

# Omnicell G4 Automated Medication Dispensing Systems

Omnicell® automated medication dispensing systems help ensure patient safety by enabling healthcare providers to reduce medication errors. Our flexible systems also help hospitals comply with The Joint Commission and other regulatory standards, effectively capture charges, reduce nursing administrative time, and ultimately improve patient care.

## Omnicell G4 Platform

Omnicell has a long history of delivering meaningful innovations in medication and supply dispensing automation. Our latest G4 (fourth-generation) platform offers new features and functionality that allow hospitals to make an even greater impact in patient safety, efficiency, compliance, and security. The redesigned G4 cabinet console also improves the way nursing and pharmacy staff access and interact with the cabinet.



The large, high-resolution touch screen display is easy to see and use.

## G4 cabinet console features:

- Redesigned interface that guides the user's eye to the most critical information on a large, high-resolution display that's easy to see and read.
- New integrated Medication Label Printer, a unique Omnicell offering, that allows nurses to print patient-specific labels during medication issue, supporting compliance with The Joint Commission's National Patient Safety Goal on medication labeling.
- All-new Touch & Go™ G4 biometric ID for fast secure access.
- Latest operating system and CPU technologies from Microsoft® and Intel® to improve security and performance.

## Flexible, Modular Configurations

Omnicell automated medication dispensing systems are highly customizable and can be configured with a wide array of drawer types to suit the specific needs of each patient care area. Omnicell develops a customized solution for each hospital.

## A Lasting Investment

Because of the modular design of our automated dispensing systems, Omnicell customers can take advantage of our modular approach to upgrades. Rather than replacing the entire cabinet, they can keep current with the latest technology by replacing only the console. That's why Omnicell systems are known for having the lowest long-term cost of ownership. In addition, standard software upgrades are included as part of our industry-leading service program.

## Medication Dispensing Systems

### OmniRx Automated Medication Dispensing Cabinets

OmniRx® is a complete system for the automated management and dispensing of medications. Its modular design provides the flexibility to meet medication storage and distribution needs of individual patient care areas. Additional cabinets can be added and seamlessly integrated if capacity needs increase.

- Each cabinet style offers ample capacity for medications and/or supplies, including oral solids, ampules, vials, oral liquids, IVs, and bulk stock.
- Omnicell's unique *guiding lights* quickly direct the user to the desired location in the cabinet.
- Integrated online medication library for reference adds convenience.
- KLAS award-winner for five consecutive years as a product leader.



The OmniRx one-cell cabinet offers ample capacity for medications and supplies.



Best in KLAS Award: OmniRx: 2010  
 KLAS Product Leadership Award:  
 OmniRx: 2006–2010  
 OmniLinkRx: 2009–2010  
 WorkflowRx and Carousel: 2010

## A Choice in Cabinet Sizes

### Standard OmniRx Cabinet

- Accommodates up to 13 drawers of any security level, or an OmniDispenser unit with 6 drawers.
- The console is integrated on the top of the cabinet.



### One-cell, Two-cell, and Three-cell OmniRx Cabinets

- Can be configured in a variety of ways with Omnicell's Three-Drawer Pharmacy Module, Nine-Drawer Pharmacy Module, the OmniDispenser Single-Dose Dispensing system, and open supply units.
- The console is integrated at standing height in these taller units.



Modular, customizable cabinets meet the unique needs of each area.

### OmniTT™ Tabletop Unit

- A space-efficient design with three configurable drawers.
- Ideal for operating rooms, cath labs, nursing homes, assisted living centers, and other areas that use a limited number of medications.



### Omnicell Drawer Types

The OmniRx automated medication dispensing system can be configured with any combination of drawer types to provide varying levels of control. Choose from:

- High-security FlexBin™ single-dose drawers
- High-security locking drawers
- Medium-security sensing drawers
- Lighted matrix drawers
- Medication/supply drawers



### Anesthesia Workstation and Anesthesia TT Tabletop

These systems extend the benefits of automated dispensing and bar code scanning to the operating and procedure rooms. They help hospitals meet medication security regulations and improve charge capture while maintaining convenience and easy access for anesthesia providers.

