

**HILLS**<sup>TM</sup> health solutions

# Wireless Nurse Call Solution



Hills Wireless Nurse Call is a robust, highly reliable solution designed and manufactured in Australia. We believe our combined local ownership, and dedication to research and development sets us apart from our competition. It means Hills can offer agile, customer centric solutions tailored to a local market with the backing of comprehensive 24/7 technical support. Whether you manage a hospital or residential aged care facility, Hills can offer a scalable, cost effective nurse call solution that wholly meets your needs.

Hills' Wireless Nurse Call Solution allows residents and staff to communicate within the facility by simply pushing a button on a wireless call station or pendant.

The backbone of our Wireless Nurse Call Solution is the Inovonics EchoStream® commercial mesh network which operates in the UHF frequency band. EchoStream® employs Frequency Hopping Spread Spectrum (FHSS) technology to protect against radio interference in densely populated RFID environments.

For larger facilities, wide area coverage is achieved by a network of High Power Repeaters (EN5040) that are mains powered with monitored battery backup.

The repeaters decode and retransmit signals from the Wireless Call Stations and Wireless Pendants. They act as a range expander for all received Inovonics EchoStream® transmissions allowing the Hills Wireless Nurse Call Solution to scale from a small day surgery clinic to a large aged care campus.

An Area Control Gateway (ACG) bridges the commercial mesh network to a standard TCP-IP over Ethernet LAN connection and also acts as a receiver. The ACG is optioned for Power over Ethernet (PoE) or an external mains transformer.

Alarm events are passed from the ACG LAN connection to the nurse call server where they are processed and logged. The messages are then sent to the networked annunciation devices including wireless telephones and annunciator displays.

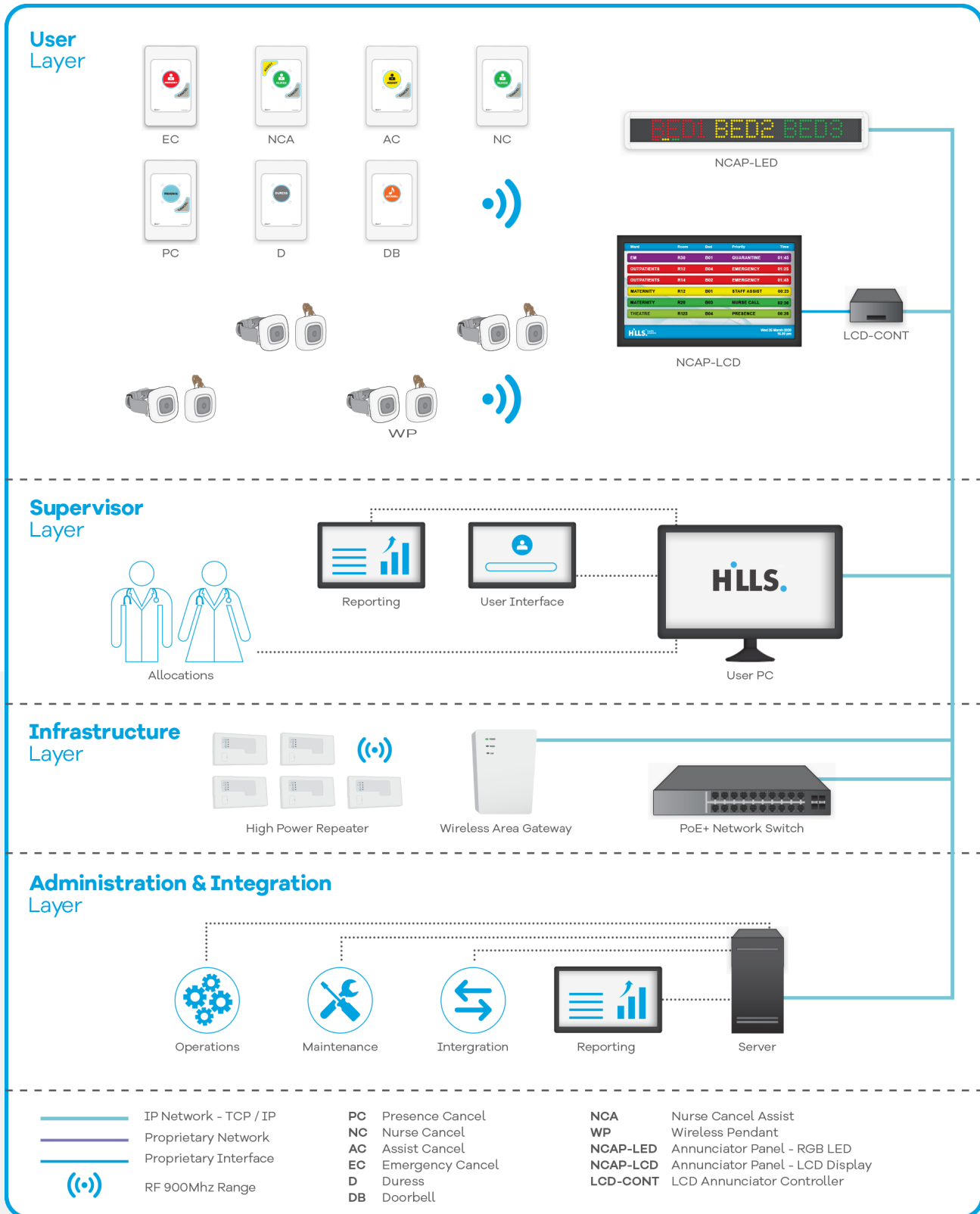
Annunciator displays require a single structured cable to the network switch, with LED displays being PoE powered and LCD displays requiring mains power.

