



REAL-TIME LOCATING SYSTEM

# CareFlow™ Acute Workflow Solutions



# Improve safety + communication to design a better care experience



Workplace violence and caregiver burnout can be very costly to your health system. Each moment spent searching for equipment, colleagues or patients, worrying about a threatening patient, or completing manual data entry takes time away from providing quality patient care.

Your staff are overwhelmed, exhausted, and anxious about what each shift holds. It doesn't have to be this way.

Real-time locating system (RTLS) technology empowers caregivers with tools to find the people and equipment they need, when they need it, signal for help and improve overall workflow. With RTLS, caregivers can focus on what matters most—patient care.

# Help your nurses manage care effectively

Nurses are at the heart of healthcare. Help make their jobs easier with automated workflows powered by RTLS.



## CAREFLOW™ NURSE CALL AUTOMATION

Give time back to your nurses by automating your nurse call system with location data. Nurses wearing RTLS badges can cancel a patient call automatically with their presence, saving time and lessening nurse workload so the focus can be on what matters most: patient care.

## SAFER, MORE HYGIENIC ENVIRONMENT

No cancel button; fewer touchpoints for germs to spread.

## ACCURATE RESPONSE TIMES

Record patient call responses immediately and automatically, eliminating manual data entry and providing accurate, unbiased data for patient satisfaction and safety initiatives.

## DOCUMENTED PATIENT CARE

Know how long your staff spends at the bedside to inform staffing strategies and resource allocation.

## INFORMED UNIT STATUS

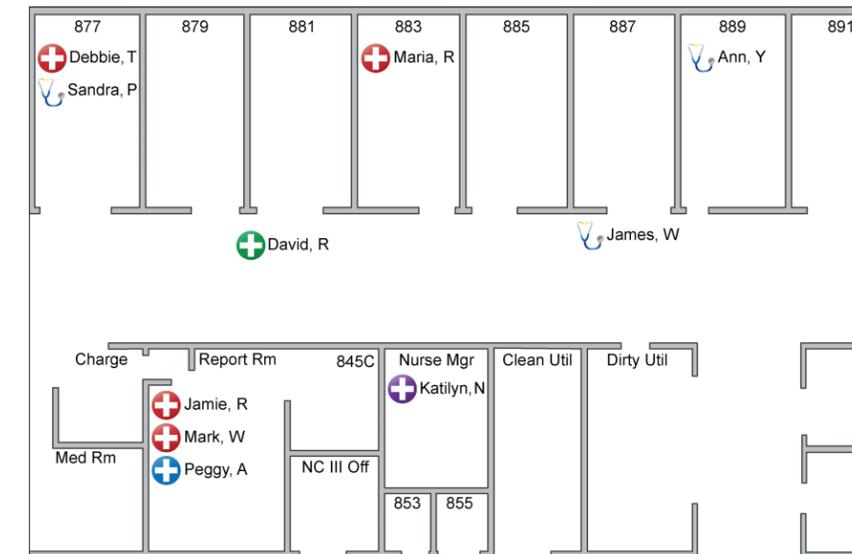
Hallway call lights automatically communicate the location of your clinical staff and which patients are waiting for assistance.

## CAREFLOW RTLS NURSE CALL INTERFACES

CareFlow RTLS interfaces with virtually every nurse call system, saving time and simplifying nurse workload by providing reliable location data.

# Simple add-ons for Nurse Call Automation

Simplify communication and time spent searching for staff with visibility to everyone wearing Midmark RTLS badges.



## CAREFLOW STAFF LOCATING

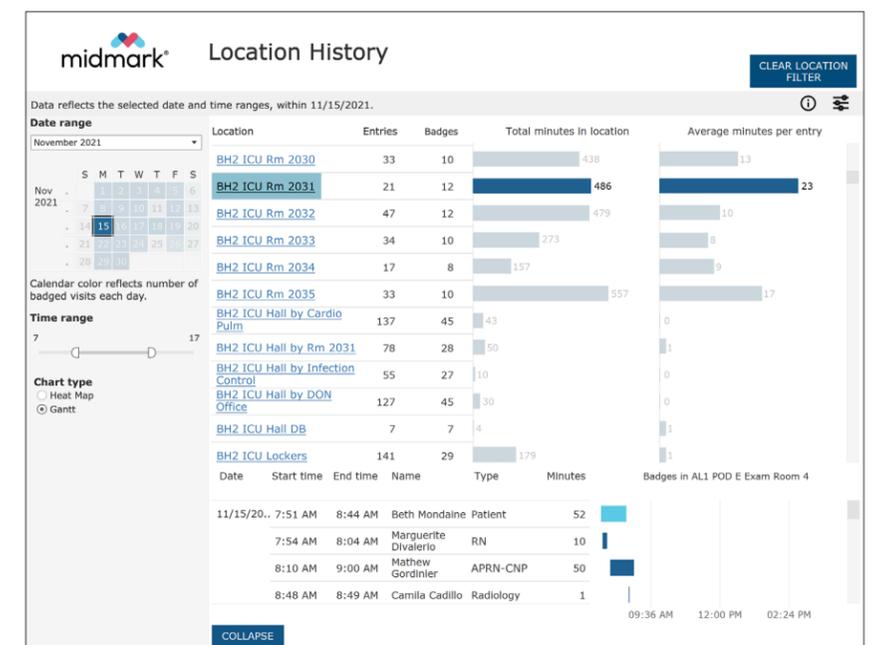
On average, nurses spend only 37 percent of their time with patients, which means their remaining time is spent elsewhere.<sup>2</sup> One of the biggest time wasters for nurses is inefficient communication.

