

HI-Paradigm

FEATURES & SPECIFICATIONS

HOWARDTM
MEDICAL

www.howard-medical.com | 877.856.6441



We've put the pieces
together
superior technology integrated with
the elements of skilled healthcare



hi-paradigm

APPLICATIONS

Howard Medical carts are the mobile computing solution for applications including:

ACUTE PATIENT CARE	LONG TERM PATIENT CARE	MEDICATION ADMINISTRATION
EMERGENCY ROOM	PACS	RESPIRATORY
PHLEBOTOMY	ELECTRONIC MEDICAL RECORDS	ADMISSIONS/ REGISTRATION

IMPROVED WORKFLOW

Enhance workflow and efficiency by teaming the HI-Paradigm cart with our Transfer Cart or Med Hub. Thanks to our innovatively designed, interchangeable drawer system, you can move medication from the pharmacy to the patient floors easily with the Transfer Cart, and store the extra medication-filled cassettes in the locking Med Hub. When ready for a med pass, switch the cassettes over to your HI-Paradigm for easy transport to patient rooms. One trip to the pharmacy ensures that nurses have the proper medication needed to last the entire day.

future ready

demands on healthcare systems

are ever-changing and at Howard we understand that fact. To that end, we've built our Howard cart systems with what we term the "future-ready" concept. This allows you to equip your cart with only what you need now, and then easily and cost-effectively upgrade it in the future as your needs change.

at howard medical,

We've designed our carts with the healthcare setting clearly in mind; with a range of features expressly integrated to ease workloads for nurses and other healthcare professionals, as well as enhance patient care. Engineered to meet the exacting requirements of the healthcare industry, and built for durability, our HI-Paradigm cart makes the ideal workmate. It can be used in a variety of applications, but it is most commonly used for medication administration. We are confident that you and your staff will appreciate the benefits highlighted in this guide.

WORK SURFACE

Our carts' work surface was designed with both ergonomics and patient care in mind. Measuring approximately 2 ft², the HI-Paradigm's work surface is one of the largest in the medical industry. It's highly resistant to scratching and fingerprints, and can be easily disinfected with a chlorine bleach solution, or completely removed for autoclave disinfection. It also has a raised edge that surrounds the surface to capture spills and prevent items from falling off onto the floor. For added protection, the work surface can be locked to secure your notebook or tablet from theft or unauthorized access.



cart features

BIFOCAL FRIENDLY

Understanding the customer's needs is important to us. For this reason, our LCD carts feature a monitor arm that allows the monitor to be moved closer in or farther away, tilted, or otherwise adjusted for optimum viewing. This design benefits bifocal wearers, or anyone with end-of-day eyestrain, and ensures that the critical data you work with is easy for you to see. Reduce overhead glare with just one simple movement, and keep eyestrain to a minimum.



FULL SIZE KEYBOARD

While other cart manufacturers provide only a single-centered rail for their keyboard, the keyboard and mouse tray on our carts is supported by a precision ball-bearing rail system on both the right and left sides for increased stability. Our retractable keyboard tray, which measures approximately 18"W x 7.25"D x 1.85"H, accommodates a full-size keyboard and can be locked in the "out" position, to prevent it from moving while you work. We've provided a separate mouse surface that is approximately 6.38"W and 7"D that can be used on either the right-hand or left-hand side of the cart and stored under the keyboard tray during transport or non-use.

WRAP-AROUND STEERING

The HI-Paradigm's 270 degree, ergonomically designed handle makes steering it a breeze. While most carts have only one small handle, our cart handle is easily accessible from multiple sides. This allows busy healthcare workers to grab the cart quickly, without having to stop to locate the handle.



HEIGHT ADJUSTMENT

We realize that not everyone is a standard height, and we kept that in mind when designing the HI-Paradigm cart. Our carts can be raised or lowered easily so that individual caregivers can find the perfect working height while standing. The work surface can be raised to a height of approximately 46" or lowered to approximately 38.5" with the touch of a button. This height adjustment range accommodates nearly 95% of human statures.

