



Empowering Caregivers

BLE Asset Tag

Deployment & User Guide

0981-xxx-000 REV A

Published: Draft4

FOR EVALUTION PURPOSES ONLY

**This document is still being edited and reviewed
and cannot be shared with other parties.**



WARNINGS

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- 1. This device may not cause interference.**
- 2. This device must accept any interference, including interference that may cause undesired operation of the device.**

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1. L'appareil ne doit pas produire de brouillage**
- 2. L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.**

Disclaimer

The information and know-how included in this document are the exclusive property of STANLEY Healthcare and are intended for the use of the addressee or the user alone. The addressees shall not forward to another their right of using the information, know-how or document forwarded herewith, in whole or in part in all matters relating or stemming from or involved therein, whether for consideration or without consideration, and shall not permit any third party to utilize the information, know-how or the documents forwarded herewith or copies or duplicates thereof, unless at the company's consent in advance and in writing. Any distribution, advertisement, copying or duplication in any form whatsoever is absolutely prohibited. The Company reserves the right to sue the addressee, user and/or any one on their behalfs, as well as third parties, in respect to breaching its rights pertaining to the intellectual rights in particular and its rights of whatever kind or type in the information, know-how or the documents forwarded by them herewith in general, whether by act or by omission.

Trademark Acknowledgements

AeroScout is a trademark of Stanley Black & Decker, Inc. or its affiliates. Other brand products and service names are trademarks or registered trademarks of their respective holders. Below is a partial listing of other trademarks or registered trademarks referenced herein:

Cisco™ is a trademark of Cisco Systems, Inc.

Sun, Sun Microsystems, the Sun Logo, Java, JRE and all other Sun trademarks, logos, product names, service names, program names and slogans that are referred to or displayed in this document are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and other countries.

This product includes software developed by the Apache Software Foundation (<http://www.apache.org/>).

This product includes code licensed from RSA Data Security.

Skype, SkypeIn, SkypeOut, Skype Me, the Skype Logo and the S logo and other marks indicated on Skype's website are trademarks of Skype Limited or other related companies.

Esper is a trademark of EsperTech, Inc.

Jboss is a trademark of Red Hat Middleware, LLC.

Oracle 10G is a registered trademark of Oracle Corporation and/or its affiliates.

MS SQL Server is a registered trademark of Microsoft Corporation in the United States and/or other countries.

JasperSoft, the JasperSoft Logo, JasperReports, the JasperReports logo, JasperIntelligence, JasperDecisions, JasperAnalysis, Scope Center, Scope Designer, and JasperServer are trademarks or registered trademarks of JasperSoft, Inc. in the United States and other countries.

iCloud Drive, iPad, iPhone, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. App Store® is a service mark of Apple Inc., registered in the U.S. and other countries.

©2021 STANLEY Healthcare. All rights reserved. Doc: 0981-xxx-000 REV A.

Published: Draft3

KB Article:

xxxxx

Table of Contents

Introduction.....	5
Key Features.....	5
Pre-Requisites	6
Minimum Requirements	6
Reference Documentation	6
Tag Descriptions.....	7
Sticker Version.....	7
Flange Version.....	7
Tag Activation.....	8
Activating the Tag using the Detector Device.....	8
Tag Mounting.....	9
Flat Surface Mounting – Sticker Version.....	9
Zip Tie Mounting – Flange Version.....	9
Tag Battery Life	10
Tag Configuration	11
Using Deployment Manager	11
Viewing Tag Details using Deployment Manager.....	11
Importing and Updating Tag Firmware.....	12
Importing .fw Files.....	13
Updating Firmware	13
MobileView Configuration	16
Tag and LF Exciter Parameter Responses	17
Tag Models & Accessories	19
Tag Specifications.....	20
Environmental Specifications.....	20
Physical and Mechanical.....	20
Electrical.....	20
Visual Indications.....	20

Radio.....	20
Range.....	20
Communication	20
Certification - TBD.....	20
Regulatory Compliance	21
FCC.....	21
BLE Calibration Tag.....	22
Activating the Calibration Tag.....	22
Engine and MobileView.....	22
Calibration Tag Default Configuration Table.....	Error! Bookmark not defined.
Firmware Updates.....	22
Warranty	23

Introduction

The BLE Asset Tag is a component of STANLEY Healthcare's BLE Platform. The small form factor, high-impact, disposable tag, adds flexibility and scalability to track assets across a wide variety of applications.

