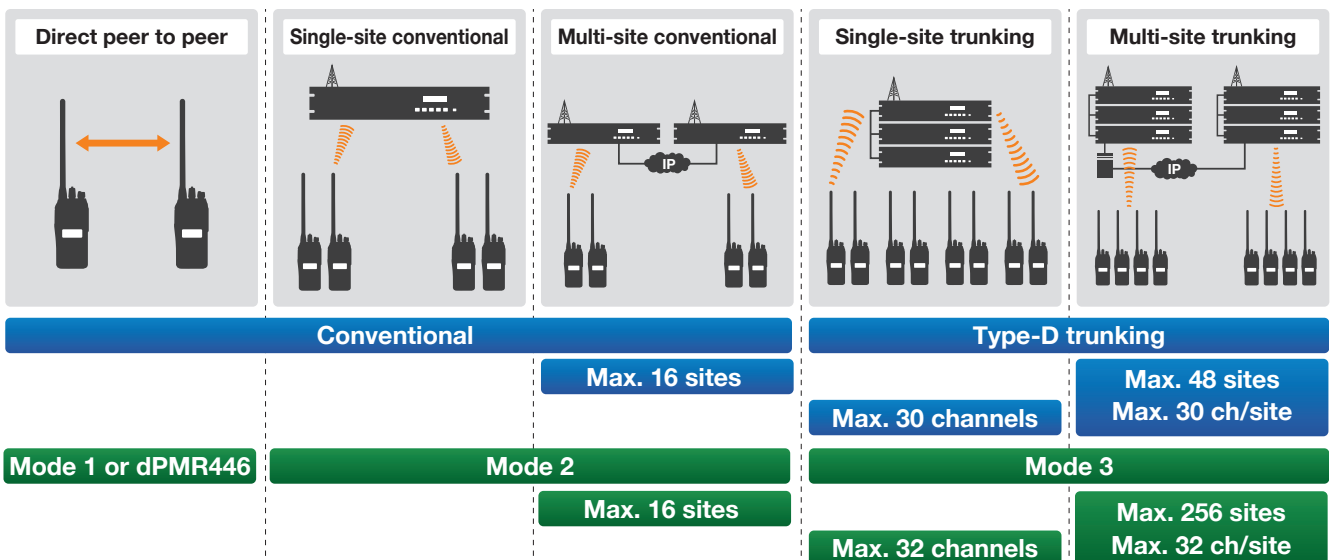
IC–F3400D/F4400D Series

IDAS™ Takes You to a New Level of "Smart"

- 1024 channels (32 channels for IC-F3400D/DP/F4400D/DP) • 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-283) • Motion/Stationary sensor • Man down/Lone worker
- Vibration alert • Channel announcement • 1300 mW loud audio

| NXDN™ | Conventional | Single/Multi-Site Trunking (Optional) |
| dPMR™ | Mode 1 | Mode 2 | Mode 3 (Optional) |

IC–F3262D/F4262D Series

Advanced Digital Radio with Built-in GPS Receiver*

- 512 channels • IP67 • Large multi-function full dot matrix display • Integrated GPS*
- 10.5 hours battery life (with BP-232WP) • Man down*/Lone worker
- Status and short data message (SDM) • Remote monitor/Ambience listening

*Depending on the version.

| NXDN™ | Conventional | Single/Multi-Site Trunking |
| dPMR™ | Mode 1 | Mode 2 | Mode 3 |

IC–F52D/F62D

5 W Power Pack, Super Compact Body

- 512 channels • IP67 • Full dot matrix display for 14 characters with status icons
- Bluetooth® capability • Voice recording • OTAP • OAA • Active noise canceller
- 13 hours battery life (with BP-290) • Motion/Stationary sensor • Man down/Lone worker
- Vibration alert • Channel announcement • 1300 mW loud audio

| NXDN™ | Conventional | Single/Multi-Site Trunking (Optional) |
| dPMR™ | Mode 1 | Mode 2 | Mode 3 (Optional) |

IC–F1100D/F2100D Series

Compact, Waterproof and Superiour Audio Clarity

- 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

| NXDN™ | Conventional | Single-Site Trunking |
| dPMR™ | Mode 1 | Mode 2 |

IC–F3202DEX/F4202DEX

IECEx/ATEX Intrinsically Safe Digital Radio

- 16 channels • IP67 • Digital/Analogue
- Channel announcement • Man down/Lone worker
- Optional speaker-microphone
- 21/19.5 hours battery life (with BP-277EX, VHF/UHF)

ATEX Certifications	IEC Certifications
Mining: I M2 Ex ib I Mb	Ex ib I Mb
Gas: II 2G Ex ib IIC T4 Gb	Ex ib IIC T4 Gb
Dust: II 2D Ex ib IIIC T110°C Db	Ex ib IIIC T110°C Db
−20°C≤Ta≤+55°C	−20°C≤Ta≤+55°C

| NXDN™ | Conventional | Single-Site Trunking |
| dPMR™ | Mode 1 | Mode 2 |

DO NOT use the transceiver with any other equipment not specified in the option list (Pages 16–20).
Please ask your dealer to ensure the ATEX and IECEx ratings are acceptable for the intended place of use.

IDAS™ Mobile Radios

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

• 1024 channels (99 channels for IC-F5400DS/DPS/F6400DS/DPS) • 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

* For IC-F5400D/DP/F6400D/DP

NXDN™	Conventional	Single/Multi-Site Trunking (Optional)	
dPMR™	Mode 1	Mode 2	Mode 3 (Optional)

IC–F5062D/F6062D
Versatile, Multi-Function Mobile Series

• 512 channels • Front panel detachable • IP54 • Large multi-function full dot matrix display • D-SUB 25-pin ACC connector • Lone worker • Status and short data message (SDM) • Remote monitor/Ambience listening

NXDN™	Conventional	Single/Multi-Site Trunking	
dPMR™	Mode 1	Mode 2	Mode 3

IC–F5122D/F6122D
Digital Standard Mobile Radio

• 128 channels • IP54 • 4 W powerful front mounted speaker • Lone worker • Status and short data message (SDM) • Remote monitor/Ambience listening • GPS receiver connection with optional ACC cable

NXDN™	Conventional	Single-Site Trunking
dPMR™	Mode 1	Mode 2

8

Digital Repeater / Controller / System Management

IC−FR5100/FR6100

Digital and Analogue, Dual Mode Repeater

• Digital conventional mode and analogue FM with auto selection • 25 W at 100% duty cycle operation (Ambient temperature: 25°C) • Optional network controllers for multi-site conventional or trunking system configuration • "Two channels in one box" configuration with optional UR-FR5100/UR-FR6100 • 32 memory channels capacity • 2U height rack mount design