CareFlow shows a real-time view of where staff are in the hospital, reducing time spent searching. Equipping your staff with this knowledge saves steps, frustration and time, and can increase overall productivity.

## CAREFLOW ANALYTICS

Collect valuable data to improve processes and remove bottlenecks to patient care. Our CareFlow Analytics suite is a perfect compliment to the CareFlow Staff Locating and Staff Duress solutions, providing operational intelligence through useful reports such as:

- Contact Tracing
- Staff Calls
- Interactions
- Movement History
- Time in Locations
- Location History



# CareFlow™ Staff Duress

Support a safer environment with a wearable, mobile duress button on the RTLS badge. When the button is pressed, responders are notified in real time.

Type	Badge	Initials	Name	Assist Call Time	Current Location	Time Entered
	60007	AF	Annie Flynn		East Hall	01/08/2024 11:20:58 AM
	60008	BC	Betsy Chilson		West Hall	01/08/2024 11:15:15 AM
	60001	BS	Bobbie Spencer		Exam Rm 1106	01/08/2024 11:16:13 AM
	60002	CR	Carmen Roberts		Exam Rm 1104	01/08/2024 11:16:41 AM
	60010	CB	Catherine Barkley		Triage 1	01/08/2024 11:18:41 AM
	60011	KL	<b>Kate Taylor</b>	11:33:37 AM	South Hall	01/08/2024 11:18:51 AM
	60009	LB	Larry Buxton		Clean Utility	01/08/2024 11:18:32 AM

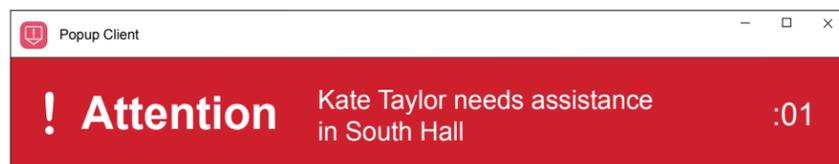
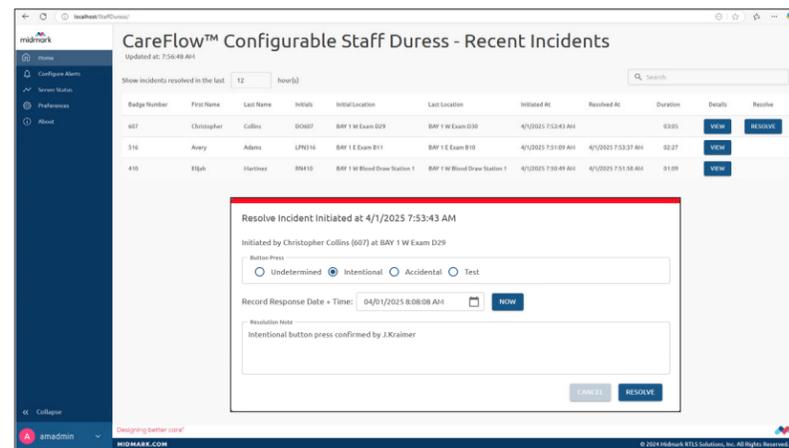
## VISUAL LOCATION CUES

Quickly and easily find staff when they are in need of help with distinct icons and color-coding. When the duress button is pressed, the staff member's icon changes to a red triangle and their name is highlighted in yellow.

## CENTRALIZED INCIDENT MANAGEMENT

The CareFlow Staff Duress application provides a centralized location for security teams to view and resolve duress incidents.

Timestamps of every action logged during a duress incident, including any associated alerts sent to other CareFlow or third-party applications, are captured and viewable.

