ICOM

IC–F5330D
IC–F6330D

Space Saving, Flexible Installation PoE Remote-Control Mobile Radio

The IC-F5330D/F6330D series offers a flexible and unique installation solution that allows the main unit (RF unit) and remote-controller (PoE PD, Power over Ethernet Powered Device) to be connected using an Ethernet cable, and can be extended up to 100 m, 328 ft with an inexpensive Cat 5e LAN cable. The remote-controller uses a Commandmic™ with excellent operability and a high contrast black LCD.

Flexible Installation Using an Ethernet Cable Between the Main Unit and Commandmic™

Loud and Intelligible Audio Even in Noisy Environment

Input / Output Interface for External Devices with Optional D-SUB Accessory Cable

Dual Mode Operation – IDAS™ Digital Mode and Analog FM Mode

400 – 520 MHz Wide Frequency Coverage (IC-F6330D UHF version)

IC-F5330D

iDAS™ NXDN™
ICOM DIGITAL ADVANCED SYSTEM

IC−F5330D•IC−F6330D

General Features

- 136–174, 400–520 MHz versions
- 128 Channels / 8 Zones
- Two-piece configuration – Commandmic™ + black box main unit
- Commandmic™ is powered from the main unit through an Ethernet cable*
  * Extendable up to 100m, 328 ft. (Cat 5e LAN cable user supplied).
- High contrast, wide viewing angle, black background display on the Commandmic™
- 1700 mW (typical) audio output from the Commandmic™
- MIL-STD-810 G shock, vibration, temperature and more
- IPX4 water splash resistance for the Commandmic™
- DTMF autodial memories capability

Operating Mode

- NXDN™ conventional
- NXDN™ Type-D single-site trunking
- NXDN™ simulcast
- NXDN™ multi-site conventional over IP network
- Analog mode

Digital Functions (Voice and Data)

- PTT ID and ANI
- Over-the-Air Alias (OAA) displays the caller's name without programming
- Individual, Group and All call
- Late entry for Group call
- Status call and Polling call
- Short data messages
- Call alert
- Radio check (RX only)

Analog Functions

- CTCSS and DTCS tone
- 2-Tone and 5-Tone
- MDC functions; PTT ID, Emergency (TX/RX), Radio check (RX), Stun (RX), Revive (RX)
- BIIS PTT ID transmission

Security and Safety

- Digital voice scrambler
- Emergency call and Lone worker
- Remote monitor (RX)
- Radio Kill, Stun and Revive (RX)

Scan Functions

- Priority scan monitors one or two priority channels while scanning non-priority channels
- Voting scan automatically selects the optimal repeater site

Hardware Features

- Set an IP address for main unit and Commandmic™
- GPS receiver connection with optional ACC cable
- Optional D-SUB connector, OPC-2078/OPC-1939, for external PTT, channel, horn, ignition switch, and dimmer control, according to programming*
  * No digital modulation "IN" when using accessory cables.

Optional OPC-2078 installation image
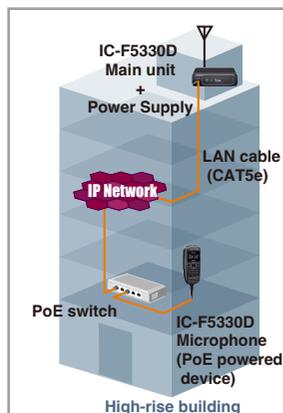
Flexible Installation with a PoE Switch and IP Network

Using a PoE (Power over Ethernet) switch (as the power supply to the microphone) and an IP network, you can easily install the IC-F5330D series into a building*.
In this installation scenario, you don't have to worry about the distance between the main unit and the Commandmic™. Also, as the main (RF) unit can be installed close to the antenna, cable loss is kept to a minimum.
* In-building usage is not available in some countries.

IC-F5330D Main unit + Power Supply

LAN cable (CAT5e)

IP Network

PoE switch

IC-F5330D Microphone (PoE powered device)

High-rise building

Icom Inc.

