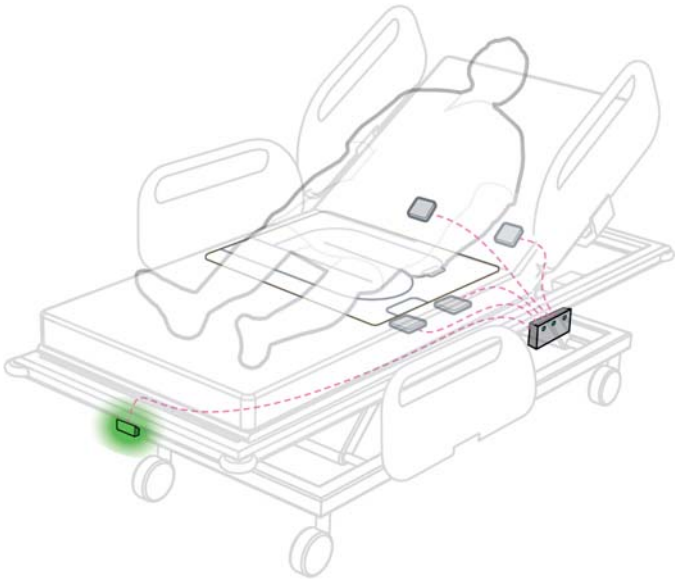
DRAFT 26-FEB-2019

WatchCare™ Incontinence Management System

User and Service Manual

Product No. P006979



196414 REV 2

Enhancing outcomes for patients and their caregivers.

Hill-Rom

REVISION

Distributed by:

HILL-ROM, INC.
1069 STATE ROUTE 46 E
BATESVILLE, IN 47006-9167 USA
800-445-3720

Manufactured by:

HILL-ROM, INC.
1069 STATE ROUTE 46 E
BATESVILLE, IN 47006-9167 USA

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Hill-Rom reserves the right to make changes without notice in design, specifications, and models. The only warranty Hill-Rom makes is the express written warranty extended on the sale or rental of its products.

The WatchCare™ Incontinence Management System product may be covered by one or more patents. For a list of applicable patents, go to www.hill-rom.com/patents. The Hill-Rom companies are the proprietors of European, US, and other patents and pending patent applications.

This product may contain software known as "free" or "open source" software (FOSS). Hill-Rom uses and supports the use of FOSS. We believe that FOSS makes our products more robust and secure, and gives us and our customers greater flexibility. To learn more about FOSS that may be used in this product, please visit our FOSS website at www.hill-rom.com/opensource. Where required, a copy of FOSS source code is available on our FOSS website.

Product images and labels are for illustrative purposes only. Actual product and label may vary.

Second Edition, DRAFT 2019-03

First Printing, 2018

Replace this manual (196414) if it is damaged and/or can not be read.

For product support or to order additional copies of this manual (196414), contact your local Hill-Rom representative or go to www.hill-rom.com.

Reference Documents

Centrella® Smart+ Bed User Manual (193587)

Centrella® Smart+ Bed Service Manual (193588)

Progressa® Bed User Manual (171528)

Progressa® Bed Service Manual (171748)

VersaCare® Bed User Manual (USR119 (A through J models); 161956 (K model and newer))

VersaCare® Bed Service Manual (MAN333 (A through J models); 161955 (K model and newer))

Table of Contents

INTENDED USE

The Incontinence Monitor is intended to detect and provide a timely alert when the patient's skin is exposed to incontinence (both urine and liquid fecal events).

INTRODUCTION

The WatchCare™ Incontinence Management System (system) provides a discreet visual alert and optional equipment call alerts after moisture is detected on the WatchCare™ smart pad.

This system is designed to discreetly alert the caregiver of an incontinence event and in doing so, may prevent prolonged exposure to moisture against the skin.

This system is most applicable in the critical care and medical/surgical settings, but it may be used in other clinical areas as well.

Before you operate the system, make sure that you read and understand in detail the contents of this manual. It is important that you read and obey the aspects of the safety content in this manual.

Any reference to a side of the bed is from the patient's view lying in the bed on his or her back.

The system has been designed and tested for compatibility with the hospital beds shown below and their compatible Hill-Rom® mattresses. To determine if the system can be used on a hospital bed not listed, contact Hill-Rom.

- The Centrella® Smart+ Hospital Bed
- The Progressa® Hospital Bed
- The VersaCare® Hospital Bed

NOTE:

The system is installed by Hill-Rom representatives to receive its power from the bed.

SYMBOLS

DOCUMENT SYMBOLS

This manual contains different typefaces and symbols to make the content easier to read and understand:

- Standard text—used for regular data.
- **Boldface text**—emphasizes a word or phrase.
- **NOTE:**—sets apart special data or important instruction clarification.
- WARNING or CAUTION

  - A WARNING identifies situations or actions that may have an effect on patient or user safety. To ignore a warning could cause patient or user injury.
  - A CAUTION identifies special procedures or precautions that persons must obey to help prevent equipment damage.

PRODUCT SYMBOLS

Symbol	Description
	WatchCare™ indicator light
	Wireless indicator—identifies the connection status of the system to the facility wireless network
	Connected indicator—identifies the connection status of the system to the NaviCare® SmartSync® System
	Location indicator—identifies the connection status of the Location feature

Symbol	Description
	Identifies these WatchCare™ System components (Progressa® and VersaCare® Beds): • WatchCare™ 1/4" communication cable • Facility equipment call jack designated for the WatchCare™ 1/4"communication cable • WatchCare™ connector on the bed
	Manufacturer
	Model or type reference
	Serial number
	Manufacture date
	ATTENTION: Consult accompanying documents
	Federal Communications Commission
IPX4	Degree of protection against Ingress of Water
	Type B applied part according to IEC 60601-1
	Medical - General Medical Equipment as to Electrical Shock, Fire and Mechanical Hazards only in accordance with ANSI/AAMI ES60601-1 (2005) + AMD 1 (2012), CAN/CSA-22.2 No. 60601-1 (2014)

Symbol	Description
	Do not dispose as Unsorted Municipal Waste

SAFETY INSTRUCTIONS

 **WARNING:**

Obey these safety instructions to help prevent injury and/or equipment damage:

- **Warning—**Read and understand all warnings in this manual and on the unit itself prior to use with a patient.
- **Warning—**The potential for electrical shock exists with electrical equipment. Failure to follow facility protocols may cause death or serious injury.
- **Warning**—The system is to be installed only by Hill-Rom representatives.
- **Warning**—To avoid risk of electrical shock, this equipment must only be connected to supply mains with protective earth.
- **Warning**—The system is not suitable for use in an oxygen-enriched environment.
- **Warning**—The system has no user serviceable parts. Only facility-authorized service persons should service the system.
- **Warning**—With the exception of the WatchCare® smart pads, do not discard components of the system as unsorted municipal waste. See your local distributor for collection and/or recycling systems available in your country.
- **Warning**—Do not modify the system.
- **Warning**—Do not use the smart pad(s) to transfer the patient from one surface to another.
- **Warning**—This product can expose you to chemicals including Titanium Dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.
- **Warning**—Make sure the position of the bed is such that you can quickly, without obstruction, unplug the power cord from the main power supply if necessary.

- **Warning**—To safely stop the operation of the system, unplug the bed and/or the external power supply from the power outlet.

FCC Guidance

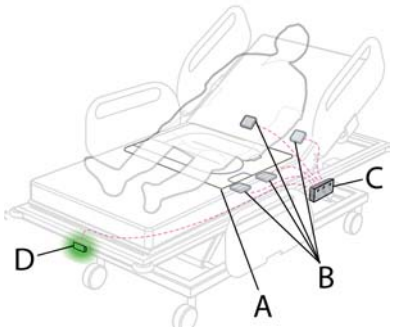
Pursuant to FCC 15.21 of the FCC rules, changes not expressly approved by Hill-Rom might cause harmful interference and void the FCC authorization to operate this product.

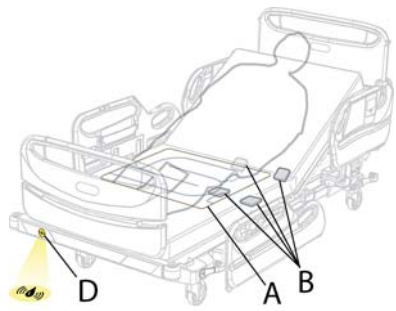
NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an output on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

QUICK VIEW™ LIST OF FEATURES

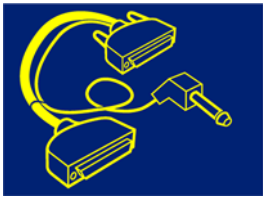
PROGRESSA® AND VERSACARE® BEDS	Item	Feature
	A	WatchCare™ smart pad
	B	WatchCare™ antennas
	C	WatchCare™ reader
	D	WatchCare™ indicator light
	E (not shown)	WatchCare™ connector (on the bed) and WatchCare™ 1/4" communication cable

CENTRELLA® SMART+ BED	Item	Feature
	A	WatchCare™ smart pad
	B	WatchCare™ antennas
	C (not shown)	WatchCare™ reader
	D	SafeView®+ Alerts—WatchCare™ indicator light
	E (not shown)	Nurse call system connection

STANDARD FEATURES

Item	Description
A	**WatchCare™ smart pad** The WatchCare™ smart pad (smart pad) is an incontinence pad, with a radio-frequency identification (RFID) tag, that detects moisture to notify the WatchCare™ RFID reader of an incontinence event.

Item	Description
B	**WatchCare™ Antennas** There are four WatchCare™ antennas (antenna(s)) located under the mattress. They identify that a smart pad is present and send a signal to the WatchCare™ reader.
C	**WatchCare™ Reader** The WatchCare™ RFID reader (reader) is located on the left side of the bed near the seat section. The RFID reader sends a signal prompting the WatchCare™ indicator light as to the smart pad's status.
D	**WatchCare™ Indicator Light** The WatchCare™ indicator light (indicator light) is located on the foot end of the bed. The indicator has multi-color (green, amber, and white) lights that indicate the system status as identified in the table that follows.
E	**WatchCare™ Communication** • **Progressa® and VersaCare® Beds—**for the WatchCare™ System to send customizable incontinence alerts to caregivers through the facility's nurse call system, connect the WatchCare™ 1/4" communication cable to the WatchCare™ connector (under the head end of the bed, on the patient's left) and to the facility's equipment call jack designated for the WatchCare™ System. • **Centrella® Bed**—for the WatchCare™ System to send customizable incontinence alerts to caregivers through the facility's nurse call system, do one of these as applicable: **Centrella® Bed with the NaviCare® System**—connect the SideCom® cable to the bed and to the facility's equipment call jack.