KEY FEATURES

- One touch adjustment
- Soft start/soft stop
- Extremely quiet motor
- Power to lift accessories
- Maximum reliability

EASE OF MOVEMENT

Moving HI-Paradigm carts is an almost effortless task. Thanks to their dual-wheel, low friction, and precision ball-bearing casters it takes only 2.5lbs of force to move one of our carts. The cart's open base sits on four durable casters that swivel 360 degrees (front casters have locking capabilities).

FOOTPRINT

Howard Medical realizes that cart size (footprint) is critical. Our HI-Paradigm carts were engineered to create the ideal balance between a small footprint and stability. With dimensions of 17.25"W x 20"D, each cart base is perfectly proportioned in relation to overall cart size for easy maneuverability. The space between the two front casters leaves room enough for clinicians to sit at the cart while working, and to walk behind the cart without kicking it.



KEY MOBILITY FEATURES

- Unobstructed view with tilt monitor
- Cut-out allows for added walking space
- Movable with only 2.5lbs of force
- High reliability, ball-bearing caster construction
- Electrostatic ground strap prevents static electricity

EASY UPKEEP

Mild commercial cleaning solutions and disinfectants, applied with a sponge, damp cloth, or paper towel, are typically all you will need to keep your HI-Paradigm cart spotless.





PC COMPARTMENT

The HI-Paradigm's PC compartment is located directly beneath the cart work surface, which can be removed for easy installation of your computing device. It includes 6 AC plugs and a convenient cable management compartment. The PC compartment is designed to house notebooks and many small form-factor computing devices, as well as to provide the necessary protection for your equipment. First, it has an aluminum base that effectively dissipates heat, allowing your computer to maintain operation within a normal temperature range, without the aid of additional cooling fans. And, second, it's lockable to deter theft and unauthorized access.

KEY FEATURES

- Easily install and integrate notebooks and many small form factor computing devices
- Secure, lockable work surface prevents theft and tampering
- Aluminum base acts as a heat sink

STATUS INDICATOR

The easy-to-read battery status indicator, which is located on the back left-hand side of the work surface, gives the user real-time updates on the status of the battery. An audible alarm signals when the cart battery's power reserve is low, and can be temporarily disabled using the alarm silence button.

CABLE & CORD MANAGEMENT

Years of experience in the healthcare industry have enabled us to master cable management and peripheral compartmentalization. Our unique cart design features an integrated cable management compartment on the rear of the cart where excess cabling and power adapters can be neatly stored in a well-arranged and tangle-free configuration. This design also prevents cables from being accidentally disconnected, or from getting caught on doorknobs or other hospital equipment during transport. The coiled power cord stretches to about 8' in length and is equipped with a hospital grade plug. For added convenience, a storage hook is located at a convenient height to secure the power cord while the cart is in motion.

KEY FEATURES

- Power cord can be easily removed for cleaning or replacement
- Cable management compartment for easy integration of multiple devices
- No excess cords hanging from cart

TOOL-LESS BATTERY REPLACEMENT

Functional simplicity is at the core of our cart design. As a result, many of the tasks related to cart usage require only a basic introduction and minimal instruction. Changing the battery in a Howard cart is one such task. It's a quick and easy, no-tool process that takes less than 3 minutes—another example of cutting-edge design that saves you time!



options

COLOR OPTIONS

Howard medical offers several color options, as shown here. Some facilities use different colors for their carts to indicate usage in specific areas such as Pulmonary, or Pediatrics, etc. Custom colors are available with a minimum quantity of 25.



Green/Blue



Gray/Blue



White/Blue



White/Gray

ACCESSORIES

To maximize productivity and make your job easier at the same time, we've prepared specialized accessories for use with your Howard cart. Choose from sharps container and BP monitor mounts to bar code and document scanners, configurable drawer storage, and more.



