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NEC

8200 LOCATION GATEWAY

BLE RECEIVER WITH IP DECT NETWORK CONNECTIVITY

The NEC 8200 Location Gateway is a sophisticated part of NEC's BLE (Bluetooth Low Energy) Location Solution for indoor localization of staff, residents as well as assets in large buildings and across premises such as in healthcare, production and warehouses. The gateway unit receives beacon ID's from various devices and uses the IP DECT backbone network to NEC Location Engine.
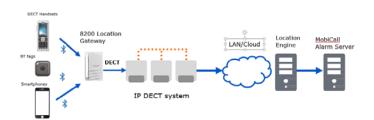
AT A GLANCE

> Appealing design
> 4-antenna array for Bluetooth beamforming
> RF-power steps to adjust sensitivity
> Ceiling and wall mount
> Various power options
> Outdoor option with outdoor box
> BLE 4.1 and Eddystone compatible
> IP DECT interface for connection to the Location Engine and Application Server
> Tamper proof with magnetic detection

MAIN PRODUCT FEATURES

The Location Gateway (LG) can be placed in rooms, or in doorways to detect the entering and leaving of specific zones. Typical use cases are in staff safety, resident wander detection and asset tracking.

A typical BLE Loaction Solution comprises of a number of LGs, beacons and handsets, an IP DECT system, a Location Engine (LE) and a DMLS (DECT Messaging and Location Service) interface to the application server MobiCall.

When a BLE beacon (an asset tag, a terminal like a IP DECT handset with BLE, a personal protection tag, etc.) enters the detection area of an LG, this is reported to the LE. Dedicated algorithms combine the information from multiple LG's and derive the location of the beacon. This information can be used by an application server for various applications, such as wander detection, staff safety and asset tracking. NEC also developed a sophisticated tool "Blueprint", which is essential to design and adjust the BLE Loaction Solution.

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FEATURES

General	Location Gateway with Bluetooth receiver and IP DECT backbone network connection
	Ceiling or Wall mount
Bluetooth	IP40 Dust and Water resistance
	Supports Bluetooth 4.1 Low Energy
	Profiles GAP / GATT
	4-antenna array for Bluetooth adjustment of antenna directivity for optimal accuracy (Left, Right, Across)
	3 Bluetooth RF attenuation steps for controlling range (Minimum, Medium, Maximum)
	Bluetooth beacon standard supported: Eddystone (Google)
	BT receiver range 0.2 - 15 m (depending on the settings)
IP DECT	IP DECT module included for backbone connection to the Location Engine and DMLS application interface and for maintenance and monitoring
	Transport of beacon information (ID, battery level)
	Receipt of new firmware and configuration data
Button	Button to enter configuration mode and for factory reset
LED	Green or Red, indicating device status (resetting, subscribed to DECT, Configuration mode)
Security	Automatic IP DECT encryption for secure air interface
	Tamper proof (magnetic switch) will generate alarm
	DECT heart beat monitoring of availability location gateway
	BLE antenna monitoring by means of an additional TX beacon (no active monitoring in locator)
Service/ Maintenance	Software upgrading via air interface
	Configuration provisioning and verification with NEC Blueprint tool

ACCESSORIES

8200 LG accessories	AC adapter USB output 5V/1000 mA
	Outdoor box
	PoE adapter

PACKAGE CONTENT

Package content	8200 Location Gateway
	2 x mounting screws and 2 x Anchors

ENVIRONMENTAL CONDITIONS

Temperature range	Operating: -10°C to +50°C
	Transport: -40°C to +70°C
	Storage: -20°C to +60°C Check
	1910 – 1930 MHz
Relative Humidity	Operating: 10 to 93%
	Transport: 10 to 95%
	Storage: 10 to 93% Check

PHYSICAL CHARACTERISTICS

Dimensions	112 x 112 x 23 mm
Weight	155 g
BT Range	0.2 – 15 m (Receiver sensitivity depending on settings) Check
	Supports Bluetooth 4.1 Low Energy
DECT Range	Indoor: 50 m max [3]
	Outdoor: 300 m max [4]
	3 Bluetooth RF attenuation steps for controlling range (Minimum, Medium, Maximum)
Power Supply	Power rail 5-24V, micro-USB or PoE adapter
	PoE IEEE 802.3af compliant with 8200 POE Module
	Power consumption 2.4W (booting), 790 mW (peak usage), 275 mW (average)
Interface	Micro USB – power supply and data
	IP DECT module included for backbone connection to the Location Engine and DMLS application interface and for maintenance and monitoring
	Transport of beacon information (ID, battery level)
	Receipt of new firmware and configuration data
Colour	White

IP DECT NETWORK TRANSMISSION & FREQUENCY

Transmitted radio RF power	Less than 250 mW [5]
Average Radio RF power	10mW
Frequency band EMEA	1880 – 1900 MHz
Frequency band Thailand [6]	1900 – 1906 MHz
Frequency band Latin America [6]	1910 – 1930 MHz
Frequency band North America [6]	1920 – 1930 MHz

The transmitted Radio RF power is according to local regulations

COMPLIANCE (DECT AND BLUETOOTH)

EMC	EN 301 489-1, EN 301 489-6, EN 301 489-17
EMF	EN 50663, EN 62479
RF	EN 300 328 (Bluetooth), EN 301 406 (DECT)
SAR	EN 62209-1, EN62209-2, EN50360
Safety	EN 62368-1

4) The radio coverage of DECT equipment depends on the environment and presence of obstacles
5) For specific countries, such as Egypt, the maximum number of channels is 6 channels per base

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DIRECTIVES & REGULATIONS EUROPEAN UNION

EMC	2014/30/EU - Electromagnetic Compatibility
LVD	2014/35/EU - Low Voltage Directive
RED	2014/53/EU - Radio Equipment Directive
RoHS	2011/65/EU + 2015/863/EU - Restriction of the use of certain hazardous substances in EEE
WEEE	2012/19/EU - Waste Electrical and Electronic Equipment
ERP	2009/125/EC - Eco-design requirements for Energy-related Products (ErP)
REACH	2006/1907/EC - Registration, Evaluation Authorization and Restriction of Chemicals (REACH)

COMPATIBILITY

IPDECT	DAP Controller version from R6.8.2
Location Gateway	NEC IP DECT handsets I766(Ex), G577(h) Third party beacons and Smartphone Apps using Eddystone (Google) protocol
MobiCall	V11
Bluetooth	4.1

LICENSES

BLE LG License	Every LG requires an LG license
BLE LG Device License	Every device monitored by the LGs needs a Device License. These are available in bundles

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