Item	Description
E	**Centrella® Bed with a different nurse call system**— a. Connect the two-cable end of the WatchCare™ adapter to the bed.  b. Connect the 37-pin end of the adapter cable to the facility's communication cable. c. Connect the remaining end (the 1/4" cable connector) of the adapter cable to the facility's equipment call jack designated for the WatchCare™ System.

Indicator Light—Visual Identification

Status	Indicator Light
Solid green light—identifies that a smart pad is present and is being monitored. No moisture is detected at this time.	
Flashing amber light—identifies that the smart pad is wet. This visual alert will project on the floor.	
Solid white light—identifies that the monitor system is on, but the reader does not detect any smart pads on the bed.	
Alternating white and green light—identifies that the monitor system can not operate effectively because more than four smart pads are detected.	
No light—the monitor system is not active. Make sure the bed is plugged into a power outlet.	

PREPARE THE SYSTEM FOR USE

WARNING:

To help prevent injury and/or equipment damage, obey these **warnings**:

- **Warning**—Keep cables out of the patient foot fall area.
- **Warning**—Connect the WatchCare™ 1/4" communication cable or WatchCare™ adapter cable (as applicable) to an equipment call jack designated for the WatchCare™ System only. Patient injury could occur if the nurse call system is not operational.

1. Make sure the bed's power cord is plugged into a power outlet.

NOTE:

Once the bed is plugged in, it may take up to 2 minutes for the indicator light to turn white.

2. If the WatchCare™ System interfaces with a nurse call system, make sure of these:
   - **Centrella® Bed**—
     - **Bed with the NaviCare® System**—the SideCom® cable is connected to the bed and to the facility's equipment call jack.
     - **Bed with a different nurse call system**—the adapter cable is connected to the bed, and the cable's 1/4" cable connector is connected to the facility's equipment call jack designated for the WatchCare™ System's incontinence alerts.

   NOTE:

   The location of the adapter cable differs depending on your bed version. An earlier version bed is shown on the left in the photos below.

Centrella® Bed P7900A0, P7900B0

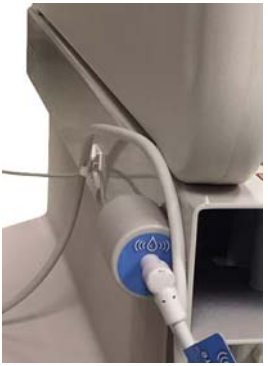
Centrella® Bed P7900B1 and Newer

Facility Connection

- **Progressa® and VersaCare® Beds**—the WatchCare™ 1/4"communication cable is connected to the WatchCare™ connector on the bed and to the facility's equipment call jack designated for the WatchCare™ System's incontinence alerts.

Progressa® Bed

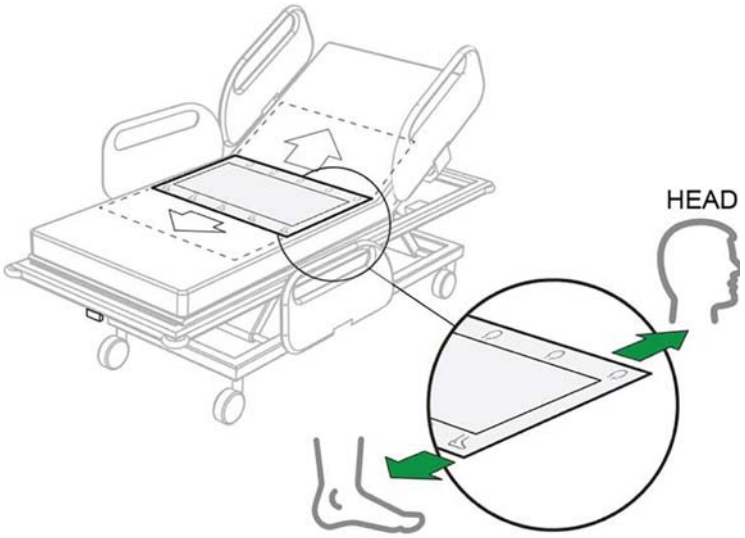
VersaCare® Bed



Facility Connection

3. Put a smart pad(s) in the middle of the bed with the head icon toward the head end of the bed and foot icon toward the foot end.

smart pad Placement



4. Listen for a single beep, and make sure the indicator light has turned green. These let you know that the pad has been detected and the incontinence monitoring has begun.

NOTES:

- Store unused, clean smart pads at least 2 feet (61 cm) from the bed.
- If the indicator light does not operate as specified, see "Indicator Light—Visual Identification" on page 8 and/or "Troubleshooting" on page 18.
- The WatchCare™ Incontinence Management System can monitor up to four WatchCare™ smart pads on a bed at one time; however, Hill-Rom recommends to use the minimum number of smart pads to minimize the risk of skin breakdown (refer to www.hill-rom.com, Hill-Rom® Safe Skin® Program).
- Placing devices that contain metallic components or metallic materials (such as a chair exit pad) under or on top of the smart pad could interfere with incontinence monitoring.

Replace the WatchCare™ smart pad

The indicator light will flash amber to indicate an incontinence event. If you are using a nurse call system, customizable incontinence alerts can be sent to—

- The nurse call console
- The nurse call dome light over the door, outside the patient's room
- The applicable mobile devices available at your facility
- The nurse call status board

1. Remove the soiled smart pad(s), and discard the pad(s) at least 2 feet (61 cm) from the bed so that the reader no longer detects the soiled pad(s).
2. Put a new smart pad on the bed, and listen for the single beep to make sure the new pad is being monitored.
   - If there is no beep, look at the indicator light. If the light is white, the smart pad is not detected. Make sure the pad is in the correct head/foot orientation and intended location (see Step 3 on page 11).
   - If you are using more than one smart pad, make sure the indicator light is green after the soiled pad is removed.

NOTE:

When the new pad is detected, the alert will clear in the WatchCare™ System.

TRANSPORT THE BED

1. Prepare the bed for transport per the bed's user manual.
2. Disconnect the bed cable (WatchCare™ 1/4"communication cable, SideCom® cable, or WatchCare™ adapter cable) from the equipment call jack on the wall.
3. Transport the bed per facility protocol.
4. After the transport, do these:
   a. Plug in the bed's power cord.
   b. Connect the bed cable (WatchCare™ 1/4" communication cable, SideCom® cable, or WatchCare™ adapter cable) to the equipment call jack on the wall.

CLEANING AND DISINFECTING

NOTE:

This section does not apply to the smart pads. The smart pads are intended for single use only. Discard a soiled smart pad at least 2 feet (61 cm) from the bed so that the reader no longer detects the soiled pad.

WARNING:

To help prevent injury and/or equipment damage, obey these **warnings**:

- **Warning**—The potential for electrical shock exists with electrical equipment. Failure to follow facility protocol could cause death or serious injury.
- **Warning**—Do not reuse wiping material for multiple steps or on multiple products.
- **Warning**—Harmful cleaning solutions may cause skin rash and/or irritation upon contact. Follow the manufacturer's instructions found on the product label and Safety Data Sheet (SDS).
- **Warning**—Lift and move items correctly. Do not twist, and seek assistance when necessary. Make sure the bed is at a correct height to lift items off the bed.
- **Warning**—Fluid spills on to the system's electronics could cause a hazard. If such a spill occurs, unplug the bed and remove it from service. When fluid spills occur outside of what is seen in normal use, immediately do as follows:
    a. Unplug the bed from its power source.
    b. Remove the patient from the bed.
    c. Clean the fluid spill from the system.
    d. Have maintenance examine the system completely.
    e. Do not use the system until it is completely dry, tested, and found to be safe to operate.

CAUTION:

To help prevent equipment damage, obey these **cautions**:

- **Caution**—Do not steam clean or power wash the system. Pressure and excessive moisture can damage the protective surfaces of the system and its electrical components.
- **Caution**—Do not use harsh cleansers/detergents, heavy duty grease removers, solvents such as toluene, xylene, or acetone, and do not use scouring pads (you may use a soft bristle brush).
- **Caution**—Do not use bleach as your primary everyday cleaner/disinfectant.

Recommendations

For proper cleaning and disinfection, staff members should be trained.

The **trainer** should carefully read the instructions and follow them when the **trainee** is being trained. The trainee should:

- Be given time to read the instructions and to ask any questions.
- Clean and disinfect the product while the trainer supervises. During, and/or after this process, the trainer should correct the trainee of any differences from the instructions for use.

The trainer should supervise the trainee until the trainee can clean and disinfect the system as instructed.

Hill-Rom recommends to clean and disinfect the system's components between patient use and regularly during extended patient stays.

Some fluids used in the hospital environment, such as iodophor and zinc oxide creams can cause permanent stains. Remove temporary stains by wiping vigorously with a lightly-dampened wiping cloth.

Cleaning and Disinfection

Cleaning and disinfection are distinctly different processes. Cleaning is the physical removal of visible and non-visible soil and contaminants. Disinfection is intended to kill microorganisms.

Table 1 below summarizes the approved cleaners/disinfectants for use with the associated contact time for disinfection.

Table 1: Approved Cleaners/Disinfectants

Cleaner/ Disinfectant	Recommended for Routine Cleaning and Disinfection	Recommended for Disinfection against Clostridium Difficile (C.Diff)	Maintain Wetness (Disinfection Contact Time)
Wex-Cide™ Germicidal Detergent ready-to-use	Yes	No	10 minutes
Virex® II 256	Yes	No	10 minutes
OxyCide® Daily Disinfectant Cleaner	Yes	Yes	3 minutes
Clorox HealthCare® Bleach Germicidal Cleaner ready-to-use	**No***	Yes	5 minutes
Clorox HealthCare® Bleach Germicidal Wipes	**No***	Yes	3 minutes

*Bleach is not recommended as the primary cleaner/disinfectant.

Remove any disinfectant residue prior to and after the use of bleach with a new or clean cloth/wipe soaked in tap water.

