



NIHON KOHDEN AMERICA, INC.

PRE-INSTALLATION SITE SURVEY

90 Icon Street
Foothill Ranch, CA 92610
Phone: 949-580-1555
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Customer Information:

Facility Name: **JERSEY CITY MEDICAL CENTER**

Address: **355 GRAND STREET**

City: **JERSEY CITY** State **NJ** Zip code: **07032**

Phone No: **201-915-2000** PO No.: **FAXED TO JUAN**

Date Completed: **9-10-12**

Key Customer Contacts	Name	Telephone Number	Email Address
Hospital Installation Coordinator	RODNEY MCKNIGHT	201-915-2015	rmcknight@Libertyhcs.org
Biomedical / Clinical Engineering	SAME		
Facilities Management			
Information Systems			
Materials Management	ED HVITFELT	201-716-5717	ehvitfelt@Libertyhcs.org
Frequency Coordinator			
Nursing Administration			
Clinical Area Nurse Manager			
Nursing Education			
Other			

Clinical areas of planned installation: (ICU, CCU, PACU, etc.) **5 EAST OBSERVATION**

Reference Quote # **Q2BNOA700102**

Sales Information :

Sales Person: **CRAIG ERLANGER** Phone No: **856-261-8321**

Standard installation timeframe is 90 days, ARO. If you require installation later than 90 days due to construction, renovation, etc, please provide requested date for installation: _____ Date: _____

Customer Acceptance:

The customer has been given a copy of the "Customer Responsibilities" and has reviewed and has received a copy of the site survey.

Customer Name Printed: **RODNEY MCKNIGHT**

Customer Signature: _____ Date: _____

Any questions concerning the installation requirements, process, or procedure should be directed to the Nihon Kohden Installation Project Manager, Nick Saccomanno, at (800) 325-0283 x3473 or nick_saccomanno@nkusa.com.

Introduction

The Site Survey is intended to assist the customer and Nihon Kohden America, Inc. to plan a successful implementation of a patient monitoring system with the minimum interruption of patient care services. The site survey will consist of the following:

- Installation Overview.
- Define installation requirements for hardwire ethernet, WMTS, and WLAN systems.
- Define the coverage areas for WMTS and WLAN systems as appropriate.

Hardwire Ethernet configuration is a TCP/IP network based system. Individual clinical units are designed and installed using CAT6 UTP (Unshielded Twisted Pair) cable in a star topology, except in ORs which require CAT6 STP (Shielded Twisted Pair).

The Wireless Medical Telemetry Service, WMTS, configuration is a channelized telemetry system operating in the 608 – 614 MHz band and in the 1.4 GHz Band (1395-1400 MHz & 1427-1432 MHz). Wireless LAN (WLAN), configuration is an IEEE 802.11a/b/g 2.4 GHz direct sequence spread spectrum based system utilizing the bedside monitors as clients.

All sections must be completed, if not applicable check "No" or "N/A"

Installation Overview:

Briefly describe the system configuration to be installed:

JCMC IS ADDING ADDITIONAL TELEMETRY EQUIPMENT TO AN AREA THAT IS CURRENTLY COVERED BY NK WMTS ANTENNA COVERAGE. THE HOSPITAL HAS PURCHASED A 16 PATIENT CNS, (2) 8 PATIENT ORG'S, (14) ZM-530 TRANSMITTERS, (14) 3 LEAD ECG BLOCKS SNAP, (14) SPO2 FINGER PROBES, LASER PRINTER

The installation will occur in:

- An existing, active patient care area where the existing system will be replaced. The customer will de-install and remove the existing equipment.
- Expansion to existing equipment
- An existing area closed to patient care, currently under renovation. The customer will de-install and remove the existing equipment.
- A new construction area, no existing installed equipment

What is the proposed method of patient shift / move strategy handling patient care?

- Work around patients
- Move patients from room to room
- Other Describe _____

Type of installation:

Type of system(s) to be installed

- Hardwire ethernet system Clinical area(s) _____
- WMTS system Clinical area(s) 5 EAST OBSERVATION
- WLAN system Clinical area(s) _____

Will the clinical area to be installed be interconnected with any existing Nihon Kohden system on a common network? Indicate on submitted floor plans existing closets, switches, etc.

- No
- Yes Describe WHOLE HOUSE

Are there any special non-standard network infrastructure requirements?