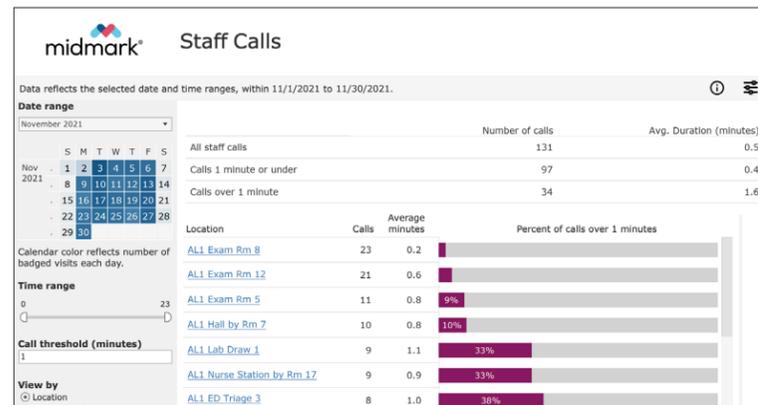


## POP-UP ALERTS

Automated desktop alerts appear on top of open applications—so they're less likely to be overlooked.

## ANALYTICS + BENCHMARKS

Better understand how to improve your incident procedures and make more informed decisions by benchmarking call response times with the Staff Calls report (purchased separately through the CareFlow Analytics suite), which reports on areas of the facility where calls are most frequent, who called for help, day/time of each call and how long each call remained open.



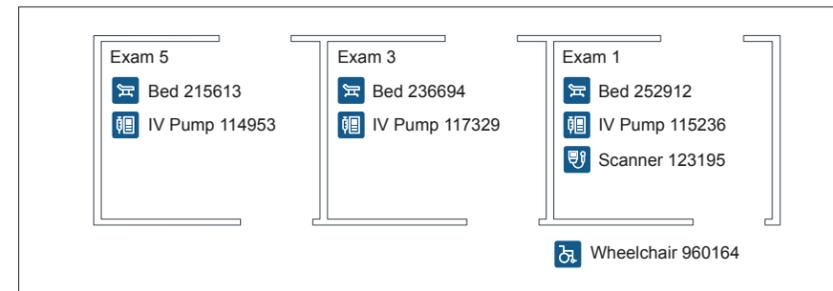
# CareFlow™ Asset Tracking

Leverage CareFlow RTLS to do more with less, improving biomedical and nursing efficiency.

Type	Tag #	Asset ID	Desc.	Location	Time Entered	Manufacturer	Model	Owner	PM Date	Batt. Chg Date
	31007	115236	IV Pump	1st Floor East Exam 1	3/22/22 9:18:14 AM	Baxter	Sigma Spectrum	Pat Trnsprt	3/10/2022	10/10/2022
	31062	117329	IV Pump	1st Floor East Exam 3	3/22/22 10:02:02 AM	Baxter	Sigma Spectrum	Pat Trnsprt	3/10/2022	10/10/2022
	31074	114953	IV Pump	1st Floor East Exam 5	3/22/22 10:15:24 AM	Baxter	Sigma Spectrum	Mat Mgmt	3/25/2022	08/15/2022
	31088	106135	IV Pump	1st Floor East Exam 8	3/22/22 9:15:57 AM	Baxter	Sigma Spectrum	Pat Trnsprt	3/25/2022	08/15/2022

## QUICKLY LOCATE ASSETS

The sortable data on the CareFlow Enterprise View® List allows you to quickly find assets and view preventive maintenance dates as well as other asset details.



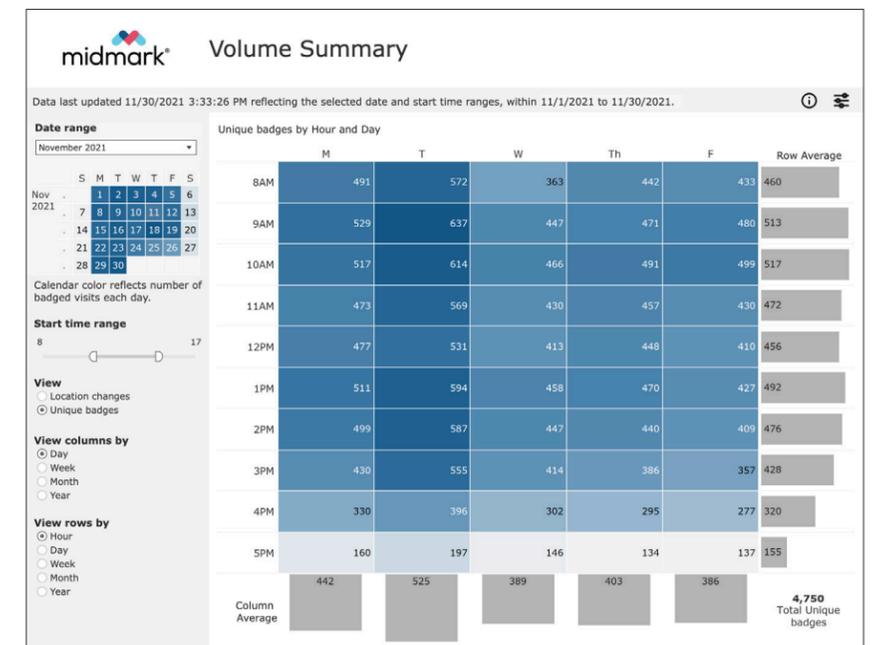
## VISUALIZE ASSET LOCATIONS

CareFlow Enterprise View Floorplans graphically represent the locations of mobile medical equipment in key areas of your facility.

