



i-STAT[®] TECHNICAL BULLETIN

i-STAT[®] 1 Wireless Analyzer Specifications

OVERVIEW

The following i-STAT 1 Wireless Analyzer specifications supplement the i-STAT 1 Analyzer specifications found in Section 2 of the i-STAT 1 System Manual. The i-STAT 1 Wireless Analyzer shares all operational specifications with the i-STAT 1 Analyzer with the exception of the following:

1. The i-STAT 1 Wireless Analyzer can communicate with a Data Manager using an existing 802.11b/g Wireless LAN.
2. The i-STAT 1 Wireless Analyzer does not have the capability to run glucose test strips.
3. An approximate 30% reduction in the lifetime of battery charge due to the use of wireless downloads is expected. See Section 2 of the i-STAT 1 System Manual for additional battery charge lifetime information.

The following table shows a comparison of the communication capabilities of the i-STAT 1 Analyzer and the i-STAT 1 Wireless Analyzer.

Communication Capabilities Comparison Table for i-STAT 1 Analyzer Variants

Communication Process	i-STAT 1 Analyzer	i-STAT 1 Wireless Analyzer	
Downloading Results to the Data Manager via a Downloader or a Downloader/Recharger	YES	YES	All i-STAT 1 communication peripherals are compatible
Downloading Results to the Data Manager via 802.11b/g Wi-Fi	NO	YES	The analyzer utilizes existing facility 802.11b/g Wi-Fi access points
Downloading customization settings, operator lists, STATNotes information, etc., via 802.11b/g Wi-Fi	NO	YES	Customization settings will be downloaded via 802.11b/g Wi-Fi access points
Updating Handheld Software via a Downloader or Downloader/Recharger	YES	YES	
Updating Handheld Software via 802.11b/g Wi-Fi	NO	NO	Users are required to have a Downloader or a Downloader/Recharger for bi-annual software updates

For instructions on configuring an i-STAT 1 Wireless Analyzer, see the Technical Bulletin “Configuring Wireless Settings in an i-STAT® 1 Wireless Analyzer” (Art: 726066).

For procedures on using the i-STAT 1 Wireless Analyzer, see the Technical Bulletin “Procedure for Using the i-STAT® 1 Wireless Analyzer” (Art: 726025).

For information on which Wireless Module your analyzer contains, see Appendix 1 of either the Technical Bulletin “Configuring Wireless Settings in an i-STAT® 1 Wireless Analyzer” (Art: 726066) or the “i-STAT® 1 Wireless User Guide” (Art: 726064).

If you have any questions regarding the information in this Technical Bulletin, please contact your Support Services provider.

BEFORE YOU USE THE i-STAT 1 WIRELESS ANALYZER

To utilize the wireless functionality of the i-STAT 1 Wireless Analyzer, an existing 802.11b/g Wireless Network must exist at your facility.

Note 1: Users must follow site-specific guidelines for operating wireless devices.

The Wireless Specifications presented below should be used to determine if the i-STAT 1 Wireless Analyzer is compatible with your existing 802.11b/g Wireless LAN infrastructure.

Note 2: Users must ensure that there is sufficient Wi-Fi coverage in the area(s) where results will be transmitted.

WIRELESS SPECIFICATIONS

For Analyzers containing Wireless Module FCC ID: YOPGS1500M (Firmware: GEXPSX.X.X/MCUX.X)

WIRELESS STANDARDS SUPPORTED	IEEE 802.11b, IEEE 802.11g
RADIO FREQUENCY UTILIZED	2.412-2.484 GHz
MAX RF TRANSMIT POWER	802.11b, 11 Mbps: +14 dBm 802.11g, 54 Mbps: +12 dBm
RF RECEIVE SENSITIVITY	802.11b, 11 Mbps: -88 dBm 802.11g, 54 Mbps: -75 dBm
RF ANTENNA	PCB Trace Antenna
DATA TRANSFER RATES	802.11b (CCK): 1, 2, 5.5, 11 Mbps 802.11g (OFDM): 6, 9, 12, 18, 24, 36, 48, 54 Mbps
CONNECTION MODES	Wireless LAN infrastructure and ad hoc (used for configuration of wireless LAN security settings)
WIRELESS SECURITY SUPPORTED	WEP 64 & 128 BIT WPA1/WPA2 (TKIP/AES) Pre-Shared Key & Enterprise EAP-TLS EAP-TTLS/MSCHAPv2 PEAPv0/EAP-MSCHAPv2

**For Analyzers containing Wireless Module FCC ID: YOPGS1500M
(Firmware: GEXPSX.X.X/MCUX.X)**

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SUPPORTED NETWORK CERTIFICATE HASH ALGORITHM	SHA-1 SHA-256
FCC IDENTIFIER	Modular Approval FCC ID# YOPGS1500M
BATTERY LIFE	An approximate 30% reduction in the life of the battery (in terms of cartridge usage) due to the use of the wireless downloads is expected. Note: this 30% reduction is an approximation based upon a use model of transmitting results wirelessly following each cartridge run. See Section 2 of the i-STAT System Manual (i-STAT 1 Analyzer) for additional battery lifetime information.
RADIO COMPLIANCE	MODULAR APPROVAL CONTAINS: FCC ID: YOPGS1500M IC: 9154-GS1500M AS/NZS 4771:2000 AS/NZS 4268:2012 R&TTE EN 300 328 V1.8.1
SAFETY COMPLIANCE	Standard for the Safety of Electrical Equipment for Measurement, Control, and Laboratory Use UL/CSA/IEC 61010-1, 3rd Edition IEC/EN 61010-2-101: 2002 1st Edition IEC 60086-4 ed. 4th Edition
RF EXPOSURE COMPLIANCE	CFR 47 Sections 2.1091 IC RSS-102 Users must maintain a 20 cm separation distance from all persons when the radio is operational.
LASER COMPLIANCE	Complies with U.S. 21 CFR 1040.10 and 1040.11 except for deviations pursuant to laser Notice No. 50, dated June 24, 2007. (Class 2) IEC/EN 60825-1:2007 (Class 2)
EMC COMPLIANCE	FCC: 47 CFR Part 15 Subpart B Class A IEC 61326-1: 2012-07 Class A IEC 61326-2-6: 2012-07 Class A IEC CISPR11 Group 1 R&TTE EN 300 489-1 V1.8.1 R&TTE EN 301 489-17 V2.2.1:2012

FCC Compliance Statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

IMPORTANT NOTE: To comply with FCC & IC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

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