- Anesthesia Workstation™ G4 is a mobile, 13-drawer unit that can easily support a full day's surgical cases.
- Anesthesia TT™ Tabletop G4 is a fixed-position, 3-drawer unit that is ideal for procedure areas.



### Omnicell Options for Increased Efficiency and Safety

#### Touch & Go G4 Biometric ID System

Fingerprint systems are an ideal way to provide high security yet fast access to your medication dispensing cabinets. Omnicell's Touch & Go™ G4 biometric ID system incorporates state-of-the-art biometric hardware and software. It also features an intelligent user interface with embedded training video that interactively guides users through the enrollment process.

- Touch & Go single-factor authentication enables users to access the cabinet via fingerprint scan only.
- Alternate finger enrollment ensures consistent access to the cabinet in case the primary finger is injured.
- Proven to stand up to challenges posed by dry, damaged, or lotioned skin.
- NIST and FIPS 201 certified.



#### OmniDispenser Single-Dose Dispensing System

The OmniDispenser™ module stores medications in a separate, secured location in the cabinet and dispenses each dose individually, so nurses only have access to the specific quantities requested. The system automatically tracks every dose, virtually eliminating time-consuming count-backs to confirm remaining inventories of controlled substances.

- Access to narcotic medications is controlled and secure.
- Saves nurse time and greatly reduces the potential for inventory discrepancies.
- Improves restocking accuracy.
- High capacity: holds up to 1,100 individual doses.
- Automatically rotates inventory on a first-in, first-out basis.



# OmniCenter/Color Touch

## Product List

This chapter contains the following cabinet types that run OmniCenter and Color Touch software:

- One-, two-, three-cell cabinets
- Half cell cabinet
- Mobile supply cart
- OmniRx
- OmniTT, Anesthesia TT
- Anesthesia Workstation

Optional cabinet modules and pharmacy drawer modules are also included.



**Note:** Auxiliary cabinets are available for one-cell, two-cell, three-cell, half cell, OmniRx, and OmniTT products. Auxiliary cabinets are connected to the main cabinet and do not have their own user interface.

## Electrical Requirements

### General Requirements

OmniceLL requires the facility to provide electrical service according to Omnicell equipment specifications. The facility is responsible for all electrical and cabling costs.

- One 115V AC outlet for each cabinet control unit and auxiliary unit in North America. For all other countries, consult the local electrical authority.
- All units must be within six feet of an electrical outlet.

Product	Voltage (VAC)	Operating Amperage	Fused Amperage	G4 Fused Amperage
One-, two- three- cell cabinets	85 - 264 AR (auxiliary) 90 - 250 AR (Color Touch)	2 A at 115 VAC - 230 VAC	4 A	6.3 A
Half-cell, OmniRx, Omni TT	90 - 260 AR (Color Touch) 90 - 260 AR (auxiliary)	1.25 A at 115 VAC 0.75 A at 230 VAC	4 A	6.3 A
Mobile supply cart	90 - 260 AR Medical grade	1.25 A at 115 VAC 0.75 A at 230 VAC	4 A	4 A
Anesthesia Workstation, Anesthesia TT	90 - 260 AR Medical grade	1.25 A at 115 VAC 0.75 A at 230 VAC	4 A	6.3 A
Smart Mobile Cart	120VAC / 60Hz (Rio)		5 A maximum	5 A maximum
Savvy Cart	90 - 260 AR	2.5 A at 115 VAC 1.6 A at 230 VAC	n/a	4 A

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**Note:** Power and data connections are made to frames at the back right of the computer. The 1-, 2-, and 3-cell computers are 51-55" (129.54 - 139.7 cm) from the floor. Half-cell, OmniRx, and Anesthesia Workstation computers are 44-50" (111.76 - 127 cm) from the floor. The OmniRx TT computer in its frame is 15" (38.1 cm) from the surface the TT sits on. Omnicell power cords are 15 feet (4.57 m) long.

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The hospital should have its own emergency power source. Omnicell recommends that emergency power be provided to each unit with connections to red plugs.

Cabinets come with internal uninterruptible power supply (UPS) units. Omnicell can also provide external UPS units. See the “UPS Protection” section.

## UPS Protection

In order to prevent power problems from damaging the computer, cabinets have a built-in UPS with surge-suppression circuitry. The UPS can provide the computer with up to 20 minutes of power when voltage levels become erratic or fail. The facility is responsible for testing and changing the battery in UPS units.