The tag supports BLE 5.0 and is easily and quickly activated using its push-button. Tag messages are received using supported STANLEY Healthcare Gateways (GW4x00, and GW3x00 series) and Cisco APs (AP91xx series). The tag also includes an LF receiver for shrinkage and chokepoint use cases.

The disposable tag has a battery life of over 2 years, is IP67 rated, and is available in two versions for different mounting options – A sticker version for sticker mounting and a flange version for zip tie mounting.



Key Features

- BLE 5.0 Chipset
- Mounted using stickers (sticker version) or zip ties (flange version)
- Includes an LF receiver for shrinkage and chokepoint use cases using a STANLEY Healthcare Exciter
- Rated IP 67 (waterproof)
- Disposable tag – long battery life of over 2 years
- Easily activated using a single button press
- Default TX interval of 60 seconds
- The Press button can be used to trigger alerts when configured in MobileView
- Provides battery status. A low battery status appears around 2 months before the battery is depleted. LED blinks red when the battery is low
- Supported by Cisco DNA Spaces.

Pre-Requisites

Minimum Requirements

Components	Version
MobileView	5.5 MR1 and above
Engine	5.5.6.x and above
Deployment Manager (DM)	Version 5.4.x and above
WGB Manager	Version 1.5.4.x and above
GW3x00	Version 1.5.4.x and above
GW4000	Version 1.1.x.x and above
WGB Detector	Version 1.5.4.x
BLE Asset Tag	Version 2.2.2.3 and above

Reference Documentation

The following articles can be accessed by logging into the STANLEY Healthcare Support Community site at the following URL:

www.stanleyhealthcare.com/support.

KB	Document Name
xxxxx	BLE Asset Tag Data Sheet
xxxxx	BLE Asset Tag Release Notes
xxxxx	BLE GW4x00 Gateways Deployment Guide
xxxxx	BLE GW4x00 Gateways Data Sheet
xxxxx	BLE GW4x00 Gateways Release Notes
xxxxx	BLE Platform Reference Guide
xxxxx	Location Engine Deployment Guide 5.5 MR3 or above
xxxxx	MobileView Administrator Guide 5.5 MR2 or above

Tag Descriptions

Sticker Version

The following describes the parts of the sticker version BLE Asset Tag:

Front View:



Back View:

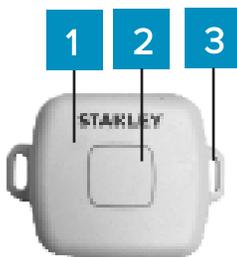


No.	Description
1	LED
2	Press Button
3	Sticker for sticker mounting

Flange Version

The following describes the parts of the flange version BLE Asset Tag:

Front View:



No.	Description
1	LED
2	Press Button
3	Flanges for zip tie mounting

Tag Activation

Tags arrive in dormant mode. To activate the BLE Asset Tag, press the press button for 1 (one) second until the LED blinks Green 3 times.



Activating the Tag using the Detector Device

The tag can also be activated using the WanderGuard BLE Detector Device.

1. Turn on the Detector by short-pressing the power button.
2. Place the tag within the LF range of the Detector (less than 12" or 0.3 meters). The Detector constantly sends LF messages.
3. To activate the tag, press the Detector power button for 1.5 seconds.
The Detector beeps indicating an activation message has been sent.
4. The Detector's LF LED lights green for two seconds indicating the tag is active.

Tag Mounting

Tags are available in two versions. A sticker version for flat surface mounting – has a sticker on the back- and a flange version for zip tie mounting to poles, etc.



NOTE

The tag is intended to be mounted less than 2m above the ground.

Flat Surface Mounting – Sticker Version

The sticker version is supplied with a sticker already attached to the back of the tag. To mount the tag, peel of the sticker cover and mount the tag to the asset. The sticker can be easily removed and replaced.

Zip Tie Mounting – Flange Version

The flange version comes with a flange on each side of the tag. Thread a zip tie through the flanges and mount the tag accordingly.

