Hugs Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) Format, including Master Format (2004 Edition), Section Format, and Page Format, contained in the CSI Manual of Practice.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings.

Delete all "Specifier Notes" when editing this section.

SECTION 27 52 13

HUGS® INFANT PROTECTION SYSTEM WITH KISSES® MOTHER/INFANT MATCHING COMPONENT

Specifier Notes: This section covers the Hugs infant protection system manufactured by Stanley Healthcare Solutions. Consult Stanley Healthcare Solutions for assistance in editing this section for the specific application.
PART 1   GENERAL

1.1 SECTION INCLUDES

A. Infant Protection System

1.2 RELATED SECTIONS

A. Section 26 00 00 – Electrical
B. Section 27 52 00 – Healthcare Communications and Monitoring Systems
C. Section 14 28 00 – Elevator Equipment and Controls
D. Section 08 71 00 – Door Hardware
E. Section 08 10 00 – Doors and Frames
F. Section 27 22 00 – Data Communications Hardware

1.3 SYSTEM DESCRIPTION

A. Basic Operation: The Hugs Infant Protection System consists of an RF Infant Tag transceiver (transmitter/receiver), an RF Receiver, a low frequency Exciter, and a Server computer. When an Infant Tag detects that it is within the range of an Exciter, it shall send a signal, which is picked up by an RF Receiver. The RF Receiver decodes the signal and forwards the data through a data network to the Server computer. The Server computer shall be capable of displaying the Infant Tag’s unique serial code and the time the signal was received. The Server computer shall provide a programmable, audible announcement of each alarm. If the Server computer determines that an “unsafe” condition is present, a security alarm shall be transmitted. The Exciter shall be capable of activating magnetic door locks and other security monitoring devices. The alarm can only be cancelled by password-authorized staff at the Server or Workstation computer. Optionally, a mother/infant matching software application and Mother Tag transmitter may be added to the system.

B. Workstation(s): Shall be added as needed at remote locations to provide remote monitoring, alarm annunciation and back-up destination functions.

C. Data Network: Shall be LonWorks technology from Echelon Corp.

D. Client/Server Network: Shall be Windows-based, and allow up to 26 Workstations to be connected to the Server computer.

Specifier Notes: Edit the following list as required for the project. List other sections with work directly related to the wireless communication system.
E. Logs: Detailed logs shall be created to record the location, time and reason for every System Alarm and response. These records can be automatically archived, backed-up, sorted, viewed or printed.

F. Frequency: System uses FCC-approved 217 MHz or 434 MHz radio communication frequency between Infant Tags and RF Receivers and uses 312.5 kHz or 125 kHz radio communication frequency between Infant Tags and Exciters.

G. Self-Supervisory Signals: All system components send self-supervisory signals at specific intervals to the central processor. If low battery, interference or other off-line condition exists, an alarm will be displayed on system workstations.

H. Remote Connection: An external modem, VPN (Virtual Private Network) or other connection scheme shall be available to provide for remote programming, training, software updates and diagnostics.

I. Alphanumeric Display Paging Systems (TAP or COMP1 Protocol): Alphanumeric display pagers can be integrated with the system so staff can automatically receive Alarm calls when they are away from the CPU.

J. CCTV (Closed Circuit TV) Systems: CCTV systems from Integral Technologies can be integrated with the Server computer so that real-time images of protected exits can be displayed on Hugs workstations during alarm events.

K. Relay Outputs from Exciters: To any device with dry contact inputs, such as magnetic or elevator door locks, visual and audible alarm devices, etc.

L. I/O Module: Generates outputs based on system events, or receives input from devices connected to the I/O Module.

M. Delayed Egress (NFPA 101 Compliant) Magnetic Locks: Connected to Exciters or I/O Modules.

N. Elevator Door Control: Interfaced with Exciter to hold elevator under an alarm condition.

1.4 SUBMITTALS

A. Comply with Section 01 33 00 - Submittal Procedures.

B. Product Data: Submit manufacturer's product data, including installation instructions, individual system component specifications and expendable component duty life expectancy.

