

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: 726066-00).

For procedures on using the i-STAT 1 Wireless Analyzer, see the Technical Bulletin “Procedure for Using the i-STAT® 1 Wireless Analyzer” (Art: 726025-00).

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: 726066-00) or the “i-STAT® 1 Wireless User Guide” (Art: 726064-00).

If you have any questions regarding the information in this Technical Bulletin, please contact Abbott Point of Care Technical Support at 800-366-8020, option 1, or by e-mail at techsvc@apoc.abbott.com.

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: PI405W (Firmware: 6.5.X.X/X.X, where X is ≥ one digit)

WIRELESS STANDARDS SUPPORTED	IEEE 802.11b, IEEE 802.11g
RADIO FREQUENCY UTILIZED	2.412-2.484 GHz
MAX RF TRANSMIT POWER	802.11b: +17 dBm 802.11g: +15 dBm
RF RECEIVE SENSITIVITY	-65 dBm
RF ANTENNA	Internal high performance +2dB multi-layer ceramic
DATA TRANSFER RATES	54 Mbps – 1 Mbps with automatic fallback
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
SUPPORTED NETWORK CERTIFICATE HASH ALGORITHM	SHA-1
FCC IDENTIFIER	Modular Approval FCC ID# PI405W
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: PI405W
SAFETY COMPLIANCE	Standard for the Safety of Electrical Equipment for Measurement, Control, and Laboratory Use – IEC 61010-1: 2nd. Ed.
RF EXPOSURE COMPLIANCE	FCC OET-65C (Ed 01-01)
LASER COMPLIANCE	Complies with the U.S. 21 CFR 1040.10 and 1040.11 except for deviations pursuant to laser Notice No. 50, dated June 24, 2007. EN 60825-1:1994 + A1:2002 + A2:2001 IEC 60825-1:1993 + A1:1997 + A2:2001
EMC COMPLIANCE	FCC Part 15 Subpart B Class A

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.

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, 11Mbps: +14 dBm 802.11g, 54 Mbps: +12 dBm
RF RECEIVE SENSITIVITY	802.11b, 11Mbps: -88dBm 802.11g, 54Mbps: -75dBm
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
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
SAFETY COMPLIANCE	Standard for the Safety of Electrical Equipment for Measurement, Control, and Laboratory Use – IEC 61010-1: 3rd. Ed.
RF EXPOSURE COMPLIANCE	FCC OET-65C (Ed 01-01)
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. EN 60825-1:1994 + A1:2002 + A2:2001 IEC 60825-1:1993 + A1:1997 + A2:2001
EMC COMPLIANCE	FCC Part 15 Subpart B Class A

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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