Tag Battery Life

BLE Asset Tags are disposable and have a battery life of over 2 years. The tag starts blinking red (low battery) 2 months before the battery is completely depleted. You can view the tag's battery status using the Deployment Manager app. See [Viewing Tag Details using Deployment Manager](#).

Tag Configuration

By default, the BLE Asset Tags are set to a Tx interval of 60 seconds. This means the tag sends a message every 60 seconds.

Using Deployment Manager

Deployment Manager is used for viewing tag details and updating tag firmware. Tag configuration is disabled.

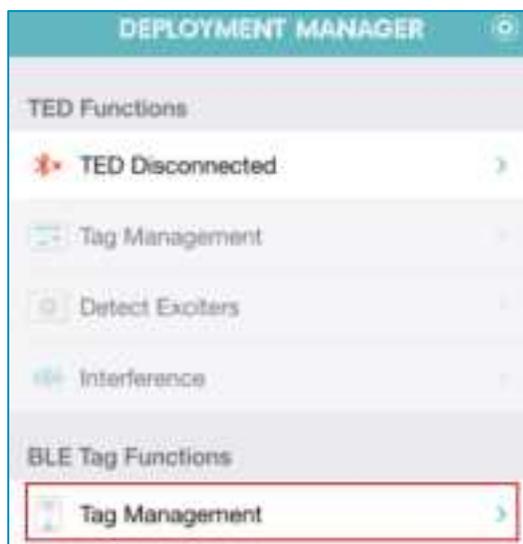
Viewing Tag Details using Deployment Manager

The tag's battery status, firmware version, and activation status can be viewed using the Deployment Manager app. Multiple tags can be detected, sorted, and viewed.

Note: A Product Key is required to activate the Deployment Manager's **BLE Tag Functions**. For more information refer to the *Deployment Manager Setup & User Guide*.

The WanderGuard BLUE Detector Device must be used together with the Deployment Manager to view tag details.

1. Turn on the Detector by short-pressing the power button.
2. Place the tag within the LF range of the Detector (less than 12" or 0.3 meters). The Detector constantly sends LF messages.
3. Open the **Deployment Manager** application.
4. Under **BLE Tag Functions**, tap **Tag Management**.



5. Tap Detect.

The tag is detected and shows as the T22.



6. The following details of each tag are displayed:

- The tag's MAC Address
- Tag model type, in this case, T22
- The tag's current Firmware version.
- The current status of the tag:
 -  **Green Icon:** The tag is activated.
 -  **Blue Icon:** The tag is dormant. Tags leave the factory is Dormant status.
 -  **Red Icon:** The tag is deactivated.
- Tag battery level indicator. The tag has two battery levels; High and Low.
 -  **High battery level**
 -  **Low battery level**

7. The information icon  is greyed out by default.

8. Multiple tags can be sorted by **MAC Address**, **Tag Type**, **Firmware Version**, or **Battery Level**. Use the **Sort**  icon to sort the tags.

Importing and Updating Tag Firmware

The tag's firmware is updated using the Deployment Manager for iOS app. A firmware version can be applied to single or multiple tags.

Note: A Product Key is required to activate the Deployment Manager's **BLE Tag Functions**. For more information refer to the *Deployment Manager Setup & User Guide*.

The WanderGuard BLUE Detector Device must be used together with the Deployment Manager to apply a firmware update.

When receiving a tag firmware version (.fw file) from STANLEY, the file must first be imported and saved to the DM app.

Importing .fw Files

iOS Mail - Tapping the file will open the default file operation list. Locate and tap Deployment Manager. The application will open allowing you to save the file.

Google Drive App - Tap the 3 dots menu (in the file row) and select 'Export'. The default file operation list will open. Select 'Copy to Deployment Manager'. The application will open allowing you to save the file.

Dropbox App - Tap the 3 dots menu (in the file row) and select "Export". The default file operation list will open. Select 'Copy to Deployment Manager'. The application will open allowing you to save the file.

Gmail App - Tap the file attachment in the email and then tap the share icon in the top right corner. The default file operation list will open. Select 'Copy to Deployment Manager'. The application will open allowing you to save the file.