When you perform the detailed cleaning steps, please note the following:

- A microfiber cloth or the Clorox HealthCare® Bleach Germicidal Wipe is recommended as the wiping cloth.
- Always replace the wiping cloth when visibly soiled.
- Always replace the wiping cloth between steps (spot clean, clean, and disinfect).
- Always use Personal Protective Equipment (PPE).

Prepare for Cleaning and Disinfecting

a. Unplug the bed.

b. Adjust the mattress position as necessary to get access to the antennas. Refer to the bed's service manual.

STEP 1: Cleaning

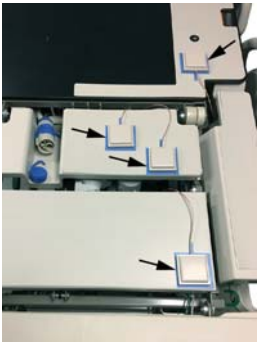
a. As necessary, first remove visible soil from the reader, indicator light, and antennas using a wiping cloth soaked with an approved cleaner/disinfectant (see "Table 1: Approved Cleaners/Disinfectants" on page 15).
   - A soft bristle brush may be used to loosen hardened soil.
   - Use as many wiping cloths as needed to remove the soil.

It is important to remove all visible soil from all areas before continuing to remove non-visible soil.

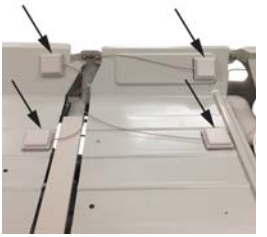
b. With a new wiping cloth soaked in an approved cleaner/disinfectant, use firm pressure to wipe all surfaces of the reader, indicator light, and antennas. Use a new or clean wiping cloth as often as necessary. Make sure the following areas are cleaned:
   - Seams around the antennas

Centrella® Bed

Progressa® Bed



VersaCare® Bed



- **Progressa® or VersaCare® Bed**—seam around the reader

STEP 2: Disinfection

a. With a new or clean wiping cloth soaked in an approved cleaner/disinfectant, use light pressure to wipe all exterior surfaces of the reader, indicator light, and antennas.

b. Make sure all surfaces **remain wet with the cleaner/disinfectant** for the **specified contact time**. **Re-wet** surfaces with a new wiping cloth as necessary. See "Table 1: Approved Cleaners/Disinfectants" on page 15 for the contact time.

NOTE:

If bleach is used with another cleaner/disinfectant, use a new or clean cloth/wipe soaked in tap water to remove any disinfectant residue prior to and after the bleach application.

Prepare for Use

a. Make sure the mattress is in position for use and is connected to the bed. Refer to the bed's service manual.

b. Plug the bed into an applicable power outlet.

PREVENTIVE MAINTENANCE

The WatchCare™ System does not require preventive maintenance.

STORAGE AND HANDLING

Store the WatchCare™ smart pads in a dry location that is at least 2 feet (61 cm) from a bed with the WatchCare™ System.

EXPECTED LIFE

The expected life of the WatchCare™ System hardware is 10 years. The smart pads are intended for single use only.

TROUBLESHOOTING

WARNING:

Warning—Only facility-authorized persons should service the system. Service by unauthorized persons could cause injury or equipment damage.

If the trouble shooting information below does not correct the problem, contact Hill-Rom.

NOTES:

- Do step 1 of the Solution first, and then if necessary, do step 2, and so on until you have fixed the problem.
- For additional troubleshooting of the WatchCare™ System on a Centrella® Bed, see the bed's service manual (193588).

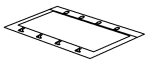
Problem	Solution
Progressa® and VersaCare® Beds—the LEDs on the reader do not flash at power up, and the indicator light is off (the reader is not receiving power).	**Caregiver** 1. Make sure the bed is plugged into an appropriate power outlet. 2. Unplug the bed, and then plug the bed in to power to reset the bed. 3. Contact your facility-authorized service persons. **Service Person Only** 1. Make sure the reader power cable is not damaged and it is fully connected to the reader and the UCB or Logic Control P.C. board. 2. Replace the reader (see page 27).

Problem	Solution
Progressa® and VersaCare® Beds—the indicator light is off even though the LEDs on the reader flash at power up.	**Caregiver** 1. Unplug the bed, and then plug the bed in to power to reset the bed. 2. Contact your facility-authorized service persons. **Service Person Only** 1. Make sure the indicator light is not damaged. 2. Make sure the indicator light cable is not damaged and it is fully connected to the reader and the indicator light P.C. board. 3. Replace the indicator light assembly (see page 34).
Progressa® and VersaCare® Beds—one or more of the indicator light colors do not come on.	**Caregiver** 1. Unplug the bed, and then plug the bed in to power to reset the bed. 2. Contact your facility-authorized service persons. **Service Person Only** 1. Make sure the indicator light is not damaged. 2. Make sure the indicator light cable is not damaged and it is fully connected to the reader and the indicator light P.C. board. 3. Replace the indicator light assembly (see page 34).

Problem	Solution
All beds—an equipment alert was not sent for an incontinence event.	**Caregiver** 1. Make sure the cable that connects the bed to the equipment call jack (WatchCare™ 1/4" communication cable, SideCom® cable, or WatchCare™ adapter cable) is not damaged and it is fully connected to the equipment call jack and the bed. Replace the cable as necessary. 2. Unplug the bed, and then plug the bed in to power to reset the bed. 3. Contact your facility-authorized service persons. **Service Person Only** **Progressa® and VersaCare® Beds** 1. Make sure the equipment call connector cable that connects to the reader is not damaged and the cable is fully connected to the reader. 2. Replace the equipment call connector cable as necessary (see page 48). **Centrella® Bed**—see the bed's service manual (193588).
All beds—a new smart pad is not detected.	**Caregiver** 1. Make sure the pad is in the correct orientation. 2. Try a different pad. 3. Unplug the bed, and then plug the bed in to reset the bed. 4. Contact your facility-authorized service persons. **Service Person Only** Make sure the antenna cables are not damaged and are fully connected to the antenna-reader cables.

REPLACEMENT PARTS

EXPENDABLE PARTS

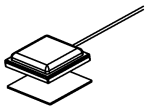
Item	P/N	Description	Qty	Page
	P006980	Smart pad	As required	12

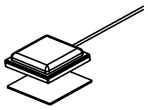
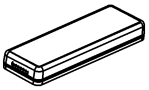
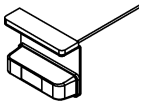
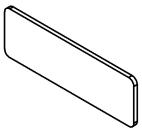
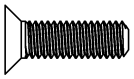
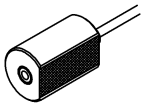
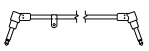
SERVICE PARTS

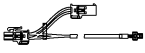
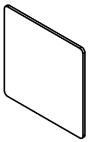
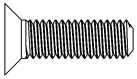
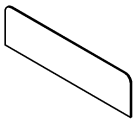
For replacement service parts for the Centrella® Smart+ Bed, see the bed's service manual (193588).

WARNING:

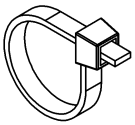
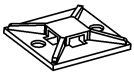
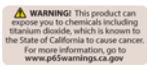
Only facility-authorized persons should service the system. Service by unauthorized persons could cause injury or equipment damage.

Item	P/N	Description	Qty	Page
	20863301	Antenna assembly, 1025 mm (green indicator; includes gasket), VersaCare® Bed	2	42
	20863302	Antenna assembly, 655 mm (blue indicator; includes gasket), VersaCare® Bed	1	42
	20863303	Antenna assembly, 795 mm (black indicator; includes gasket), VersaCare® Bed	1	42
	20863304	Antenna assembly, 905 mm (red indicator; includes gasket), Progressa® Bed	2	42

Item	P/N	Description	Qty	Page
	20863305	Antenna assembly, 705 mm (yellow indicator; includes gasket), Progressa® Bed	2	42
	20863401	Reader with gasket and antenna tape, VersaCare® Bed	1	27
	20863403	Reader with gasket and antenna tape, Progressa® Bed	1	27
	201009S	Indicator light with cable assembly	1	34
	199673	Reader gasket	1	27
	197328	Screw, reader housing	6	27
	208680S	Assembly, equipment call cable	1	48
	208506S	Assembly, WatchCare™ 1/4" equipment call (communication) cable	1	48

Item	P/N	Description	Qty	Page
	201582	Power cable, VersaCare® Bed (A - J models)	1	29
	198184	Power cable, VersaCare® (K and newer models) and Progressa® Beds	1	29
	199672	Antenna gasket	1	42
	208635	Antenna tape	As required	42
	199273	Screw, lens cover	2	34
	199674	Indicator light adhesive	1	34
	206911	Graphic, head section, Progressa® Bed	1	45
	206912	Graphic, seat section, Progressa® Bed	1	45

Item	P/N	Description	Qty	Page
	206913	Graphic, thigh section, Progressa® Bed	1	45
	206914	Graphic, deck filler, Progressa® Bed	1	45
	198343	Indicator light label	1	52
	207837	Branding label, equipment call cable	1	52
	207838	Branding label, equipment call jack	1	52
	207839	Branding label, bed plug (equipment call connector)	1	52
	207606	Branding label, VersaCare® Bed	2	52
	207840	Branding label, Progressa® Bed	2	52

Item	P/N	Description	Qty	Page
	19124	Cable tie	As required	
	64565	Cable tie mount	As required	
	209378	Prop 65 label	1	52

SERVICE PART REPLACEMENT PROCEDURES

For replacement procedures for the Centrella® Smart+ Bed, see the bed's service manual (193588).

Tools:
- Wire cutters
- Soft cloth
- T10, T20, and T25 Torx® screwdrivers
- Tape measure
- Alcohol-based cleaner
- Antistatic strap
- Dry smart pad

SETUP

WARNING:

To help prevent injury and/or equipment damage, obey these **warnings**:

- **Warning**—Only facility-authorized persons should service the system.
- **Warning**—Do not replace service parts while a patient is on the bed.
- **Warning**—With the exception of the WatchCare™ smart pad, before you remove and replace components of the system, make sure to unplug the bed.
- **Warning**—Make sure that hands, arms, legs, and feet are not under the bed or between the sleep deck sections as they move.
- **Warning**—During the replacement procedures, you will need to use an alcohol-based cleaner. Such cleaners are flammable and

toxic to skin, eyes, and respiratory tract. Do not use the cleaner near an open flame or in confined areas.

- **Warning**—Recycle or discard no longer used parts in accordance with local regulations.