Bar code scanners
Offer all leading brands including HHP, Symbol, and Welch Allyn



BP monitor mount
Universal pole mount design accommodates most brands and models



Mini waste bin



Dual monitor mount



Notebook lock
6.5ft cable, combination style



Notebook security shroud
14.5"W X 12.75"W X 1.68"H



Sani-wipe holder
Accommodates all models that include appropriate mounting brackets



Sharps container
Multiple sizes and brands available
Bracket accommodates most sizes



Small form factor mount
Fits computers 2.8" - 5" thick and 10.8" - 18" long



Cup dispenser
available in small or large sizes



Universal mounting arm with document scanner
Accommodates many document scanners



Hand sanitizer bracket



USB wireless adapter
Mounts to monitor



Wire basket
available in small or large sizes

If your customization needs cannot be found here, we can create a custom design solution for you.

power system options

We designed our HI-Paradigm carts around a Tripp-Lite brand, hospital grade power system. It's a 3-in-1 unit in which a single modular unit performs the tasks of an inverter, a battery charger and an isolation transformer. And, in the unlikely event of a power system failure, simply remove two panels to access the inverter and perform a swap. One trained technician can typically accomplish a complete power system replacement in less than 20 minutes.

Significant advantages of this modular system include:

1. Proven, high quality performance—our choice was based on Tripp-Lite's upstanding reputation for quality, service, and performance.
2. No need to ship the cart back
3. Easy to service- no need to tip the cart on its back or side to access the most important components. This alleviates the need for two technicians and the possibility of damaging the cart or computer hardware.
4. Minimal training is needed to test or replace a power system.

SLA BATTERY

Howard Medical introduces its new high efficiency power supply system for Sealed Lead Acid batteries. The HC120 form Tripp-Lite provides 85% output efficiency, a 10A charger, and a 120W pure sine wave output.

- **High output efficiency (85% efficiency)**
- **Long runtime- up to 11.2 hours on a 55Ah for typical configurations**
- **High cycle life from battery**
- **2 battery sizes available- 55Ah (39lbs) and 33Ah (25lbs)**
- **Quiet, reliable fan-less design**
- **Compliant with UL 60601 standards**
- **Data logging**
- **Multi-level low battery warning alarm**
- **Universally compatible output (120 VAC)**

OR

NEW LITHIUM PHOSPHATE BATTERY

Howard Medical introduces its new power system based on Lithium Iron Phosphate technology. It includes a 40Ah battery that can deliver 2500 cycles (about 10 times that of most SLA batteries) down to 80% capacity at 100% depth of discharge per cycle. The battery is accompanied by our new Tripp-Lite HC150 power system, specifically designed with this battery in mind. It has up to 85% output efficiency, a 20A charger, and a 150W pure sine wave output.

- **Very long battery life- High cycle life**
- **Fast charging (100% recharge in about 2 hrs)**
- **Durable**
- **Safe**
- **Universally compatible output (120 VAC)**
- **Lower cost of ownership**
- **High energy density/Light weight**
- **Recovery from prolonged discharge**
- **Data logging**
- **Multi-level low battery warning alarm**

locking options

With Howard Medical's innovative storage options, you will be sure to get the features you want with the capacity you need. For added security, we offer three different types of locking mechanisms:

ADVANCED ELECTRONICS used for medication dispensing. Derived from years of research, this locking system is the most advanced and secure option available and includes an electronic controller with USB computer interface, a 10 digit keypad, open and closed position sensors, safety catch locking mechanisms, 500 user IDs and the capability to remotely manage the cart configuration and user IDs. Our Med Manager's software interface displays onscreen graphical controls and drawer status. Howard Medical's Advanced Electronics locking system is equipped with an automatic re-lock feature that is programmable from 1 second to 3600 seconds. Drawers and patient bins can be opened by entering a user ID four different ways: keypad, optional touch screen monitor, keyboard or mouse.

A second electronic lock can be added to drawers in any of the top three tiers, providing secure storage for narcotics. Access to these double locked drawers requires entry of an additional Narc code. Electronic sensors combined with Med Audit software allow drawer and patient bin openings to be tracked so that supervisors will know who has had access to patient medications and how long individual bins and drawers were open. As an added feature, advanced electronics also has a key override bypass, which will prevent a medication lock-out in case of a computer failure.

BASIC ELECTRONICS used for medication dispensing. Similar to the Advanced Electronics, Howard Medical's Basic Electronics offers a narcotic locking feature, adjustable automatic re-locking and up to 50 programmable user IDs. This locking mechanism opens and locks drawers and patient bins with the easy-access keypad built into the steering handle.

