



SATELLITE PTT Radios



iridium®
connected



What is SATELLITE PTT?

The Icom IC-SAT100/M is the dedicated satellite push-to-talk (PTT) radio, and is the only PTT radio offering real-time communications at the push of a button between a group of individuals, each of whom can be anywhere on the planet^{*1}. The IC-SAT100/M uses the Iridium® satellite communication network, which covers the entire globe, including both poles.



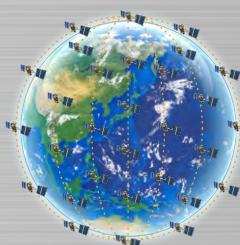
Main Features

One-to-Many Communication



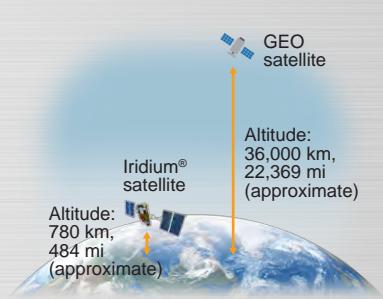
IC-SAT100/M users can immediately start talking to all the radios in the same talkgroup, with just a push of the transmit (PTT) button.

Total Global Coverage, Including the Poles



The Iridium® satellite network covers the entire globe, including both poles, and can provide global communications anywhere on the planet^{*1}.

Real-Time Communication



Using 66 Low Earth Orbit (LEO) Iridium® satellites, the IC-SAT100/M provides low-latency communication, and broader, more reliable network coverage, compared to Geosynchronous Equatorial Orbit (GEO) satellites.

Interoperability with Conventional Radios



With a VE-PG4 RoIP gateway, the IC-SAT100/M can interconnect with an IP phone, WLAN, LTE, IDAS digital^{*2}, analogue transceivers and other communication systems.

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

^{*2} Type-D multi-site trunking and conventional systems.

Compact Handheld Satellite PTT Radio

SATELLITE PTT

IC-SAT100

- IP67 waterproofing and dust-tight protection • 1500 mW of powerful audio
- 14.5 hours* of long lasting battery life • Emergency key on the top panel
- Short Data Message • Voice Recording function
- Built-in Bluetooth® capability • AES 256-bit encryption for security

And More

- Multiple language display (English, Chinese, French, Japanese, and Spanish)
- Integrated GPS receiver shows a received signal position information on the display
- SMA type antenna connector for an external antenna
- AquaQuake™ function clears any water ingress that may penetrate the speaker grill of the unit
- USB charging

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



Supplied Accessories

- BP-300 Li-ion battery pack • BC-241 desktop charger • BC-242 AC adapter • FA-S102U antenna • MBB-5 belt clip

I Optional Accessories (for the IC-SAT100)

Docking Station for In-Vehicle Use



DOCKING STATION+ANTENNA
+SPEAKER-MICROPHONE
**BC-247+AH-40
+HM-222**

With the AH-40 optional antenna, you can use the IC-SAT100 in a vehicle (by attaching the antenna to the roof).

*Product image for illustration purposes only.

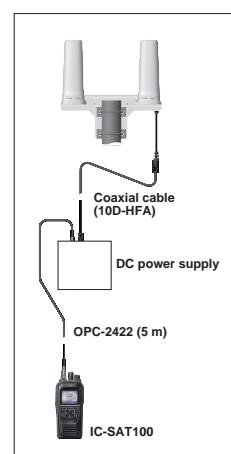
Active Antenna for In-Building Use



ANTENNA
AH-41

Can be set maximum 55 m; 180.4 ft away from the radio*. Supplied with OPC-2422 and DC power supply.

*Coaxial cable (10D-HFA) required.



ANTENNA
AH-38

OPC-2113 optional coaxial cable required (10 m, 32.8 ft).



MULTI-CHARGER
BC-214N*

Charges up to six batteries (with/without transceivers) at the same time. (BC-157S, AC adapter supplied.)



HEADSET
VS-3

Bluetooth® headset



COAXIAL CABLE
OPC-2422

For AH-40 and AH-41
5 m, 16.4 ft



COAXIAL CABLE
OPC-2113

For AH-38
10 m; 32.8 ft



For more optional accessories, check the Icom website:

* The AD-140 charger adapters are supplied with the BC-214N, depending on the charger version.