NXDN™ dPMR™

IC−FC5000E

dPMR™ Mode 3 Trunking Controller

• Spectrum efficient centralized control channel trunking • Up to 32 channels per site (One control channel, up to 31 traffic channels) • Up to 32 site multi-site trunking with CS-FC5000SCS system control software • Up to 256 site multi-region connection • Call queuing and emergency call with pre-emption • Repeater anomaly detection and alert • A traffic channel can be configured as a secondary control channel • 1U (44 mm) rack mount

dPMR™

RC−FS10

Virtual Radio/PC Dispatch
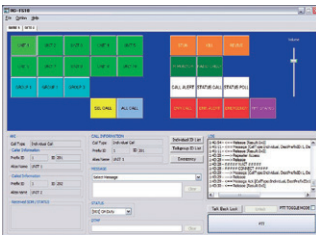
• PC remote communicator for IDAS™ conventional, NXDN™ Type-D multi-site trunking and analogue radio systems (VE-PG4 is required for analogue radio systems.) • Up to eight different IDAS and analogue radio systems can be programmed • Up to 40 programmable buttons. Short data message, status and DTMF 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
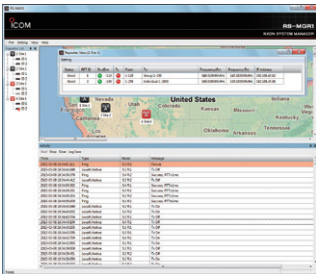
• Provides real-time monitoring, system alerts and log search functions • Repeater properties show condition summary, system information, interface (traffic statistics), repeater condition details and ping status of each repeater • Registration log, communication log, traffic log and search log can be searched and downloaded with extensive filter settings

NXDN™

RS−MGR2

Enhance System Management for dPMR™ Mode 3 Systems
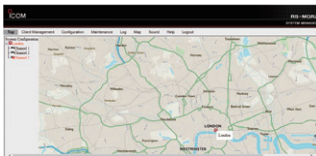
• Provides real-time monitoring, system alerts and log search functions for a dPMR™ Mode 3 system • Real-time monitoring includes repeater view, repeater status, repeater condition, active screen and system connection • Registration log, communication log, traffic log and search log can be searched and downloaded with extensive filter settings

dPMR™

CS−OTPM1

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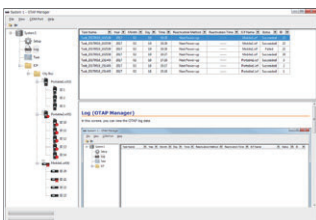
• Remotely reconfigure radios while in the field • Radios can be reconfigured in a short period of time by transmitting only the updates • Single programming data can transmit to a whole fleet with only one click • Up to 10,000 sessions are logged for review and rescheduling • Manages up to 100,000 radios

NXDN™ dPMR™

Analogue Radios

IC−F1000/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
- Channel announcement • 16 codes inversion voice scrambler

IC−F51 ATEX/F61 ATEX

ATEX Intrinsically Safe Radio

- Compact design • 128 channels • IP67 • Lone worker function • 16.5 hours battery life
(with BP-227AXD) • Built-in 2-Tone, 5-Tone, CTCSS and DTCS • HM-138 Optional speaker-
microphone

ATEX Certifications
Gas: II 2G Ex ib IIA T3 Gb
Dust: II 2D Ex tb IIIC T160°C Db IP67
(Tamb=−20°C to +55°C)

DO NOT use the transceiver with any other equipment not specified in the option
list (Pages 16–20).
Please ask your dealer to ensure the ATEX and IECEx ratings are acceptable for
the intended place of use.

IC−F5022/F6022
IC−F5012/F6012

Hardworking Mobile Radios

- 2 models for display or non-display • 128 channels (IC-F5022/F6022) or 8 channels
(IC-F5012/F6012) • Lone worker function • 4 W (typical) front mounted speaker
- External device connection with optional ACC cable

Data Radios

IC−F5122DD/F6122DD

General Purpose Transparent Data Modem

- 9600 bps (at 12.5 kHz) and 4800 bps (at 6.25 kHz) data mode
- 25 W, 10 W and 6 W three-step RF output power • TCP/IP protocol (IPv4) support for Ethernet
- Meets EN 300 113/EN 301 166 standards • Fast data transfer using 4-level FSK modulation

RoIP Gateway

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

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

WLAN Radios

Wireless Access Point **AP-95M**

WLAN radio **IP100H**

Remote Communicator **IP100FS**

IP Phone

IP Phone System

Remote Communicator **RC-FS10**

IP Network

LTE (4G) and 3G Network

RoIP GATEWAY **VE-PG4**

IDAS™ Conventional, or Type-D multi-site trunking

LTE Radios

LTE Radio **IP503H/IP501M**

Data Communication GPS Position Data

Analogue Radio

RoIP (Radio over IP)

Satellite PTT

Satellite

Satellite PTT **IC-SAT100**

External Devices

USB Storage Device

Speaker-microphone

External Device

VE−PG4

Licence-Free Radios

IC–F29SDR · Digital/Analogue

Professional Licence-Free Radio Suitable for Various Industry Sectors

• dPMR 446 (Digital) and PMR 446 (Analogue) in one radio • Digital 32 channels, Analogue 16 channels • Display and 4 programmable keys on the front • Status message • CTCSS, DTCS for analogue • IP67 • 1500 mW loud audio • Alert-Ring function for emergency situations • 26 hours battery life (with BP-280) • Channel announcement • 11 km coverage*

* Wide open space. Communication range will vary, depending on the terrain and conditions.

IC–F29DR/F29DR2 · Digital/Analogue

Professional Digital Licence-Free Radio

• dPMR 446 (Digital) and PMR 446 (Analogue) in one radio • IC-F29DR2: Digital 32 channels, Analogue 16 channels • IC-F29DR: Digital 16 channels, Analogue 8 channels • CTCSS, DTCS for analogue • IP67 • 26 hours battery life (with BP-280) • Channel announcement • 11 km coverage*

* Wide open space. Communication range will vary, depending on the terrain and conditions.

IC–F29SR/F29SR2 · Analogue

Slim, Waterproof PMR 446 Licence-Free Radio

• PMR 446 (Analogue) • IC-F29SR2: Analogue 16 channels • IC-F29SR: Analogue 8 channels • CTCSS, DTCS • Built-in voice scrambler for private conversation • IP67 • 21 hours battery life (with BP-279) • 1500 mW loud audio • Channel announcement • 8 km coverage*

* Wide open space. Communication range will vary, depending on the terrain and conditions.

