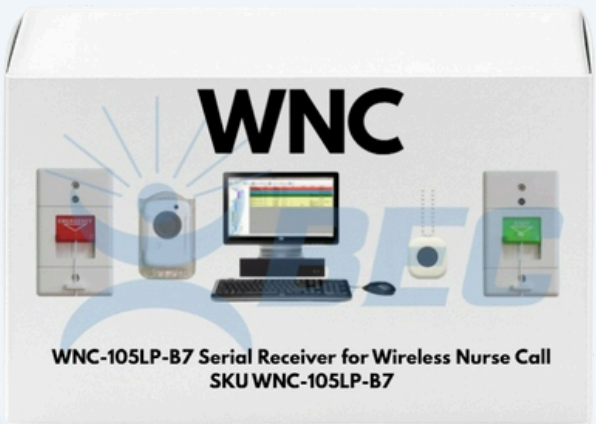

WNC-105LP-B7
Serial Receiver

The WNC-105LP-B7 is a critical interface component designed for wireless nurse call systems. It acts as a bridge between wireless peripheral devices (such as pendants, pull cords, and bed stations) and a central monitoring computer or head-end server. By utilizing a serial connection, it translates 900 MHz spread spectrum signals into actionable data for software-based alert management.

The WNC-105LP-B7 Serial Receiver is engineered for reliability and long-range performance. It continuously monitors the facility for wireless transmissions from patient and staff devices. Once a signal is captured, it is passed via a serial port (RS-232) to the facility's central server, which then processes the call and triggers notifications to pagers, cell phones, or console displays. This receiver is often the backbone of “PC-based” nurse call configurations where advanced logging and reporting are required.

Architects' and Engineers' Specifications

The wireless system interface shall be the model WNC-105LP-B7 Serial Receiver.

1. **RF Technology:** The receiver shall utilize 900 MHz spread spectrum technology to ensure secure, interference-free transmission. Systems utilizing 433 MHz or other non-hopping frequencies shall not be acceptable.
2. **System Supervision:** The receiver must support full supervision, including the ability to detect and report low battery or inactive status of all associated wireless transmitters.
3. **Connectivity:** Data output shall be provided via a standard RS-232 serial connection to the primary system server
4. **Indicators:** The unit must feature external LED indicators to allow staff to verify power status and signal reception without the use of diagnostic tools.
5. **Installation:** The device shall be capable of being wall- or shelf-mounted and must operate on a low-voltage DC power supply.

Specifications

- **Operating Frequency:** 902–928 MHz (Frequency Hopping Spread Spectrum)
- **Data Interface:** RS-232 Serial (DB9 Female)
- **Input Voltage:** 12V DC (500mA typical)
- **Dimensions:** 5.5" W × 4.0" H × 1.25" D
- **Operating Temperature:** 32°F to 120°F (0°C to 49°C)
- **Enclosure:** Impact-resistant, flame-retardant ABS Plastic
- **Typical Range:** 100–300 ft. indoor environment; varies by structure

Equipment Options

- **Mounting Brackets:** Includes standard wall-mount tabs; optional ceiling-mount or hidden-rack brackets are available for aesthetic or secure installations.
- **Connection Interfaces:** Standard DB9 serial port; optional RS-232 to USB adapters for compatibility with modern server hardware.
- **Antenna Variations:** High-gain dipole antenna (included) for standard coverage; support for remote-mounted antennas to bypass architectural signal barriers.
- **Power Supply:** 12V DC power adapter (standard) or direct hardwire capability for integration with facility backup power systems.

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Product Specification Sheet

WNC-105LP-B7

Serial Receiver

Features

- **900 MHz Spread Spectrum Technology:** Uses frequency-hopping logic to prevent interference from Wi-Fi, Bluetooth, and medical imaging equipment.
- **Supervised Monitoring:** Constantly polls connected transmitters for “heartbeat” signals, low battery status, and device presence.
- **High Capacity:** Capable of managing hundreds of individual wireless devices simultaneously within its reception radius.
- **Dual-LED Indicators:** Real-time visual feedback for “Power” and “RF Activity” to simplify troubleshooting during installation.
- **Compact Footprint:** Low-profile housing designed for discreet placement in hallways or equipment closets.
- **Range Extendability:** Can be used in conjunction with WNC-MR (Mini Repeaters) to provide gapless coverage across multi-floor facilities.
- **Non-Volatile Memory:** Configuration settings are retained during power loss without requiring manual reconfiguration.
- **Plug-and-Play Integration:** Recognized by major nurse call software platforms as a standard serial input device.

Compliance and Certification

The WNC-105LP-B7 is built to meet stringent healthcare and communication standards:

- **FCC Part 15:** Certified for use as an intentional radiator in commercial and medical environments (FCC ID: Authorized).
- **UL 1069 / UL 2560:** Designed as a component of signaling systems compliant with Hospital Signaling and Nurse Call Equipment standards.
- **RoHS:** Compliant with the Restriction of Hazardous Substances directive (Lead-free).
- CE Mark: Certified for safety and electromagnetic compatibility in applicable regions.

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