ICOM NEW IDAS SERIES

iDAS™ ICOM DIGITAL ADVANCED SYSTEM   NXDN™   dPMR digital™

6.25 kHz FDMA
True RF Efficiency

LOOK SMART, WORK SMART

IDAS Radio Systems Advantages

NXDN/dPMR Protocol Choice

The IDAS digital radio system has two protocol choices, NXDN and dPMR. Both protocols are an open digital radio standards using 6.25 kHz FDMA narrowband technology.

With this flexible choice, the IDAS radio system allows for interoperability with other manufactures equipment for seamless supply/replacement of existing NXDN and/or dPMR systems. And naturally these FDMA based protocols are a perfect match, when migrating an analog system to digital.

System Scalability According to Communication Traffic and Coverage

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

Trunking (NXDN Type-C, Type-D or dPMR Mode 3)

IDAS trunking can bind multiple channels and effectively share the limited number of channels with a large number of users.
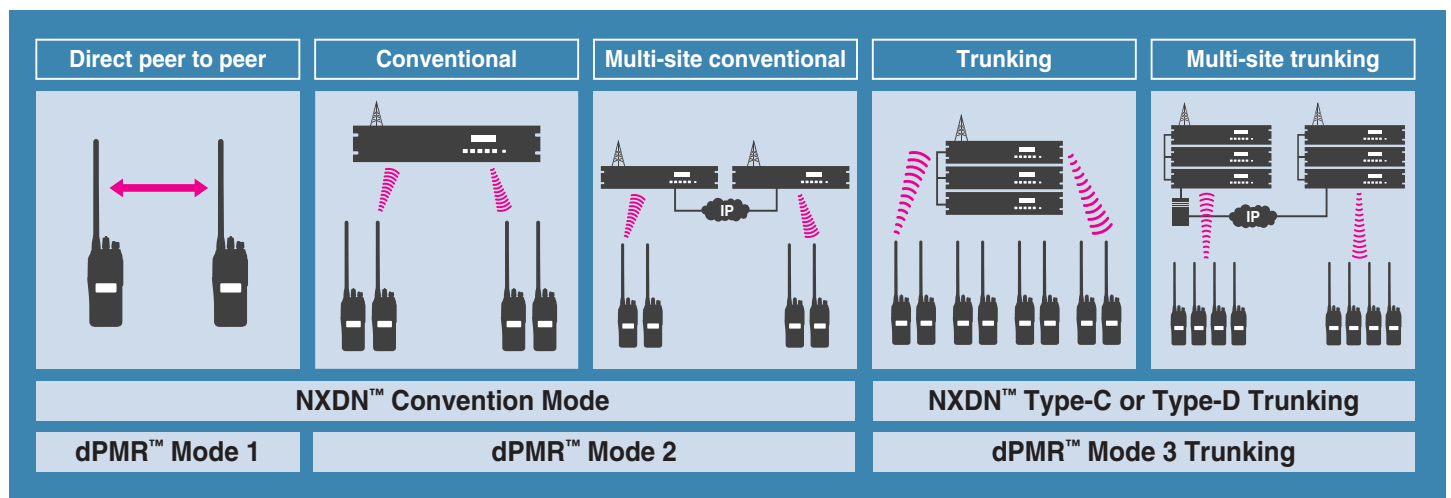
* Licence key (ISL-UGMTR for NXDN Type-D or ISL-UGMD3 for dPMR Mode 3) required. Type-C trunking upgrade key will be available later.

Multi-site connectivity

Connect two or more repeater sites over the IP network and expand the communication coverage. The multi-site connectivity can be applied to both conventional and trunking modes.

Voting scan

When used in a multi-site conventional system, the IDAS radio searches an optimal repeater site and automatically selects the repeater. Useful for users moving over wide area.