IDAS™ Handheld Radio Feature Comparison

		IC-F3400D/IC-F4400D SERIES			IC-F3262D/IC-F4262D SERIES		IC-F52D IC-F62D	IC-F1100D/IC-F2100D SERIES			IC-F3202DEX IC-F4202DEX
		IC-F3400DT/DPT IC-F4400DT/DPT	IC-F3400DS/DPS IC-F4400DS/DPS	IC-F3400D/DP IC-F4400D/DP	IC-F3262DT IC-F4262DT	IC-F3262DS IC-F4262DS	IC-F52D IC-F62D	IC-F1100DT IC-F2100DT	IC-F1100DS IC-F2100DS	IC-F1100D IC-F2100D	IC-F3202DEX IC-F4202DEX
Frequency Range		136–174 MHz			136–174 MHz		136–174 MHz	136–174 MHz			136–174 MHz
		380–470 MHz			400–470 MHz		400–470 MHz	400–470 MHz			400–470 MHz
Channels		1024*1	1024*1	32	512		512	128	128	16	16
Digital Channel Spacing		6.25/12.5*2 kHz			6.25 kHz		6.25/12.5*2 kHz	6.25 kHz			6.25 kHz
Dimensions*3 (W × H × D; Projections are not included)		53.6 × 123.5 × 29.3 mm			53.5 × 142.7 × 39.5 mm		56 × 91.5 × 29 mm	52.2 × 111.8 × 34.1 mm	52.2 × 111.8 × 29.4 mm		63 × 144 × 50 mm
Weight*3 (approx.)		305 g (VHF) 300 g (UHF)			410 g (VHF) 400 g (UHF)		230 g	277 g	266 g	258 g	466 g (VHF) 460 g (UHF)
RF output power (High)		5 W			5 W		5 W	5 W			1 W
IP Rating		IP68			IP67		IP67	IP67			IP67
Operating Time*3*4 (hours)		10.5			12 (Non-GPS ver.) 10.5 (GPS ver.)		13	18			21.5 (VHF) 19 (UHF)
Display		Yes	Yes	No	Yes		Yes	Yes	Yes	No	No
Keypad		Full	Limited	No	Full	Limited	Limited	Full	Limited	No	No
AF Output Power (internal SP)		1300 mW typ.			800 mW typ.		1300 mW typ.	1500 mW typ.			400 mW typ.
ATEX		No			No		No	No			Yes
Encryption	DES (4-key)	Yes			No		No	No			No
	DES (64-key)	Optional			No		No	No			No
	AES	Optional			No		No	No			No
Voice Scrambler (Digital)		Yes			Yes		Yes	Yes			Yes
Voice Scrambler (Analogue)*5		Yes			Yes		Yes	No			No
OTAP (Over-the-Air Programming)		Optional			No		Optional	No			No
CTCSS/DTCS	Encoder/Decoder	Yes			Yes		Yes	Yes			Yes
2-Tone	Encoder/Decoder	Yes			Yes		Yes	Yes			Yes
5-Tone	Encoder/Decoder	Yes			Yes		Yes	Yes			Yes
DTMF Autodial		Yes			Yes		Yes	Yes			Yes
BIIS 1200		Yes			Yes		Yes	Yes*6			Yes*7
Man Down		Yes			Yes*8		Yes	Yes			Yes
Motion Detection Sensor		Yes			No		Yes	Yes			No
Lone Worker		Yes			Yes		Yes	Yes			Yes
Channel Announcement		Yes			No		Yes	Yes			Yes
Vibration Alert		Yes			No		Yes	No			No
Voice Recorder		Yes			No		Yes	No			No
Bluetooth® Capability		Yes			No		Yes	No			No
GPS Receiver		Yes			Yes*8		External	External			No
Short Data Message		Yes*9			Yes		Yes	Yes*9			Yes*9
Status Message		Yes*9			Yes		Yes	Yes*9			Yes*9
Emergency Call		Yes			Yes		Yes	Yes			Yes
Stun/Kill/Revive		Yes			Yes		Yes	Yes*10			Yes*10
Remote Monitor		Yes			Yes		Yes	Yes*10			Yes*10
NXDN™*11	Conventional	Yes			Yes		Yes	Yes			Yes
	Multi-Site Conventional	Yes			Yes		Yes	Yes			Yes
	Type-D Trunking	Optional			Yes		Optional	Single Site only			Single Site only
dPMR™*11	Mode 1/ Mode 2	Yes			Yes		Yes	Yes			Yes
	Mode 2 Multi-site	Yes			Yes		Yes	Yes			Yes
	Mode 3 Trunking	Optional			Yes		Optional	No			No

IDAS™ Mobile Radio Feature Comparison

	IC-F5400D/IC-F6400D SERIES		IC-F5062D IC-F6062D	IC-F5122D IC-F6122D
	IC-F5400D/DP IC-F6400D/DP	IC-F5400DS/DPS IC-F6400DS/DPS	IC-F5062D IC-F6062D	IC-F5122D IC-F6122D
Frequency Range	136–174 MHz		136–174 MHz	136–174 MHz
	380–470 MHz		400–470 MHz	400–470 MHz
Channels	1024*12	99	512	128
Digital Channel Spacing	6.25/12.5*2 kHz		6.25 kHz	6.25 kHz
Dimensions (W × H × D; Projections are not included)	174 × 55 × 150 mm		160 × 45 × 150 mm	150 × 40 × 117.5 mm
Weight (approx.)	1.5 kg		1.3 kg	800 g
RF output power (High)	25 W		25 W	25 W
IP Rating	IP55		IP54*13	N/A
Display	Yes	2-digit numeric	Yes	Yes
Keypad	Yes		Yes	Yes
AF Output Power (internal SP)	4 W typ.		4 W typ.	4 W typ.
Encryption — DES (4-key)	Yes		No	No
Encryption — DES (64-key)	Optional		No	No
Encryption — AES	Optional		No	No
Voice Scrambler (Digital)	Yes		Yes	Yes
Voice Scrambler (Analogue)*5	Yes		Yes	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
BIIS 1200	Yes		Yes	Yes
Lone Worker	Yes		Yes	Yes
Channel Announcement	Yes		No	No
Voice Recorder	Yes		No	No
Bluetooth® Capability	Yes		No	No
GPS Receiver	Yes*14		No	No
Short Data Message	Yes		Yes	Yes
Status	Yes		Yes	Yes
Emergency Call	Yes		Yes	Yes
Stun/Kill/Revive	Yes		Yes	Yes*10
Remote Monitor	Yes		Yes	Yes*10
Front Panel Separation	Optional		Optional	No
Multiple Controller Capability	Yes	No	No	No
COMMANDMIC™ Capability	Yes	No	No	No
I/O Control Port	USB, D-SUB		D-SUB	Optional*15
NXDN™*11 Conventional	Yes		Yes	Yes
NXDN™*11 Multi-Site Conventional	Yes		Yes	Yes
NXDN™*11 Type-D Trunking	Optional		Yes	Single site only
dPMR™*11 Mode 1/ Mode 2	Yes		Yes	Yes
dPMR™*11 Mode 2 Multi-site	Yes		Yes	Yes
dPMR™*11 Mode 3 Trunking	Optional		Yes	No

*1 Upgrade licence(ISL-CHEX) required to enable 4000 channel capacity.
*2 NXDN™ only
*3 With standard battery pack
*4 Conventional mode. 5:5:90 duty cycle, power save ON
*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 Depending on the version.
*9 The non-display model beeps and its LED indicator blinks when receiving a message.
*10 RX only
*11 Default factory setting (Protocol) differs, depending on the radio model.
*12 Upgrade licence (ISL-CHEX) required to enable 4000 channel capacity.
*13 IP dust and water tests were performed on the controller and RMK-3 only.
*14 UX-241 antenna is required.
*15 D-SUB. Digital modulation input is not available even when using accessory cables.