C. Commissioning Checklist: Submit manufacturer’s commissioning
checklist at completion of installation.

D. Proposed Training Schedule: Submit manufacturer’s training program, including training aids and training duration.

E. Operating and Maintenance Instructions: Submit manufacturer’s operating and maintenance instructions.

F. Warranty: Submit manufacturer’s standard warranty.

G. Service: Submit non-warranty service costs, including trip charge, response time, hourly rate, per diem expense and itemized major system component price list.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications:

Specifier Notes: Edit or delete the following manufacturer qualifications as required for the project.

1. Responsible for supplying or specifying all components.
2. Continuously engaged in wireless communication system construction with a minimum of 10 years successful experience.
3. Able to demonstrate successful performance on comparable projects.
4. Responsible for system design, including:
   a. Preparation of engineering and production documentation.
   b. Development of testing program and interpretation of test results.
5. Capable of providing manufacturer-employed field service personnel for installation assistance
6. Capable of providing technical service assistance through a toll free telephone number after acceptance of work by the Owner.
7. Capable of providing remote technical service after acceptance of work by the Owner.

B. Installer Qualifications:

Specifier Notes: Edit or delete the following installer qualifications as required for the project.

1. Minimum of 10 years successful experience in installation of similar wireless communication systems.
2. Approved by manufacturer.
3. Capable of performing an assessment of [existing] [new] facility to determine specific component requirements for wireless communication system. This includes evaluation of building materials and their impact on system installation and performance, assessment of each doorway to be
protected, requirements for peripheral devices, and location of computers.

**Specifier Notes:** Describe requirements for a meeting or conference call to coordinate the installation of the wireless communication system and to sequence related work. Delete this paragraph if not required.

C. Pre-installation Meeting or Conference Call: Convene a pre-installation meeting or conference call two (2) weeks before start of installation of wireless communication system. Require attendance of parties directly affecting work of this section, including Contractor, Architect, Installer, and Dealer or manufacturer's representative. Review installation, field quality control, adjusting, demonstration, and coordination with other work including electrical, telecommunications, and elevators.

### 1.6 DELIVERIES, STORAGE, AND HANDLING

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage: Store materials indoors, in a clean, dry area in accordance with manufacturer's instructions.

C. Handling: Protect materials during handling and installation to prevent damage.

### 1.7 MAINTENANCE SERVICE

A. Maintenance Service: Provide maintenance service for the Infant Protection System remotely from manufacturer through a remote connection (modem, VPN, etc.). Manufacturer-trained and approved technicians shall also be available.

B. After-Warranty Service: Provide after-warranty service for Infant Protection System remotely from manufacturer through a remote connection (modem, VPN, etc.). Manufacturer-trained and approved technicians shall also be available.
PART 2 PRODUCTS

2.1 MANUFACTURER

A. Stanley Healthcare Solutions, 309 Legget Drive, Ottawa ON K2K 3A3, Canada. Toll free: 1.866.559-6275. Phone: (613) 592.6997. Fax: (613) 592.4296. Web site: www.stanleyhealthcare.com. E-mail: hugssupport@stanleyworks.com

2.2 INFANT PROTECTION SYSTEM

Specifier Notes: Consult Stanley Healthcare Solutions for assistance in editing this article for the specific application.

Hugs Infant Protection System:

A. Server Computer Central Processing Station: Connected directly to a network of RF Receivers, Exciters and I/O Modules. Also acts as a server for up to 26 Workstation computers in a client/server network.

1. Hub of an addressable microprocessor-based communication system. Receives signals from networked RF Receivers to provide a centralized monitoring system.
2. When an alarm is received, both audible and visual annunciations are activated by the central monitor. Central monitor displays and logs all system activity. Logs are archived on the hard drive. All programming and historical alarm data can be backed up to either removable media or a network server.
3. Password and User Lever Protection: Multiple levels can be created to restrict authorization to perform certain functions.
4. Printed Records: Generated through a parallel printer output or to any available networked printer using native Windows printer drivers.

Specifier Notes: System interface to locking systems, access card readers, elevator interlock control and touch screen monitor are optional components. Modify or delete Sentence 5 below if these components are not required.