1. Make sure the brake is set.
2. Remove the sleep surface. Refer to the bed's service manual.
3. Raise the bed to its highest position.
4. Raise the siderails.

WARNING:

Warning—Failure to unplug the bed and the optional auxiliary outlet from their power sources could cause injury or equipment damage.

5. Unplug all bed power cords.
6. Go to the applicable procedure:
   - "Reader Replacement" on page 27
   - "Power Cable Replacement" on page 30
   - "Indicator Light Assembly Replacement" on page 34
   - "Antenna Assembly Replacement" on page 42
   - "Graphic Replacement for the Head, Seat, and Thigh Sections, and Deck Filler—Progressa® Bed" on page 45
   - "Equipment Call Cable Replacement" on page 48
   - "Label Replacement" on page 52

1.1 Reader Replacement

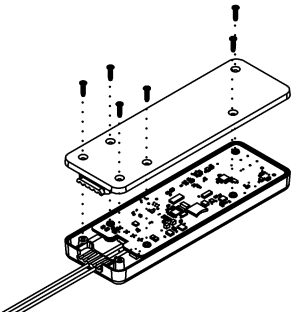
1. Make sure the bed is unplugged and you have done the steps for "Setup" on page 25.
2. Near the reader, remove the cable tie(s) that holds the power cable with the other cables on the bed.
3. Remove the heat shrinks from the antenna cable connections.

4. Disconnect the antenna-reader cables from the antenna cables.
5. Remove the reader from the bed.

VersaCare® Bed

Progressa® Bed

6. Remove the six screws that attach the back cover to the reader.



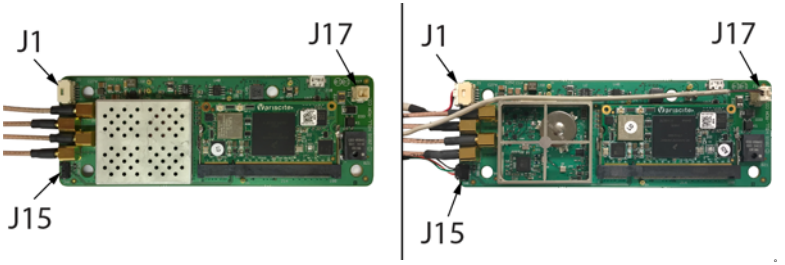
CAUTION:

Caution—Failure to wear an antistatic strap could cause equipment damage.

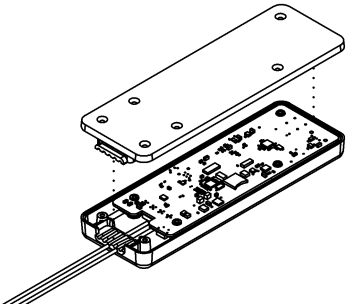
7. Put on the antistatic strap.
8. Remove the P.C. board from the reader.

9. Disconnect all cables except the ANT 1 reader cable from the P.C. board.
10. If the back cover is installed on the **new** reader, remove the cover.
11. Remove the P.C. board from the **new** reader.

12. Connect the cables to the **new** P.C. board (the connectors on the P.C. board are specific to the cables):
    - **J1**— Power
    - **J15**—Indicator light cable
    - **J17**—Equipment Call connector



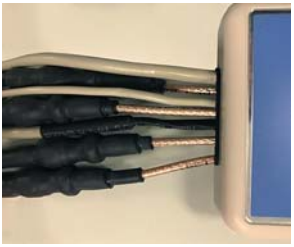
13. Install the **new** P.C. board in the **new** reader.



WARNING:

Warning—Failure to correctly align the gaskets on the covers of the reader could permit fluids to get into the enclosure. Injury or equipment damage could occur.

14. Install the back cover on to the reader. **Make sure the gasket inserts are correctly aligned.**



15. Install the six screws to attach the back cover to the reader.
16. Remove any tape residue from the back cover of the reader.
17. Use the alcohol-based cleaner to clean the back cover of the reader and the area where the reader was installed on the bed. Let the back cover and area dry.
18. Remove one side of the adhesive covering from the double-sided tape gasket, and install the gasket on to the back cover.
19. Remove the adhesive covering from the other side of the gasket, and install the reader on the bed so that its label is toward the outside of the bed. Firmly press the reader into position for 10 seconds with approximately 75 lb (34 kg) of force.

VersaCare® Bed shown

20. Connect the antenna-reader cables to the antenna cables.
21. Put insulated tape over the cable connections.
22. The replacement is complete. Do the function checks on page 53 and in the bed's service manual. As you operate the bed's articulation functions, make sure the cables are not in a location where they could get damaged or pinched.

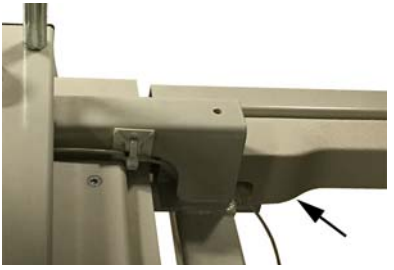
1.2 Power Cable Replacement

1. Make sure the bed is unplugged and you have done the steps for "Setup" on page 25.
2. Get access to the Logic Control P.C. board (VersaCare® Bed, A through J model bed) or upper control board (UCB) (VersaCare® Bed, K or newer model bed or Progressa® Bed). Refer to the bed's service manual.
3. Make a note of the power cable connections on the Logic Control P.C. board or UCB, and then disconnect the power cable from the Logic Control P.C. board or UCB.
4. Connect the **new** power cable to the connectors on the Logic Control P.C. board or UCB.
   - **Progressa® Bed and VersaCare® Bed, K or newer model**—the power cable connects to P14.
   - **VersaCare® Bed, A through J model**—the power cable connects to P1 and P11.
5. Make a note of the power cable routing from the Logic Control P.C. board or UCB to the reader, and then use the same routing for the **new** power cable. Remove and install cable ties as necessary.

NOTES:

- **VersaCare® Bed**—you will need to remove the cable channel cover for access to the cable routing in the channel.

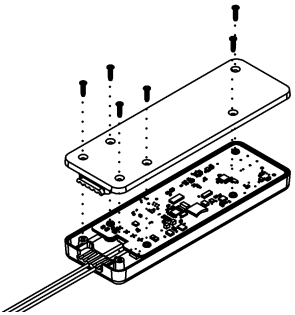
- **Progressa® Bed**—you will need to remove the hose cover screw and hose cover for access to the cable routing along the air hose.



6. Near the reader, remove the cable tie(s) that holds the power cable with the other cables on the bed.

7. Remove the reader from the bed.

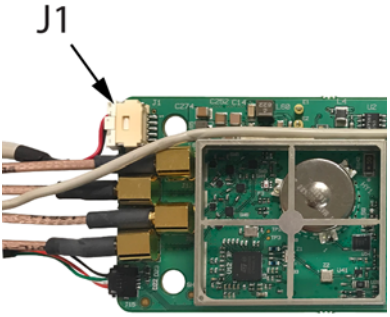
8. Remove the six screws that attach the back cover to the reader.



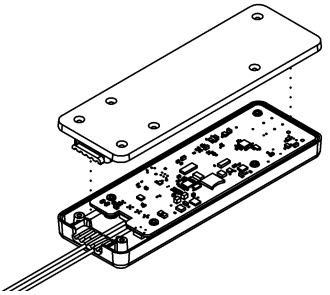
CAUTION:

Caution—Failure to wear an antistatic strap could cause equipment damage.

9. Put on the antistatic strap.
10. Remove the P.C. board from the reader.
11. Disconnect the power cable from J1 on the P.C. board, and remove the **old** power cable from the bed.
12. Connect the **new** power cable to J1 on the P.C. board.



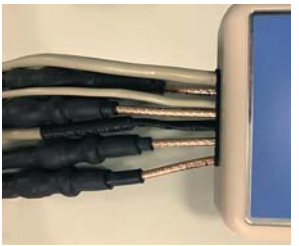
13. Install the P.C. board in the reader.



WARNING:

Warning—Failure to correctly align the gaskets on the covers of the reader could permit fluids to get into the enclosure. Injury or equipment damage could occur.

14. Install the back cover on to the reader. **Make sure the gasket inserts are correctly aligned.**



15. Install the six screws to attach the back cover to the reader.
16. Remove any tape residue from the back cover of the reader.
17. Use the alcohol-based cleaner to clean the back cover of the reader and the area where the reader was installed on the bed. Let the back cover and area dry.
18. Remove one side of the adhesive covering from the double-sided tape gasket, and install the gasket on to the back cover.
19. Remove the adhesive covering from the other side of the gasket, and install the reader on the bed so that its label is toward the outside of the bed.

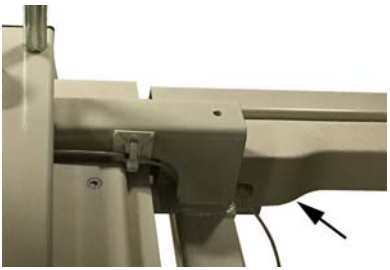
20. Firmly press the reader into position for 10 seconds with approximately 75 lb (34 kg) of force.
21. At the cable tie mount(s) near the reader, install a cable tie(s) to hold the cables on to the bed.

22. Do as applicable for your bed:

VersaCare® Bed

a. Install the cable channel cover.

b. Install the cover for the Logic Control P.C. board (VersaCare® Bed A through J model) or the UCB (VersaCare® Bed K or newer model). Refer to the bed's service manual.



Progressa® Bed

a. Put the hose cover in position on the bed, and install the screw to attach the hose cover to the bed.

b. Install the cover for the UCB. Refer to the bed's service manual.

23. The replacement is complete. Do the function checks on page 53 and in the bed's service manual. As you operate the bed's articulation functions, make sure the cables are not in a location where they could get damaged or pinched.

1.3 Indicator Light Assembly Replacement

1. Make sure the bed is unplugged and you have done the steps for "Setup" on page 25.
2. Raise the knee section to its highest position.
3. At the indicator light assembly, cut the light assembly cable to free it from the light assembly.
4. Remove the indicator light assembly from the bed.
5. Use the alcohol-based cleaner to clean these areas, and then let the areas dry:
   - The area where the indicator light was installed.
   - If the indicator light is being replaced on a bed in the state of California, the area on the **new** indicator light assembly where the Prop 65 label is to be installed.
   - The area on the back of the **new** indicator light assembly where a cable tie mount is to be installed.
     - **VersaCare® Bed**—the mount is to be installed at the top center of the assembly.
     - **Progressa® Bed**—the mount is to be installed in the center of the assembly.