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**Note:** The battery in UPS unit must be connected during installation because Omnicell is required to disconnect battery cables prior to shipping. When connecting an OmniCenter server to an external UPS, do not plug the printer or computer monitor into the UPS unit.

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Parameter	Specification
Voltage range	100-240VAC
Frequency	50-60Hz
Average current	1 A
Peak current	5A – 2.5A
Fuse	4A/250V slow blow
Surge ratings: Nominal surge current	2500A (8/20µs Impulse)
Max surge voltage	2kV (1.2/50µs Impulse)
Battery recharge rate	2 – 4 (hours)
Battery back-up Time (typical): half load	40 minutes
full load	20 minutes
Full time EMI/RF filtering	Yes
Energy rating	320 joules

**Table 2-1.** Internal UPS Specifications

# Communication Requirements

## Network Requirements



**Note:** Omnicell's equipment resides on a facility's network which determine the overall network performance and security of the system. The equipment should be set up behind the facility's firewall. If possible, the equipment should be in an isolated local area network segment or LANS.

However, Omnicell applications do have their own security features. They also support network connections between the cabinets and OmniCenter.

To ensure that the Omnicell system can interface properly with the facility network, the facility must provide:

- LAN or WAN with 100 Mbps or higher is preferred. 10 Mbps is the minimum requirement.
- 802.11 a/b/g WLAN infrastructure and configuration for units requiring this option (Anesthesia Workstation, OmniSuppliers, OmniRx units, and Rio Mobile Carts).
- Category 5 or higher cabling from the switch to the jack for applicable units.
- One network port for each cabinet and at least one for every OmniCenter or Interface Server (NIC bridging or teaming are options on current server lines).
- One static IP address, subnet mask, and gateway address for each cabinet and at least one for each server.
- DNS or WINS server addresses for name resolution (optional).

## Remote Access

### Communication Protocols

Omnicell primarily operates over TCP/IP and uses Health Level 7 (HL7) v.2.5 interface standards. Socket, FTP and MSMQ protocols are also used.

### Options

- vSuite solution is preferred.
- Virtual private network (VPN) solutions are used only if vSuite is not supported.
- T1 for service internet connection is recommended.
- Telephone line with direct inward dial (DID) is seldom used.

### Requirements

- Web access on Port 443
- Port 80 for access to cabinets and OmniCenter web, prefer hardwired
- 128 encryption SSL (only for vDirector if used)
- One line per cabinet (if phone used)
- One to four lines per OmniCenter for remote diagnostics (if phone used)

## OCRA

OmniCenter Remote Access (OCRA) allows remote access to the OmniCenter system application from any customer-provided computer system (using Windows 95 or higher). The computer system must support Microsoft® Terminal Services (client) software.

OCRA manages individual sessions that may be running at any one time. OCRA can access the OmniCenter Console application through Microsoft Terminal Services (TS) and Terminal Services Client (TSC). Terminal Services is a Windows server-based technology that enables an application to be run on the server, but controlled from a client computer.

The following items are required to operate OCRA:

- OCRA software
- OCRA license
- Omnicell Option Key
- Microsoft Terminal Services Server Client Access License(s)
- Microsoft Windows Server Client Access License(s)

The Omnicell Option Key is encoded with the allowable number of user sessions. Facilities may assign OCRA access to the number of users specified in the purchased OCRA configuration. For example, if the facility purchases rights to 10 User OCRA (Silver), sessions, the n 10 individual users can access the OCRA. Omnicell provides setup and configuration instructions, and the software CD. Once OCRA is enabled at the OmniCenter, users can then install the software on the applicable PCs.

The OCRA user account is set up during the manufacturing process.



**Note:** Omnicell obtains the Microsoft Terminal Services Client Access License and Microsoft Windows Server Client Access License, then installs the software for all network PC conversions. For more information, see the *OCRA Technical Guide* (P/N 67-3013).

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With the exception of an optional hand-held mobile computer or bar code printer, the customer is responsible for the installation and hardware support of this feature.