Direct peer to peer	Conventional	Multi-site conventional	Trunking	Multi-site trunking

NXDN™ Convention Mode			NXDN™ Type-C or Type-D Trunking	
dPMR™ Mode 1	dPMR™ Mode 2		dPMR™ Mode 3 Trunking	

Licence Upgrade / System Migration for Initial Cost Saving

Mix Mode Operation
(NXDN conventional or dPMR Mode 1/2)

The IDAS radio can receive both analog and digital mode signals on a channel and can reply either in analog or digital mode according to the received mode. You can partially introduce the IDAS radios, while still using the existing analog radios in a system.

Licence Key Upgrade

Necessary functions such as trunking capability, channel capacity, AES encryption and other functions can be added with licence key options. The IDAS radios can be upgraded and customised to meet your specific needs.

Programming

• Trunking capability
• AES encryption
• Channel capacity

System / Radio Unit Management Efficiency

Over-the-Air-Programming (OTAP)

The OTAP function allows you to distribute a radio configuration file over-the-air to update the IDAS radios. Save considerable time with no need to return the radio for reprogramming.

* OTAP manager software (CS-OTPM1) is required. The OTAP function for dPMR version will be available with the future firmware update.

System Management Software, RS-MGR1/RS-MGR2
(NXDN Type-D trunking and dPMR Mode 3)

The system management software remotely monitors multiple repeater conditions and traffic statistics over the IP network. If it detects abnormal conditions, the software can send an e-mail alert to the system administrator.

System Configuration File (SCF) (dPMR Mode 3)

Icom's dPMR Mode 3 system server can export an SCF which includes common system parameters and the IDAS radio can import the SCF for further programming efficiency.
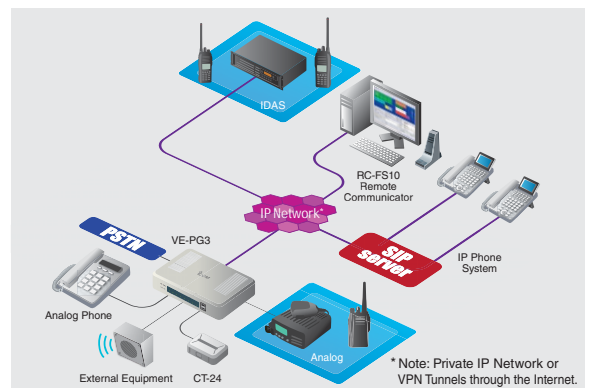

Site 1
Site 2
Site 3
Control Server
Download
SCF
System Parameters
Import
Programming
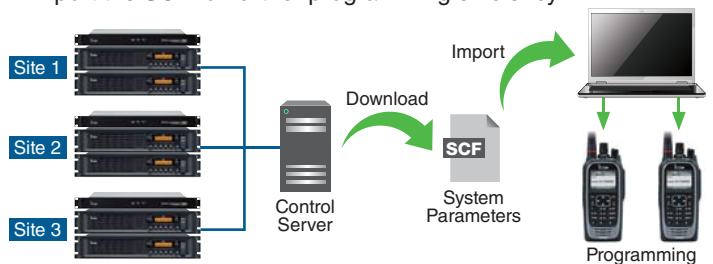
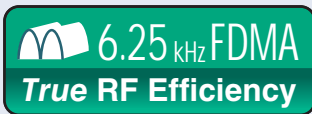## Interopearability with Various System

RoIP Gateway, VE-PG3
(NXDN conventional, Type-D trunking, dPMR Mode 2 and Mode 3*)

With a VE-PG3 RoIP gateway, the IDAS radio system can interconnect with an IP phone, analog phone, IP advanced radio system and analog radio as well as NXDN and dPMR protocols.

* The RoIP gateway for dPMR Mode 3 will be released in the future.

IDAS
RC-FS10 Remote Communicator
IP Network*
SIP server
IP Phone System
PSTN
VE-PG3
Analog Phone
External Equipment
CT-24
Analog

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

6.25 kHz FDMA
True RF Efficiency

Why 6.25 kHz FDMA Narrowband?

True Narrowband: Reliable Communications for Half the Spectrum!