In-Building and In-Vehicle Use

SATELLITE PTT

IC-SAT100M



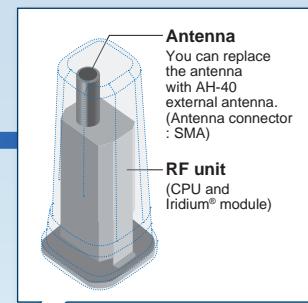
Main unit



Mic



Antenna (with RF unit)



Antenna
You can replace the antenna with AH-40 external antenna. (Antenna connector : SMA)

RF unit
(CPU and Iridium® module)

- Power supply capability over Ethernet from main unit to antenna (with RF unit)
- LAN cable (CAT5e) accepts up to 100 m cable connection (from main unit to antenna with RF unit) without any sensitivity loss and thin cable allows easy wiring work
- Supplied multi-functional speaker-microphone
- Power supply requirement: 13.2 V/26.4 V DC
- IP67 waterproofing and dust-tight protection*1

And More

- Voice Recording function
- Built-in Bluetooth® capability
- Multiple language display (English, Chinese, French, Japanese, and Spanish)
- Integrated GPS receiver shows received signal position information on the display
- 1500 mW powerful audio output
- Short Data Message
- AES 256-bit encryption*2

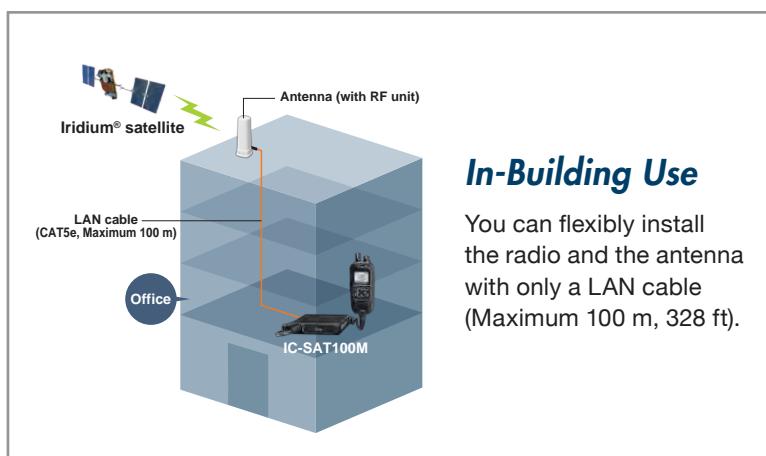
*1 Main unit: IP54, Mic: IP55.

*2 Communication data is scrambled in the Ethernet section to prevent casual eavesdropping.

Supplied Accessories

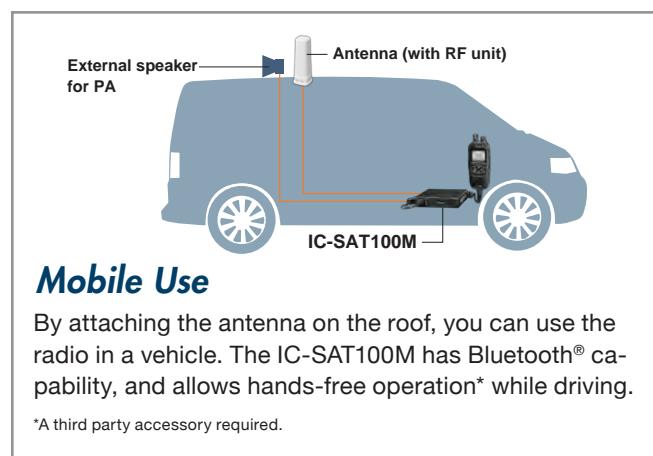
- Multi-functional speaker-microphone
- OPC-585 DC power cable
- OPC-2102 LAN cable (20 m, 65.6 ft)
- Mobile bracket

Installation Examples



In-Building Use

You can flexibly install the radio and the antenna with only a LAN cable (Maximum 100 m, 328 ft).



Mobile Use

By attaching the antenna on the roof, you can use the radio in a vehicle. The IC-SAT100M has Bluetooth® capability, and allows hands-free operation* while driving.

*A third party accessory required.

Optional Accessories (for the IC-SAT100M)



ANTENNA
AH-40
For in-vehicle use.
1.5 m, 4.9 ft.