## Backup

The customer is responsible for burning archive data to a CD (tower) and moving data to the network attached storage (NAS). Refer to *Omnicell Implementation Guide* (#67-3004) for OmniBackup Checklist and *Omnicell 12.0 Server Administration Guide* (#67-2016) for the latest procedures.

## Archives

The customer is responsible for rotating tapes (tower) and picking up data off the backup table.

## Cabinet Web Access

Cabinet web access is an optional feature. The cabinet computer can have an embedded version of Windows XP. OmniExplorer is an optional web extension of OmniCenter, Port 80, and MSMQ. Web access uses a controlled embedded browser.

## Environment

### General Requirements

The following environment requirements must be met:

- Adequate ventilation: 4" (10.16 cm) clearance around each Omnicell cabinet (from the wall and other cabinets)
- Adequate air flow
- A floor plan showing the location of where each cabinet is placed

### Transport/Storage Conditions

The maximum cabinet humidity exposure should not exceed 80% (without condensation). See the recommended cabinet temperature ranges by item type in the table below. It is the customer's responsibility to maintain room temperature at or below 71°F (22° C). Document areas in the cabinet that are +6°F of the ambient temperature and note not to store sensitive medication in those areas.

Cabinet	Degrees Celsius	Degrees Fahrenheit
Medications	20-25°	68-77°
General Supplies (with brief deviations)	15-30°	59-86°

### Operating Temperature

The operating temperature for most Omnicell cabinets is 5-35° C.

### Heat Dissipation

Table 2-2 contains useful information in determining a site's heating and ventilation setup so that room temperatures can be maintained with the cabinets installed.

Cabinet	Heat Dissipation
1-, 2-, and 3-cell	304-853 BTU/hr
Half-cell, OmniRx, OmniTT, Anesthesia TT	304-443 BTU/hr
Anesthesia Workstation	341-443 BTU/hr
Smart Mobile Cart	819 BTU/hr (max)
Mobile supply cart	304-443 BTU/hr

**Table 2-4.** HVAC Table Heat Dissipation Advisories

## Safety/Quality Certifications

Omnicell cabinets are certified according to the Canadian Standards Association (CSA) and Conformity European (CE) mask standards. They are exempt from Food & Drug Administration (FDA) certifications.

- Omnicell cabinets meet fire protection standards with their CSA and CE certification.
- Omnicell is ISO 9001:2000 compliant.
- The Anesthesia Workstation (AWS) and Supply Mobile Cart (55CTMC) have CSA and CE Medical Device certification and a medical grade power supply.

## Seismic Specs

See the California Building Code documents OPA 0331 (1-, 2-, and 3-cell cabinets) in “Appendix B: Seismic Specs”. It contains seismic specifications details. These documents were prepared by Degenkolb Engineers.



**Note:** The state of California is in the process of approving the seismic specifications.

Go to the following link for the OSHPD pre-approval list:

<http://www.oshpd.ca.gov/FDD/Pre-Approval/OPAIndex.pdf>

## AUX / PC Box Specifications

### Auxiliary Box Specifications

Cabinets with an auxiliary (aux) box are connected with 25-foot cables to a main cabinet with a CT PC box for communication to the OmniCenter. An aux box does not have direct interface capability.

Item	Omnicell Configuration (Dell part #)
Base System:	Provides power and communication line to OmniSupplier Aux
Output Voltage:	12V and 5V
Max Amps:	5A for 12V; 10A for 12V
Input Voltage:	85-264 VAC
Operating Temperature:	5°C to 35 °C
Storage Temperature:	-40 °C to 85 °C
Dimensions (H x W x D):	6.56" x 22.5" x 21.3" / 16.66cm x 57.15cm x 54.1cm
Feature:	Setting options to connect to external PC or main cabinet.

**Table 2-5.** Aux Box Specifications

## Software Requirements

OmniCenter requires:

- One of the following three operating systems (OS):
  - Microsoft Windows Server 2008 with Service Pack 2 (version 15 or higher)
  - Microsoft Windows Server 2003 with Service Pack 2 (versions 11.0 or to 14.0)
  - Microsoft Windows 2000 Server with Service Pack 4 (versions 7000 to 11.0)
- Microsoft .NET Framework 2.0 (required for version 11.0 and higher)

Interface Services require:

- One of the following three operating systems:
  - Microsoft Windows Server 2008 with Service Pack 2
  - Microsoft Windows Server 2003 with Service Pack 2
  - Microsoft Windows 2000 Server with Service Pack 4 and Windows Installer 3.0
- IIS 5.0 or 6.0
- Microsoft .NET Framework 2.0 (installed after IIS so that IIS can be registered with ASP.NET); enable ASP .NET

## Space Requirements

The cabinet storage capacity is directly proportionate to the square footage of floor space required for each column. Clearance required for pharmacy drawers is equal to clearance required for supply doors.