NON-LOCKING DETENT used when extra space is needed but security isn't an issue. Our engineers designed these drawers with a detent catch, so they will open when you want them to and not when you don't—such as when the cart is in motion and during sudden stops.

ADVANCED & BASIC ELECTRONICS

UPPER STORAGE OPTIONS

2-Tier Cassette (4, 6, or 8 patient bins)
1-Tier Cassette (2, 3, or 4 patient bins)

4.13"W			
16"W x 5.5"H x 12"D			

2-Tier Cassette (4, 6, or 8 patient bins)
1-Tier Drawer

5.5"W		
16"W x 2.75"H x 12"D		

1-Tier Cassette (4, 3, or 4 patient bins)
2X 1-Tier General Storage Drawers

8.25"W	
16"W x 2.75"H x 12"D	
16"W x 2.75"H x 12"D	

1-Tier Cassette (2, 3, or 4 patient bins)
1X 2-Tier Bulk Storage Drawer

4.13"W			
16"W x 5.5"H x 12"D			

3X 1-Tier General Storage Drawers

16"W x 2.75"H x 12"D		
16"W x 2.75"H x 12"D		
16"W x 2.75"H x 12"D		

1X 1-Tier-General Storage Drawer
1X 2-Tier Bulk Storage Drawer

16"W x 2.75"H x 12"D	
16"W x 5.5"H x 12"D	

ADD-ON STORAGE OPTIONS

2X 1-Tier General Storage Drawers

16"W x 3"H x 7.5"D
16"W x 3"H x 7.5"D

1X 2-Tier Bulk Storage Drawer

16"W x 6"H x 7.5"D

NON-LOCKING DETENT

UPPER STORAGE OPTIONS

3X 1-Tier General Storage Drawers

16"W x 2.75"H x 12"D
16"W x 2.75"H x 12"D
16"W x 2.75"H x 12"D

1X 1-Tier General Storage Drawer
1X 2-Tier Bulk Storage Drawer

16"W x 2.75"H x 12"D
16"W x 5.5"H x 12"D

*ADD-ON STORAGE OPTIONS

1X 1-Tier General Storage Drawer

16"W x 3"H x 7.5"D

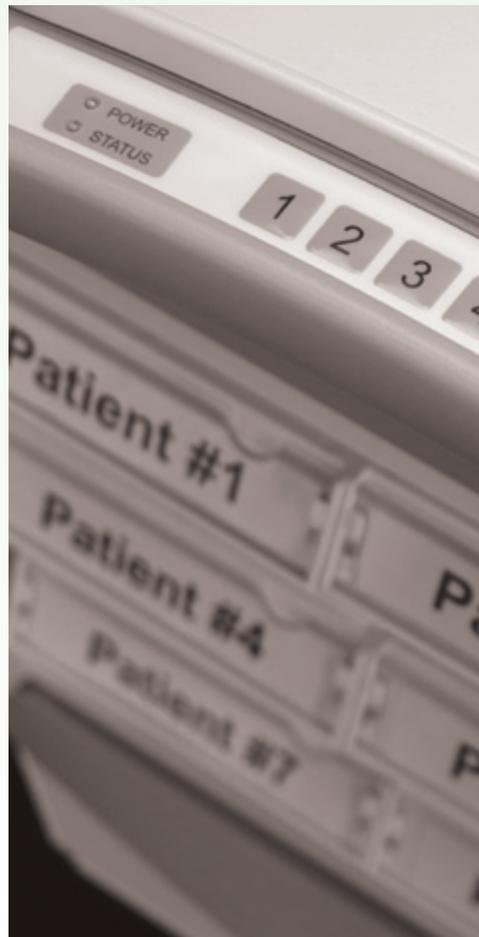
2X 1-Tier General Storage Drawers

16"W x 3"H x 7.5"D
16"W x 3"H x 7.5"D

1X 2-Tier General Storage Drawer

16"W x 6"H x 7.5"D

*Also available as key-locking



POWER MANAGEMENT

CLINICAL ASSISTANT Provides the clinician with vital information about the cart power system in a concise, non-intrusive manner. This is designed for use with Power Display software. The primary feature of our Clinical Assistant software is to provide a battery level indicator with a 10-step resolution along with a charge status indicator. This software will also provide messaging logic designed to guide the clinician in proper charging procedures.

