



Iridium Core 9523

Satellite Transceiver Module

Compact, cost-effective and powerful –
Iridium Core 9523 is driving global
communications in ways never
thought possible.



 **iridium®**
Everywhere



Connections that matter – across the entire planet, in ways never thought possible

Pushing the boundaries of global communications

Iridium Core 9523 is our smallest, lightest and most advanced voice and data satellite transceiver module ever. Over 90% more compact than our previous model, it offers our partners new opportunities to integrate Iridium directly on their printed circuit boards (PCB) and develop products that meet the needs of previously unreachable consumer and vertical markets like never before.

Powering new possibilities

From single or multi channel communication platforms for maritime, aviation and land mobile markets to highly capable feature enhanced handheld smart devices and unattended sensors, the Iridium Core 9523 delivers cost effective satellite voice and data communications.

Enabling new capabilities

Small but powerful, Iridium Core 9523 supports all Iridium voice and data services. In one tiny module, it delivers the capability needed to develop innovative communications devices, and the technology backbone for embedded applications such as GPS and location-based services, Wi-Fi and Bluetooth.

Key Features

- Ultra compact form factor
- Single-board transceiver
- Voice, Circuit Switched Data and RUDICS capable
- Short Burst Data (SBD) capable
- Direct PCB integration
- Pole-to-pole global coverage
- FCC, Industry Canada, and CE approval*

* For applications using an antenna with a gain of up to 3dbi.

Enabling simplified
global voice and
data connectivity
through the
world's furthest
reaching network.



Size matters

Over 90% smaller and lighter than Iridium 9522B, Iridium Core 9523 drives innovation and helps meet the needs of underserved markets around the globe.

Simplifying integration

Iridium Core 9523 features standardized connectors, making integration into innovative new devices and solutions easier than ever. With simplified PCB integration and compact form factor, designers can mount Iridium Core 9523 directly onto their application board – enabling optimization through shared components and power sources.

Iridium's smallest, lightest and most advanced voice and data module ever.

Specifications

Capabilities

- Iridium Voice, SMS, Circuit Switched Data and RUDICS
- Maximum mobile originated SBD message size 1960
- Maximum mobile terminated SBD message size 1890

Mechanical

- Length 70.44 mm
- Width 36.04 mm
- Height (reservoir capacitors) 14.6 mm
- Height (screen can) 8.9 mm
- Weight 32 g

Environmental

- Operating Temp. -30°C to $+70^{\circ}\text{C}$
- Operating Humidity $\leq 75\%$ RH
- Storage Temp. -40°C to $+85^{\circ}\text{C}$
- Storage Humidity $\leq 93\%$ RH

RF Parameters

- Frequency Range 1616 MHz to 1626.5 MHz
- Duplexing Method TDD (Time Domain Duplex)
- Input/Output Impedance $50\ \Omega$
- Multiplexing Method TDMA/FDMA

DC Power Input

VBAT Power Input Specifications

- Nominal Voltage $+3.7\ \text{V}$
- Voltage Limits $+3.2\ \text{V}$ to $+6\ \text{V}$
- Maximal Current 500 mA

VBAT Typical Current at Nominal $+3.7\ \text{V}$

- Standby Current 70 mA
- Peak Current during Call 300 mA
- Average Current during Call 110 mA

VBOOST Power Input

- Nominal Voltage $+27\ \text{V}$
- Maximal Voltage $+35\ \text{V}$
- Maximal Recommended Voltage $+32\ \text{V}$
- Minimal Voltage during Call Transmit Burst $+10.5\ \text{V}$
- Maximal Current 1 A

VBOOST Power Consumption

- Typical Average Power during Call 2.3 W
- Maximal Average Power during Call 3.1 W