Iridium 9602-SB SBD Transceiver
S u p p l e m e n t Developer's Guide

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Revision History

Revision	Date	Comment
1.0	9-Nov-10	Initial Product Release

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1. Product Overview

In 2010 SkyBitz and Iridium partnered to develop a unique, two-way remote asset tracking and monitoring solution, the Iridium 9602-SB Transceiver. This solution is built around the Iridium 9602 SBD Transceiver. SkyBitz is the leading remote asset tracking and information management service provider, specializing in real‑time decision-making tools for companies with unpowered assets such as trailers, containers, rail cars, power generators, heavy equipment and other assets. SkyBitz´s asset tracking solutions are delivered to commercial, transportation, military and public safety customers, including sensitive shipment haulers of Arms, Ammunition and Explosives (AA&E) cargos.

The Iridium 9602-SB is different from the Iridium 9602 in that it supports GPS-based position finding services. Internal to the Iridium 9602-SB is additional hardware for receiving GPS signals, additional DPS software for extracting GPS codephase information and additional CP software for managing the feature and sending time-stamped codephase information via an SBD message to a remote server. To save battery power and manage resources more effectively, the SkyBitz solution provides the position of an asset through the computing power of the SkyBitz Data Center, rather than in the device itself.

Similar to the Iridium 9602, the Iridium 9602-SB only supports Iridium's Short Burst Data (SBD) capability. It does not support voice, circuit switched data, or short message service (SMS).

SkyBitz offer their tracking service using the Iridium satellite network via a SkyBitz device which integrates the Iridium 9602-SB. This supplemental documentation provides only details about the additional functionality of the Iridium 9602-SB.   The physical specifications, electrical interfaces and RF interfaces for the Product are described in detail in the Iridium 9602 SBD Transceiver Developer Guide.

2. Packaging and Regulatory Certification

The Iridium 9602-SB is a regulatory approved daughter module transceiver that can be fitted within an enclosed host system. With appropriate external connections, the host system can be designed to meet full transceiver regulatory tests and sold as a Regulatory Certified product that meets CE, FCC and IC requirements.

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The 9602-SB is tested to the regulatory and technical certifications shown in Table 1 (See Note below).

Table 1: Regulatory and Technical Certifications.

Regulatory Approvals	Radio Tests	EMC Tests	Electrical / Mechanical / Operational Safety Tests
CE	ETSI EN 301 441 V1.1.1 (2000-05)	ETSI EN301 489-1 V1.8.1(2008-04) ETSI EN 301 489-20 V1.2.1(2002-11)	EN60950-1:2006 Part 1
FCC	FCC CFR47 parts 2, 15, and 25	EN61000-4-2 : 1995/A2 : 2001 Part 4.2 EN61000-4-3 : 2002 Part 4.3 EN61000-4-4 : 2004 EN61000-4-6 : 1996/A1 : 2001 Part 4.6 EN55022:2006 EN55022A1 :2007	
Industry Canada	Industry Canada RSS170 Issue 1, Rev 1, November 6, 1999		

3. AT Command Set Description

This document specifies the AT Commands supported by the Iridium 9602-SB Transceiver.   The 9602-SB is configured and operated through the use of AT commands. Only AT Commands that are relevant to the 9602-SB are included. This document will be periodically updated to reflect the addition, deletion or modification of

AT Commands. The Product Developer should also consult the software release notes for the version of software that is physically loaded on the 9602-SB used in applications under development. Such release notes are made available to SkyBitz directly. It is the responsibility of Product Developer to check compatibility of applications software with the AT Commands on all 9602-SBs used for both development and commercial deployments.

Product Developers should also consult the "Iridium Short Burst Data Service Developers Guide" in addition to the Commands stated herein. That guide provides significant additional information that will aide in Product Developers understanding of the Iridium system.

Use the codephase specific AT commands to instruct the 9602-SB to make and store codephase measurements and the standard SBD commands to send this stored information to the SkyBitz Data Center.

Table 2: AT Command unique to 9602-SB.

AT Command	Description
+SBDCP	PRN list for GPS Codephase reception
+SBDCC	GPS Codephase reception and calculation
+SBDCR	Read GPS Codephase results
+SBDCW	Clear or Write GPS Codephase results
+SBDIX	Initiate Short Burst Data Session (extended) to send data
+MSGEO	Request Geolocation
+CRISX	Ring Indication Status (extended) to read L-band frame number
+SBDST	Short Burst Data: Session Timeout
+GEMON	Energy Monitor

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