- No
- Yes Describe _____

Check all that apply:

- Union Requirements
- Infection Control Requirements (tenting/materials provided by hospital)
- Other Describe _____

Vendor Credentialing Requirements? Yes No **Service Used:** _____

Documentation Requirements:

Provide **two** copies of a **dimensioned** floor plan drawing, preferably in AutoCAD (DWG). One copy should be unmarked and the second copy should be clearly marked showing the location and bed number of all proposed bedside monitors, central stations, remote displays, and electrical / utility / telecommunications closets. If the monitoring system will be installed on multiple floors, mark the location where the cables will run between floors, vertical runs. Clearly define the coverage area for any WLAN and WMTS showing the desired area(s) of reception, the location of fire walls, all patient rooms and bathrooms, areas of glass with wire mesh, etc. and all equipment locations.

Are CAD files available? No Yes Requested from: _____

Power Requirements:

The patient monitoring system components, bedside monitors, central stations, remote displays, antenna power supplies, network switches, etc., have the following AC power requirements:

- AC line voltage 117 VAC plus or minus 10%,(105 to 128 VAC).
- AC line frequency 60Hz plus or minus 2%, (58.8 to 61.2 Hz).
- Normal voltage impulse not to exceed plus or minus 800 Volts, rise time 1 ns and pulse width 0.1 us.
- AC line voltage interruption not to exceed one cycle, (16 ms).

For patient and operator safety, each power outlet installed at a patient bedside station or central station requires a separate ground wire to the common ground at the AC power panel. Conduit ground is not acceptable. AC power for the monitoring system components, such as bedside monitors and central stations, should be on a dedicated AC circuit, separate from other AC outlets and devices. It is recommended that the monitoring system AC power be connected to the customer's emergency power source or an auxiliary power system.

Network & Closet Requirements:

All installations require the use of a network switch and patch panel. A suitable location is in an electrical / utility / telecommunications closet with available AC emergency power. Mark the dimensioned floor plans where this closet is located.

Is wall space available in each marked closet? Yes No

Is it requested that NK utilize existing rack space in any closet? Yes No

All provided Ethernet cabling is Gray CAT6 UTP (Unshielded Twisted Pair) plenum rated cable. However, hardwire installations within an OR require Gray CAT6 STP (Shielded Twisted Pair). Specify if applicable within the "Hardwire Ethernet Systems" section.

Closet connectivity for distances greater than 300ft can be accomplished via hospital-provided fiber. Nihon Kohden would require one dedicated pair of 62.5 micron multimode fiber with SC connectors (preferred) between each closet. Mark any closets to be connected via this method on the submitted floor plans.

Will any closets be connected via hospital-provided fiber? Yes No Connection Type (i.e., SC, LC): _____

For all installations which include a central station, mark the central station(s) and printer locations on the dimensioned floor plan. The central station consists of a touch screen display, keyboard, mouse, recorder, CPU and UPS. Has the location of these components been discussed with the customer?

Yes No

Location of the CPU & UPS. Desktop Under Counter In Cabinet*

*If the central station is to be mounted inside a cabinet or console, cooling is required to allow a maximum ambient air temperature of 90^o F (70^o F mean). Cabinetry requirements must be completed prior to the start of installation.

Were CNS upgrades purchased as part of this installation (i.e., 8 to 12 bed, 12 to 16 bed, etc)? Yes No

List all serial #s to be upgraded along with the upgrade purchased: _____

Have remote displays been ordered as part of this installation? Yes No

Mark the location of each remote and its corresponding CNS on the dimensioned floor plans. If there are to be remote displays, please indicate the location distance from the central station to the remote display(s). If there are more than 1, indicate on a separate document.

Distance: _____ FT

Cable shipment is requested later than the standard 30 days from receipt of the PO. Indicate later date below.

Attention: _____

Installation supplies should be sent to the attention of: RODNEY MCKNIGHT

Hardwire Ethernet Systems N/A

Bedside Wiring:

Nihon Kohden will provide a **standard single gang RJ45 stainless steel wall plate** to be used at the bedside monitor location. The bedside data jacks are ivory. The standard interconnect cable provided by Nihon Kohden to connect the bedside monitor to the wall plate is white and 5 ft. in length.

Note: Non-standard wall plate sizes and non-standard cables at the bedside monitor are not included in the standard installation charges. Please indicate any non-standard requirements:

Indicate the location for each bedside monitor on the dimensioned floor plan.

Will any ethernet cabling be installed within an OR? Yes* No Qty: _____

*If yes, clearly mark on floor plans the location of all OR drops.

Wall Plates Required

How many of each wall plates are needed for all hardwire terminations (includes BSMs, printers, centrals, remotes, all network terminations outside of the wiring closet)

- Single gang (single port) Qty: _____
- Single gang (2 port) Qty: 2
- Single gang (4 port) Qty: _____
- 2 gang (single port) Qty: _____
- Other: _____ Qty: _____

Bedside Wallmounts:

How will the bedside monitors be mounted?