6. Install the Prop 65 label (if applicable) and cable tie mount on to the indicator light assembly.
7. Remove the adhesive covering from the top of the **new** indicator light, and install the indicator light so the label on the indicator light is toward the outside of the bed. Firmly press the indicator light into position for 10 seconds with approximately 75 lb (34 kg) of force.
8. Go to the section for your bed:
   - "VersaCare® Bed" on page 35
   - "Progressa® Bed" on page 35

VersaCare® Bed

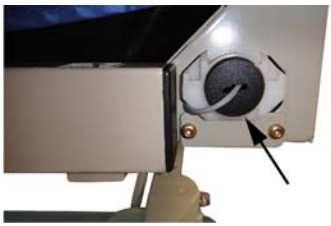
CAUTION:

Caution—The foot section of the bed must be extended for the cable routing. Otherwise, equipment damage could occur.

1. Extend the foot section.
2. Follow the routing of the old light assembly cable to the reader, and then use the same routing for the **new** light assembly cable. Remove and install cable ties as necessary.

NOTE:

You will need to remove the plug from the foot end of the sliding foot tube and remove the screw and end cap from the fixed foot section to get access to the cable routing.



3. Go to "Final Steps" on page 39.

Progressa® Bed

1. Fully retract the foot section.
2. Determine which version of the foot-end cover, with holes or without holes, is on your bed (see below).

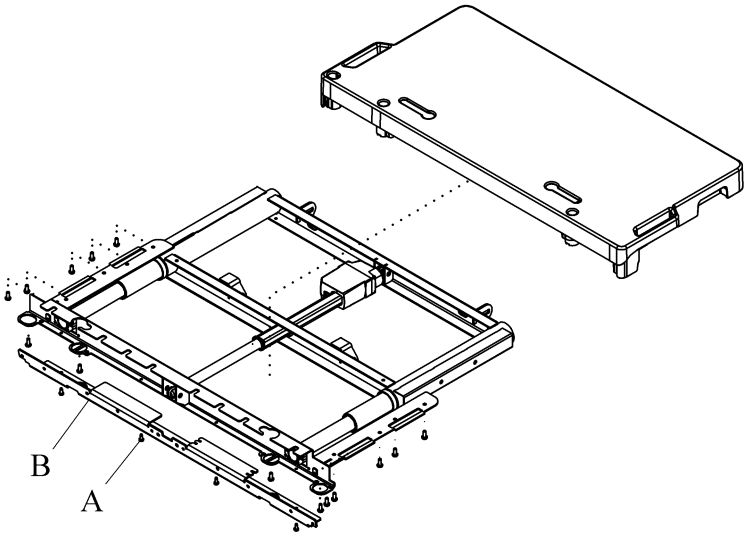
With Holes

Without Holes

3. Go to the section for your foot-end cover:
   - "Foot-End Cover With Holes" on page 36
   - "Foot-End Cover without Holes" on page 37

Foot-End Cover **With** Holes

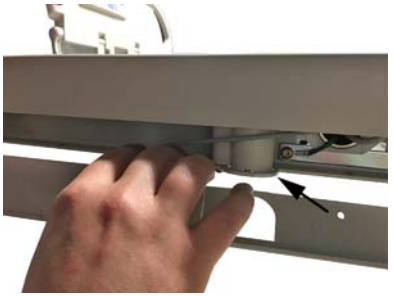
1. Remove the four screws (A) that attach the foot-end cover (B) to the bed (see the image below).
2. Remove the foot-end cover (B) from the bed.



3. Follow the routing of the old light assembly cable to the reader, and then use the same routing for the **new** light assembly cable. Remove and install cable ties as necessary.

NOTES:

- Make sure the **new** cable is routed around the boss in the foot-end cover so that the cable does not get pinched.



- At the head end of the guide tube, you may need to use a screwdriver to move the plastic cover enough to get access to the old and new cables.

- After you route the new cable through the guide tube, do these:
  a. Pull the old cable out from the guide tube.

CAUTION:

Caution—The foot section must be extended to correctly install the indicator light. Otherwise, equipment damage could occur.

  b. Extend the foot section.
  c. Put the foot-end cover (B) in its location on the bed, and install the four screws (A) to attach the foot-end cover (B) to the bed (see Step 1 on page 36).
  d. Continue routing the new cable to the reader.

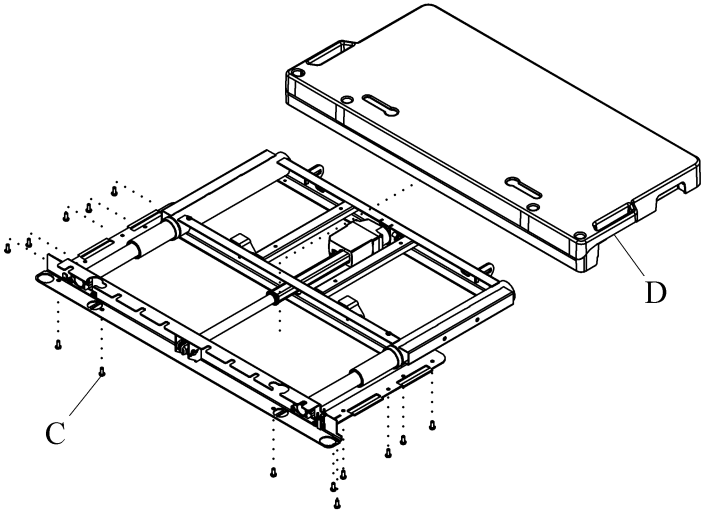
4. Go to "Final Steps" on page 39.

Foot-End Cover **without** Holes

CAUTION:

When you set the sliding foot cover on the thigh section of the bed, be careful not to accidentally disconnect the footboard sensor switch cable. Equipment damage could occur.

1. Remove the fourteen screws (C) that attach the sliding foot cover (D) to the bed, and set the cover on the thigh section of the bed.



2. Follow the routing of the old light assembly cable to the reader, and then use the same routing for the **new** light assembly cable. Remove and install cable ties as necessary.

NOTE:
At the head end of the guide tube, you may need to use a screwdriver to move the plastic cover enough to get access to the old and new cables.

- After you route the new cable through the guide tube, do these:
  a. Pull the old cable out from the guide tube.

CAUTION:
Caution—The foot section must be extended to correctly install the indicator light. Otherwise, equipment damage could occur.

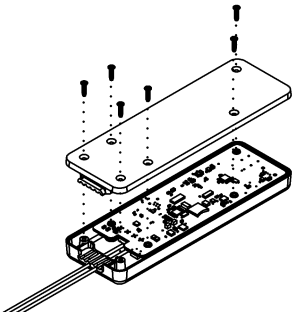
  b. Extend the foot section.
  c. Make sure that the footboard sensor switch is fully connected, and then install the sliding foot cover (D) and its fourteen screws (C) on to the bed (see Step 2 on page 36).
  d. Continue routing the new cable to the reader.

3. Go to "Final Steps" on page 39.

Final Steps

1. Near the reader, remove the cable tie(s) that holds the light assembly cable with the other cables on the bed.
2. Remove the reader from the bed.

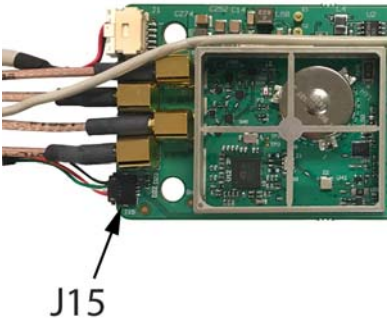
3. Remove the six screws that attach the back cover to the reader.



CAUTION:

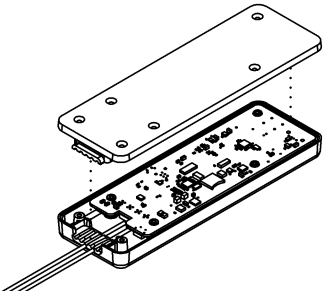
Caution—Failure to wear an antistatic strap could cause equipment damage.

4. Put on the antistatic strap.
5. Remove the P.C. board from the reader.
6. Disconnect the **old** light assembly cable from J15 on the P.C. board, and remove the cable from the bed.



7. Connect the **new** light assembly cable to J15 on the P.C. board.

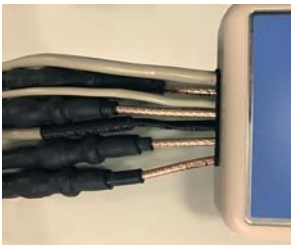
8. Install the P.C. board in the reader.



WARNING:

Warning—Failure to correctly align the gaskets on the covers of the reader could permit fluids to get into the enclosure. Injury or equipment damage could occur.

9. Install the back cover on to the reader. **Make sure the gasket inserts are correctly aligned.**



10. Install the six screws to attach the back cover to the reader.
11. Remove any tape residue from the back cover of the reader.
12. Use the alcohol-based cleaner to clean the back cover of the reader and the area where the reader was installed on the bed. Let the back cover and area dry.
13. Remove one side of the adhesive covering from the double-sided tape gasket, and install the gasket on to the back cover.
14. Remove the adhesive covering from the other side of the gasket, and install the reader on the bed so that its label is toward the outside of the bed.

Firmly press the reader into position for 10 seconds with approximately 75 lb (34 kg) of force.

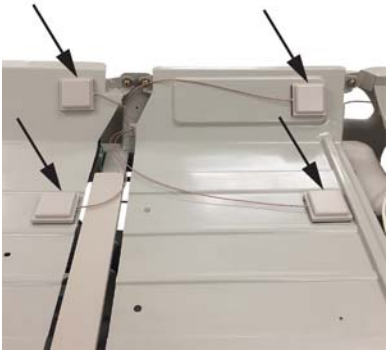
15. The replacement is complete. Do the function checks on page 53 and in the bed's service manual. As you operate the bed's articulation functions, make sure the cables are not in a location where they could get damaged or pinched.