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

Analogue & Licence-Free Radio Feature Comparison

	ANALOGUE HANDHELD RADIOS				ANALOGUE MOBILE RADIOS		LICENCE-FREE RADIOS		
	IC-F1000T IC-F2000T	IC-F1000S IC-F2000S	IC-F1000 IC-F2000	IC-F51 ATEX IC-F61 ATEX	IC-F5022 IC-F6022	IC-F5012 IC-F6012	IC-F29SDR	IC-F29DR2 IC-F29DR	IC-F29SR2 IC-F29SR
Frequency Range	136–174 MHz			136–174 MHz	136–174 MHz		PMR446: 16 ch dPMR446: 32 ch	IC-F29DR2 PMR446: 16 ch dPMR446: 32 ch / IC-F29DR PMR446: 8 ch dPMR446: 16 ch	IC-F29SR2 PMR446: 16 ch / IC-F29SR PMR446: 8 ch
	400–470 MHz			400–470 MHz	400–470 MHz				
Channels	128	128	16	128	128	8	6.25, 12.5 kHz	6.25, 12.5 kHz	12.5 kHz
Channel Spacing	12.5, 20, 25 kHz			12.5, 20, 25 kHz	12.5, 20, 25 kHz		6.25, 12.5 kHz	6.25, 12.5 kHz	12.5 kHz
Dimensions*1 (W × H × D; Projections are not included)	52.2 × 111.8 × 24.5 mm			56 × 97 × 36.4 mm	150 × 40 × 117.5 mm		52.2 × 111.8 × 29.4 mm	52.2 × 111.8 × 30.3 mm	52.2 × 111.8 × 24.5 mm
Weight*1 (approx.)	240 g			290 g	800 g		270 g	270 g	240 g
RF output power (High)	5 W (VHF) 4 W (UHF)			1 W (VHF/UHF)	25 W		500 mW (ERP)	500 mW (ERP)	500 mW (ERP)
IP Rating	IP67			IP67	N/A		IP67	IP67	IP67
Operating Time*2 (hours)	14			16.5	N/A		26	26	21
Display	Yes	Yes	No	Yes	Yes	LED lighting	Yes	No	No
Keypad	Full	Limited	No	Limited	Yes		Limited	No	No
AF Output Power (internal SP)	1500 mW typ.			500 mW typ.	4 W typ.		1500 mW typ.	800 mW typ.	1500 mW typ.
ATEX	No			Yes	No		No	No	No
Voice Scrambler	Yes			Yes*5	Optional		No	No	Yes
CTCSS/DTCS Encoder/Decoder	Yes			Yes	Yes		Yes	Yes	Yes
2-Tone Encoder/Decoder	Yes			Yes	Yes		No	No	No
5-Tone Encoder/Decoder	Yes			Yes	Yes		No	No	No
DTMF Autodial	Yes			Yes	Yes		No	No	No
BIIS 1200	Yes*3			Yes	Yes*6		No	No	No
Man Down	Yes			No	No		No	No	No
Lone Worker	Yes			No	Yes		Yes	No	No
Motion Detection Sensor	Yes			No	No		No	No	No
Channel Announcement	Yes			No	No		Yes	Yes	Yes
Status Message	No			Yes	No		Yes	No	No
Emergency Call	Yes			Yes	Yes		No	No	No
Stun/Kill/Revive	Yes*4			Yes	Yes*4		No	No	No
Remote Monitor	Yes*4			Yes	Yes*4		No	No	No

*1 With standard battery pack
*2 5:5:90 duty cycle, power save ON
*3 PTT ID and emergency call
*4 RX only
*5 Depending on the version
*6 PTT ID only

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

Optional Accessories for Handheld Radios

BATTERY PACKS

MODEL NAME	BP-277EX (Li-ion) For intrinsically safe radios 7.4 V/1800 mAh (min.) 1900 mAh (typ.)	BP-227AXD (Li-ion) For intrinsically safe radios 7.4 V/1850 mAh (min.) 1950 mAh (typ.)	BP-300 Li-ion 7.2 V/2200 mAh (min.) 2350 mAh (typ.)	BP-284 (Li-ion) 7.2 V/3070 mAh (min.) 3210 mAh (typ.)	BP-283 (Li-ion) 7.2 V/ 1910 mAh (min.) 2010 mAh (typ.)	BP-232WP (Li-ion) 7.4 V/2200 mAh (min.), 2350 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.)	BP-280 (Li-ion) 7.2 V/2280 mAh (min.) 2400 mAh (typ.)
IC-SAT100			✔						
IP503H									
IP100H									
IC-F3400DT/DS/D IC-F4400DT/DS/D				✔	✔				
IC-F3262DT/DS IC-F4262DT/DS						✔			
IC-F52D IC-F62D							✔	✔	
IC-F1100DT/DS/D IC-F2100DT/DS/D									✔
IC-F3202DEX IC-F4202DEX	✔								
IC-F1000/T/S IC-F2000/T/S									✔
IC-F51 ATEX IC-F61 ATEX		✔							
IC-F29SDR									✔
IC-F29DR IC-F29DR2									✔
IC-F29SR IC-F29SR2									✔

BATTERY PACKS / BATTERY CASES / DESKTOP CHARGERS

MODEL NAME	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-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-240 LR03 (AAA) ×6 cells	BP-261 LR6 (AA) ×6 cells	BP-291 LR6 (AA) ×5 cells	BP-273 LR6 (AA) ×3 cells	BC-212EX*1 Rapid charger for intrinsically safe radios	BC-241 Rapid charger
IC-SAT100									✔
IP503H			✔						
IP100H			✔				✔		
IC-F3400DT/DS/D IC-F4400DT/DS/D									
IC-F3262DT/DS IC-F4262DT/DS				✔	✔				
IC-F52D IC-F62D						✔			
IC-F1100DT/DS/D IC-F2100DT/DS/D	✔	✔							
IC-F3202DEX IC-F4202DEX								✔	
IC-F1000/T/S IC-F2000/T/S	✔	✔							
IC-F51 ATEX IC-F61 ATEX									
IC-F29SDR	✔	✔							
IC-F29DR IC-F29DR2	✔	✔							
IC-F29SR IC-F29SR2	✔	✔							

DESKTOP CHARGERS

MODEL NAME	BC-219N Rapid charger	BC-225 Intelligent charger	BC-226 Connectable type. Connects up to six BC-226 units.	BC-227 Comapct rapid charger	BC-160 Rapid charger	BC-171 Regular charger	BC-213 Rapid charger	BC-119N Rapid charger	BC-152N Regular charger
IC-SAT100									
IP503H									
IP100H									
IC-F3400DT/DS/D IC-F4400DT/DS/D	✔	✔	✔ (Use with BC-228)	✔					
IC-F3262DT/DS IC-F4262DT/DS					✔	✔			
IC-F52D IC-F62D	✔	✔	✔ (Use with BC-228)	✔					
IC-F1100DT/DS/D IC-F2100DT/DS/D							✔		
IC-F3202DEX IC-F4202DEX									
IC-F1000/T/S IC-F2000/T/S							✔		
IC-F51 ATEX IC-F61 ATEX								✔ (AD-100 is required)	✔ (Use with BC-147S)
IC-F29SDR							✔		
IC-F29DR IC-F29DR2							✔		
IC-F29SR IC-F29SR2							✔		

*1 The battery charger, BC-212EX **must not be used** in an explosive atmosphere.