IC−F5330D•IC−F6330D

		IC-F5330D	IC-F6330D
GENERAL			
Frequency coverage		136–174 MHz	400–520 MHz 400–512 MHz
Number of channels		128 channels/8 zones	
Type of emission*	USA, EXP 50 W/45 W	16K0F3E (25 kHz)*/11K0F3E (12.5 kHz)/4K00F1E, F1D (6.25 kHz)	
(* Depending on the version)	EXP 25 W	16K0F3E (25 kHz)/14K0F3E (20 kHz)/8K50F3E (12.5 kHz)/4K00F1E, F1D (6.25 kHz)	
Power supply requirement	USA, EXP 50 W/45 W	13.6 V DC nominal	
	EXP 25 W	13.2 V DC nominal	
Current drain (approx.)	Tx (High)	14 A Max. (50 W/45 W) 7 A Max. (25 W)	
	Rx (Max./Standby)	2.5 A Max./500 mA Max.	
Antenna impedance	USA, EXP 50 W/45 W	50 Ω (SO-239)	
	EXP 25 W	50 Ω (BNC)	
Operating temperature range		−30 °C to +60 °C, −22 °F to +140 °F	
Dimensions (W×H×D) (Projections not included)		Main unit: 150 × 45 × 161.8 mm, 5.9 × 1.8 × 6.4 in Mic: 60.8 × 134.8 × 35.5 mm, 2.4 × 5.3 × 1.4 in	
Weight (approx.)		Main unit: 1.2 kg, 2.4 lb Mic: 250 g, 8.8 oz	
TRANSMITTER			
Output power (rated)	USA, EXP 50 W/45 W	50 W, 25 W, 5 W (Hi, L2, L1)	45 W, 25 W, 4.5 W (Hi, L2, L1)
	EXP 25 W	25 W, 10 W, 5.8 W (Hi, L2, L1)	25 W, 10 W, 5.8 W (Hi, L2, L1)
Frequency stability		±1.0 ppm	
Spurious emissions	USA, EXP 50 W/45 W	80 dB typ.	
	EXP 25 W	0.08 μW (typ.) (≤ 1 GHz) 0.03 μW (typ.) (> 1 GHz)	
Audio harmonic distortion (AF 1 kHz 40% deviation)		0.6% typ.	
FM Hum and Noise (without CCITT filter)		80/70 dB typ. (W/N)	76/70 dB typ. (W/N)
FSK error		1.4% typ.	
RECEIVER			
Sensitivity	Analog 12 dB SINAD (USA, EXP 50/45 W)	0.22 μV (−120 dBm) typ. (W/N)	
	Analog 20 dB SINAD (EXP 25 W)	−5.0/−5.0/−2.0 dBμV emf typ. (W/M/N)	
	Digital 5% BER	−5.0 dBμV emf typ.	
Adjacent channel selectivity	USA, EXP 50 W/45 W	83/58/73 dB typ. (W/N/D)	76/58/69 dB typ. (W/N/D)
	EXP 25 W	83/83/79/73 dB typ. (W/M/N/D)	76/76/74/69 dB typ. (W/M/N/D)
Spurious response rejection		80 dB typ.	75 dB typ.
Intermodulation rejection	Analog (USA, EXP 50/45 W) (EXP 25 W)	76 dB typ. 69 dB typ.	74 dB typ. 69 dB typ.
	Digital	74 dBμV emf typ.	74 dBμV emf typ.
Hum and noise		60/52 dB typ. (W/N)	55/52 dB typ. (W/N)
AF output power	Internal SP (Commandmic™)	1.7 W typ. (at 5% distortion, 8 Ω load)	
	External SP	4.2 W typ. (at 5% distortion, 4 Ω load)	

All stated specifications are subject to change without notice or obligation. Measurements made in accordance with TIA-603 (USA/EXP) or EN 300-086, EN 301-166 (EUR/EXP).
* 25 kHz bandwidth is no longer available for FCC Part 90 licensees for USA versions.

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
Humidity	507.5	II
Vibration	514.6	I
Shock	516.6	I, IV

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

Ingress Protection Standard

Water Resistance for Commandmic™	IPX4 (Water resistance)

Supplied accessories:
 • Commandmic™ with 6.2 m, 20.3 ft ethernet cable • DC power cable • Mounting bracket kit • Microphone hanger

■ EXTERNAL SPEAKERS

SP-30: External speaker. 20 W rated input power
SP-35/L: Compact external speaker
> SP-35 cable length: 2 m, 6.6 ft
> SP-35L cable length: 6 m, 19.7 ft

SP-30　　　　　**SP-35/L**

■ ACC CABLES

OPC-2078: D-SUB 25-pin accessory cable
OPC-1939: D-SUB 15-pin accessory cable
* Note: No Digital Modulation "IN" when using accessory cables.

OPC-2078　　　　　**OPC-1939**

■ DC POWER CABLES

OPC-2478: DC power cable (20 A, 3 m for 45/50 W version)
OPC-2479: DC power cable (10 A, 3 m for 25 W version)

Advanced System Example with VE-PG4

LTE Radios, System B　　　IC-FR5300 series　　　Radio System D

IP Network

LTE

Radio System A (VHF)　IC-F5330D (VHF)　D-SUB　VE-PG4　VE-PG4　D-SUB　IC-F6330D (UHF)　Radio System C (UHF)
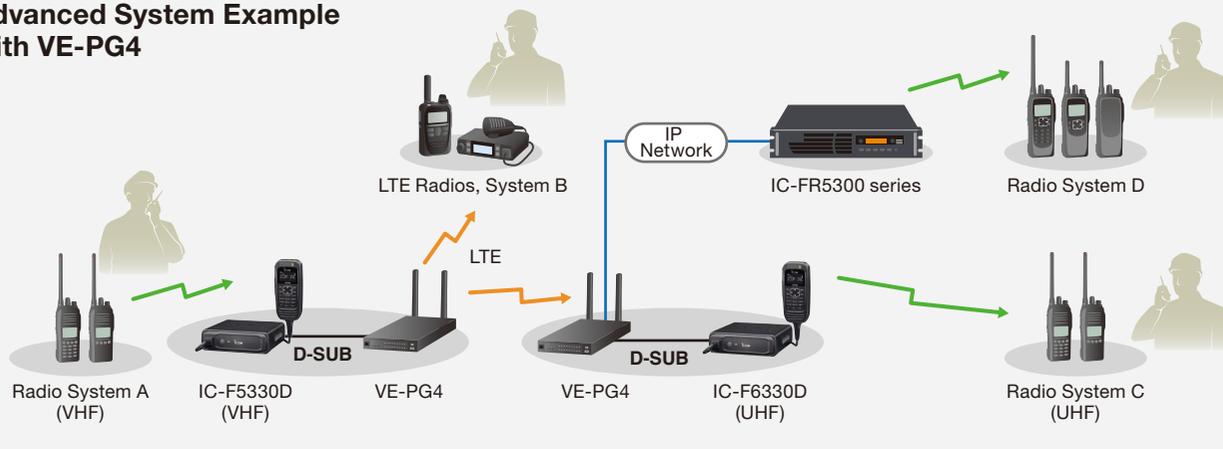
The VE-PG4 is a versatile RoIP (Radio over IP network) gateway unit, which interconnects the IC-F5330D series with other radio systems, even when the systems are using different bands*.

As shown in the example, any transmission from the "Radio System A" is bridged to other radio systems, so the radio user in the "Radio System A" can talk to all connected radio users in the figure.

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

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