Additionally, when using the above methods, the file can also be saved to your iCloud Drive by tapping on 'Save to File'.

Updating Firmware

1. Turn on the Detector by short-pressing the power button.
2. Place the tag within the LF range of the Detector (less than 12" or 0.3 meters). The Detector constantly sends LF messages.
3. Open the **Deployment Manager** application.
4. Under **BLE Tag Functions**, tap **Tag Management**.



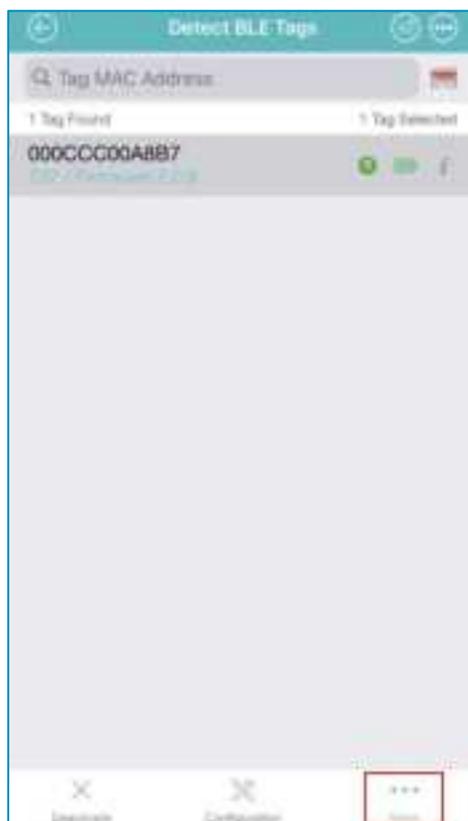
5. Tap **Detect**.

Tags are detected and shown as the T22.



6. Select the required tag or multiple tags. You can also tap the **Options**  icon and tap **Select All**.

7. Tap **More**.



8. Tap **Firmware Update**.

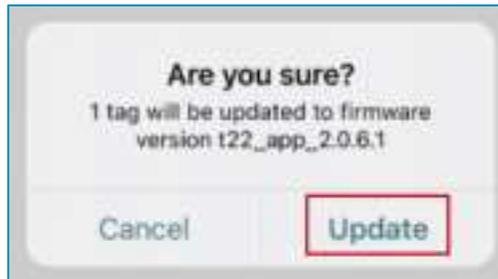


9. Tap the required Firmware version.

10. Tap **Update**.



11. Confirm the **Update**.



12. The progress bar appears.



13. Ensure the Firmware update was **successful**.



14. Tap **Done**.

MobileView Configuration

The BLE Asset Tag can be added to MobileView like any other STANLEY Healthcare tag.



Events can be created for specific use cases. For more information refer to the latest *MobileView Administrator Guide*.

Tag and LF Exciter Parameter Responses

The following section assumes familiarity with the Location Engine. For more information, refer to the *Location Engine Deployment Guide*.

The following tables explain how the T22 Tag responds to specific LF Exciter parameters:

LF General Tab > General LF Parameters

Parameter	Tag Response
Dropbox	Supported: The tag becomes inactive when in a dropbox.
Test Station	Supported: The tag sends BLE messages when in range. The tag will not blink when sending BLE messages.

Internal LF Tab

Parameter	Tag Response
Antenna Functionality 'Choke Point'	Supported
Make Tag Blink	Not Supported
Tag Message	Not Supported
Set Tag's Activity Status to	Supported
Change Special Control Command on Tag to	Not Supported
Change Map ID on Tag to	Supported
Make Tag Blink for	Not Supported
Send 'Leaving Device Range' Notification	Supported

Ultrasound Mode	Not Supported
Tag Transmission Mode (All)	Not Supported
Set Tag Repetition To	Supported
Set Data Frame format to	Not Supported
Power Save Ensure Mode	Supported*: *When SSPSEM is selected as the Power Save Ensure Mode , the tag will move to PSEM . The tag will not move to SSPSEM . *When 'Set Tag Repetition To' is set to 0 – when 'Ultrasound Mode' is set to 'Clear Last Ultrasound Device ID' – the tag will support SSPSEM .
Filter	Not Supported
High Priority LF	Not Supported
Tag's LF Sensitivity	Not Supported