6.25 kHz FDMA allows you to double the capacity of your valued spectrum. The choice of two independent 6.25 kHz in 12.5 kHz, or a standalone 6.25 kHz channel is yours. This double capacity/independent channel flexibility and efficiency is only possible with 6.25 kHz FDMA.

Communications Reliability When You Most Need It

No need to allow for TDMA time slot synchronization. Instant communications in emergencies and critical situations. FDMA is the fail safe mode of choice in land mobile radio. Nothing else compares.

FDMA: Proven History Like No Other Radio Technology

For over 50 years, FDMA has been the backbone of two-way radio communication. Generational enhancements have cul-

minated in the realization of 6.25 kHz FDMA digital protocols that are literally ahead of their time, while keeping backward compatibility with analog FM.

6.25 kHz Channels: the Current and Future Trend

6.25 kHz channel plans and standards are used in North America, Europe, Japan, Oceania, and the list goes on. 6.25 kHz provides an answer to the worldwide problem of spectrum shortage and efficient use.

6.25 kHz Fundamental Excellence

Narrower bandwidth FDMA provides technical excellence in sensitivity, interference resistance, increased coverage, audio quality, spectrum efficiency and more. Why look at anything else?

Small, Slim and Smart

The compact body is made possible from new engineering techniques including the use of a custom SoC (System-on-a-Chip) and flat sheet keypad. The slim dimensions are also supplemented with reduced power consumption, allowing for a thinner battery pack.

IP68 Waterproof and Dust-tight (Handheld)

The IDAS handheld radio is built durable to endure 1 m depth water for 1 hour and dust-tight protection. The radio also passes MIL-STD-810 specifications.

Colour LCD and improved User Interface

A high-resolution colour LCD and new user interface is adopted. The colour LCD enhances the visibility both in natural and indoor lighting, with the night mode LCD setting as an alternative for use in night time or low lighting conditions. Functions can be easily set by following easy to understand icons and menu items.
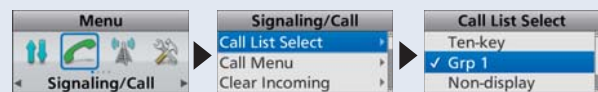
Operation example, Setting Call list select

Operating Convenience

Over-the-Air-Alias (OAA)

The OAA function sends own alias name with a call to receivers and automatically shows the callers name on the receivers display. It eliminates the need to program the call list to each radio, when a new radio is entered or existing radio is passed to another person.

Hands-Free Operation with Bluetooth Headset

The built-in Bluetooth module provides remote operation and hands-free communication paired with a third-party headset*.

* Available functions depend on paired Bluetooth devices. Icom does not guarantee all functions and performance of the Bluetooth headset.

Digital Voice Recording

The IDAS radio can record incoming and outgoing calls, and the user can check recorded communications just in case. When a 32 GB microSD* card is used, a Max. 500 hours of recording is possible.

* A microSD card is required separately.

Vibration Alert (Handheld)

When a call is received, the IDAS radio vibrates powerfully enough for the incoming call to be felt through heavy clothing.

Multiple Languages

Functions and menu items can be programmed in a language other than English. Cyrillic and Simplified Chinese fonts are supported.

• Voice announcements can be replaced with customised messages
• Message of up to 100 characters • Status message • Low battery beep
• Normal, priority and voting scan • Internal clock

Safety and Security

AES/DES Encryption with Over-the-Air-Rekeying (OTAR)

For digital communication security, the IDAS radio provides basic 4-key DES encryption as standard and can be upgraded to 64-key DES with the optional UT-134. When used with the optional UT-134 and licence key (ISL-AKAES), the AES encryption with the OTAR function are available. The OTAR function* allows updating of encryption keys over the radio channel.

* The OTAR function will be available with future firmware upgrade.

Emergency Call by Man Down and Motion/Stationary Detection (Handheld)

To remotely monitor worker safety, the IDAS handheld radio has four emergency related functions: motion detection, stationary detection, man down and lone worker functions. If one of these functions are activated, the radio automatically sends an emergency signal.

