ICOM

SATELLITE PTT

IC-SAT100

One-to-Many Global Communications with Just a Push of a Button



iridium®
connected

Real-Time Communications



What is 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.



One-to-Many Communications

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



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.

* 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 km², 38,610 mi² (radius 178 km, 111 mi)	300,000 km², 115,830 mi² (radius 309 km, 192 mi)	750,000 km², 289,577 mi² (radius 480 km, 298 mi)	1,500,000 km², 579,153 mi² (radius 691 km, 429 mi)	2,250,000 km², 868,729 mi² (radius 846 km, 526 mi)

What is a "Talkgroup"?

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

SATELLITE PTT

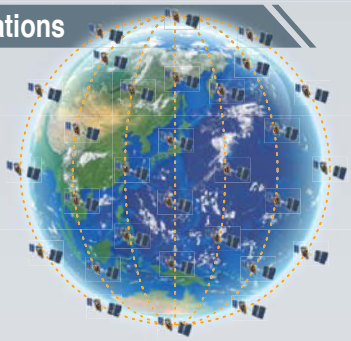
IC-SAT100

Across the Globe

Wide Area Global Communications

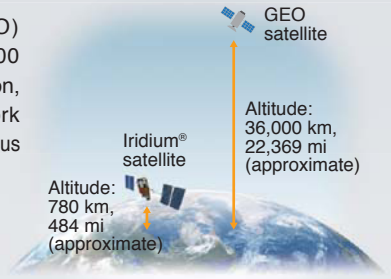
The Iridium® satellite network covers the entire earth, including both poles, and can provide wide area global communications anywhere on the planet*.

* Depending on the country or region, carrying and/or use of the IC-SAT100 may be prohibited.



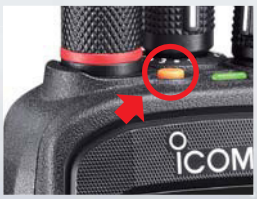
Real-Time, Low-Latency Communication

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



Built-in Emergency Key

The orange key on the top panel can be used for emergency situations. You can transmit an emergency call to preprogrammed users with holding down the key.



Emergency key

Waterproof, Dust-tight and Durable Body

The IC-SAT100 provides IP67 waterproofing (1 m depth of water for 30 minutes) and dust-tight protection, making it ideal for use in harsh outdoor environments. The radio also meets MIL-STD 810G specifications. The operating temperature range is from –30°C to +60°C (–22 °F to 140 °F).



In-Vehicle or In-Building Use

With the AH-40 optional antenna, you can use the IC-SAT100 in the vehicle (by attaching it to the roof) or building (by placing outside a window). The IC-SAT100 has Bluetooth® capability, and allows hands-free operation while driving.



▲ AH-40 optional antenna

◀ BC-247 optional docking station

* Product image for illustration purposes only.

Private Conversations

The IC-SAT100 provides secure conversations with AES 256-bit encryption.

And more

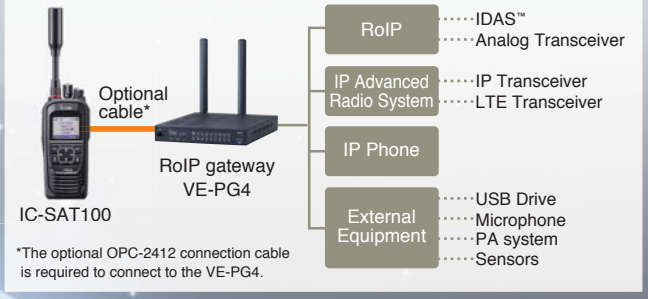
• 1500 mW powerful audio • 14.5 hours* of long lasting battery life • Short Data Message function • Voice Recording function • Multiple language display (English, Chinese, French, Japanese, and Spanish) • Bluetooth® capability • Integrated GPS receiver shows a received position information on the display • 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 (USB Micro-B type)

* Approximate. Operating periods are calculated under the following conditions.
TX : RX : standby = 5 : 5 : 90

Conventional Radios and IP Phones Interconnection

With a VE-PG4 RoIP gateway, the IC-SAT100 can interconnect with an IP phone, IP, LTE, IDAS digital* and analog transceivers.

* Type-D multi-site trunking and conventional systems.

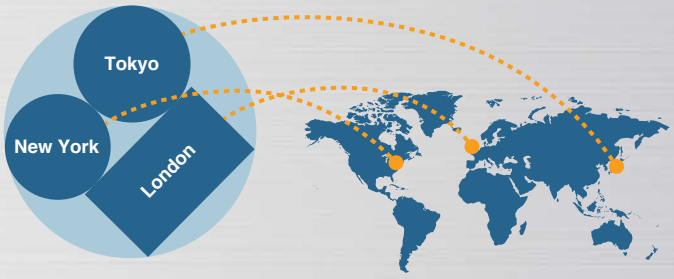


*The optional OPC-2412 connection cable is required to connect to the VE-PG4.