Tag Models & Accessories

Models & Accessories	SKUs
T22 Tag	TAG-2200-B: BLE Based Asset Tag with a back sticker
	TAG-2200-F: BLE Based Asset Tag with Flanges
Zip Ties	XXXXXXXX
Mounting Stickers	XXXXXXXX

Tag Specifications

Environmental Specifications

- **Operating Temperature Range:** 0°C to 50°C (32°F to 122°F)
- **Tag Storage Temperature Range:** -20°C to 60°C (-4°F to 140°F)
- **Humidity:** 0% to 95% RH non-condensing
- **Ingress Protection Rating:** IP-67

Physical and Mechanical

- **Dimensions LWH:** 30 x 26 x 13 mm (1.18 x 1.0 x 0.5 inch)
- **Weight:** 12g (0.4 oz)

Electrical

- **Battery:** CR2354 3V (Non-replaceable, Non-rechargeable)

Visual Indications

- **Dual LED:** Red/Green

Radio

- **Transmission power:** 0dbm

Range

- **Outdoor range:** Up to 200m (650 feet)
- **Indoor range:** Up to 80m (260 feet)

Communication

- **BLE (Bluetooth Low Energy) Transmitter:** BLE 5.0 [2.402 GHz — 2.480 GHz (2.4GHz bands)]
- **LF Receiver:** 125kHz

Certification - TBD

- **Radio, EMC:**
FCC Part 15 Subpart C, Subpart B, RSS-247, EN 300-328,
EN 301-489 Radio Equipment Directive 2014/53/EU (RED), Radio

Equipment Directive S.I.2017/1206 (RED), RoHS 2 Directive
2011/65/EU, RoHS 2 Directive S.I.2012/3032

– **Safety:**

CE, UKCA, EN62368/UL62368/IEC62368, Japan 201-200712

Regulatory Compliance

FCC

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

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

BLE Calibration Tag

BLE Calibration Tag SKU: TAG-2200B-TST.

The T22 BLE Calibration Tag is intended to be used by STANLEY Healthcare professional services personnel only. The tag is used for Engine mesh calibration only.

Note: The tag does not support LF range detection and does not respond to LF messages from Exciters or Controllers. The tag only responds to LF messages received from the WanderGuard BLUE detector (for activation).

Activating the Calibration Tag

The Calibration tag arrives in dormant mode. The tag is activated using the same activating method as the T22 BLE Asset Tag. See [Tag Activation](#).

After activation, the tag will transmit a message every 5 seconds. The tag's LED will blink Green during each transmission. The tag will automatically move to dormant mode after 2 hours of activation, however, when using the WanderGuard BLUE Detector together with the tag will prevent the tag from going into dormant mode.

Note: The tag's battery status is not shown (not supported) when using the WanderGuard BLUE Detector.

Engine and MobileView

In the Engine, the tag's messages are shown as T22 messages. When a message is received in the Engine from the Calibration Tag, a tag report is sent to MobileView. Messages are also shown in Engine's analyzer.

Firmware Updates

The Calibration Tag's firmware is updated using the Deployment Manager for iOS app just like the T22 Asset Tag. see [Importing and Updating Tag Firmware](#).

Warranty

STANLEY Healthcare (“STANLEY”) Standard Warranty and Disclaimer For STANLEY Healthcare AeroScout® Products (“Products”)

Limited Warranty and Disclaimer. STANLEY warrants that commencing from the date of delivery to Customer and continuing for a period of one (1) year thereafter (the “Warranty Period”), the hardware components of STANLEY Healthcare AeroScout® Products (the “Hardware”) will be free from defects in material and workmanship under normal use subject to the terms hereof. The date of shipment of the Hardware by STANLEY is set forth on the packaging material in which the Hardware is shipped. This limited warranty extends only to the original user of the Hardware. Customer's sole and exclusive remedy and the entire liability of STANLEY and its suppliers under this limited warranty will be, at STANLEY's or its service center's option, shipment of replacement Hardware components within the Warranty Period or a refund of the purchase price if the Hardware is returned to the party supplying it to Customer, if different than STANLEY, freight and insurance prepaid. STANLEY replacement parts used in Hardware repair may be new or equivalent to new, and STANLEY reserves the right to provide replacement Hardware components of similar form and function, as long as the functionality is equal or better than Customer's original Hardware components. STANLEY's obligations hereunder are conditioned upon the return of affected Hardware in accordance with STANLEY's then-current Return Material Authorization (RMA) procedures. Notwithstanding the foregoing, the warranty for TAG Hardware specifically designated for sterilization via autoclave or other sterilization methods shall have a warranty period of 350 sterilization cycles from the date of delivery; provided, however, that sterilization outside of environmental specifications approved in any applicable user documentation voids all warranties.