Power OFF Emergency (Mobile)

The Power OFF emergency sends an emergency signal even though the radio appears to be powered OFF.

Radio Kill, Stun and Revive

If a radio a lost or stolen, the radio kill function disables the radio over the air to reduce a security threat. When the radio Stun command is received, all functions will be temporarily locked out until a Revive command is received or the user password is entered.

• Remote monitor (NXDN) /Ambience listening (dPMR) functions
• Power ON Password • Surveillance function
• Tactical group function for temporarily regroup of user groups

Audio Quality

Active Noise Canceller

The active noise canceller assists in providing clear audio, while suppressing background noise. The function improves both your transmitted voice and incoming call. The radio user does not need to shout into the microphone even under extremely noisy environments.

Audio Equalizer Effect

The audio equalizer allows you to tailor the audio tone to optimise voice quality in various use environments.

• 14-pin ACC connector with BTL amplifier output (handheld radio only)
• AquaQuake™ draining function clears water away from the speaker grill (handheld radio only)
• Audio compander • Beat cancel

Data Communication

Transparent Data

The IDAS radio can be used as a transparent data modem which transmits various data up to 3600 bps over the radio channel. The NXDN 12.5 kHz digital mode doubles the data speed.

Built-in GPS Receiver

The position data can be sent with voice call or status call and can be used with a thir-party AVL (Automatic Vehicle Location) system. The GPS log functions logs user position data at regular intervals.

* An optional GPS antenna UX-241 is required for mobile radios.

USB Port for PC Connection

The IDAS radio can be connected to a PC through a USB port for programming radios and accessing the installed microSD card in mass storage mode.

• Horn, dimmer and external PTT programmable through D-SUB 25-pin connector for mobile radio
• Serial communication interface with Bluetooth® for wireless connection
• Radio programming through a microSD card

	IC-F3400DT/DS/D IC-F5400D/DS NXDN Version	IC-F3400DPT/DPS/DP IC-F5400DP/DPS dPMR Version
Operating type		
NXDN Single-site Conventional	Yes	N/A
NXDN Multi-site Conventional	Yes	N/A
NXDN Type-D trunking (Single/multi)	Option (ISL-UGMTR)	N/A
NXDN Type-C trunking (Single/multi)	Option*1	N/A
12.5 kHz digital mode	Yes	N/A
dPMR Mode 1/2 conventional	N/A	Yes
dPMR Mode 3 trunking	N/A	Option (ISL-UGMD3)
Analog mode	Yes	Yes
Analog/Digital mix mode	Yes	Yes
Digital functions		
OTAP (Over-the-Air Programming)	Option (CS-OTPM1)	Option*1
OAA (Over-the-Air Alias)	Yes	Yes
Transparent data mode	Yes	Yes
Status message	Yes	Yes
Short data message	Yes	Yes
Radio Stun/Revive/Kill	Yes	Yes
Remote monitor/Ambience listening	Yes	Yes
Analog functions		
2-Tone/5-Tone encoder/decoder	Yes	Yes
CTCSS/DTCS encoder/decoder	Yes	Yes
DTMF autodial/decoder	Yes	Yes
BIIS 1200 (MSK)	N/A	Yes
MDC functions	Yes	N/A
LTR trunking	Yes	N/A
Security		
DES encryption (4-key)	Yes	Yes
DES encryption (64-key)	Option (UT-134)	Option (UT-134)
AES encryption	Option (UT-134 + ISL-AKAES)	Option (UT-134 + ISL-AKAES)
OTAR (Over-the-Air Rekeying)	Option*1	Option*1
Digital voice scrambler	Yes	Yes
Analog voice scrambler (Inversion)	Yes	Yes