5. Interface: System interfaces with locking systems, access control systems, elevator control and touch screen monitor.

Specifier Notes: Server computer is a required component supplied by owner and must meet the following minimum requirements.

6. Server Computer Minimum Requirements:
   a. Processor: 2.2 GHz minimum.
b. Operating System: Microsoft Windows XP SP2, SP3, Windows Server 2003 SP1, or Vista Business, Ultimate SP1

c. Software: Microsoft Internet Explorer 6.0 or higher, Patient Security Server software, Remote connection software, LonWorks drivers, Hugs application software and Kisses application software (optional)

d. Memory: 2 GB minimum.

e. Hard Drive: 160 GB minimum.

f. DVD-Rom Drive.

g. Remote connection: modem (56 kbps minimum), VPN, or other connection scheme

h. Sound card and speakers (if using server as workstation also).

i. PCI slots: minimum 1 if using PCLTA-20 or PCLTA-21 LonWorks interface; not necessary if using SmartServer (IP to LonWorks converter) to connect to RF Receivers, Exciters and I/O Modules.

j. Battery Backup: None supplied, recommended (UPS).

Specifier Notes: Workstation computers are optional components and are supplied by owner. Modify or quantify Sentence 7 below, or delete if workstations are not required.

7. Workstation Computer Minimum Requirements:

a. Processor: 2.2 GHz minimum.

b. Operating System: Windows XP Professional or Windows Vista

c. Software: Microsoft Internet Explorer 6.0 or higher, Hugs application software and Kisses application software (optional)

d. Memory: 1 GB minimum.

e. Hard Drive: 160 GB minimum.

f. CD-Rom Drive.

g. USB Ports: 1 free if using access card reader to log into application.

h. Sound card and speakers.

i. Battery Backup: None supplied, recommended (UPS).

Specifier Notes: Select 217 MHz for North America, 434MHz for International
Select PSR for North America, iPSR for International

B. RF Receiver ([PSR]/[iPSR]): Provides interface between wireless Infant Tags and central monitor. Converts RF signals into data stream for central processor. Connects to central processor over hard-wired, LonWorks network interface cable through LonWorks interface card, or by IP through LonWorks SmartServer. Power and service LEDs shall be provided.

1. Frequency:[217 MHz] [434 MHz].

2. Bandwidth: 16 kHz.

3. Detection Radius: 50 ft (15 meters) with overlapping [PSRs] [iPSRs], or 35 ft (11 meters) with stand-alone [PSRs] [iPSRs] maximum, depending on
site conditions.
5. Supervision: fully supervised, with regular polling by Server computer.
7. Power: 12 to 30 VDC, 100 mA max., powered from network power supply.
8. Operating Temperature: 32° to 120° F (0° to 49° C).
9. Humidity: 0 to 85% at 70° F (21° C), non-condensing.
10. Weight: Approximately 8.5 oz (240 g).
11. Dimensions: Approximately 6.1” x 4.9” x 1.7”. (155 x 125 x 45 mm).
13. Mounting: hardware to accommodate in-ceiling or surface mounting.

C. Infant Tag: Shall be fully supervised, waterproof, programmed to transmit a unique digitally encoded ID number received by [PSRs] [iPSRs] for transmission and display on Server and Workstations. Tag shall incorporate a tamper detection mechanism that is enabled as soon as the tag is attached to the infant. When attached, Tag shall emit an encoded signal to auto-admit the infant into the Infant Protection System with no further staff action. Tag shall use a tamper proof, hypoallergenic band that can be adjusted for infant weight loss. Band shall contain no latex. Tag shall enter “sleep” mode when removed from infant and reactivate when next applied. Tag shall be warranted for a period of one year.

1. The tag shall cause the Infant Protection System to generate an alarm under any of the following conditions:
   a. Unauthorized exit
   b. Tag’s signal not detected by the system for a programmable time period.
   c. Tag removed from infant’s skin (come loose without band being cut).
   d. Band has been cut or tampered with.
   e. Tag’s battery is low.
   f. Attempted “piggyback” through protected exit with another protected infant.
   g. Infant has not returned to the designated safe area within a user-specified time.
2. Power: lithium battery, warranted for 1 year’s life.