## IMPROVE OPERATIONS WITH HISTORICAL ANALYSIS

Take the guesswork out of asset-related decision making with CareFlow Analytics, including a full suite of reports:

- Movement History
- Location History
- Interactions
- Volume Summary
- Time in Locations
- Inventory + Low Battery



# CareFlow™ Patient Flow

Improve workflow, inform care teams and enhance the delivery of care.

## IN-THE-MOMENT PATIENT STATUS

Quickly find information specific to each ED or OR patient's stage of care on Glance-and-Go digital whiteboards. In the ED, this can include acuity and needed ancillary services such as diagnostic imaging, pulled automatically from the EMR.

In the OR, registration times, stage progression, duration and overall length of stay provide additional insight into surgery operations.

RS	Room	Patient	Acuity	Alone Time	OLOS	Current Location	Nrs	Phy	Nurse	Physician
Exam 1A	Smith, J	2	00:00:35	68:02	Exam 1A	Taylor, F	Jennison, A			
Exam 1B	Rodriguez, I	3		51:18	Exam 1B	Taylor, F	Jennison, A			
Exam 2A	Lee, K	5		45:35	Exam 2A	Indra, J	Billington, J			
Exam 2B	Wellington, D	3	00:02:15	62:18	Exam 2B	Indra, J	Billington, J			
Exam 3A										
Exam 3B	Davidson, P	3	00:05:12	62:18	Exam 3B	Taylor, F	Jennison, A			
Exam 4A	Lopez, M	2	00:01:32	62:18	Radiology	Indra, J	Billington, J			
Exam 4B	Samir, S	3	00:05:57	62:18	Exam 4B	Indra, J	Billington, J			
Exam 5A	Sanders, T	4	00:07:43	53:50	Exam 5A	Taylor, F	Jennison, J			
Exam 5B	Arun, B	4		53:50	Exam 5B	Indra, J	Billington, J			
Exam 6A										
Exam 6B										

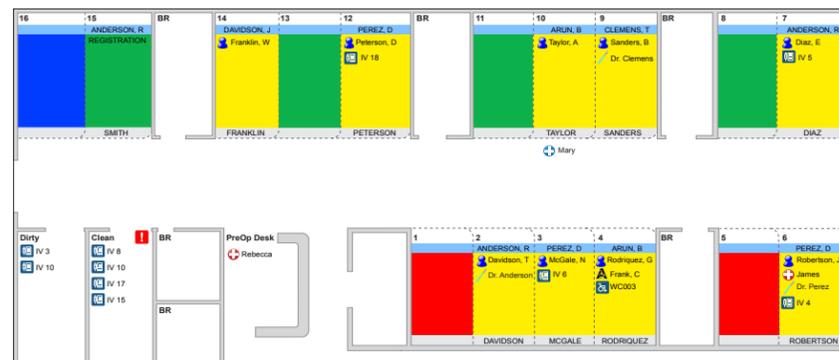
Patient ID	In OR	Surgery Start	Finish	Recovery
6225				✓
0311	✓			
1055		✓		
1266			✓	
5011	✓			

## INFORMED PATIENT PROGRESS FOR ORs

In surgery settings, give families peace of mind. HIPAA-compliant digital whiteboards offer loved ones and family members an overview of each patient's progress as they move through surgery.

## VISUAL INTELLIGENCE FOR ROOM STATUS

Whether in ED exam rooms, OR suites, or in pre- and post-op areas, Midmark's precise locating technology provides sub-room level precision so you can see which rooms or bays are available, occupied or need cleaning.



# Interfaces

Create a complete healthcare ecosystem by interfacing CareFlow RTLS with your EMR, CMMS and other systems. CareFlow RTLS provides an open architecture for seamless system integration.



## ELECTRONIC MEDICAL RECORDS (EMR)

Interface with virtually any EMR, including Epic®. A bi-directional RTLS-EMR integration facilitates data flow from the RTLS to the EMR, reducing manual data entry.

## CMMS SYSTEMS

Reduce search time for mobile equipment by adding real-time location data to your computerized maintenance management system (CMMS) by interfacing with RTLS.

## SMART IV PUMPS

Our smart IV pump interface allows you to know whether or not an IV pump is in use—a perfect complement to our Asset Tracking solution.



## PATIENT ENGAGEMENT

Create a positive, interactive care experience by providing location data to patient engagement systems. As a caregiver enters the patient room, their credentials are displayed on the TV to inform and put the patient at ease.