The server is the central data repository of the Hills Wireless Nurse Call Solution logging information such as calls, timing, monitoring data and settings which can be used to generate reports.

Third party systems such as fire, security, telephony, CCTV and access control may be integrated to the Wireless Nurse Call Solution via the server.

Wireless Call Stations and Wireless Pendants are IP rated making them suitable for use in wet environments. These devices require no cabling and are battery powered.

Call stations are surface mounted using the supplied wall plate which can either be adhered to the wall with removable double sided tape, or screwed to the wall if the structure permits.



## Benefits of the Hills Wireless Nurse Call Solution

Utilises industry leading Inovonics™ RF technology to ensure that your alarm event is registered first time, every time.

Wide range of standard overlays available to suit most requirements, or tailored to custom needs upon request.

Call station batteries are rated for a minimum of two years with normal use. Monitoring feature maximises battery life, saving you time and money by only having to replace batteries when required.

Wireless Call Stations are IP65 rated with Wireless Pendants being IP67 rated, making them suitable for use in wet environments. The high protection rating ensures liquid and dust ingress is prevented, enhancing product lifespan and reliability.

Hills' Wireless Solution can be natively integrated to new or existing IP Series Nurse Call installations. This is particularly beneficial as your facility expands, making it ideal for independent living units.

Call stations, pendants and high power repeaters perform a status check at regular intervals to ensure they are functional, giving you piece of mind that your critical system is always operational.

The ACG and High Power Repeaters operate in the 900Mhz frequency range and will not conflict with WiFi or neighbouring wireless networks. This frequency provides greater signal penetration and improved range. The repeaters are mains powered with on board battery backup ensuring continuous operation during power outages.

Hills' Wireless Nurse Call Solution utilises the same software, messaging and integration as our industry leading IP Series Nurse Call Solution, thus providing the same trusted level of flexibility and capability.

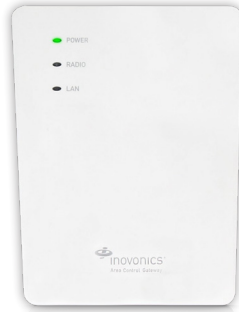
Mobile Wireless Pendants can provide reliable location services. Accuracy of positioning data can be optimised for more critical applications, such as mobile duress, by increasing the density of High Power Repeaters. This provides a reliable and cost effective positioning solution without the need for disparate systems.