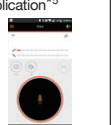The IC-F3202DEX/F4202DEX and IC-F51/F61 ATEX intrinsically models should only be used with the specified intrinsically safe approved accessories.

✔ : Applicable   : Not applicable

Optional Accessories for Handheld Radios

MODEL NAME	DESKTOP CHARGERS		MULTI-CHARGERS				CHARGER ADAPTERS		
	BC-202IP2 — Rapid charger with smart charging function	BC-218 — Rapid charger cradle with Bluetooth®	BC-211 — Rapid multi-charger	BC-214/N*2 — Rapid multi-charger	BC-197*3 — Rapid multi-charger	BC-121N — Rapid multi-charger	AD-140*2 — For BP-300	AD-132N*2 — For BP-283, BP-284, BP-294 or BP-290	AD-122*3 — For BP-232WP
IC-SAT100				✔ (Use #31, AD-140 installed)				✔ (Use with BC-214N)	
IP503H	✔	✔	✔ (AD-127 installed)						
IP100H	✔		✔ (AD-127 installed)						
IC-F3400DT/DS/D, IC-F4400DT/DS/D				✔ (Use #23, AD-132N installed)				✔ (Use with BC-214)	
IC-F3262DT/DS, IC-F4262DT/DS					✔ (Use #23, AD-122 installed)				✔ (Use with BC-197)
IC-F52D, IC-F62D				✔ (Use #23, AD-132N installed)				✔ (Use with BC-214)	
IC-F1100DT/DS/D, IC-F2100DT/DS/D				✔ (Use #03, AD-130 installed)					
IC-F3202DEX, IC-F4202DEX									
IC-F1000/T/S, IC-F2000/T/S				✔ (Use #03, AD-130 installed)					
IC-F51 ATEX, IC-F61 ATEX						✔ (Use with AD-100)			
IC-F29SDR				✔ (Use #03, AD-130 installed)					
IC-F29DR, IC-F29DR2				✔ (Use #03, AD-130 installed)					
IC-F29SR, IC-F29SR2				✔ (Use #03, AD-130 installed)					

MODEL NAME	CHARGER ADAPTERS		AC ADAPTERS						
	AD-130*2 — For BP-278, BP-279 or BP-280	AD-100 — For BP-227AXD	BC-242 — 12 V/1 A	BC-123S*4 — 12 V/1 A	BC-145S*4 — 16 V/0.93 A	BC-147S*4 — 12 V/0.33 A	BC-157S — 12 V/7.5 A	BC-228 — 15 V/4 A	BC-207S — 12 V/4.2 A
IC-SAT100			✔ (Use with BC-241)				✔ (Use with BC-214N)		
IP503H				✔ (Use with BC-202/IP2)			✔ (Use with BC-211)		✔ (Use with BC-218)
IP100H				✔ (Use with BC-202/IP2)			✔ (Use with BC-211)		
IC-F3400DT/DS/D, IC-F4400DT/DS/D				✔ (Use with BC-219N, BC-225 or BC-227)			✔ (Use with BC-214)	✔ (Use with BC-226)	
IC-F3262DT/DS, IC-F4262DT/DS				✔ (Use with BC-160)		✔ (Use with BC-171)	✔ (Use with BC-197)		
IC-F52D, IC-F62D				✔ (Use with BC-219N, BC-225 or BC-227)			✔ (Use with BC-214)	✔ (Use with BC-226)	
IC-F1100DT/DS/D, IC-F2100DT/DS/D	✔ (Use with BC-214)		✔ (Use with BC-213)	✔ (Use with BC-213)			✔ (Use with BC-214)		
IC-F3202DEX, IC-F4202DEX				✔ (Use with BC-212EX)					
IC-F1000/T/S, IC-F2000/T/S	✔ (Use with BC-214)		✔ (Use with BC-213)	✔ (Use with BC-213)			✔ (Use with BC-214)		
IC-F51 ATEX, IC-F61 ATEX		✔ (Use with BC-119N or BC-121N)			✔ (Use with BC-119N)	✔ (Use with BC-152N)	✔ (Use with BC-121N)		
IC-F29SDR	✔ (Use with BC-214)		✔ (Use with BC-213)	✔ (Use with BC-213)			✔ (Use with BC-214)		
IC-F29DR, IC-F29DR2	✔ (Use with BC-214)		✔ (Use with BC-213)	✔ (Use with BC-213)			✔ (Use with BC-214)		
IC-F29SR, IC-F29SR2	✔ (Use with BC-214)		✔ (Use with BC-213)	✔ (Use with BC-213)			✔ (Use with BC-214)		

MODEL NAME	CHARGER BRACKET	CIGARETTE LIGHTER CABLES		DC POWER CABLES		READER SOFTWARE	APPLICATION	SPEAKERPHONE UNIT
	MB-130	CP-22 — With DC-DC CONVERTER	CP-23L	OPC-656	OPC-515L	RS-BC225	IP500APP — LTE radio mobile application*5	VE-SP1
IC-SAT100				✔ (Use with BC-214N)				
IP503H		✔ (Use with BC-218)	✔ (Use with BC-218)				✔	✔
IP100H								
IC-F3400DT/DS/D, IC-F4400DT/DS/D		✔ (Use with BC-219N or BC-227)	✔ (Use with BC-214)	✔ (Use with BC-219N, BC-225 or BC-227)	✔ (Use with BC-225)			
IC-F3262DT/DS, IC-F4262DT/DS	✔ (Use with BC-160)		✔ (Use with BC-160)	✔ (Use with BC-197)	✔ (Use with BC-160 or BC-171)			
IC-F52D, IC-F62D		✔ (Use with BC-219N or BC-227)	✔ (Use with BC-214)	✔ (Use with BC-219N, BC-225 or BC-227)	✔ (Use with BC-225)			
IC-F1100DT/DS/D, IC-F2100DT/DS/D	✔ (Use with BC-213)		✔ (Use with BC-213)	✔ (Use with BC-214)				
IC-F3202DEX, IC-F4202DEX								
IC-F1000/T/S, IC-F2000/T/S	✔ (Use with BC-213)		✔ (Use with BC-213)	✔ (Use with BC-214)				
IC-F51 ATEX, IC-F61 ATEX								
IC-F29SDR	✔ (Use with BC-213)		✔ (Use with BC-213)	✔ (Use with BC-214)				
IC-F29DR, IC-F29DR2	✔ (Use with BC-213)		✔ (Use with BC-213)	✔ (Use with BC-214)				
IC-F29SR, IC-F29SR2	✔ (Use with BC-213)		✔ (Use with BC-213)	✔ (Use with BC-214)				