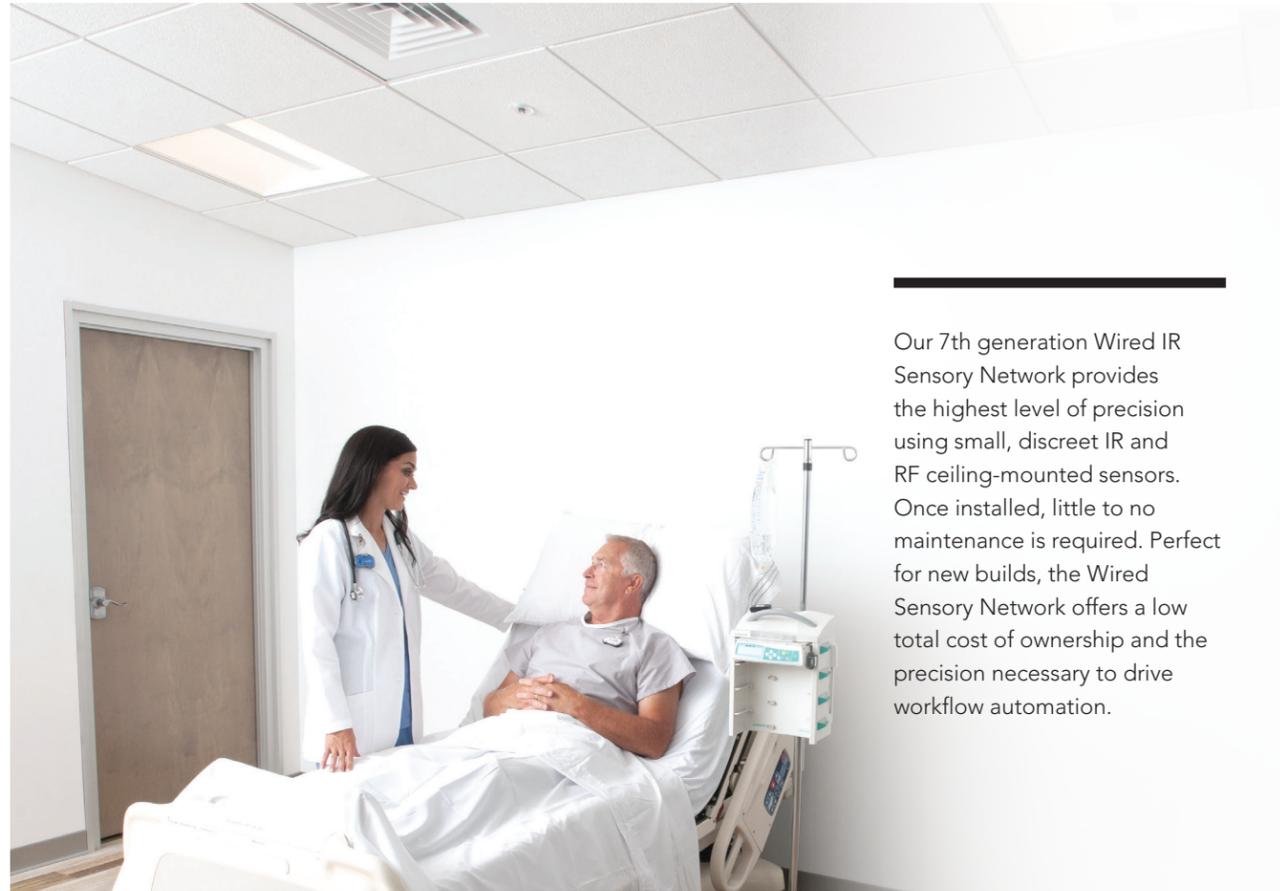
## TEMPERATURE MONITORING

Integrate with Primex® or your environmental monitoring system to view temperature monitoring data along with RTLS data in CareFlow Enterprise View.