POWER DISPLAY Provides the user with a browser based graphical, on-screen interface displaying various parameters of the med cart power system. Functionality includes data display, data logging, event logging, and event based alarms.

POWER SYSTEM REMOTE MONITORING An enterprise-level device monitoring, control and inventory application. This web-based application allows you to monitor and control up to 1000 devices (depending on the license purchased) from a single console. Some of the features include: real-time alarm monitoring, extensive reporting capability including automated report generation and delivery via email, and configurable hierarchy structure to allow you to group devices by location, type or function.

MEDICATION MANAGEMENT

MED DISPLAY Provides the user with a PC-based graphical, on-screen user interface on a personal computer that has been integrated with the cart. The software can also be used for accessing the locked storage compartments on a cart.

MED DISPLAY LITE provides the basic electronics user with the ability for password protected local cart management features. The software can also be used for accessing the locked storage compartments on a cart.

MED MANAGER Provides remote management to carts running med display software. It provides the ability for an administrator to manage or maintain user lists and cart settings on any number of med carts within their network.

MED AUDIT Maintains a record of all transactions that occur when the cart is locked and unlocked. The electronic locking system can store up to 500 event records internally, which can then be offloaded to a local computer at predetermined intervals, ensuring that events are not lost. Using the Med Audit tools within Med Manager, these records can be retrieved from the cart's computer and stored in the Med Manager database for subsequent review. The data can be viewed on-screen in custom formatted reports, printed or exported to external files.

professional services

Many organizations don't require the services of a full-time IT coordinator for technology administration; however, the need for some support remains constant. At Howard, we custom fit our services to give you the help you need, when you need it, and without the expense and hassle of hiring (and retaining) in-house support personnel. From a few hours every week to days each month, our technology professionals can devise a plan that is right for your business. Which integration option is right for you? No integration performed by Howard; **In-factory integration**, or **On-site Integration**? You choose.

IN-FACTORY INTEGRATION

- Integration of computing devices, monitors, keyboards, mice, and accessories purchased from Howard Medical.
- Possible integration of additional equipment not purchased through Howard Medical
- Performance testing of integrated equipment and carts prior to shipping

ON-SITE INTEGRATION

- Unpacking the carts
- Integration of computing devices, monitors keyboards, mice, and accessories purchased from Howard Medical.
- Performance testing of integrated equipment and carts

Other professional services we offer include:

- IMAGING
- TRAINING
- PREVENTIVE MAINTENANCE
- REMOVAL OF OLD EQUIPMENT
- MOBILE PRODUCT SPECIALISTS
- CART INVENTORY & STORAGE
- COMPUTER SWAP-OUT
- DATA MIGRATION

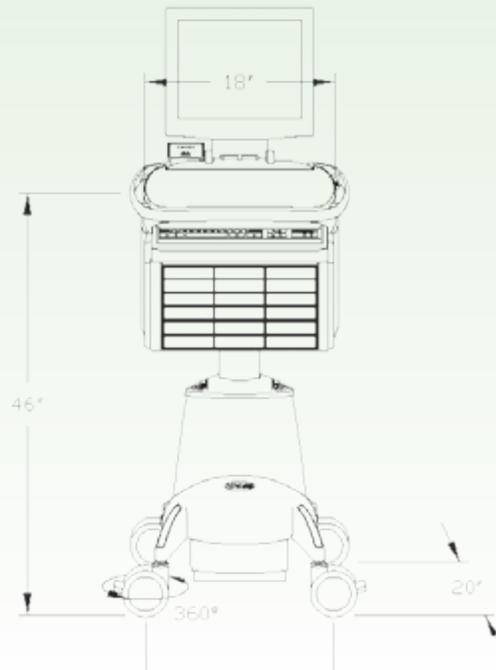
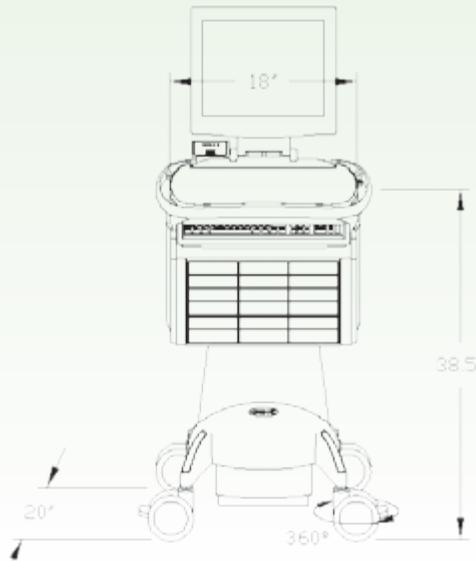
NEW COMPLETE CART SHIPPING