Call stations and pendants are fully wireless removing the need for invasive wall penetrations and expensive cable runs, saving significant installation costs and reducing operational downtime.

From small day surgery to large aged care campus, Hills' Wireless Nurse Call Solution is scalable to the size of your facility.

## Components

### EN6080 Area Control Gateway



**Dimensions**  
135mm x 170mm x 30mm

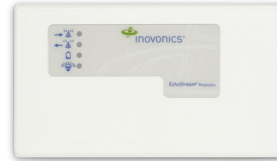
**Power requirement**  
IEEE 802.3at-2009 compliant  
or 12-24VDC 500mA

**Operating environment**  
Temperature: -20C to 60C

**Frequency**  
915-928 MHz – Australia  
922-928 MHz – New Zealand

**Number of devices supported**  
Up to 3000 end devices  
Up to 397 repeaters

### EN5040 High Power Repeater



**Dimensions**  
165mm x 90mm x 25mm

**Power requirement**  
12-24VDC 500mA

**Operating environment**  
Temperature: -20C to 60C

**Frequency**  
915-928 MHz – Australia  
922-928 MHz – New Zealand

**Battery capacity**  
450mAh @ 3.7V

**Estimated battery life**  
Up to 24hrs

### ENI22IS Waterproof Pendant



**Dimensions**  
40mm x 40mm x 5mm

**Weight**  
17grams

**Protection rating**  
IP67 certified

**Frequency**  
915-928 MHz – Australia  
922-928 MHz – New Zealand

**Internal battery**  
CR2032 lithium battery

**Estimated battery life**  
>1yr with normal use

### Wireless Call Station



**Dimensions**  
117mm x 75mm x 26mm

**Protection rating**  
IP65 certified

**Frequency**  
915-928 MHz – Australia  
922-928 MHz – New Zealand

**Internal battery**  
CR123A lithium battery

**Estimated battery life**  
>2yrs with normal use

## System Specifications

#### Wireless network

Inovonics EchoStream®

#### Frequency

915-928 MHz – Australia  
922-928 MHz – New Zealand

#### RF technology

Frequency Hopping Spread Spectrum  
(FHSS)

#### Server requirements

Dell PowerEdge R240® tower server  
or equivalent.  
\*refer to the PDS for details

#### System devices

Up to 3000 end points  
Up to 397 repeaters

#### Wired network

Ethernet TCP/IP  
TCP/UDP packet based communication

#### Message delivery

99.99% alarm message delivery

#### Fault reporting and detection

Systems faults can be reported by SMTP or  
standard HillsCore messaging integration

#### Check in time frequency

Call station -	60min
Pendant -	60min
Repeater -	20min

#### Device monitoring features

Low battery alert  
Device offline  
Tamper alert

#### Messaging integration

Compatible with the wide variety of messaging  
interfaces available to HillsCore using vendor  
specific and generic integration protocols

#### Third party alarm integration

Compatible with the wide variety of inbound  
interfaces available to HillsCore using vendor  
specific and generic integration protocols

#### Regulatory compliance

Inovonics™ devices; FCC, EL 2560

#### System requirements

HillsCore (Software)  
HillsAssist (Software)

#### Hills nurse call system compatibility

Can be natively integrated with IP7500 &  
IP7100 nurse call solutions

## Connect Entertain Secure

Hills is a value-added distributor of integrated technology solutions that connect, entertain and secure people in the environments that they need and trust most: their homes, hospitals and aged care residences, places of learning, retail spaces, workplaces and government institutions.



Health



IT



Security

## Head Office

### NSW - Lidcombe

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Lidcombe NSW 2141  
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hills.com.au

## Wireless Nurse Call Solution integrates with:



### Mobile Telephony

Real time notifications sent directly to caregiver's pagers or wireless telephones.



### Building Management Systems



### Facility Systems

Security & Fire Alarms    Duress & Panic Requests  
Intrusion Alerts            Patient Administration Systems



### Compliance & Certifications

All Hills Health Solutions and Inovonics wireless devices are certified and are compliant with the relevant Australian and New Zealand standards