*2 Either AD-130, AD-132N or AD-140 is supplied with the BC-214/N, depending on the version. *3 AD-122 is supplied with the BC-197, depending on the version.
*4 BC-123SA/BC-145SA/BC-147SA for US plug. SE for EURO plug. SV for Australia plug. BC-123SUK/BC-145SUK for UK plug.
*5 For iOS™: iOS™ version 12 or later. For Android™: Android™ version 8.0 or later

Optional Accessories for Handheld Radios

SPEAKER-MICROPHONES

MODEL NAME	HM-203EX (For intrinsically safe radios, IP67)	HM-222 (IP68)	HM-184/H (IP67)	HM-233GP (GPS, IP67)	HM-168LWP (IP67)	HM-158LA	HM-159LA	HM-171GPW (GPS, IP67)	HM-138 (IPX7)
IC-SAT100		✔							
IP503H									
IP100H									
IC-F3400DT/DS/D / IC-F4400DT/DS/D		✔							
IC-F3262DT/DS / IC-F4262DT/DS			✔						
IC-F52D / IC-F62D		✔		✔					
IC-F1100DT/DS/D / IC-F2100DT/DS/D					✔	✔	✔	✔	
IC-F3202DEX / IC-F4202DEX	✔								
IC-F1000/T/S / IC-F2000/T/S					✔	✔	✔		
IC-F51 ATEX / IC-F61 ATEX									✔
IC-F29SDR					✔	✔	✔		
IC-F29DR / IC-F29DR2					✔	✔	✔		
IC-F29SR / IC-F29SR2					✔	✔	✔		

SPEAKER-MICROPHONES / EARPHONE-MICROPHONES / TIE-CLIP MICROPHONE

MODEL NAME	HM-183LS (IPX7)	HM-186LS	HM-215	HM-153LA	HM-166LA	HM-153LS	HM-166LS	HM-163MC
IC-SAT100								✔
IP503H	✔	✔	✔ (Use with BC-218)			✔	✔	
IP100H	✔	✔				✔ *6	✔ *6	
IC-F3400DT/DS/D / IC-F4400DT/DS/D								
IC-F3262DT/DS / IC-F4262DT/DS								
IC-F52D / IC-F62D								✔
IC-F1100DT/DS/D / IC-F2100DT/DS/D				✔	✔			
IC-F3202DEX / IC-F4202DEX								
IC-F1000/T/S / IC-F2000/T/S				✔	✔			
IC-F51 ATEX / IC-F61 ATEX								
IC-F29SDR				✔	✔			
IC-F29DR / IC-F29DR2				✔	✔			
IC-F29SR / IC-F29SR2				✔	✔			

HEADSETS / EARPHONES

MODEL NAME	VS-3 (Bluetooth® headset)	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)	EH-15B	SP-26 (Tube earphone)
IC-SAT100	✔	✔ (Use with VS-5MC)		✔ (Use with VS-5MC)		✔ (Use with VS-5MC)		✔ (Use with HM-163MC)	✔ (Use with HM-163MC)
IP503H	✔	✔ *7 (Use with OPC-2006LS or OPC-2328)		✔ *7 (Use with OPC-2006LS or OPC-2328)		✔ *7 (Use with OPC-2006LS or OPC-2328)	✔ (Use with OPC-2359)		
IP100H		✔ *7 (Use with OPC-2006LS or OPC-2328)		✔ *7 (Use with OPC-2006LS or OPC-2328)		✔ *7 (Use with OPC-2006LS or OPC-2328)	✔ *6 (Use with OPC-2359)		
IC-F3400DT/DS/D / IC-F4400DT/DS/D		✔ (Use with VS-4MC)		✔ (Use with VS-4MC)		✔ (Use with VS-4MC)			
IC-F3262DT/DS / IC-F4262DT/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)		✔ (Use with HM-163MC)	✔ (Use with HM-163MC)
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-F3202DEX / IC-F4202DEX									
IC-F1000/T/S / IC-F2000/T/S		✔ (Use with VS-4LA or OPC-2004LA)	✔	✔ (Use with VS-4LA or OPC-2004LA)		✔ (Use with VS-4LA or OPC-2004LA)			
IC-F51 ATEX / IC-F61 ATEX									
IC-F29SDR		✔ (Use with VS-4LA or OPC-2004LA)	✔	✔ (Use with VS-4LA or OPC-2004LA)	✔	✔ (Use with VS-4LA or OPC-2004LA)			
IC-F29DR / IC-F29DR2		✔ (Use with VS-4LA or OPC-2004LA)	✔	✔ (Use with VS-4LA or OPC-2004LA)	✔	✔ (Use with VS-4LA or OPC-2004LA)			
IC-F29SR / IC-F29SR2		✔ (Use with VS-4LA or OPC-2004LA)	✔	✔ (Use with VS-4LA or OPC-2004LA)	✔	✔ (Use with VS-4LA or OPC-2004LA)			

*6 Full-duplex operation can be possible with either HS-102 with OPC-2359, HM-153LS or HM-166LS.
*7 HS-94, HS-95 and HS-97 headsets are simplex operation only.

✔ : Applicable   : Not applicable

Optional Accessories for Handheld Radios

MODEL NAME	EARPHONES					PLUG ADAPTER CABLES		PTT SWITCH CABLES	
	SP-27 Tube earphone	SP-28	SP-29	SP-32 Tube earphone adapter	SP-40	OPC-2004LA VOX operation	OPC-2006LS For VOX operation	VS-5MC For manual PTT/ VOX operation	VS-4MC For manual PTT operation
IC-SAT100	✔ (Use with HM-222 or AD-135)	✔ (Use with HM-163MC)	✔ (Use with HM-222 or AD-135)	✔ (Use with EH-15B)	✔ (Use with HM-222 or AD-135)			✔ (Use with HS-94, HS-95 or HS-97)	
IP503H							✔ (Use with HS-94, HS-95 or HS-97)		
IP100H							✔ (Use with HS-94, HS-95 or HS-97)		
IC-F3400DT/DS/D IC-F4400DT/DS/D									✔ (Use with HS-94, HS-95 or HS-97)
IC-F3262DT/DS IC-F4262DT/DS									✔ (Use with HS-94, HS-95 or HS-97)
IC-F52D IC-F62D	✔ (Use with HM-222 or AD-135)	✔ (Use with HM-163MC)	✔ (Use with HM-222 or AD-135)	✔ (Use with EH-15B)	✔ (Use with HM-222 or AD-135)			✔ (Use with HS-94, HS-95 or HS-97)	
IC-F1100DT/DS/D IC-F2100DT/DS/D							✔ (Use with HS-94, HS-95 or HS-97)		
IC-F3202DEX IC-F4202DEX									
IC-F1000/T/S IC-F2000/T/S							✔ (Use with HS-94, HS-95 or HS-97)		
IC-F51 ATEX IC-F61 ATEX									
IC-F29SDR							✔ (Use with HS-94, HS-95 or HS-97)		
IC-F29DR IC-F29DR2							✔ (Use with HS-94, HS-95 or HS-97)		
IC-F29SR IC-F29SR2							✔ (Use with HS-94, HS-95 or HS-97)		