## ALARM MANAGEMENT + MESSAGING

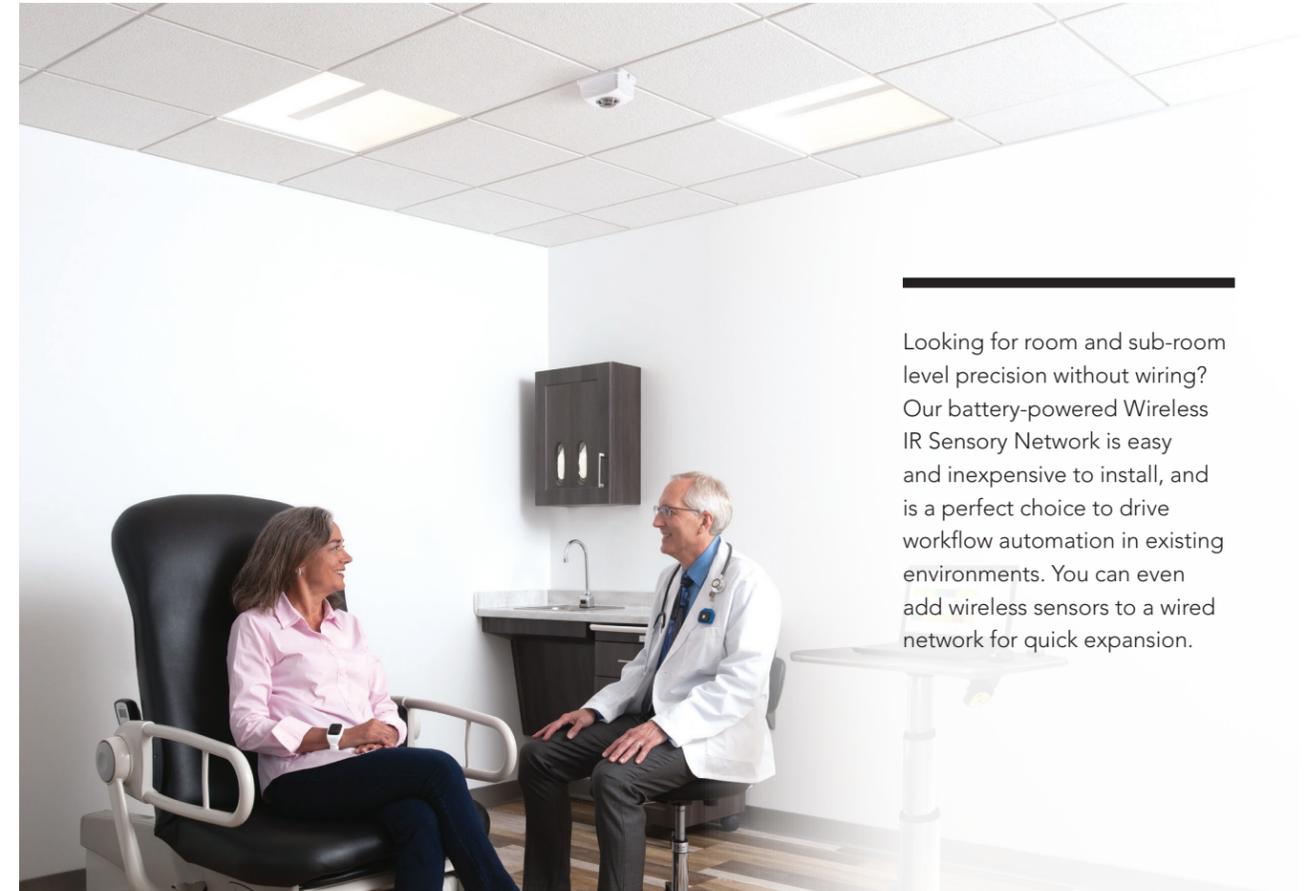
Send notifications from CareFlow RTLS directly to mobile phones and other devices. You can also suppress notifications based on location to reduce noise and alarm fatigue.

# Wired IR Sensory Network



Our 7th generation Wired IR Sensory Network provides the highest level of precision using small, discreet IR and RF ceiling-mounted sensors. Once installed, little to no maintenance is required. Perfect for new builds, the Wired Sensory Network offers a low total cost of ownership and the precision necessary to drive workflow automation.

# Wireless IR Sensory Network



Looking for room and sub-room level precision without wiring? Our battery-powered Wireless IR Sensory Network is easy and inexpensive to install, and is a perfect choice to drive workflow automation in existing environments. You can even add wireless sensors to a wired network for quick expansion.



## WIRED IR SENSORS

Our discreet IR Sensors (2.75"W x 1"D) receive badge and tag signals to create room-, bed- or chair-level locations as small as a 2-foot radius. Sensor Plus includes a USB port to power Bluetooth® Low Energy (BLE) beacons for wayfinding applications.

## WIRED RF SENSORS

In addition to IR Sensors, RF Sensors (2.75"W x 1"D) are placed throughout the facility to receive button push and battery status data from IR/RF badges, Remote Stations and other components.

## COLLECTOR + CONCENTRATOR

The Concentrator (shown, with punchdown block) and Collector (both 5.25"W x 1.625"D x 5.5"H) are the backbone of the Wired Sensory Network. Concentrators receive data from up to four Collectors, which each receive data from up to 24 sensors.

## WIRELESS IR SENSORS

Wireless IR Sensors receive IR signals from IR/RF badges and tags to create locations as small as a 3-foot radius, allowing precision down to chair level. Wireless IR Sensors are battery operated, easy to install and roughly the size of a smoke detector: 6"W x 2.63"D x 5"H

## LINK MODULE

The Link Module is the data conduit for the Wireless IR Sensory Network, receiving sensor data and passing it to the Gateway. It also acts as an RF sensor. At 2.23"W x 1.52"D x 1.52"H, Link Modules are compact and plug into AC wall outlets for easy installation.