1.4 Antenna Assembly Replacement

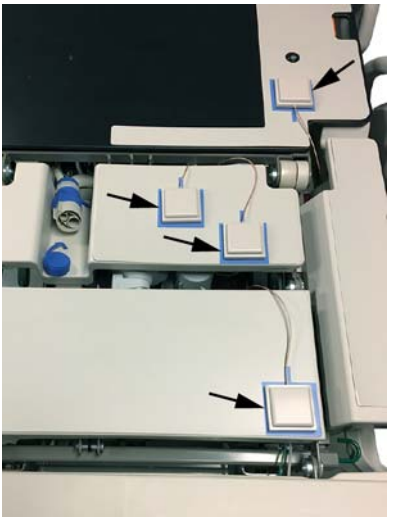
1. Make sure the bed is unplugged and you have done the steps for "Setup" on page 25.
2. Make a note of these:
   - The antenna's location
   - The antenna's orientation
   - The indicator color on the antenna's cable.

   NOTES:
   - The antenna cable lengths are different. The indicator color on the cable will help to make sure the new antenna is correct for its location.
   - The location and orientation of the antenna are very important for the operation of the system.

VersaCare® Bed



Progressa® Bed



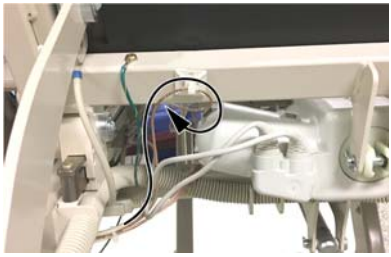
3. Remove the antenna from the sleep deck, and set the antenna aside.
4. Use the alcohol-based cleaner to clean the area where the antenna was removed. Let the area dry.

CAUTION:

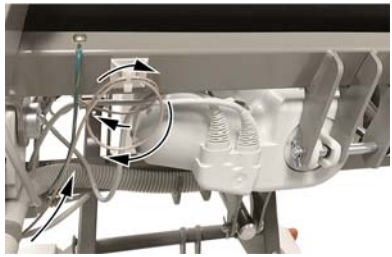
Caution—Make sure to install the new antenna in the correct orientation and location. Otherwise, the antenna may not operate as intended.

5. Remove the adhesive covering from the gasket on the bottom of the **new** antenna, and then install the antenna in the correct orientation and location on the sleep deck. Firmly press the antenna into position for 10 seconds with approximately 75 lb (34 kg) of force.
6. Follow the routing of the antenna cable to the reader, and then use the same routing for the **new** antenna cable. Remove and install cable ties as necessary.
7. **Progressa® Bed**—for the head section antenna, put a service loop in the cable, and **loosely** secure the new cable tie to allow cable movement (see below).

With StayInPlace™ Feature



Without StayInPlace™ Feature



NOTE:

To determine if your bed has the StayInPlace™ Feature, look at the bottom of the Progressa® Therapy label on the intermediate siderail. A bed with the StayInPlace™ Feature will have the StayInPlace™ logo on the label,

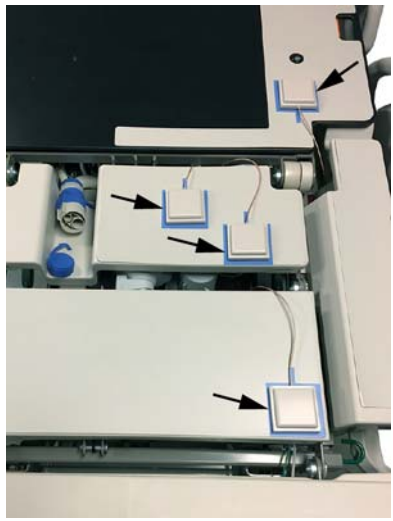
8. Near the reader, remove the cable tie(s) that holds the antenna cable with the other cables on the bed.
9. At the antenna-reader cable to antenna cable connection, remove the heat shrink or insulated tape.

10. Disconnect the antenna-reader cable from the antenna cable.

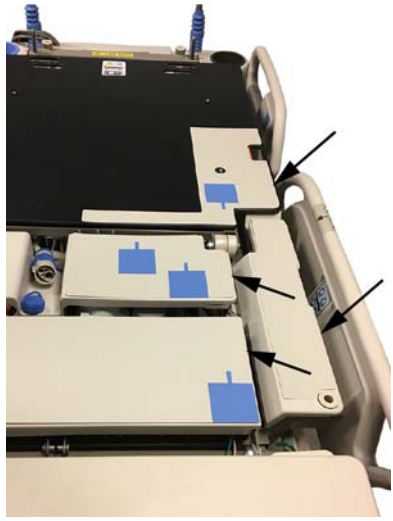
11. Connect the antenna cable to the antenna-reader cable.
12. Put insulated tape over the cable connection.
13. At the cable tie mount(s) near the reader, install a cable tie(s) to hold the cables on to the bed.
14. The replacement is complete. Do the function checks on page 53 and in the bed's service manual. As you operate the bed's articulation functions, make sure the cables are not in a location where they could get damaged or pinched.

1.5 Graphic Replacement for the Head, Seat, and Thigh Sections, and Deck Filler—Progressa® Bed

1. Make sure the bed is unplugged and you have done the steps for "Setup" on page 25.
2. **Head, seat, or thigh section graphic**—remove the antenna(s) from the applicable graphic.



3. Remove the graphic from the sleep deck.

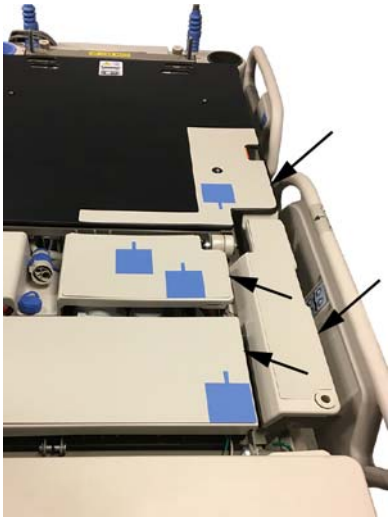


4. Use the alcohol-based cleaner to clean the area where the graphic was removed. Let the area dry.

CAUTION:

Caution—Make sure to install the new graphic in the correct orientation and location. Otherwise, the antennas may not operate as intended.

5. Remove the adhesive covering from the bottom of the graphic, and then install the graphic in the correct orientation and location on the sleep deck.

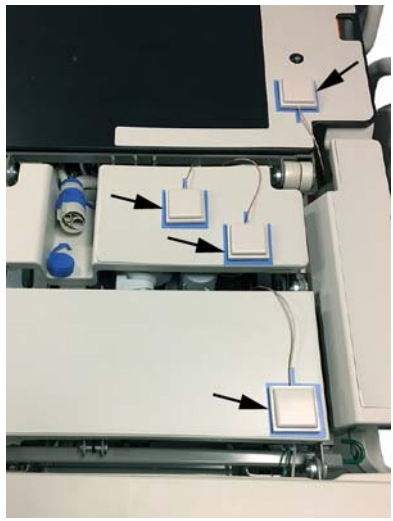


6. **Head, seat, or thigh section graphic**—do as follows:
   a. Remove the gasket and any tape residue from the bottom of the antenna.
   b. Use the alcohol-based cleaner to clean the bottom of the antenna and the graphic blue area where the antenna is to be installed.
   c. Let the antenna bottom and graphic blue area dry.
   d. Remove the adhesive covering from the **new** antenna gasket, and install the gasket on the bottom of the antenna.

CAUTION:

Caution—Make sure to install the antenna in the correct orientation and location. Otherwise, the antenna may not operate as intended.

e. Remove the other adhesive covering from the new antenna gasket. Make sure the antenna is in the correct orientation and location on the graphic. Then, firmly press the antenna into position for 10 seconds with approximately 75 lb (34 kg) of force.



7. The replacement is complete. Do the function checks on page 53 and in the bed's service manual. As you operate the bed's articulation functions, make sure the cables are not in a location where they could get damaged or pinched.

1.6 Equipment Call Cable Replacement

1. Make sure the bed is unplugged and you have done the steps for "Setup" on page 25.
2. Disconnect the WatchCare™ 1/4" communication cable from the equipment call jack and from the bed.
3. Remove the equipment call cable connector from the bed.

VersaCare® Bed

Progressa® Bed

4. Use the alcohol-based cleaner to clean the area where the equipment call cable connector was removed. Let the area dry.

CAUTION:

Failure to install the equipment call cable connector in the correct location could cause equipment damage.

5. Install the **new** equipment call cable connector as follows:
   a. Remove the adhesive covering from the equipment call cable connector.

b. At the location where the old connector was removed, put the **new** connector into position.

- **Progressa® Bed**—make sure the connector is aligned with the head-end edge of the UCB box and the connector's patient-left side is aligned with the patient-left side of the UCB box (box without holes) or aligned with the hole in the box.

UCB box without holes

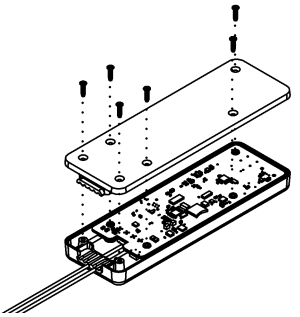
UCB box with holes

- **VersaCare® Bed**—make sure the connector is installed approximately 2" (51 mm) from the patient-left edge of the headboard support.

c. Make sure the connecting pins are away from the bed. Then, firmly press the **new** connector into position for 10 seconds with approximately 75 lb (34 kg) of force.

6. Make a note of the equipment call cable routing from its connector to the reader, and then use the same routing for the **new** equipment call cable. Remove and install cable ties as necessary.
7. Near the reader, remove the cable tie(s) that holds the equipment call cable with the other cables on the bed.
8. Remove the reader from the bed.

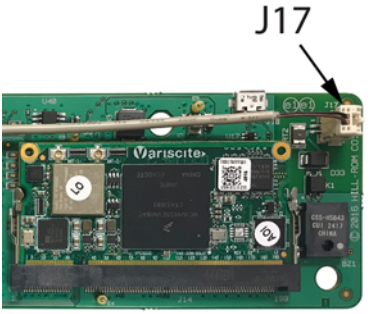
9. Remove the six screws that attach the back cover to the reader.



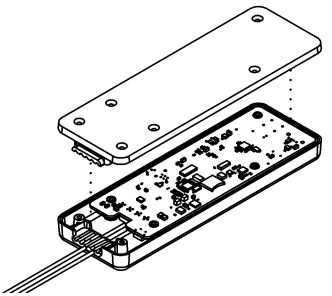
CAUTION:

Caution—Failure to wear an antistatic strap could cause equipment damage.

10. Put on the antistatic strap.
11. Remove the P.C. board from the reader.
12. Disconnect the **old** equipment call cable from J17 on the P.C. board, and remove the cable from the bed.