**Specifier Notes:** Select 217 MHz for North America, 434 MHz for International

4. Frequency: [217 MHz] [434 MHz].
5. Bandwidth: 16 kHz
7. Weight: Approximately 0.35 oz (10 g).
8. Dimensions: Approximately 1.2” x 1.4” x .052”. (29 x 34 x 13 mm).
10. Approvals: FCC approved.

Specifier Notes: Mother/Infant matching is an optional component. Delete Item D below if this component is not required.

D. Mother (Kisses) Tag: Confirms that the correct infant is matched with the correct mother each time they are brought together. Worn on the wrist of the mother, the Kisses tag is bonded with the Hugs tag attached to her baby. The tags remain bonded throughout the mother’s and baby’s stay at the hospital. Nurses are alerted with an audible indicator that immediately confirms the match or mismatch of the baby and mother when the two are brought together, even if there are other infants in the room. When the Hugs tag is discharged from the Hugs system, the two tags automatically un-bond and may be cleaned and re-used. The Hugs system warns users of a Kisses tag with a low battery. Further, a Hugs tag will not bond with a low-battery Kisses tag. Any Kisses tag can be selected for use with any Hugs tag; no special steps are required to associate the tags with one another.

1. Frequency: 117-129 kHz.
2. Battery Life: Warranted for 1 year
3. Operating Temperature: 32° to 120° F (0° to 49° C).
4. Humidity: 0 to 85% at 70° F (21° C), non-condensing.
5. Dimensions: Approximately 1.8 x 1.2 x 0.4 in (45 x 30 x 10 mm)
6. Weight: Approximately 1 oz (28 g)

Note: For legacy Kisses tags, use these values:
5. Dimensions: Approximately 1.9 x 1.6 x 0.6 in (48 x 40 x 15 mm)
6. Weight: Approximately 1 oz (28 g)

E. Exciter: Projects field around monitored doorway that is detected by Infant Tags. The Exciter shall contain two programmable outputs that can operate locks, activate visual alarms or sound audible warning devices. The Exciter shall include protection against over-voltage, transient voltage and power supply reverse wiring. Power and service LEDs shall be provided.

Specifier Notes: Select 312.5 kHz for North America, 125 kHz for International

1. Frequency: [312.5 kHz] [125 kHz].
2. Bandwidth: 105 kHz.
3. Operating Range: Approximately 15 feet.
4. Detection Range: Adjustable up to 8.5 feet (2.6 m).
5. Functions: (2) programmable, 30 V DC, 1 Amp, SPDT relays.
7. Supervision: Fully supervised, with regular polling by Server computer.
8. Test Procedure: Self-diagnostic, polled by central processor.
9. Power: 12 to 30 VDC, 200 mA @ 24 V DC, 500 mA maximum.
10. Operating Temperature: 32° to 120° F (0° to 49° C).
11. Humidity: 0 to 85% at 70° F (21° C), non-condensing.
12. Weight: Approximately 18.7 oz (530 g).
13. Dimensions: Approximately 14.2” x 4.9” x 2” (360 x 124 x 50 mm).
15. Mounting: Hardware to accommodate wall or ceiling mounting.

F. Exciter Range Extender: The Master Exciter Range Extender is installed with a Master Exciter to extend the range of coverage in areas with large or several doors. The Range Extender uses the ID of the Master Exciter. All alarms and events are reported using the Master Exciter’s ID number and any device connected to the Range Extender’s relays is activated based on the settings selected for the Master. The Range Extender shall include protection against over-voltage, transient voltage and power supply reverse wiring. Power and service LEDs shall be provided.