## GATEWAY

The Gateway receives all IR and RF data from the Link Modules. It aggregates location data, and then sends it via Ethernet to an on-premises server for distribution to workstation computers. Dimensions: 6.25"W x 2.25"D x 4.95"H

# Clearview™ Badge



Our IR/RF Clearview Badge sets the standard for durability and accuracy. With superior battery life and a functional, easy-to-wear design, Clearview stands the test of time.

# Clearview™ Mini Badge



Looking for more wearable options? Clearview Mini is our most versatile badge: same IR/RF technology as the Clearview, with four wearable options. Clearview Mini is best suited for patient flow applications in outpatient clinic and acute care settings.



## PRECISE LOCATING, LONG LIFE

Powered by lithium coin cell batteries, superior battery life of up to two years sets the Clearview Badge apart.



## A DURABLE, COMPACT DESIGN

Clearview is easy-to-wear and non-invasive. It's compact (1.65"W x 0.55"D x 2.44"H) and lightweight (1.06 oz, battery included). The badge button is programmable, typically used to signal for assistance.



## MULTIPLE COLOR CHOICES

Choose the color that matches your facility, or creatively color code badges based on staff roles. The possibilities are endless. Clearview comes in White, Red, Blue, Yellow and Green. Custom options also available.



## FOUR WEARABLE OPTIONS

Clearview Mini can be worn on the wrist using our silicone accessory (sold separately), a hospital wrist band, or on the lapel using the included clothing clip or our silicone accessory (sold separately).



## YOUR CHOICE OF CONFIGURATION

For Staff Duress or other assistance options, Clearview Mini is available with an optional button. Silicone accessories come in White, Charcoal Gray, Pink and Blue.



## SUPERIOR BATTERY LIFE TO DISPOSABLE BADGES

Compared to disposable badge options on the market, Clearview Mini boasts three times the battery life (up to 90 days)—at a fraction of the cost.

# IR Asset Tags



Leverage the same IR sensory network used for Nurse Call Automation and Patient Flow to find equipment for patient care and preventive maintenance.



## ASSET TAG

A reliable IR RTLS tag for room-level (or better) accuracy. Exceptional battery life of up to two years, depending on time in motion. Dimensions: 1.38"W x 0.56"D x 2.41"H



## MINI ASSET TAG

Same locating technology and precision in a smaller size. Exceptional battery life of up to two years, depending on time in motion. Dimensions: 1.25"W x 0.73"D x 1.75"H

## EQUIPMENT TO TAG

Asset tags can be used on mobile assets, such as:

- IV Pumps
- ECGs
- Case Carts
- Wound Carts
- Stocking Carts
- Rapid Response Carts
- Wheelchairs
- Vein Finders
- Mobile Radiology Equipment
- Ultrasound Machines
- Wound Vacs
- Sequential Compression Devices

# Additional Accessories

Enhance your RTLS investment and equip your facility or health system with these additional accessories for the Wired and Wireless IR Sensory Networks.



## ADA BADGE STORAGE CABINET

Place IR/RF badges in a "non-active" zone and preserve battery life. Meets Americans with Disabilities Act (ADA) standards for accessible design. Available in wired and wireless configurations.



## ADA BADGE DROP BOX

Make returning IR/RF badges easy with our ADA-compliant Badge Drop Box, which updates CareFlow™ RTLS and automates many aspects of the patient discharge process. Available in wired and wireless configurations.



## REMOTE STATION

The Remote Station is a small, wireless RF device that can be mounted on a wall or other surface to initiate a preprogrammed response (e.g., identify room status as clean/dirty, call for vital signs, call for staff assist).



## FOCUS KIT

Looking to focus your IR sensors for increased precision? Our inexpensive Focus Kits easily configure Wired and Wireless IR Sensors to achieve bed- and chair-level precision.



## RACK MOUNT SYSTEM

Integrate your Midmark RTLS Wired IR Sensory Network with your existing rack mount architecture using our Rack Mount System for Collectors and Concentrators.



## BADGE TESTER

Check the status of IR badges or tags using our hand-held Badge Tester. The LCD screen shows a reading of badge/tag ID number, battery state, IR signal type, motion state and alarm state.

# Hybrid Technology Asset Tags



Our hybrid technology asset tags complement your IR network and existing Cisco® infrastructure, making RTLS quick and easy to deploy. Combining the trusted precision of infrared with Bluetooth® Low Energy (BLE) or Wi-Fi signaling, you can install IR sensors where needed for precise location, then rely on your Cisco network elsewhere to determine the tag's location.



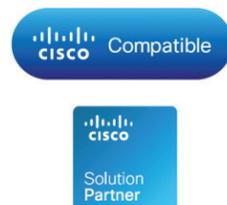
## BLE/IR ASSET TAG

The BLE/IR Asset Tag communicates location using both BLE and IR signals, allowing you to leverage your Bluetooth-capable infrastructure while supplementing with an infrared sensory network where precise location data is required. Up to one year of battery life.