	IC-F3400DT/DS/D IC-F5400D/DS NXDN Version	IC-F3400DPT/DPS/DP IC-F5400DP/DPS dPMR Version
Scan functions		
Priority scan	Yes	Yes
Voting scan	Yes	Yes
Emergency functions		
Lone worker function	Yes	Yes
Man down function	Yes (For handheld)	Yes (For handheld)
Motion/Stationary detection	Yes (For handheld)	Yes (For handheld)
Power OFF emergency	Yes (For mobile)	Yes (For mobile)
Voice/Audio functions		
Voice announcement	Yes	Yes
VOX function	Yes	Yes
Voice recording/playback	Yes	Yes
Active noise canceller	Yes	Yes
TX/RX Audio equalizer	Yes	Yes
Hardwares		
GPS receiver	Yes*2	Yes*2
Vibration alert	Yes (For handheld)	Yes (For handheld)
Bluetooth®	Yes	Yes
microSD memory card slot	Yes	Yes
USB connector	Yes	Yes
Dual head controller	Option (for IC-F5400D/F6400D)	Option (for IC-F5400DP/F6400DP)
COMMANDMIC™	Option (for IC-F5400D/F6400D)	Option (for IC-F5400DP/F6400DP)

*1 Type-C trunking upgrade key will be available later. OTAP and OTAR functions will be available with future firmware upgrade.
*2 Optional GPS antenna UX-241 is required separately for mobile radios.

Multiple Controller Configurations

Detached Controller*
Optional RMK-5 and separation cable required.

Dual Head Controller*
Optional RMK-7, hand microphone and separation cables required.

COMMANDMIC™ and Detached Controller*
Optional RMK-5, COMMANDMIC, HM-218 and separation cables required.

A detached controller head with the separated RF unit is a simple to install in almost any vehicle.

Suitable for double cab vehicles. Install the controller head to front and rear seats respectively.

The COMMANDMIC is handy for installing a work platform on the rear part of the vehicle.

* Detached Controller, Dual head and COMMANDMIC configurations are for IC-F5400D/IC-F6400D/F5400DP/IC-F6400DP only.

Products Lineup

Top view

IC-F3400DT   IC-F3400DS   IC-F3400D

VHF DIGITAL TRANSCEIVERS (NXDN Version)
IC-F3400DT/DS/D

UHF DIGITAL TRANSCEIVERS (NXDN Version)
IC-F4400DT/DS/D

VHF DIGITAL TRANSCEIVERS (dPMR Version)
IC-F3400DPT/DPS/DP

UHF DIGITAL TRANSCEIVERS (dPMR Version)
IC-F4400DPT/DPS/DP

Mobile Radios

IC-F5400D

IC-F5400DS

VHF DIGITAL TRANSCEIVERS (NXDN Version)
IC-F5400D/DS

UHF DIGITAL TRANSCEIVERS (NXDN Version)
IC-F6400D/DS

VHF DIGITAL TRANSCEIVERS (dPMR Version)
IC-F5400DP/DPS

UHF DIGITAL TRANSCEIVERS (dPMR Version)
IC-F6400DP/DPS

Commandmic™

REMOTE CONTROL MICROPHONE
HM-218

Handheld Radios Options

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

BATTERY PACKS

IP68   IP68

BP-283   **BP-284**

Battery packs	Type	Capacity	Operating time*
BP-283	Rechargeable Li-ion	2010 mAh (typ.) 1910 mAh (min.)	10 hours (Approx.)
BP-284	Rechargeable Li-ion	3350 mAh (typ.) 3120 mAh (min.)	16 hours (Approx.)

* Tx: Rx: standby = 5:5:90 duty cycle. Power save function ON.

INTELLIGENT CHARGER

BC-123SA[*1]   **BC-225**

Charges the BP-283/BP-284 in 3/4.5 hours (approx.) respectively. Shows the battery information with the LED lighting.

RS-BC225

Shows the battery information for optimum conditioning

RAPID CHARGER

BC-123S[*1]   **BC-219N**

Charges the BP-283/BP-284 in 3/4.5 hours (approx.) respectively.

*1 BC-123SA for USA. SE for Europe. SV for Australia.

MULTI-CHARGER

BC-214   **BC-157S**

Charges up to six BP-283/BP-284 battery packs in 3/4.5 hours (approx.) respectively.