- New wall mount
- Shelf
- Roll stands
- Stand alone
- Existing support arms (verify that the support arms mate with the appropriate BSM adapter plate)
- Other - Explain: _____

Customer is responsible to mount all wall channels. Indicate requested delivery date.

- N/A (not needed or customer sourced)
- With cable shipment (30 days from PO release)
- With equipment delivery (2 weeks prior to installation start date)
- Other: _____

Note: The interconnection of separate Nihon Kohden Monitoring Systems is not included in the standard installation pricing. Final pricing is subject to review and approval of the proposed system configuration and the completed Site Survey.

WMTS (Telemetry) System N/A

Indicate the coverage area by indicating the boundary lines on the dimensioned floor plan. If a combination of construction types, indicate all below and indicate locations and types on marked floor plans.

Has the ORG closet been identified and marked on the submitted floor plans? Yes No

What is the wall construction between corridor and patient rooms?

- Wallboard/sheetrock/plasterboard
- Lathe and plaster
- Concrete block
- Other - Explain: na _____

What is the ceiling construction in the coverage area?

- Suspended ceiling tile on T bar (removable ceiling)
- Foil backed ceiling tile on T bar (removable ceiling)
- Metal tile
- Hard wallboard/sheetrock/drywall ceiling (fixed or hard ceiling)
- Hard lathe and plaster ceiling (fixed or hard ceiling)
- Other - Explain: na wmts already in the hospital _____

Does the coverage area contain wire mesh glass windows? Yes No

Telemetry Channel Information:

Existing TV channels operating in the area: UHF channel 36 UHF channel 38 Neither

Does the customer have existing WMTS telemetry in use? Yes No

List all manufacturers and models of existing telemetry in use (if not Nihon Kohden):

How many total WMTS telemetry beds (all vendors) exist at this account? 40

What is the maximum number of all telemetry beds possible at this account? _____

Nihon Kohden Telemetry operates on frequencies between 608-614 MHz & 1.4 GHz (1395-1400 MHz & 1427-1432 MHz).

- For proper operation of medical telemetry, it is essential that the assignment of medical telemetry channels be coordinated with existing telemetry channels operating within the same frequency range.
- Please list all specific WMTS frequencies currently in use on the following page. WMTS operates in the 608 – 614 MHz band & in the 1.4 GHz band (1395-1400 MHz & 1427-1432 MHz). List all frequencies in use, including existing Nihon Kohden equipment. For Nihon Kohden equipment, channel information is acceptable. All other manufacturers must have specific frequencies listed.

The standard WMTS coaxial cable will be black RG 6 and white RG 6 non-plenum rated. Some state and local codes may require plenum rated cable be used in cold air return (plenum) type ceilings.

Is plenum coax cable required? No Yes

Existing installed telemetry components, antennas, amplifiers, cable, etc., will not be used.

- Nihon Kohden America accepts no responsibility of changes to frequency allocations by FCC
- Nihon Kohden America accepts no responsibility for changes in the RF environment
- Nihon Kohden America accepts no responsibility or cannot guarantee interference free telemetry monitoring.

Additional Comments

WMTS Registration

The Federal Communication Commission, FCC, requires that all transmitters operating in the WMTS bands must be registered to ensure interference free operation. The FCC has charged American Society of Healthcare Engineering, ASHE, with the registration process. ASHE has selected Comsearch to facilitate the frequency coordination with the WMTS band. Contact ASHE or Comsearch for details or visit the following web sites, <http://www.ashe.org/resources/WMTS/> or http://www.comsearch.com/interactive_solutions/WMTS/overview.jsp. Registration is a two step process. The first step is a customer registration managed by ASHE. ASHE will charge an administrative fee of \$125.00 for the customer registration. The second step is the actual deployment of the WMTS transmitters managed by Comsearch after a frequency search. The deployment pricing is \$20.00 per transmitter, \$250.00 minimum and \$1500.00 maximum.

WLAN (Wireless LAN) Systems N/A

Indicate the coverage area by indicating the boundary lines on the dimensioned floor plan. If a combination of construction types, indicate all below and indicate locations and types on marked floor plans.

What is the wall construction between corridor and patient rooms:

- Wallboard/sheetrock/plasterboard
- Lathe and plaster
- Concrete block
- Other - Explain: _____

What is the ceiling construction in the coverage area?

- Suspended ceiling tile on T bar (removable ceiling)
- Foil backed ceiling tile on T bar (removable ceiling)
- Metal tile
- Hard wallboard/sheetrock/drywall ceiling (fixed or hard ceiling)
- Hard lathe and plaster ceiling (fixed or hard ceiling)
- Other - Explain: _____

Does the coverage area contain wire mesh glass windows?