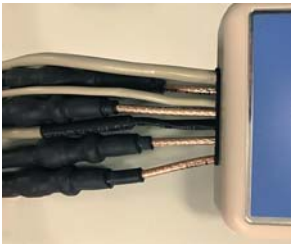
13. Connect the **new** equipment call cable to J17 on the P.C. board.
14. Install the P.C. board in the reader.



WARNING:

Warning—Failure to correctly align the gaskets on the covers of the reader could permit fluids to get into the enclosure. Injury or equipment damage could occur.

15. Install the back cover on to the reader. **Make sure the gasket inserts are correctly aligned.**



16. Install the six screws to attach the back cover to the reader.
17. Remove any tape residue from the back cover of the reader.
18. Use the alcohol-based cleaner to clean the back cover of the reader and the area where the reader was installed on the bed. Let the back cover and area dry.
19. Remove one side of the adhesive covering from the double-sided tape gasket, and install the gasket on to the back cover.
20. Remove the adhesive covering from the other side of the gasket, and install the reader on the bed so that its label is toward the outside of the bed.

Firmly press the reader into position for 10 seconds with approximately 75 lb (34 kg) of force.

21. At the cable tie mount(s) near the reader, install a cable tie(s) to hold the cables on to the bed.
22. Connect the WatchCare™ 1/4" communication cable to the bed and to the equipment call jack.
23. The replacement is complete. Do the function checks on page 53 and in the bed's service manual. As you operate the bed's articulation functions, make sure the cables are not in a location where they could get damaged or pinched.

1.7 Label Replacement

NOTE:

Replace a label if it can not be read or if it is not fully bonded to its location.

1. Remove the label.

CAUTION:

Caution—Failure to clean the label location thoroughly could prevent the label from bonding correctly.

2. Use the alcohol-based cleaner to clean the area where the label was removed. Let the area dry.
3. Install the new label where the old label was removed. Make sure the label has fully bonded to its location.

1.8 WatchCare™ System Function Check

1. Make sure any WatchCare™ smart pads are at least 2 feet (61 cm) from the bed, and then plug the bed in.
2. At the indicator light, make sure the white light comes on solid. This could take up to 2 minutes. If the white light does not come on, check the cable connections. (For more information about the indicator light, see "Indicator Light—Visual Identification" on page 8.)
3. Use the dry pad as follows to make sure the system operates correctly:
   a. Install the sleep surface on the bed. Refer to the bed's service manual.
   b. Put a dry pad on the bed in the correct location and orientation (see "Prepare the System for Use" on page 9), and make sure you hear a beep and the indicator light is solid green. This could take up to 10 seconds.

NOTE:

If the indicator light does not operate as specified, see "Troubleshooting" on page 18.

SPECIFICATIONS

Product Identification

Product Number	Description
P006979	WatchCare™ reader, indicator light, and antennas
P006980	WatchCare™ smart pad

Dimensions

Feature	Dimension
WatchCare™ smart pad	30" x 36" (76.2 cm x 91.4 cm)

Environmental Conditions for Use

Condition	Range
Temperature	50°F to 104°F (10°C to 40°C)
Relative humidity	20% to 85%
Atmospheric pressure	70 kPa to 106 kPa

Environmental Conditions for Transport and Storage

Condition	Range
Temperature	-20°F to 140°F (-29°C to 60°C)
Relative humidity	15% to 90%
Atmospheric pressure	50 kPa to 106 kPa

AC/Mains Power Requirements

Condition	Range
Integrated System	
Rated voltage	24 to 55 V DC
Rated current	0.5 A
Non-Integrated System[a] (not available at this time)	
Rated voltage	24 to 55 V DC
Rated current	0.5 A

a. The non-integrated system uses an XP Power AFM45US24 external power supply that is semi-permanently attached to the bed.

Classifications and Standards

Classification	Standard
Technical and quality assurance standards	IEC 60601-1 ANSI/AAMI ES 60601-1 CAN/CSA-C22.2 No. 60601-1 IEC 60601-1-2 IEC 62366 IEC 60529 ISO13485
Equipment classification per EN 60601-1	Class 1
Degree of protection against electric shock	Type B
Degree of protection against ingress of water	IPX4
Mode of operation	Continuous
Applied parts	Potentially accessible parts are treated as Type B Applied Parts: antennas, indicator light, reader housing, and exposed cables.

ELECTROMAGNETIC EMISSIONS GUIDANCE

CAUTION:

To help prevent equipment damage, obey these cautions:

- **Caution**—This device meets all requirements for electromagnetic compatibility per IEC 60601-1-2. It is unlikely that the user will encounter problems with this device because of inadequate electromagnetic immunity. However, electromagnetic immunity is always relative, and standards are based on anticipated environments of use. If the user observes unusual device behavior, particularly if such behavior is intermittent and associated with nearby use of radio or TV transmitters, cell phones, or electro-surgical equipment, this could be an indication of electromagnetic-interference. If such behavior occurs, the user should try to move the interfering equipment further from this device.
- **Caution**—To safely stop the operation of the system, unplug the bed and/or the external power supply from the power outlet.
- **Caution**—If the system is installed on a non-Hill-Rom bed (this system is not available at this time), the system (ME EQUIPMENT) must be connected to the power outlet (AC mains) by the power cord supplied with the system. This power cord is semi-permanently attached to the bed.

WARNING:

Warning—The P006979 (WatchCare™ reader, indicator light, and antennas) should not be used adjacent to or stacked with other electrical equipment. If adjacent or stacked use is necessary, observe the P006979 and the other electrical equipment to make sure they operate as intended.

Make sure the P006979 operates correctly when it is used near other electronic devices. Portable and mobile radio frequency (RF) communications equipment can affect electrical equipment.

Medical equipment needs special precautions in regard to electromagnetic compatibility (EMC) and needs to be installed and put

into service according to the EMC information supplied in the tables that follow.

Guidance and Manufacturer's Declaration—Electromagnetic Emissions		
The P006979 is intended for use in the electromagnetic environment specified below. The customer or the user of the model P006979 should make sure it is used in such an environment.		
Emissions Test	**Compliance**	**Electromagnetic Environment—Guidance**
RF emissions CISPR 11	Group 1	The P006979 is an intentional radiator of RF energy. Therefore, its RF emissions are low and may cause interference in nearby electronic equipment (see the tables that follow).
RF Emissions CISPR 11	Class A	NOTE: The EMISSIONS characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.
Harmonic Emissions IEC 61000-3-2	Not applicable	
Voltage Fluctuations/ Flicker Emissions IEC 61000-3-3	Not applicable	

ELECTROMAGNETIC IMMUNITY GUIDANCE

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
The P006979 is intended for use in the electromagnetic environment specified below. The customer or the user of the P006979 should make sure it is used in such an environment.			
Immunity Test	**IEC 60601-1-2 Test Level**	**Compliance Level**	**Electromagnetic Environment—Guidance**
Electrostatic Discharge (ESD) IEC 61000-4-2	± 8 kV Contact ± 2 kV, ± 4 kV, ± 8 kV, and ± 15 kV Air	± 8 kV Contact ± 2 kV, ± 4 kV, ± 8 kV, and ± 15 kV Air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
The P006979 is intended for use in the electromagnetic environment specified below. The customer or the user of the P006979 should make sure it is used in such an environment.			
Immunity Test	**IEC 60601-1-2 Test Level**	**Compliance Level**	**Electromagnetic Environment—Guidance**
Electrical Fast Transient/Burst IEC 61000-4-4	± 2 kV (100 kHz repetition frequency) for Power Supply Lines	± 2 kV (100 kHz repetition frequency) for Power Supply Lines	Mains power quality should be that of a typical hospital environment.
Surge IEC 61000-4-5	± 1 kV Line(s) to Line(s) ± 2 kV Line(s) to Ground	± 1 kV Line(s) to Line(s) ± 2 kV Line(s) to Ground	Mains power quality should be that of a typical hospital environment.
Voltage dips IEC 61000-4-11	0% U_T: 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270°, and 315° 0% U_T: 1 cycle and 70% U_T: 30 cycles Single phase: at 0° (See Note)	0% U_T: 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270°, and 315° 0% U_T: 1 cycle and 70% U_T: 30 cycles Single phase: at 0° (See Note)	Mains power quality should be of a typical hospital environment. If the user of the P006979 requires continued operation during power mains interruption, it is recommended that the P006979 be powered from an uninterruptible power supply.
Voltage interruptions IEC 61000-4-11	0% U_T: 300 cycles	0% U_T: 300 cycles	
Power Frequency Magnetic Fields IEC 61000-4-8	30 A/m 60 Hz	30 A/m 60 Hz	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical hospital environment.

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
The P006979 is intended for use in the electromagnetic environment specified below. The customer or the user of the P006979 should make sure it is used in such an environment.			
Immunity Test	**IEC 60601-1-2 Test Level**	**Compliance Level**	**Electromagnetic Environment—Guidance**
Conducted RF IEC 61000-4-6	3 V 0.15 MHz - 80 MHz 6 V in ISM bands between 0.15 MHz and 80 MHz 80% AM at 1 kHz	3 V 0.15 MHz - 80 MHz 6 V in ISM bands between 0.15 MHz and 80 MHz 80% AM at 1 kHz	
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.7 GHz 80% AM at 1 kHz	10 V/m 80 MHz to 2.7 GHz 80% AM at 1 kHz	Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey[a], should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with this symbol. 
Note: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
The P006979 is intended for use in the electromagnetic environment specified below. The customer or the user of the P006979 should make sure it is used in such an environment.			

a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the P006979 is used exceeds the applicable RF compliance level above, the P006979 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the P006979.

Wireless Connectivity Specifications

NOTE:
The WiFi antenna must be installed so that it is at least 8" (20 cm) from all persons and other antennas.