SPEAKER-MICROPHONE

IP68

HM-222

HEADSETS and PTT SWITCH CABLE
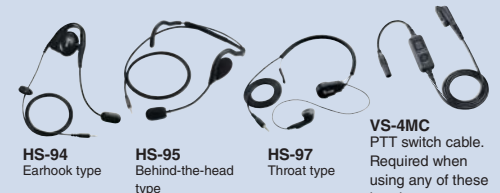
HS-94 Earhook type   **HS-95** Behind-the-head type   **HS-97** Throat type

VS-4MC PTT switch cable. Required when using any of these headsets

CIGARETTE LIGHTER CABLE & POWER SUPPLY CABLES

CP-23L For use with BC-219   **OPC-515L** For use with BC-219   **OPC-656** For use with BC-214

ACC ADAPTOR

AD-118 For use with Hirose Plug Accessory

AES/DES ENCRYPTION UNIT

UT-134

ZONE COPY CABLES

OPC-1870 Handheld to handheld cable   **OPC-2362** Handheld to mobile cable

BELT CLIPS

MB-133 Alligator type Same as supplied.   **MB-136** Swivel type

LEATHER BELT HANGERS

MB-96N   **MB-96F**   **MB-96FL**

CARRYING CASES

LC-184   **LC-186**

ANTENNAS
• **FA-S81V**: 136–150 MHz
• **FA-S82V**: 148–162 MHz
• **FA-S83V**: 160–174 MHz
• **FA-S81U**: 380–430 MHz
• **FA-S82U**: 430–480 MHz
• **FA-S83U**: 470–520 MHz

CUT ANTENNAS
• **FA-S67VC**: 136–174 MHz
• **FA-S76UC**: 380–520 MHz

STUBBY ANTENNAS
• **FA-S81VS**: 136–150 MHz
• **FA-S82VS**: 148–162 MHz
• **FA-S83VS**: 160–174 MHz
• **FA-S81US**: 400–450 MHz
• **FA-S82US**: 450–490 MHz

CHARGER ADAPTER
• **AD-132N** for BC-214
AD-132N is supplied with the BC-214, depending on BC-214's version.

SOFTWARE
• **CS-KLD2**: Key-loader for UT-134
• **CS-OTPM1**: OTAP manager software

ACTIVATION KEYS
• **ISL-UGMTR**: NXDN™ trunking upgrade key
• **ISL-UGMD3**: dPMR™ Mode 3 upgrade key
• **ISL-AKAES**: AES activation key
• **ISL-CHEX**: Channel expansion key

Mobile Radios Options

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

HAND MICROPHONES

IP54   IP54   IP55   IP55

HM-220 Heavy duty microphone   **HM-220T** Heavy duty microphone with DTMF keypad   **HM-221**   **HM-221T** DTMF microphone

DESKTOP MICROPHONE

SM-29

GPS ANTENNA

UX-241

EXTERNAL SPEAKERS

SP-30 20 W rated input   **SP-35:** 2 m cable **SP-35L:** 6 m cable

AES/DES ENCRYPTION UNIT

UT-134

SEPARATION KIT

RMK-5* For detached controller configuration.

DUAL-HEAD SEPARATION KIT

RMK-7* Separation kit and secondary controller for dual head configuration.

COMMANDMIC™

IP55

HM-218* Remote control microphone for RMK-5.

SEPARATION CABLES

For RMK-5 or RMK-7
OPC-2364: 1.9 m; 6.2 ft
OPC-2365: 3 m; 9.8 ft
OPC-2366: 5 m; 16.4 ft
OPC-2367: 8 m; 26.2 ft

For HM-218, COMMANDMIC
OPC-2373: 1.9 m; 6.2 ft
OPC-2374: 8 m; 26.2 ft

ZONE COPY CABLE
• **OPC-2362**: Mobile to handheld cable

SOFTWARE
• **CS-KLD2**: Key-loader for UT-134
• **CS-OTPM1**: OTAP manager software

ACTIVATION KEYS
• **ISL-UGMTR**: NXDN™ trunking upgrade key
• **ISL-UGMD3**: dPMR™ Mode 3 upgrade key
• **ISL-AKAES**: AES activation key
• **ISL-CHEX**: Channel expansion key

* RMK-5, RMK-7, HM-218 and separation cables are options for IC-F5400D/F6400D, F5400DP/F6400DP only.

SPECIFICATIONS

	IC-F3400DT/DS/D NXDN Version	IC-F4400DT/DS/D NXDN Version	IC-F5400DT/DS/D NXDN Version	IC-F6400DT/DS/D NXDN Version
	IC-F3400DPT/DPS/DP dPMR Version	IC-F4400DPT/DPS/DP dPMR Version	IC-F5400DPT/DPS/DP dPMR Version	IC-F6400DPT/DPS/DP dPMR Version
GENERAL				
Frequency coverage (NXDN) (* Depending on version)	136–174 MHz	380–470 MHz, 450–512 MHz	136–174 MHz	380–470 MHz, 450–512 MHz
Frequency coverage (dPMR)	136–174 MHz	380–470 MHz	136–174 MHz	380–470 MHz
Number of channels	1024 channels /128 zones 4000 channels /128 zones (Option*¹) 32 channels /2 zones (Non-display type)*²		1024 channels /128 zones 4000 channels /128 zones (Option*¹) 99 channels (7 Segment display type)*³	
Type of emission (NXDN) (* Depending on version)	16K0F3E*⁴, 14K0F3E, 11K0F3E, 8K50F3E ,8K30F1E/D, 4K00F1E/D		16K0F3E*⁴, 14K0F3E, 11K0F3E, 8K50F3E,8K30F1E/D, 4K00F1E/D	
Type of emission (dPMR) (* Depending on version)	16K0F3E*⁴, 14K0F3E, 8K50F3E, 4K00F1E/D		16K0F3E*⁴, 14K0F3E, 8K50F3E, 4K00F1E/D	
Power supply requirement	7.5 V DC nominal		13.6 V DC nominal (USA/EXP), 13.2 V DC nominal (EUR)	
Current drain (approx.) — Tx High	1.5 A	1.8 A	9.0 A typ. (at 50 W) 5.0 A typ. (at 25 W)	8.8 A typ. (at 45 W) 5.0 A typ. (at 25 W)
Current drain (approx.) — Rx Max. audio/ Standby	450 mA (Internal SP)/140 mA		0.9 A typ. (Internal SP)/ 370 mA typ.	0.8 A typ. (Internal SP)/ 270 mA typ.
Antenna impedance	50 Ω		50 Ω	
Operating temperature range	–30 °C to +60 °C; –22 °F to +140 °F (Radio specifications)		–30 °C to +60 °C; –22 °F to +140 °F	
Dimensions (W × H × D; Projections not included)	53.6 × 123.5 × 29.3 mm; 2.1 × 4.9 × 1.2 in (With BP-283)		174 × 55 × 150 mm; 6.9 × 2.2 × 5.9 in	
Weight (approx.)	180 g; 6.4 oz (main unit) 305 g; 10.8 oz (BP-283, MB-133, FA-S81VS)	300 g; 10.6 oz (BP-283, MB-133, FA-S81US)	1.5 kg; 3.3 lb	
TRANSMITTER				
Output power (Hi, L2, L1) (Depending on version)	5 W, 2 W, 1 W		50 W, 25 W, 5 W 25 W, 10 W, 5.8 W	45 W, 25 W, 4.5 W 25 W, 10 W, 5.8 W
Frequency stability	±1.0 ppm		±1.0 ppm	
Spurious emissions — USA	80 dB typ.		90 dB typ.	80 dB typ.
Spurious emissions — EUR	0.25 µW (≤ 1 GHz), 1.0 µW (> 1 GHz)		0.25 µW (≤ 1 GHz), 1.0 µW (> 1 GHz)	
FM Hum and noise (W/N)	55/55 dB typ.	60/59 dB typ.	54/54 dB typ.	
Audio harmonic distortion (AF 1kHz 40% deviation)	0.5% typ.	0.4% typ.	0.5% typ.	
FSK error	1% typ. (DN/DVN)		1% typ. (DN/DVN)	
RECEIVER				
Sensitivity — 12 dB SINAD	0.22 µV typ.	0.23 µV typ.	0.22 µV typ.	0.25 µV typ.
Sensitivity — 20 dB SINAD (W/N)	–5.5/–2.5 dBµV emf typ.	–5.0/–2.0 dBµV emf typ.	–4.0/–4.0 dBµV emf typ.	
Sensitivity — 5% BER (DVN/DN)	–5.5/–4.0 dBµV emf typ.	–4.0/–4.0 dBµV emf typ.	–6.0/–5.0 dBµV emf typ.	
Adjacent channel (W/N)	80/76 dB typ.	75/72 dB typ.	75/72 dB typ.	
Adjacent channel (DVN/DN)	71/70 dB typ.	66/66 dB typ.	65/68 dB typ.	
Spurious response rejection	81 dB typ.	76 dB typ.	85 dB typ.	
Intermodulation rejection — USA	75 dB typ.	74 dB typ.	78 dB typ.	75 dB typ.
Intermodulation rejection — EUR	67 dB typ.	68 dB typ.	70 dB typ.	70 dB typ.
Intermodulation rejection — DVN/DN	72 dBµV emf typ./–41 dBm typ.	73 dBµV emf typ./–41 dBm typ.	70/70 dB typ.	70/70 dB typ.
Audio output power Internal SP (With 12 Ω load)	800 mW typ. (at 5% distortion)		4.0 W typ. (at 5% distortion)	
Audio output power External SP (With 8 Ω load)	1000 mW typ. (at 5% distortion)		4.0 W typ. (at 5% distortion)	

Measurements made in accordance with TIA-603, EN300 086, EN301 166, EN300 113.
All stated specifications are subject to change without notice or obligation.
*¹ Optional licence key (ISL-CHEX) required.
*² IC-F3400D/F4400D/F3400DP/F4400DP (Non-display type): Up to 32 selected channels out of 1024 can be allocated to the channel knob.
*³ IC-F5400DS/F6400DS/F5400DPS/F6400DPS: Due to the segment display, channel indication is possible for up to 99 selected channels out of 1024.
*⁴ 25 kHz bandwidth is no longer available for FCC Part 90 licencees for USA versions.
DVN: Digital Very Narrow (6.25 kHz), DN: Digital Narrow (12.5 kHz). DN is for NXDN version only.

Applicable U.S. Military Specifications & IP Rating

Standard	MIL 810G	
	Method	Procedure
Low Pressure	500.5	I, II
High Temperature	501.5	I, II
Low Temperature	502.5	I, II
Temperature Shock	503.5	I-C
Solar Radiation	505.5	I
Rain Blowing/Drip	506.5	I, III
Humidity	507.5	II
Salt Fog	509.5	–
Dust Blowing	510.5	I
Immersion*	512.5	I
Vibration	514.6	I
Shock	516.6	I, IV

Also meets equivalent MIL-STD-810-C, -D, -E and -F.
* Handheld radios only.

Ingress Protection Standard	
IC-F3400D/DP series	IP68 (Dust-tight and waterproof protection)
IC-F5400D/DP series	IP55 (Dust-protection and jet water resistance)

Supplied accessories for handheld radios:
(May differ depending on version)
• Battery pack, BP-283 • Belt clip, MB-133

Supplied accessories for mobile radios:
(May differ depending on version)
• Hand microphone, HM-220 or HM-221
• DC power cable • Mounting bracket kit
• Microphone hanger

6.25 kHz FDMA
True RF Efficiency

Check our web site to know more about 6.25 kHz FDMA narrow band. www.icom.co.jp/world/fdma/