MODEL NAME	PTT SWITCH CABLES			ACC ADAPTERS		BELT CLIPS			BELT HANGER
	VS-4LA For manual PTT operation	OPC-2328	OPC-2359	AD-118 Allows you to use 6-pin Hirose plug accessories	AD-135 3.5 mm jack earphone adapter	MB-94EX For intrinsically safe radios	MB-136 MB-93 MB-86 Swivel type	MB-135 MB-133 MB-127 MB-98 MB-94R MBB-3 MBB-5 Alligator type	MB-96N
IC-SAT100				✔	✔			✔ (Use MBB-5)	
IP503H		✔ (Use with HS-94, HS-95 or HS-97)	✔ (Use with HS-102)					✔ (Use with MB-135)	
IP100H		✔ (Use with HS-94, HS-95 or HS-97)	✔ (Use with HS-102)					✔ (Use with MB-127)	
IC-F3400DT/DS/D IC-F4400DT/DS/D				✔			✔ (Use MB-136)	✔ (Use MB-133)	✔
IC-F3262DT/DS IC-F4262DT/DS				✔			✔ (Use MB-93)	✔ (Use MB-94R)	✔
IC-F52D IC-F62D				✔	✔		✔ (Use MB-136)	✔ (Use MBB-3)	✔
IC-F1100DT/DS/D IC-F2100DT/DS/D	✔ (Use with HS-94, HS-95 or HS-97)							✔ (Use MB-133)	
IC-F3202DEX IC-F4202DEX					✔				
IC-F1000/T/S IC-F2000/T/S	✔ (Use with HS-94, HS-95 or HS-97)							✔ (Use MB-133)	
IC-F51 ATEX IC-F61 ATEX							✔ (Use MB-86)	✔ (Use MB-98)	
IC-F29SDR	✔ (Use with HS-94, HS-95 or HS-97)							✔ (Use MB-133)	
IC-F29DR IC-F29DR2	✔ (Use with HS-94, HS-95 or HS-97)							✔ (Use MB-133)	
IC-F29SR IC-F29SR2	✔ (Use with HS-94, HS-95 or HS-97)							✔ (Use MB-133)	

MODEL NAME	BELT HANGERS		MOUNT BASE	BRACKET ADAPTER	CARRYING CASES				
	MB-96F	MB-96FL	MBF-1 For use with BC-218	MBA-7 For use with BC-218	LC-184 For IC-F3400DT/DS, F4400DT/DS	LC-186 For IC-F3400D, F4400D	LC-187 *8 For use with BP-290	LC-188 For use with BP-290	LC-190 *8 For use with BP-294
IC-SAT100									
IP503H			✔ (Use with MBA-7)	✔ (Use with MBF-1)					
IP100H									
IC-F3400DT/DS/D IC-F4400DT/DS/D	✔	✔			✔	✔			
IC-F3262DT/DS IC-F4262DT/DS	✔	✔							
IC-F52D IC-F62D	✔	✔					✔	✔	✔
IC-F1100DT/DS/D IC-F2100DT/DS/D									
IC-F3202DEX IC-F4202DEX									
IC-F1000/T/S IC-F2000/T/S									
IC-F51 ATEX IC-F61 ATEX	✔								
IC-F29SDR									
IC-F29DR IC-F29DR2									
IC-F29SR IC-F29SR2									

*8 Charging is possible while the case is attached.

Optional Accessories for Handheld Radios

MODEL NAME	CARRYING CASES		STRAP	ANTENNAS					
	LC-183*8 For use BP-271	LC-185*8 For use BP-272	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-S24V 136–150 MHz FA-S59V 150–174 MHz FA-S27U 400–470 MHz	FA-S102U Satellite + GPS antenna	AH-40 Satellite + GPS antenna (1.5 m cable)
IC-SAT100								✔	✔
IP503H	✔	✔	✔ (Use with LC-183 or LC-185)						
IP100H									
IC-F3400DT/DS/D IC-F4400DT/DS/D			✔						
IC-F3262DT/DS IC-F4262DT/DS					✔				
IC-F52D IC-F62D							✔		
IC-F1100DT/DS/D IC-F2100DT/DS/D					✔	✔			
IC-F3202DEX IC-F4202DEX					✔				
IC-F1000/T/S IC-F2000/T/S					✔	✔			
IC-F51 ATEX IC-F61 ATEX							✔		
IC-F29SDR									
IC-F29DR IC-F29DR2									
IC-F29SR IC-F29SR2									

MODEL NAME	CUT ANTENNAS		HIGH GAIN ANTENNAS	STUBBY ANTENNAS			OPTION BOARD	ZONE COPY CABLES	DOCKING STATION
	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	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-S62VS 150–162 MHz FA-S63VS 160–174 MHz FA-S57US 450–490 MHz	UT-134 AES/DES encryption unit	OPC-1870 Handheld to handheld OPC-2362 Handheld to mobile (Photo shows OPC-1870)	BC-247*9 Charging cradle
IC-SAT100									✔
IP503H									
IP100H									
IC-F3400DT/DS/D IC-F4400DT/DS/D	✔			✔			✔	✔ (OPC-1870/OPC-2362)	
IC-F3262DT/DS IC-F4262DT/DS		✔	✔		✔			✔ (OPC-1870)	
IC-F52D IC-F62D		✔	✔		✔			✔ (OPC-1870)	
IC-F1100DT/DS/D IC-F2100DT/DS/D		✔	✔		✔				
IC-F3202DEX IC-F4202DEX									
IC-F1000/T/S IC-F2000/T/S		✔	✔		✔				
IC-F51 ATEX IC-F61 ATEX						✔			
IC-F29SDR									
IC-F29DR IC-F29DR2									
IC-F29SR IC-F29SR2									

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

Activation Keys for IDAS™ Radios

MODEL NAME	ACTIVATION KEYS				
	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-AKSTM Dealer set mode activation key
IC-F3400DT/DS/D IC-F4400DT/DS/D	✔	✔	✔ (Use with UT-134)	✔	✔
IC-F52D IC-F62D	✔	✔			
IC-F5400D/DS IC-F6400D/DS	✔	✔	✔ (Use with UT-134)	✔	✔