EXTERNAL SPEAKER
SP-30



EXTERNAL SPEAKERS
SP-35 / SP-35L
2 m, 6.5 ft / 6 m, 19.6 ft



HEADSET
VS-3
Bluetooth® headset



CABLE
OPC-2429
Extension cable for use with supplied speaker-microphone
2 m, 6.5 ft



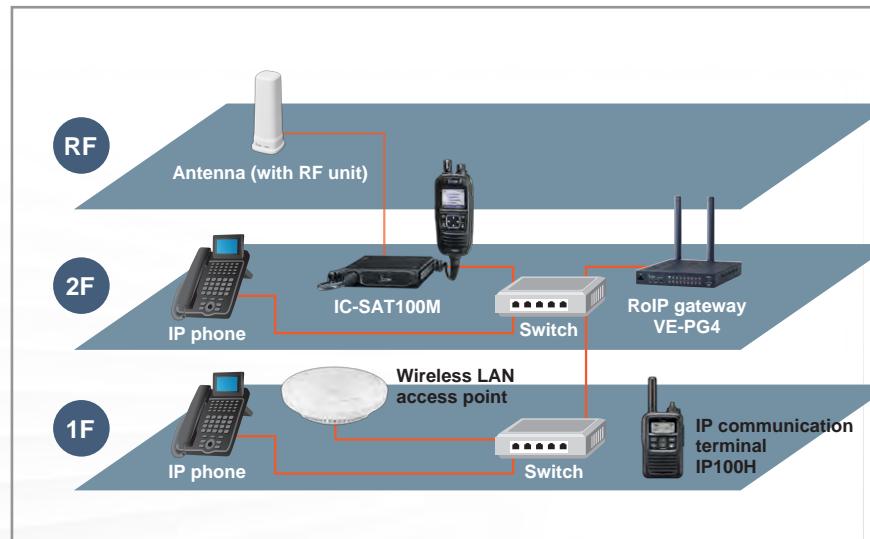
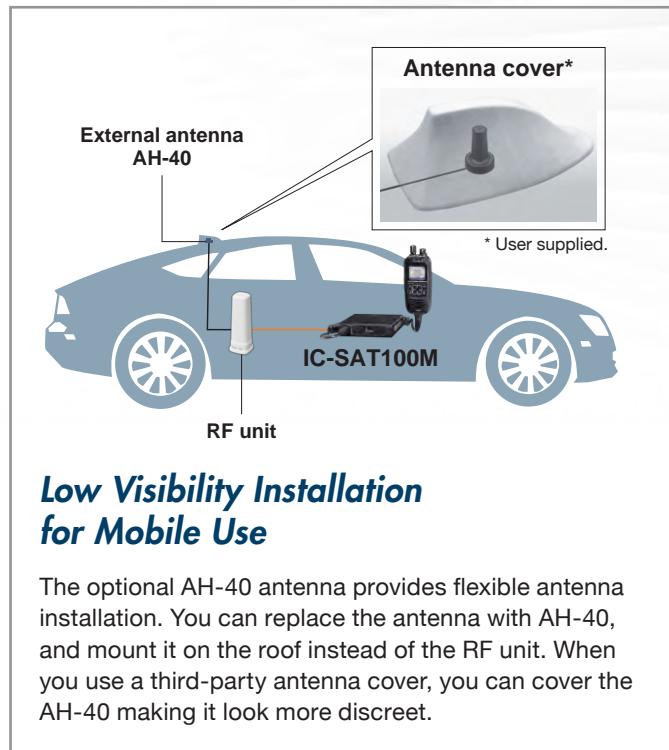
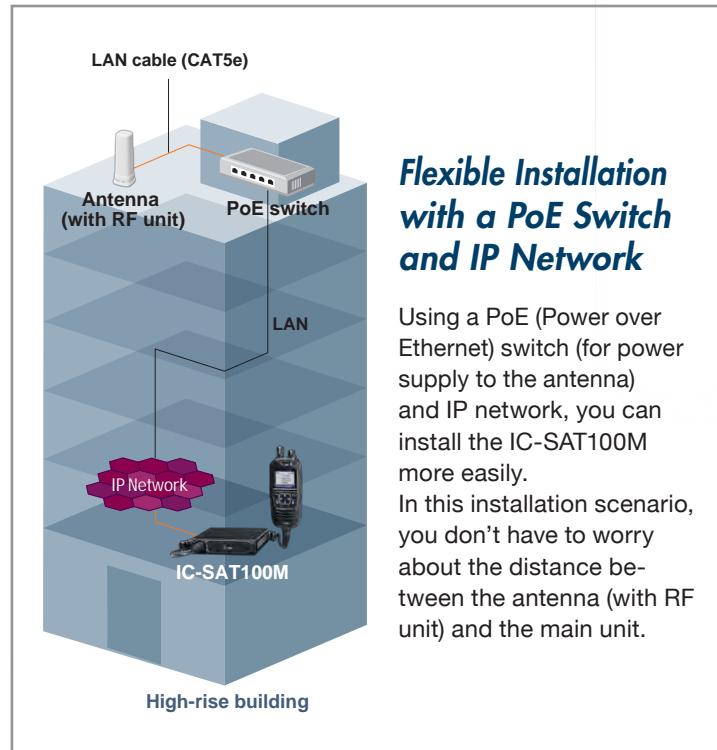
COAXIAL CABLE
OPC-2422
For AH-40
5 m, 16.4 ft