- Yes No

Existing Wireless LAN systems:

Nihon Kohden's Wireless LAN operates in 2.4 GHz or 5 GHz frequencies (IEEE 802.11a/b/g).

Does the hospital / customer currently have a wireless LAN deployed?

- No
- Yes Who is the hospital representative to discuss coexistence?
Name: _____ Telephone number: _____ Email: _____

- Floor plan has been marked with existing access point locations and channels

Indicate all wireless types currently deployed.

- 802.11a (5GHz)
- 802.11b/g (2.4GHz)
- 802.11n (2.4GHz)
- 802.11n (5GHz)

NOTE:

- Existing WLAN infrastructure will not be used.
- Nihon Kohden America accepts no responsibility of changes to frequency allocations by FCC
- Nihon Kohden America accepts no responsibility for changes in the RF environment
- Nihon Kohden America accepts no responsibility or cannot guarantee interference free monitoring

Additional Comments

NetKonnct / HL7 / ECG / Communication Gateway Servers N/A

Each gateway server requires a 1U 4-post rack mounted Dell PowerEdge gateway server that connects to both the Nihon Kohden monitoring system and the hospital network using dual network cards. The connection from the server to the Nihon Kohden monitoring system must be run on a dedicated hardwired connection which may require an additional cable pull.

Has the server location been identified on the floor plans? Yes No

IP schemes currently in use by the hospital network: 10.X.X.X 172.X.X.X 192.X.X.X Other: _____

Primary contact for server deployment/installations: _____

Primary contact email: _____

Primary contact phone: _____

Customer Responsibilities

Provide an equipment staging and work area near the clinical unit for the installation team. The customer will remove and dispose of pre-existing equipment and cabling and provide waste disposal services for shipping materials.

Pull all cable prior to installation start date. All required cable will be furnished by NKA. The cable length excess requirements are 10 feet at each end. All cable runs needs to be identified and labeled, and Ethernet cables pulled to the electrical box. The customer will provide identification on ceiling grid where each coaxial cable end is located as necessary. If conduit is required by the customer, local, county, or state code, the customer will be responsible for conduit installation. Minimum recommended conduit size is 1 inch for 3 cable runs. If more than 3 cable runs are needed, larger diameter conduit will be required.

Provide any tenting and materials necessary to adhere to facility's infection control requirements for the duration of Nihon Kohden's installation period.

Provide central communication closets or areas with emergency AC power for all cabling, patch panels, hubs, etc. Nihon Kohden will assume the responsibility of termination, connection and testing of network.

Bedside monitor and central station network terminations require a standard single gang (2x4) electrical box with plaster ring that will accept a standard single gang wall plate. Any other configuration must be indicated on the pre-installation site survey.

Installation of 115vac line receptacles as required. For patient and operator safety, each power outlet installed at a patient bedside station or central station requires a separate ground wire to the common ground at the AC power panel. Conduit ground is not acceptable. AC power for the monitoring system components, such as bedside monitors, central stations, receivers, and network switches should be on a dedicated AC circuit, separate from other AC outlets and devices. ***It is recommended that the monitoring system AC power be connected to the customer's emergency power source or an auxiliary power system.***

Installation of all mounts, such as wall channels or ceiling mounts for each bedside, central station display, or remote monitor as required. Wall channels and ceiling mounts are not standard accessories and must be purchased separately.

Installation of any shelving, plywood backboard or equipment racks that may be required.

Any direct or indirect facility related work will be the responsibility of the customer, such as cabinetry, remodeling, removal of light fixtures to gain cable access, penetration and resealing of fire walls, etc.

It is the customer's responsibility to provide an area for the central station with adequate ventilation (75 degrees F mean) as required and perform other alterations or construction as necessary. Improper ventilation will shorten the life of the monitoring equipment. If mounted within an enclosed cabinet or console, it will be necessary to install vents or fans to provide adequate forced-air ventilation. The maximum ambient temperature is 90 degrees F, 75 degrees F mean.

Ensure that all mechanical and electrical construction conforms to all local, city, county and state building codes. Customer is responsible to inform Nihon Kohden of any local or union regulations and/or rules prior to the installation.

If the medical unit where the equipment is to be installed will remain open for patient care during the installation process, the customer is responsible for providing Nihon Kohden America, Inc. personnel timely access to all necessary work areas. The customer is responsible for:

- Moving patients in a timely manner to allow access to bedside locations.
- Removing any existing bedside and central station equipment as required.
- Pulling cable, installing wall channels, and performing all customer responsibilities as required in a timely manner.

Customer is responsible to register all WMTS transmitters with American Society of Healthcare Engineering, ASHE, and Comsearch according to the Federal Communication Commission, FCC.