## Cabinet Specifications

Table 2-10 contains standard cabinet specifications. It includes line item capacity and dimensions. See “Drawings” on page 2-35 for graphic presentation of measurements.



**Note:** Dimensions have been rounded up to 1/100 inch (two decimal places), with the corresponding metric measurement. Width includes screw heads on sides of cabinet. Clearance should be added to make it easy to move the cabinets in and out from the wall. Clearance is also needed for modules mounted on the side of the unit—such as the external return bin (ERB) or SafetyStock scanner. Depth includes the door or drawer handle. Clearances are provided when the door/drawer is open. User access may require even more clearance.

Some cabinets are used by Omnicell Supply Specialty and SecureVault. Their part numbers are identified as *OPTlxxx* and *xxxxSV* respectively.

The pictures in table 2-5 display sample cabinet configurations. Actual configurations and modules may be customized by the hospital. Cabinet weight will vary depending on the configuration.

Cabinet	Specifications	Metric
<p>One-cell Color Touch (Shown with 9-drawer pharmacy carrier)</p> 	<p>Model #: OSCT104, OSCT104RX, OPTI1CT Item capacity: 96 to 500-600 (8 items per shelf, max. 12 shelves or 18 drawers/2 shelves)</p> <p>W x H x D: 26.74" x 77.37" x 24.47" Clearance: 48" depth to include door swing Screen height: 56" Screen size: 10.5" Color Touch Weight: 500 lbs empty; varies by configuration Shelf (W x L): 22.75" x 21-22" (minimum spacing) 3.25" (between light bars) 4.5" (between shelves)</p>	<p>67.92 x 196.52 x 62.15 cm 121.92 cm 142.24 cm 26.67 cm 226.8 kg 59.79 x 53.34-55.88 cm 8.26 cm 11.43 cm</p>
<p>One-cell Color Touch G4</p> 	<p>Model #: SDA-FRM-001, MDA-FRM-001, OPF-FRM-001  (dimensions have not changed)</p>	
<p>One-cell auxiliary (Pharmacy modules can be added)</p> 	<p>Model #: OX104, OPTIX1, OX104SV Item capacity: 104 to 500-600 (8 items per shelf, max. 13 shelves or 18 drawers/3 shelves)</p> <p>W x H x D: 26.74" x 77.37" x 24.47" Clearance: 48" depth to include door swing Screen height: N/A Weight: 500 lbs empty; varies by configuration Shelf (W x L): 22.75" x 21-22" (minimum spacing) 3.25" (between light bars) 4.5" (between shelves)</p>	<p>67.92 x 196.52 x 62.15 cm 121.92 cm 226.8 kg 59.79 x 53.34-55.88 cm 8.26 cm 11.43 cm</p>
<p>Two-cell Color Touch (Pharmacy modules can be added)</p> 	<p>Model #: OSCT224, OSCT224RX, OPTI2CT Item capacity: 216 to 700-1000 (8 items per shelf, max. 27 shelves or 32 drawers/7 shelves)</p> <p>W x H x D: 52" x 77.37" x 24.47" Clearance: 48" depth to include door swing Space req.: 17.33 sq. ft. with door open Screen height: 56" Screen size: 10.5" Color Touch Weight: 750 lbs empty; varies by configuration Shelf (W x L): 22.75" x 21-22" (minimum spacing) 3.25" (between light bars) 4.5" (between shelves)</p>	<p>132.08 x 196.52 x 62.15 cm 121.92 cm 1.61 sq. m 142.24 cm 26.67 cm 340.19 kg 59.79 x 53.34-55.88 cm 8.26 cm 11.43 cm</p>

**Table 2-10.** Cabinet Specifications (1 of 8)

### One-Cell Cabinet