For more optional accessories, check the Icom website:



Advanced System Examples



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



SATELLITE PTT Radios

		IC-SAT100	IC-SAT100M
Frequency range		1616 MHz to 1626.5 MHz	1616 MHz to 1626.5 MHz
Dimensions (W × H × D, projections not included)		57.8 × 135 × 32.8 mm, 2.3 × 5.3 × 1.3 in	Antenna with RF unit: 76.8 × 200 × 76.8 mm, 3 × 7.9 × 3 in Main unit: 125 × 29 × 156 mm, 4.9 × 1.1 × 6.1 in Microphone: 59.6 × 130.2 × 28.4 mm, 2.3 × 5.1 × 1.1 in
Weight (approximate)		360 g, 12.7 oz (with BP-300 and antenna)	T.B.D.
Operational temperature range		-30°C to +60°C, -22 °F to 140 °F	-30°C to +60°C, -22 °F to 140 °F
Audio output power	Internal speaker	1500 mW typical (at 5% distortion into an 8 Ω load)	1500 mW typical (8 Ω load)
	External speaker	1000 mW typical (at 5% distortion into an 8 Ω load)	4 W typical (4 Ω load)
Battery life (approximate)		14.5 hours (TX : RX : standby = 5 : 5 : 90)	-
Power supply voltage		-	13.2 V / 26.4 V DC
IP rating		IP67	IP67 (antenna with RF unit), IP55 (mic), IP54 (main unit)
Talkgroup		15 groups (maximum)	15 groups (maximum)
Antenna connector		SMA	SMA (for external antenna)

Antenna Comparison

Radio	Antenna	Connection cable	Distance from radio to antenna
IC-SAT100	AH-40	-	Maximum 1.5 m, 4.9 ft
		OPC-2422 optional coaxial cable (5D-HFA)	Maximum 6.5 m, 21.3 ft
	AH-38	OPC-2113 optional coaxial cable (5D-HFA)	Maximum 10 m, 32.8 ft
	AH-41	OPC-2422 optional coaxial cable and a third-party coaxial cable (10D-HFA)	Maximum 55 m, 180.4 ft
IC-SAT100M	Antenna with RF unit	LAN cable (CAT5e, theoretical values)	Maximum 100 m, 328.1 ft

Q&A

What about communication fees?

- A.** Communication fees are typically charged at a flat rate through a monthly plan, and there are no additional call charges.* Communication fees differ, depending on the coverage area and the number of the IC-SAT100/M.
* Depending on the country or area, a flat charge plan may not apply, or the service may not be available.

Coverage Area

Size	Small	Medium	Large	Extra Large	Jumbo
Coverage area	100,000 km ² , 38,610 mi ² (radius 178 km, 111 mi)	300,000 km ² , 115,830 mi ² (radius 309 km, 192 mi)	750,000 km ² , 289,577 mi ² (radius 480 km, 298 mi)	1,500,000 km ² , 579,153 mi ² (radius 691 km, 429 mi)	2,250,000 km ² , 868,729 mi ² (radius 846 km, 526 mi)

What is a “Talkgroup”?

- A.** Using SATELLITE PTT, you can communicate with other IC-SAT100/M radios assigned to the same Talkgroup. The coverage area of the Talkgroup is selectable from five sizes (see the table above).

Can I use the IC-SAT100 in any location?

- A.** The IC-SAT100 can be used in open spaces, like the rooftop of a building. Receiving and transmitting may fail, depending on the satellite position or any obstacles between the radio and satellites. Your body can also be an obstacle. Hook the radio upright on your shoulder rather than on your waist.



*Ask your dealer for service plan details.

All stated features, appearances, screen shots and specifications may be subject to change without notice.

Icom, Icom Inc. and the Icom logo are registered trademarks of Icom Incorporated (Japan) in Japan, the United States, the United Kingdom, Germany, France, Spain, Russia, Australia, New Zealand and/or other countries. Iridium, and the Iridium connected logo are trademarks and registered trademarks of Iridium Satellite LLC. The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Icom Inc. is under license. IDAS and AQUAQUAKE are trademarks of Icom Incorporated. All other products or brands are registered trademarks or trademarks of their respective holders.