## WI-FI ASSET TAG

The Wi-Fi Asset Tag combines IR and Wi-Fi RTLS for hospital-wide visibility, plus precision locating where you need it. Up to 18 months of battery life.



# Choosing the right RTLS technology

Mix-and-match locating technologies to suit your needs

SENSORY NETWORK	Wired IR	Wireless IR	BLE	Wi-Fi
LOCATION METHOD	Infrared	Infrared	Bluetooth® Cisco® Spaces	WiFi Cisco® Spaces
GRANULARITY	Room/Bed/Chair Level	Room/Bed/Chair Level	Near Room-Level (<5 meters)	Zone-Level (5-15 meters)
POWER SOURCE	Low Voltage Wiring	Battery	AC/PoE	AC/PoE

## WHICH TECHNOLOGY DO YOU CHOOSE? IT DEPENDS ON PRECISION DO YOU NEED.

**Infrared** uses a sensor in each location to provide highly accurate room-, bed- and chair-level locating for use cases where a person or asset needs to be definitively located:

- Nurse Call Automation
- Patient Flow
- EMR, Patient Engagement and other interfaces

**Bluetooth Low Energy (BLE)** technology is less expensive to deploy and uses an algorithm to estimate the location of a badge or tag to the near-room level (within 5 meters). Due to the low-power nature of BLE signals, badges and tags are often smaller, or have long-lasting battery life. BLE technology is suitable for use cases where definitive room-level location is not required:

- Asset Tracking
- Staff Duress

**Wi-Fi** technology is similar to BLE in that the location of a badge or tag is estimated; however, Wi-Fi signals are battery-intensive, leading to a larger tag size and lower battery life, while the range of precision is much greater (between 5-15 meters). At Midmark RTLS, we recommend Wi-Fi locating only for Asset Tracking.

**Hybrid RTLS** technology combines the room-level or better location precision of infrared with either BLE or Wi-Fi. When badges and tags emit both an IR signal and a BLE or Wi-Fi signal, you can:

- Deploy an infrared sensory network in patient rooms and hallways for Nurse Call Automation, Patient Flow and other room-level use cases.
- Elsewhere, rely on your compatible Cisco® Wi-Fi network to complete your facility-wide RTLS initiative for Asset Tracking and Staff Duress.

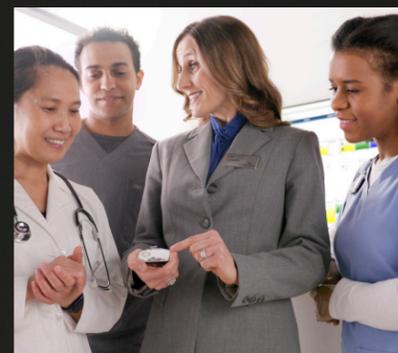


# What you get with Midmark



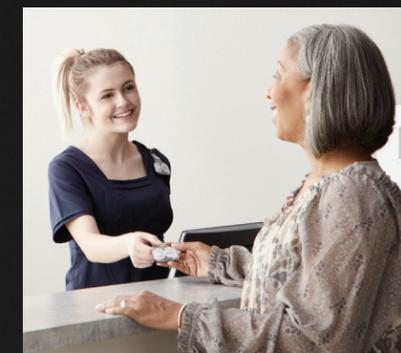
## **SUCCESS COACHING + EXPERT PROJECT MANAGEMENT**

Our Success Coaches are with you every step of the way, pre-sale to post-go-live, helping you with decision making, change management and process improvement using RTLS data. They'll work together with our highly knowledgeable in-house clinical experts and regionally-certified System Integrators, using a proven methodology for successfully deploying CareFlow RTLS in the clinical environment.



## **COMPREHENSIVE EDUCATION, IN-PERSON + VIRTUAL**

An experienced nurse educator from our Clinical Solutions team or your local System Integrator will conduct onsite training for super users on best practices for wearing badges, using software and running reports. For our Advanced Patient Flow customers, we also provide System Analyst education that enables your team to configure and support the system. In addition, on-demand virtual tutorials are available through our online knowledge base.



## **EXTENSIVE, TIME-TESTED WORKFLOW EXPERTISE**

For more than three decades, we've helped health systems improve operations and create better experiences for patients, nurses, providers and staff. From simple asset tracking to complex patient flow solutions, which we pioneered more than 15 years ago, Midmark RTLS and our nationwide network of local support offers the proven expertise your health system needs to catalyze positive change using accurate, reliable technology.



Designing better care.®

Midmark RTLS is an ISO 9001 Certified Company.

For more information or a demonstration, contact 1.800.MIDMARK, or call Midmark RTLS directly at 1.877.983.7787. Visit our website at [midmark.com](http://midmark.com).

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