The Wireless Connectivity module supports these security protocols:

Standards

- Wireless Equivalent Privacy (WEP)
- Wi-Fi Protected Access (WPA)
- IEEE 802.11i (WPA2)

Encryption

The Wireless Connectivity module supports these encryption protocols:

- Wireless Equivalent Privacy (WEP, RC4 Algorithm)
- Temporal Key Integrity Protocol (TKIP, RC4 Algorithm)
- Advanced Encryption Standard (AES, Rijndael Algorithm)
- Encryption Key Provisioning Static (40-bit and 128-bit lengths)
- Pre-Shared (PSK)
- Dynamic 802.1X

Encryption Options

- Off
- On
- Auto
- PSK
- WPA-TKIP
- WPA2-PSK
- WPA2-AES
- CCKM-TKIP
- CCKM-AES
- WPA-PSK-AES
- WPA-AES

Extensible Authentication Protocol Types (EAP Types)

- EAP-FAST
- PEAP-MACHAPv2
- EAP-TLS
- PEAP-TLS
- EAP-TTLS
- LEAP
- PEAP-GTC

Regulatory Information

WARNING:

Warning—Changes and/or modifications not expressly approved by Hill-Rom, Inc. could void the user's authority to operate the equipment. Patient safety could be compromised.

The module must be installed and used in accordance with the Hill-Rom use and installation instructions. Hill-Rom is not responsible for any radio or television interference caused by unauthorized modification of the devices included with the Hill-Rom module, or the substitution or attachment of connection cables and equipment other than that specified by Hill-Rom, Inc. The correction of interference caused by such unauthorized modification, substitution, or attachment is the responsibility of the user. Hill-Rom is not liable for any damage or violation of government regulations that may arise from the user failing to comply with these requirements.

USA—Federal Communications Commission (FCC) Radiation Exposure Statement

CAUTION:

Caution—The radiated output power of the WatchCare™ reader is far below the FCC radio frequency exposure limits. Nevertheless, the WatchCare™ reader must be used in such a manner that the potential for human contact during normal operation is minimized. To avoid the possibility to exceed the FCC radio frequency exposure limits, you (or any other person) should—

- **Progressa® and VersaCare® Beds**—Keep a distance of at least 8" (20 cm) from the WatchCare™ reader.
- Keep a distance of at least 0.39" (1.0 cm) from the WatchCare™ antennas.

Interference Statement for FCC

This device complies with Part 15 of the FCC Rules. Operation of the device is subject to these two conditions: (1) the device may not cause harmful interference, and (2) the device must accept any interference that may cause unwanted operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to supply reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If the equipment is not installed and used in accordance with the instructions, the equipment may cause harmful interference to radio communications. There is no guarantee, however, that such interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on), the user is encouraged to take one of these measures to try to correct the interference:

- Move this device.
- Increase the separation between the device and the receiver.
- Connect the device to an outlet on a circuit difference from that of other electronics.
- Consult the dealer or an experienced radio technician for help.

The WatchCare™ reader must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Any other installation or use

will violate FCC Part 15 regulations. Modifications not expressly approved by Hill-Rom could void your authority to operate the equipment.

NOTE:

The WatchCare™ reader must not be co-located or operated in conjunction with any other antenna or transmitter.

Wireless System Characteristics

Characteristic	Description
Frequency Band—2.4 GHz	FCC: 2.4 GHz to 2.483 GHzETSI: 2.4 GHz to 2.483 GHzMIC: 2.4 GHz to 2.495 GHzKC: 2.4 GHz to 2.483 GHz
Frequency Band—5 GHz	FCC: 5.15 GHz to 5.35 GHz, 5.725 GHz to 5.825 GHzETSI: 5.15 GHz to 5.35 GHz, 5.47 GHz to 5.725 GHzMIC: 5.15 GHz to 5.35 GHz, 5.47 GHz to 5.725 GHz (W56)KC: 5.15 GHz to 5.25 GHz, 5.725 GHz to 5.825 GHz
Modulation	BPSK @ 1, 6, 6.5, 7.2, and 9 MbpsQPSK @ 2, 12, 13, 14.4, 18, 19.5, and 21.7 MbpsCCK @ 5.5 and 11 Mbps16-QAM @ 24, 26, 28.9, 36, 39, and 43.3 Mbps64-QAM @ 48, 52, 54, 57.8, 58.5, 65, and 72.2 Mbps
Network Standards	IEEE 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11n
Data Rates Supported	802.11a (OFDM): 6, 9, 12, 18, 24, 36, 48, 54 Mbps802.11b (DSSS, CCK): 1, 2, 5.5, 11 Mbps80211g (OFDM): 6, 9, 12, 18, 24, 36, 48, 54 Mbps802.11n (OFDM, HT20, MCS 0-7): 6.5, 13, 19.5, 26, 39, 52, 58.5, 72.2 Mbps and 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65 Mbps

Characteristic	Description
Transmit Power Settings	802.11a: 6 Mbps 15 dBm54 Mbps 13 dBm (PER - 10%)802.11b: 1 Mbps 16 dBm11 Mbps 16 dBm (PER - 10%)802.11g: 6 Mbps 16 dBm54 Mbps 14 dBm (PER - 10%)802.11n (2.4 GHz): MCS0 Mbps 16 dBmMCS7 Mbps 12 dBm80211n (5 GHz): MCS0 Mbps 15 dBmMCS7 Mbps 12 dBmBluetooth 2 dBm (1.58 mW) (Class 2)

Immunity to Proximity Fields from Radio Frequency Wireless Communications Equipment

In addition to the Radiated RF IEC 61000-4-3 as shown in the table above, the P006979 has been tested as specified in the table below.

Test Frequency (MHz)	Band (MHz)	Service	Modulation
385	380–390	TETRA 400	Pulse modulation 18 Hz
450	430–470	GMRS 460, FRS 460	FM ± 5 kHz deviation 1 kHz sine
710	704–787	LTE Band 13,17	Pulse modulation 217 Hz
745			
780			
810	800–960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation 18 Hz
870			
930			
1720	1700–1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1,3, 4,25; UMTS	Pulse modulation 217 Hz
1845			
1970			

Immunity to Proximity Fields from Radio Frequency Wireless Communications Equipment			
In addition to the Radiated RF IEC 61000-4-3 as shown in the table above, the P006979 has been tested as specified in the table below.			
Test Frequency (MHz)	**Band (MHz)**	**Service**	**Modulation**
2450	2400-2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation 217 Hz
5240	5100–5800	WLAN 802.11 a/n	Pulse modulation 217 Hz
5500			
5785			

RFID Characteristics

Characteristic	Description
Frequency Band	902-928 MHz
Modulation	OOK, frequency hopping amongst 50 channels
Network Standards	EPC Gen 2
Data Rates Supported	400 kBPS

FCC ID

Hill-Rom® Module	**FCC ID**
P006979	2AOL2041115

FCC ID WiFi and Bluetooth®

Variscite Module	**Texas Instruments Module**	**FCC ID**
VS10R5MN5MAEDCL1B	WL18 MODGI	Z64-WL18DBMOD

LIMITED WARRANTY

HILL-ROM COMPANY, INC.
LIMITED WARRANTY

Hill-Rom Company, Inc. (Hill-Rom) has a long tradition of providing superior products and service to our customers. Our goal is "Total Customer Satisfaction". In that spirit, Hill-Rom is proud to offer the following warranty.

GENERAL WARRANTY (APPLICABLE UNLESS A SPECIFIC WARRANTY IS LISTED)

Hill-Rom warrants to the original purchaser that its products and replacement parts shall be free from defects in material and workmanship for a period of one (1) year from date of delivery. Hill-Rom's obligation under this warranty is expressly limited to supplying replacement parts and/or service for, or replacing, at its option, any product which is, in the sole discretion of Hill-Rom, found to be defective. In addition to the foregoing one year warranty, Hill-Rom warrants to the original purchaser that the frame and welds on its products will be free from structural defects for the life of the product. Any product upgrade or modification initiated by Hill-Rom does not affect the original product warranty.

SPECIFIC WARRANTIES

MATTRESS WARRANTIES

Hill-Rom warrants to the original purchaser that its mattress product shall be free from defects in material and workmanship for a period of two (2) years from date of delivery. However, electro mechanical mattress components (compressors, valves, printed circuit boards, hoses, and couplers) are covered by the general one (1) year warranty.

EXPENDABLES WARRANTIES

A sixty (60) day limited warranty from date of delivery applies to expendable parts such as cushions, coverlets, software diskettes, locator badge batteries, dome light incandescent bulbs, overhead fluorescent tubes, heating elements, temperature probes, filter sheets, and microspheres. This warranty is limited to replacement of the parts covered.

TO OBTAIN PARTS AND SERVICE

In the United States, call Hill-Rom Technical Support Department at (800) 445-3720, Monday through Friday. In Canada, call Hill-Rom Technical Support Department at (800) 267-2337, Monday through Friday. Outside the United States and Canada, call your authorized Hill-Rom Distributor. In order to expedite service, we request you furnish the following information: customer identification number, product model number, serial number, and description of problem. A qualified specialist will provide, via telephone (United States and Canada), or FAX (Outside the United States and Canada), troubleshooting assistance for facility personnel and provide necessary parts to make repairs. If troubleshooting determines the need for on-site technical service, a qualified service representative will be dispatched. Replacement of non-technical items will be the responsibility of the customer. If requested by Hill-Rom, products or parts for which a warranty claim is made shall be returned prepaid to Hill-Rom's factory.

OUT OF WARRANTY EXCHANGE POLICY

After the expiration of the original warranty, upon request, Hill-Rom will ship as a replacement, components such as selected: motors and printed circuit boards, for like units returned to Hill-Rom by the original purchaser at a substantial savings. Please call Hill-Rom Technical Support Department for current pricing.

PARTS AVAILABILITY POLICY

Hill-Rom will offer parts for new and remanufactured products for ten (10) years from date of sale; for communications products for five (5) years from date of sale. Note: Some original component parts and assemblies may not be available; functional equivalents may be substituted.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS OF PURPOSE. HILL-ROM'S OBLIGATION UNDER THESE WARRANTIES SHALL NOT INCLUDE ANY LIABILITY FOR LOSS OF PROFITS, DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES OR DELAYS. Some states, provinces, or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply. Any improper or negligent use, any alterations or repairs not in accordance with Hill-Rom's manuals or performed by others in such manner as in Hill-Rom's sole judgment affects the product materially and adversely, shall void these warranties. These warranties do not cover failures due to misuse, abuse, neglect, or lack of routine maintenance. No employee or representative of Hill-Rom is authorized to change these warranties in any way or grant any other warranty unless in writing and signed by a Hill-Rom officer. These warranties provide specific legal rights; but, there may be other available rights, which vary from state to state, province to province, or country to country.

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Hill-Rom Company, Inc., 1069 State Route 46 E, Batesville, IN 47006-9167

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