Extended Warranty: STANLEY offers an extended warranty, for a fee, on AeroScout products. Within the one (1) year of the standard warranty, additional warranty of two (2) years may be purchased. Additional warranty years may only be purchased once within the first one (1) year, or prior to warranty expiration. A maximum of three (3) total warranty years are available for Hardware.

Exclusions: The warranty set forth above will not apply if the Hardware or the Product (i) has been altered, except by STANLEY, (ii) has not been installed, operated, repaired, or maintained in accordance with instructions supplied by STANLEY, (iii) has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident; or (iv) is provided for beta, evaluation, testing, or demonstration purposes for which STANLEY does not receive a payment of purchase price or license fee.

In addition, this warranty shall not cover the following:

- Batteries (other than DOA -Dead On Arrival).
- Plastics (including defects in appearance, cosmetics, decorative or structural items including framing and non-operative parts).
- Tag Calibration.

- Expenses related to removing or reinstalling the Products.
- Defects or damage that result from the use of Non-STANLEY certified Products, Accessories, Software or other peripheral equipment.
- Defects or damages resulting from service, testing, adjustment, installation, maintenance, alteration, or modification in any way by any party other than STANLEY, or its authorized service partners.
- **All software contained in or otherwise part of STANLEY Healthcare AeroScout® Products, which is covered by STANLEY's separate software warranty contained in the separate software license agreement with respect to such Products.**

The warranty set forth above shall not be enlarged and no obligation or liability shall arise out of STANLEY's rendering of technical advice, facilities or service in connection with Customer's purchase of the STANLEY Healthcare AeroScout® Products.

Except for the foregoing warranties, which shall be the exclusive warranties with respect to any Products, STANLEY MAKES NO WARRANTY OR REPRESENTATION OF ANY KIND, EXPRESS OR IMPLIED, WRITTEN OR ORAL, REGARDING INFORMATION GIVEN OR THE PRODUCTS OR SERVICES SUPPLIED AND EXPRESSLY DISCLAIMS ALL EXPRESS AND IMPLIED WARRANTIES, REPRESENTATIONS AND CONDITIONS, INCLUDING WITHOUT LIMITATION ALL WARRANTIES AND CONDITIONS OF QUALITY, NON-INFRINGEMENT, MERCHANTABILITY AND SUITABILITY OR FITNESS FOR A PARTICULAR PURPOSE TO THE EXTENT PERMITTED BY LAW. STANLEY WILL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT OR PUNITIVE DAMAGES FOR ANY CAUSE OF ACTION, WHETHER IN CONTRACT, TORT OR OTHERWISE. Consequential, incidental and indirect damages include, but are not limited to, lost profits, lost revenue and loss of business opportunity, whether or not STANLEY was aware or should have been aware of the possibility of these damages.

About STANLEY Healthcare

Over 15,000 hospitals and senior living communities rely on STANLEY Healthcare solutions to empower caregivers to deliver better care. STANLEY Healthcare is a part of Stanley Black & Decker and a proud supporter of the Alzheimer's Association®. Learn more at stanleyhealthcare.com.

STANLEY Healthcare

75 Portsmouth Blvd
Suite 220
Portsmouth, NH 03801
Tel: +1-888-622-6992

North America

E-mail: stanleyhealthcare@sbdinc.com

Asia-Pacific

E-mail: stanleyhealthcare-asiapac@sbdinc.com

Europe

E-mail: shs-uk@sbdinc.com

Latin America

E-mail: stanleyhealthcare-latam@sbdinc.com

Middle East

E-mail: stanleyhealthcare-MEA@sbdinc.com