How do I assign a coverage area?

A. The coverage area can be split into different coverage regions, using circles, squares, and rectangles. For example, you can assign coverage areas to Tokyo, New York and London.

Coverage region example



Can I change my Talkgroup and/or the region within a coverage area?

A. Yes, you can flexibly change these settings* on the Iridium® website (https://ptt.iridium.com/).

* To change the contents of a contract may require an application in advance.

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.

Can the IC-SAT100 make phone calls?

A. No, the IC-SAT100 is PTT (Push-To-Talk) use only. Using the optional VE-PG4* RoIP gateway, the IC-SAT100 will be able to communicate with other networks.

* The optional OPC-2412 connection cable is required to connect to the VE-PG4.

SPECIFICATIONS

		IC-SAT100
Dimensions (W×H×D; projections are not included)		57.8 × 135 × 32.8 mm, 2.3 × 5.3 × 1.3 in
Weight (Approximate)		360g, 12.7 oz (with BP-300 and antenna)
Display (W × H, approximate)		33 × 27 mm, 1.3 × 1.1 in (viewing area)
Operational temperature range		–30°C to +60°C, –22 °F to 140 °F
Audio output power	Internal speaker	1500 mW typical (At 5% distortion into an 8 K load)
	External speaker	1000 mW typical (At 5% distortion into an 8 K load)
Battery life (Approximate)		14.5 hours (TX : RX : standby = 5 : 5 : 90)
Talkgroup		15 groups (Maximum)
Antenna connector		SMA

Measurements made in accordance with FCC 47 CFR Part25 & 2, Canada RSS-170&RSS-GEN, EN.
All stated specifications are subject to change without notice or obligation.

Supplied accessories

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

Applicable U.S. Militar7 Specikcations

Icom makes rugged products that have been tested to, and passed, the following MIL-STD requirements and strict environmental standards.

Standard	MIL-810 G	
	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.

Ingress Protection Standard	
Dust & Water	IP67/55/54

OPTIONS

BATTERY PACK



BP-300
7.2 V/2200 mAh (min.)
2350 mAh (typ.) Same as supplied.

CHARGER



BC-241
Rapid charger. Same as supplied. (BC-242, AC adapter supplied.)

MULTI-CHARGER



BC-214N[*1]
Charges up to six batteries (with/without W aterproof transceivers) at the same time. (BC-157S, AC adapter supplied.)

SPEAKER–MICROPHONE



HM-222
speaker-microphone with 3.5 mm jack.

TIE-CLIP MICROPHONE



HM-163MC
Tie-clip microphone with 2.5 mm jack.

ACC ADAPTER



AD-135
3.5 mm jack earphone adapter.

ACC ADAPTER



AD-118
For use with Hirose plug accessory. 2.5 mm plug. Use with HM-163MC.

EARPHONES



EH-15B



SP-32
Tube earphone adapter. Use with EH-15B. 2.5 mm plug. Use with HM-163MC. 3.5 mm plug. Use with HM-222 or AD-135. 2.5 mm plug. Use with HM-163MC.



SP-26



SP-27



SP-28

EARPHONES



SP-29
3.5 mm plug.
Use with HM-222 or AD-135.



SP-40
3.5 mm plug.
Use with HM-222 or AD-135.

PTT SWITCH CABLE



VS-5MC
For manual PTT, VOX operation.

HEADSETS



HS-94
Earhook type with boom microphone. Use with VS-5MC.



HS-95
Behind-the-head type. Use with VS-5MC.



HS-97
Throat microphone type. Use with VS-5MC.

Bluetooth® HEADSET



VS-3

DC POWER CABLE



OPC-656
Use with BC-214N.

ANTENNAS



FA-S102U
Same as supplied.



AH-40
For in-vehicle and in-building use. 1.5 m, 4.9 ft length.

DOCKING STATION



BC-247[*2]
Charger cradle for in-vehicle and in-building use.

OTHER OPTIONS

OPC-2412
Connection cable for VE-PG4.
5 m, 16.4 ft length.

OPC-2422
Coaxial cable for AH-40.
5 m, 16.4 ft length.

MBB-5
Belt clip. Same as supplied.

*1 The AD-140 charger adapters are supplied with the BC-214N, depending on the charger version. *2 Use an external microphone or headset to transmit when the transceiver is attached to the BC-247.

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