At Howard, we understand how time consuming assembling complicated equipment can be. Our solution—complete cart shipping! That's right. When you purchase a Howard cart, just open the box, roll out the cart, attach the monitor and accessories using the quick connect clips, and your cart is ready to use.



specifications

DIMENSIONS



MECHANICAL

Lift Mechanism

Operating voltage	12VDC nominal
Operating current	3.8A typical at 30 lb. load 7.2A at maximum load
Stroke	7.5 inches
Duty cycle	10% long-term Maximum 6 min. per hour or 2 min. continuous at full load
Thrust	Maximum 180lbs-force (800N)
Safety	Self-locking (no power required) Overcurrent protected
Bending moment	Static: 996 pound feet (1350 Nm) max. Dynamic: 111 pound feet (150 Nm)
Performance	Low-noise Soft start & soft stop for minimal vibration

PHYSICAL

PC compartment (under work surface)	16"W x 16.5"D x 1.88"H
Work surface area	19.5"W x 15.5"L
Work surface height	38.5" to 46" adjustable 7.5" stroke
Footprint (base)	17.25" wide x 20" deep C-C
Keyboard tray	17.9"W x 7.25"D x 1.85"H (1.3"H with expansion spacers for PC compartment)
Mouse surface	6.38"W x 7"D Positionable to right or left sides

ACCESSORY MOUNTING OPTIONS

Accessory Plate
Accessory Pole
Extended Accessory Mount (side)
Extended Accessory Mount (rear)
Articulating Arm
Howard LCD Arm



Both our HI-Paradigm cart and the power supply are recognized to the rigorous UL 60601-1 safety standard, as well as CAN/CSA-C22.2 No. 601.1-M90.

Choosing a warranty option that best fits the demands of equipment for a healthcare facility can be an enormous task. At Howard Medical, we try to make your decision an easy one. Each HI-Paradigm cart comes with a 3-year standard warranty:

3-year standard warranty (3 mechanical / 3 electrical)

For more information about Howard Medical warranties, call us at 877.856.6441

Q: *Is the HI-Paradigm cart hard to clean?*

A: No. Hard external surfaces make the carts extremely easy to clean and maintain using a variation of bleach, water, and mild commercial cleaners and disinfectants.

Q: *Will I be able to integrate future hardware on the HI-Paradigm?*

A: Yes. We realize the need to easily upgrade in the future, so we have engineered technology to assist you in upgrading as needed.

Q: *Can I get my carts in a color of my choice?*

A: Yes. Since color plays an important role in cart configuration, we have designed our entire cart family with several accent colors for you to choose from. We also offer custom cart colors with orders of 25 or more.

Q: *How difficult is it to change a battery?*

A: Not hard at all. The battery can be changed in under 3 minutes without any tools.

Q: *Do I have to use a certain computer with the Howard carts?*

A: No. The fact that you can use the computer brand of your choice is one of the really nice features of our HI-Paradigm carts. Our carts can be integrated with thin clients, notebooks, tablets, and many small form factor computing devices from industry-leading manufacturers such as Howard, Dell, HP, Panasonic, Wyse, and more.



A simple solution to **mobile computing**

Howard Medical is your total point-of-care solutions provider. Our product offerings include revolutionary medical carts; specialized hardware technologies that are vital to EMR, CPOE, PACS, and other health-related systems. And by partnering with like-minded technology innovators, we also offer rugged notebooks, tablets, and flat panel wall mounts. We provide healthcare personnel with real-world solutions so they can focus on what matters most—patients.

Experience the **Howard Advantage**

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