✔ : Applicable   : Not applicable

Optional Accessories for Mobile Radios and Repeaters

HAND MICROPHONES

MODEL NAME	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-211 Noise Canceling Mic	HM-152	HM-152T with DTMF keypad	HM-148G Heavy-duty type	HM-148T Heavy duty type with DTMF keypad
IP501M									
IC-F5400D, IC-F6400D	✔	✔	✔	✔					
IC-F5400DS, IC-F6400DS	✔	✔	✔	✔					
IC-F5062D, IC-F6062D					✔	✔	✔	✔	✔
IC-F5122D, IC-F6122D					✔	✔	✔	✔	✔
IC-F5022, IC-F6022					✔	✔	✔	✔	✔
IC-F5012, IC-F6012					✔	✔	✔	✔	✔
IC-FR5100, IC-FR6100					✔				

MODEL NAME	SPEAKER-MICROPHONE HM-241	HEADSET VS-3 Bluetooth® headset	DESKTOP MICROPHONES SM-29	DESKTOP MICROPHONES SM-26 SM-28	EXTERNAL SPEAKERS SP-30	EXTERNAL SPEAKERS SP-35 2 m cable SP-35L 6 m cable	SEPARATION KITS RMK-5	SEPARATION KITS RMK-7 Dual head	SEPARATION KITS RMK-3
IP501M	✔	✔		✔ (Use SM-28)	✔	✔			
IC-F5400D, IC-F6400D			✔		✔	✔	✔ (Separation cable is required)	✔ (Separation cable is required)	
IC-F5400DS, IC-F6400DS			✔		✔	✔			
IC-F5062D, IC-F6062D				✔ (Use SM-26)	✔	✔			✔ (OPC-609 is required)
IC-F5122D, IC-F6122D				✔ (Use SM-26)	✔	✔			
IC-F5022, IC-F6022				✔ (Use SM-26)		✔			
IC-F5012, IC-F6012				✔ (Use SM-26)	✔	✔			
IC-FR5100, IC-FR6100				✔ (Use SM-26)		✔			

MODEL NAME	COMMANDMIC™ HM-218 Secondary controller for use with RMK-5 IP55	COMMANDMIC™ HM-230HB IP55	SEPARATION CABLES 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	SEPARATION CABLES OPC-2373 (1.9 m) OPC-2374 (8 m) For use with HM-218, COMMANDMIC	SEPARATION CABLES OPC-609 (1.9 m) for use with RMK-3	MICROPHONE CABLE OPC-2355 2.5 m	ACC CABLES OPC-1939 (15-pin) OPC-2078 (25-pin)	ACC CABLES OPC-2202 UR-PA5000/PA6000 connection cable	ACC CABLES OPC-2407 D-SUB 25-pin type
IP501M		✔				✔ (Use with HM-230HB or HM-241)			✔
IC-F5400D, IC-F6400D	✔ (Separation cable is required)		✔	✔					
IC-F5400DS, IC-F6400DS									
IC-F5062D, IC-F6062D					✔				
IC-F5122D, IC-F6122D							✔ *10		
IC-F5022, IC-F6022							✔		
IC-F5012, IC-F6012							✔		
IC-FR5100, IC-FR6100								✔	

(Photo shows OPC-1939)

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

Optional Accessories for Mobile Radios and Repeaters

MODEL NAME	ZONE COPY CABLE OPC-2362 Mobile to handheld	GPS ANTENNA UX-241 5 m cable length	OPTION BOARD UT-134 AES/DES encryption unit	CHANNEL MODULES UR-FR5100 136–174 MHz, 25 W UR-FR6100 400–470 MHz, 25 W	POWER AMPLIFIERS UR-PA5000 136–174 MHz, 50 W 100% duty UR-PA6000 400–470 MHz, 50 W 100% duty	NETWORK CONTROLLER UC-FR5000[*11] For IDAS™ multi-site networking	ETHERNET BOARD UC-FR5000SE For connection with IC-FC5000E
IP501M							
IC-F5400D, IC-F6400D	✔	✔	✔				
IC-F5400DS, IC-F6400DS	✔	✔	✔				
IC-F5062D, IC-F6062D							
IC-F5122D, IC-F6122D							
IC-F5022, IC-F6022							
IC-F5012, IC-F6012							
IC-FR5100, IC-FR6100				✔	✔	✔	✔

[*11] The following versions are available.
#01 For NXDN™ single-site trunking
#02 For NXDN™ multi-site conventional
#03 For NXDN™ multi-site trunking
#12 For dPMR™ multi-site conventional

Optional Accessories for RoIP Gateway and IP Products

MODEL NAME	AC ADAPTERS BC-207S 12 V /4.2 A	AC ADAPTERS BC-147S[*12] 12 V/0.33 A	AUDIO/DATA CONNECTION CABLES OPC-2273 For VHF marine transceiver 5 m	OPC-2275 For mobile trans-ceiver 5 m	OPC-2276 For HM-152 or SM-26 5 m	OPC-2389 For RS-232 serial connection 5 m	OPC-2390 For IC-FR5100 series 5 m	OPC-2412 For IC-SAT100 5 m
VE-PG4			✔	✔	✔	✔	✔	✔
AP-95M	✔							
IP100FS		✔ (Use with CT-23)						
RC-FS10		✔ (Use with CT-23)						

MODEL NAME	SPEAKER-MICROPHONE HM-241	HAND MICROPHONES HM-152	HM-152T DTMF keypad type	HM-216 Short cable[*14]	DESKTOP MICROPHONE SM-26	MICROPHONE ADAPTER CT-23	ACCESS POINT MANAGER RS-AP3
VE-PG4	✔	✔[*13]	✔[*13]	✔[*13]	✔[*13]		
AP-95M							✔
IP100FS		✔ (Use with CT-23 and BC-147S)			✔ (Use with CT-23 and BC-147S)	✔	
RC-FS10		✔ (Use with CT-23 and BC-147S)			✔ (Use with CT-23 and BC-147S)	✔	

[*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 code, while the HM-152 has a total of 900 mm cable length.

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.

| ✔ | : Applicable | | : Not applicable |

Global Wireless Communications Company

Icom Inc., launched over 50 years ago as an amateur radio manufacturing company is now a global wireless communications company that provides the world with the most comprehensive range of radio solutions for land, sea and air.

LAND

SEA

AIR

Icom Inc.
1-1-32, Kamiminami, Hirano-Ku, Osaka 547-0003, Japan   Phone: +81 (06) 6793 5302   Fax: +81 (06) 6793 0013   www.icom.co.jp/world   Count on us!

Icom America Inc.
www.icomamerica.com

Icom Canada
www.icomcanada.com

Icom Brazil
E-mail: sales@icombrazil.com

Icom（Europe）GmbH
www.icomeurope.com

Icom Spain S.L.
www.icomspain.com

Icom（UK）Ltd.
www.icomuk.co.uk

Icom France s.a.s.
www.icom-france.com

Icom（Australia）Pty. Ltd.
www.icom.net.au

Shanghai Icom Ltd.
www.bjicom.com

Your local distributor/dealer: