ICOM

IC−F5400D
IC−F6400D

Look Smart, Work Smart

The IC-F5400D/F6400D series is Icom's new generation IDAS mobile radios. Incorporating cutting edge design, superb performance and a comprehensive range of features on a flexible, upgradable multi-protocol platform. The series is available in both VHF and UHF with either a numeric or full color high resolution LCD. Multiple controller configurations are available to suit almost any vehicle application.

High resolution color LCD

Multiple operating modes
(Available mode depending on version)
• NXDN™/dPMR™ conventional
• Upgradable to NXDN™ Type-D trunking
• Upgradable to dPMR™ Mode 3 trunking
• Analog FM

Built-in Bluetooth®, voice recording, active noise canceller functions*
* Version without Bluetooth® also available.
  Ask your Dealer for details.

Encryption: DES (4-key, 64-key), AES*
* 4-key standard. 64-key DES requires UT-134.
  AES requires UT-134 and ISL-AKAES.

Optional OTAR (Over-the-Air-Rekeying) function for AES/DES

Optional OTAP (Over-the-Air-Programming) function

IP55 jet water resistance and dust-protection

Optional detached controller, dual head or COMMANDMIC™ configurations

IC-F5400D

IDAS™ NXDN™ dPMR digital™
ICOM DIGITAL ADVANCED SYSTEM

IC−F5400D・IC−F6400D

General Features

- 136–174, 380–470, 450–520 MHz versions
- 1024 Channels / 128 Zones
- 4000 Channels with optional license key, ISL-CHEX
- High resolution color LCD and intuitive user interface
- Large sized function and four-direction buttons
- Day and night mode display settings
- Programmable functions and menu items in a language other than English (For example French, Spanish, German, Russian and Turkish)
- MIL-STD-810 G shock, vibration, temperature and more
- IP55, water jet resistance and dust protection
- DTMF autodial and decoder

Operating Mode (Available mode depending on version)

- NXDN or dPMR Mode 1/Mode 2 conventional
- NXDN or dPMR multi-site conventional over IP network
- NXDN Type-D single/multi-site trunking*
  * License key (ISL-UGMTR) required.
- dPMR Mode 3 trunking*
  * License key (ISL-UGMD3) required. Not available in all regions.
- 12.5 kHz digital mode (NXDN conventional)
- Analog mode
- Analog/digital mixed operation

Digital Functions (Voice and Data)

- Over-the-Air Programming (OTAP) function*
  * OTAP manager (CS-OTPM1) required.
- Over-the-Air Alias (OAA) sends own name with a call
- Over-the-Air Update (OTAU) changes the repeater channel data and site code over the air (NXDN Type-D trunking)
- Individual, group and all call
- Late entry for group call
- Unit ID and talkgroup display on receive
- Status call and polling
- Short data messages (up to 100 characters)
- Call alert (NXDN)
- GPS position
- Transparent data mode

Analog Functions

- CTCSS and DTCS tone
- 2-Tone and 5-Tone
- MDC functions (Depending on version)
- BIIS 1200 functions (Depending on version)
- LTR™ trunking (Depending on version)

6.25 kHz FDMA
True RF Efficiency

Check our web site to know more about 6.25 kHz FDMA narrow band.
https://www.icomjapan.com/explore/digital/

Security and Safety

- Encryption: DES (4-key, 64-key)*, AES
  * 4-key standard. 64-key DES requires UT-134. AES requires UT-134 and ISL-AKAES.
- Over-the-Air-Rekeying (OTAR) function*
  * OTAR manager (CS-OTAR1) required.
- Digital voice scrambler (Low level encryption)
- Analog voice scrambler (Inversion)
- Power ON password
- Tactical group temporarily reconfigures user talkgroups
- Remote Kill, Stun and Revive
- Remote monitor (NXDN)/ambience listening (dPMR)
- Power OFF emergency
- Emergency key for emergency call
- Lone worker function

Scan Functions

- Priority scan
- Voting scan for site roaming

Voice/Audio Functions

- Voice announcement (Channel number and zone)
- VOX function for hands-free operation
- Voice recording/playback (Saves to a microSD card)*
  * A microSD card is required separately.
- The following information can be embedded in the WAV file; user IDs, GPS position, frequency, AF volume, RSSI, etc. (Depending on setting).
- Customized channel announcement
- TX/RX active noise canceller
- TX/RX audio equalizer (Flat, high/mid/low boost, low cut)
- Audio compander (Analog mode)

Hardware Features

- Programmable ringer beep[*1]
- Built-in Bluetooth® for wireless audio and data[*1]
- A third-party wireless Bluetooth® headset[*1] (for example, 3M™ Peltor™ WS™ 5 series) can be used*
  * Compatibility with third-party Bluetooth® headsets cannot be guaranteed.
- Wireless radio programming over Bluetooth® [*1]
- USB connector for data transfer mode or card reader mode
- Built-in GPS with GPS position screen and auto log function*
  * An optional GPS antenna UX-241 is required.
- Internal clock with time auto adjustment
- Programmable D-SUB connector for external PTT, channel, horn, PA/RX speaker, ignition switch and dimmer control
- Low voltage alert
- Optional detached controller, dual head controller or COMMANDMIC™ configurations
- Intercom function between dual head controller or COMMANDMIC™
- microSD card slot

[*1] Version without Bluetooth® also available. Ask your Dealer for details.

SPECIFICATIONS

IC-F5400D・IC-F6400D

	IC-F5400D NXDN Version	IC-F5400DP dPMR Version	IC-F6400D NXDN Version	IC-F6400DP dPMR Version
GENERAL				
Frequency coverage* (* Depending on version)	136–174 MHz	136–174 MHz	380–470 MHz, 450–520 MHz	380–470 MHz
Number of channels	1024 channels /128 zones 4000 channels /128 zones (Option)*1			
Type of emission* (* Depending on version)	16K0F3E*2, 14K0F3E, 11K0F3E, 8K50F3E, 8K30F1E/D, 4K00F1E/D	16K0F3E*2, 14K0F3E, 8K50F3E, 4K00F1E/D	16K0F3E*2, 14K0F3E, 11K0F3E, 8K50F3E, 8K30F1E/D, 4K00F1E/D	16K0F3E*2, 14K0F3E, 8K50F3E, 4K00F1E/D
Power supply requirement	13.6 V DC nominal (USA/EXP), 13.2 V DC nominal (EUR)			
Current drain (approx.) — Tx	9.0 A typical (at 50 W) 5.0 A typical (at 25 W)		8.8 A typical (at 45 W) 5.0 A typical (at 25 W)	
Current drain (approx.) — Rx	0.9 A typical/370 mA typical (Max. audio (Internal SP)/Standby)		0.8 A typical/270 mA typical (Max. audio (Internal SP)/Standby)	
Antenna impedance	50 Ω			
Operating temperature range	−30 °C to +60 °C; −22 °F to +140 °F			
Dimensions (W × H × D;Projections not included)	174 × 55 × 150 mm; 6.9 × 2.2 × 5.9 in			
Weight (approx.)	1.5 kg; 3.3 lb			
TRANSMITTER				
Output power (Hi, L2, L1)* (* Depending on version)	50 W, 25 W, 5 W (USA/EXP) 25 W, 10 W, 5.8 W (EUR)		45 W, 25 W, 4.5 W (USA/EXP) 25 W, 10 W, 5.8 W (EUR)	
Frequency stability	±1.0 ppm			
Spurious emissions	90 dB typical (USA)		80 dB typical (USA)	
	0.25 µW (≤ 1 GHz), 1.0 µW (> 1 GHz) (EUR)			
FM Hum and noise	54 dB typical (@25 kHz), 54 dB typical (@12.5 kHz)			
Audio harmonic distortion	0.5% typical (AF 1 kHz 40% deviation)			
FSK error	1% typical (@DVN/DN)			
RECEIVER				
Sensitivity — Analog (12 dB SINAD)	0.22 µV typical		0.25 µV typical	
Sensitivity — Analog (20 dB SINAD)	−4.0 dBµV emf typical (@25 kHz), −4.0 dBµV emf typical (@12.5 kHz)			
Sensitivity — Digital (1% BER)	−6.0 dBµV emf typical (0.25 µV typical) (@DVN), −5.0 dBµV emf typical (0.28 µV typical) (@DN)			
Adjacent channel selectivity — Analog	75 dB typical (@25/20 kHz), 72 dB typical (@12.5 kHz)			
Adjacent channel selectivity — Digital	65 dB typical (@DVN), 68 dB typical (@DN)			
Spurious response rejection	85 dB typical			
Intermodulation rejection — Analog	78 dB typical (USA) 70 dB typical (EUR)		75 dB typical (USA) 70 dB typical (EUR)	
Intermodulation rejection — Digital	70 dB typical (@DVN), 70 dB typical (@DN)		70 dB typical (@DVN), 70 dB typical (@DN)	
Audio output power — Internal SP	4.0 W typical (at 5% distortion with 4 Ω load)			
Audio output power — External SP	4.0 W typical (at 5% distortion with 4 Ω load)			

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 license key (ISL-CHEX) required.
*2 25 kHz bandwidth is no longer available for FCC Part 90 licensees 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
Vibration	514.6	I
Shock	516.6	I, IV

Also meets equivalent MIL-STD-810-C, -D, -E and -F.

Ingress Protection Standard	
Dust & Water	IP55 (Dust-protection and jet water resistance)

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

Icom Inc.

Please check the website for the latest version of this brochure at **www.icomjapan.com**

■ HAND MICROPHONES AND DESKTOP MICROPHONE

HM-220: Heavy duty microphone. IP54 protection.
HM-220T: Heavy duty microphone with DTMF keypad. IP54 protection.
HM-221: Hand microphone with emergency button. IP55 protection.
HM-221T: Hand microphone with DTMF keypad and emergency button. IP55 protection.
SM-29: Desktop microphone with monitor and monitor lock buttons.

HM-220 HM-220T HM-221 HM-221T SM-29

■ COMMANDMIC™ AND SEPARATION KITS

HM-218: Remote control microphone for use with RMK-5. IP55 protection.
RMK-5: Separation kit. For detached controller configuration.
RMK-7: Dual-head separation kit. Separation kit and secondary controller for dual head configuration.

HM-218 RMK-5 RMK-7

■ SEPARATION CABLES

OPC-2364: 1.9 m; 6.2 ft separation cable for RMK-5 or RMK-7.
OPC-2365: 3 m; 9.8 ft separation cable for RMK-5 or RMK-7.
OPC-2366: 5 m; 16.4 ft separation cable for RMK-5 or RMK-7.
OPC-2367: 8 m; 26.2 ft separation cable for RMK-5 or RMK-7.
OPC-2373: 1.9 m; 6.2 ft separation cable for HM-218, COMMANDMIC.
OPC-2374: 8 m; 26.2 ft separation cable for HM-218, COMMANDMIC.

OPC-2364 OPC-2373

■ EXTERNAL SPEAKERS

SP-30: External speaker. Cable length 2.6 m; 8.5 ft.
SP-35: Compact external speaker. Cable length 2 m; 6.6 ft.
SP-35L: Compact external speaker. Cable length 6 m; 19.7 ft.

SP-30 SP-35/SP-35L

■ GPS ANTENNA

UX-241: External GPS antenna. Cable length 5 m; 16.4 ft.

■ AES/DES ENCRYPTION UNIT

UT-134: AES/DES encryption unit.

■ ZONE COPY, PROGRAMMING AND DC POWER CABLES

OPC-2362: Zone copy cable. Mobile to handheld cable.
OPC-2363: Programming cable.
OPC-1132: DC power cable. Cable length 3 m; 9.8 ft.
OPC-347: DC power cable. Cable length 7 m; 23 ft.

UX-241 UT-134 OPC-2362

■ SOFTWARE AND ACTIVATION KEYS

CS-F3400D: Programming software.
CS-KLD2: Key-loader for UT-134.
CS-OTPM1: OTAP manager software.
CS-OTAR1: OTAR manager software.
ISL-UGMTR: NXDN™ Type-D trunking upgrade key.
ISL-UGMD3: dPMR™ Mode 3 upgrade key.
ISL-AKAES: AES activation key.
ISL-CHEX: Channel expansion key.
ISL-AK25K: 25 kHz activation key.
ISL-AKSTM: Dealer set mode activation key.

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

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.