Specifier Notes: Select 312.5 kHz for North America, 125 kHz for International

1. Frequency: [312.5 kHz] [125 kHz].
2. Bandwidth: 105 kHz.
3. Operating Range: Approximately 15 feet.
4. Detection Range: Adjustable up to 8.5 feet (2.6 m).
5. Functions: (2) programmable, 30 V DC, 1 Amp, SPDT relays.
7. Supervision: Fully supervised, with regular polling by Server computer.
8. Test Procedure: Self-diagnostic, polled by central processor.
9. Power: 12 to 30 VDC, 200 mA @ 24 V DC, 500 mA maximum.
10. Operating Temperature: 32° to 120° F (0° to 49° C).
11. Humidity: 0 to 85% at 70° F (21° C), non-condensing.
12. Weight: Approximately 18.7 oz (530 g).
13. Dimensions: Approximately 14.2” x 4.9” x 2” (360 x 124 x 50 mm).
15. Mounting: Hardware to accommodate wall or ceiling mounting.

G. Central Power Supply: The dual-voltage Central Power Supply shall provide five separate 12 or 24 VDC regulated outputs to supply power to
network and peripheral devices, including RF Receivers, Exciters, Range Extenders, optional key pads, and I/O Modules. Each output can power 25 RF Receivers, 5 Exciters or Range Extenders, or 25 I/O Modules. The Central Power Supply shall accommodate either one 12 V battery (12 V output) or two 12 V batteries (24 V output).

1. Output Voltage: Selectable 12/24 VDC, 6 A max. 5 individual outputs, 2.5 A per output; ripple amplitude shall not exceed 100 mV at 60Hz.
2. Battery Backup: 12 VDC, 40 Ah, lead acid or gel cell type (2 required, not supplied).
3. Dimensions: 15.5” x 12” x 4.5” (394 x 305 x 114 mm).

H. Input/Output Module: The Input/Output (I/O) Module generates outputs based on system events, or receives inputs from devices connected to the I/O Module. The I/O Module shall include 8 individually programmed points, with any combination of inputs or outputs. The I/O Module shall include protection against over-voltage, transient voltage and power supply reverse wiring. Power and service LEDs shall be provided. Two general-purpose relays shall be provided for installations that require heavy loads or load isolation. Relays shall have a service life of 100,000 cycles at rated load.

1. Supply Voltage: 11 to 35 VDC.
2. Current Draw: 40 mA typical, 60 mA maximum.
3. I/O Outputs: 1 A maximum at 70° C (transient peak 2 A), 40 V maximum (transient peak 50 V).
4. I/O Inputs: 2 mA at 12 V, 5 mA at 24 V, 8 mA at 40 V maximum, 12 to 40 VDC (transient peak 50 V).
5. Relays: 10 A at 250 V, 10 A at 28 VDC (maximum operating frequency: 1,800 cycles/hour).
6. Temperature: Operating (inside case): 32° to 120° F (0° to 49° C).
7. Humidity: 0 to 85% RH at 70° (21° C) non-condensing.
8. Dimensions: 5.75” x 3.33” x 1.25” (146 x 85 x 32 mm).
9. Weight: Approximately 6.2 oz. (177 g).
10. Approvals: FCC approved.
PART 3   EXECUTION

3.1 EXAMINATION

A. Examine areas to receive Infant Protection System, and examine their impact on system installation and performance, each doorway to be protected, requirements for peripheral devices, and location of computers. Notify Architect if areas are not acceptable. Do not begin installation until unacceptable conditions have been corrected.

3.2 INSTALLATION

A. Install Infant Protection System in accordance with manufacturer's instructions.
B. Install system at locations as required.
C. Connect system to a grounded, 120 VAC Uninterruptible Power Supply (UPS) as required.
D. Connect UPS system to emergency power system.
E. Determine proper location of RF Receivers, Exciters, Range Extenders, Power Supplies, I/O Modules and computers.

3.3 FIELD QUALITY CONTROL

A. Test after installation is complete to verify system is properly installed and operating.
B. Complete commissioning checklist and submit copies to Architect and manufacturer.

3.4 ADJUSTING

A. Adjust system as required to perform properly.

3.5 DEMONSTRATION

A. Provide 16 hours of on-site service by manufacturer or manufacturer's representative.
   1. Demonstrate system to Owner's personnel.
B. TRAINING
   1. Provide 16 hours of clinical training to train Owner's personnel in proper operation and maintenance.

END OF SECTION