

## FBH8131 with LTE Backhaul

# Personal Small Cell Hub



The FBH8131 Access Point (AP) from NEC provides a small cell that is able to autonomously adapt to its RF environment to provide best coverage. It is built on many years of small cell development, providing a solution that supports zero touch installation, as it also incorporates an adaptive and distributed radio management function obtaining optimal local coverage with minimal macro network interference. This helps operators to reduce expenditure on network optimisation.

### Features

The FBH8131 provides significant performance gains compared to other similar products in the market and to previous NEC products. It can support the full HSDPA and HSUPA data rates whilst supporting up to 8 calls. The FBH8131 product offers fixed line and mobile LTE as backhaul options. This extends the end user usability to places where the fixed line Ethernet is not available.

- Designed for the mobile life style use in homes and offices
- Handles up to 8 simultaneous calls
- Supports HSDPA 14.4 Mbps downlink
- Supports HSUPA 5.7Mbps uplink.
- Transmit power up to 13dbm (20mW)
- Effective cell radius ~50m, depending on actual deployment environment
- Supports WCDMA Band I
- Product variants support Bands II/V and IV

- LTE Band VIII For Backhaul with fixed line Ethernet as an option
- Remote device management: TR-069
- NEC FemtoSpace with inter-FAP HO for seamless deployment of several small cells
- Wall mounting is provided as an option
- Works with both GAN (pre-luh) and luh
- Incorporates leading technologies
- Ubiquisys software engine
- Broadcom BCM61600

NEC's small cell access point provides a 'zero touch' plug and play function that enables end users to install the Femtocell access point (FAP) in their homes quickly and easily. After installation, the FAP automatically sets up connections to the core network over the subscriber's broadband connection and it interworks with 3G handsets without any modification. The end users enjoy improved 3G capacity and bundled services.

### Small Footprint

The FBH8131 has an elegant and compact design to fit unobtrusively in to the modern mobile life style. It is also highly energy efficient, consuming less than 4W of power, way below the 2009 EU target of 11W.

### Best Performance

Despite its diminutive proportions, the FBH8131 is at the leading edge of small cell performance. Each unit can handle up to 8 calls and download speeds up to 14.4 Mbps in fixed WAN and mobile LTE Backhaul deployments.

### Home & Business

Can be deployed in homes and in business spaces, when no Ethernet WAN is available but, LTE can be used as Backhaul. Once activated it provides 3G coverage.

### Field Proven

The software system has been proven in multiple commercial deployments worldwide, and includes unique real-time interference mitigation system.

Feature	Specification
Number of calls	4 or 8 subject to soft key licensing
HSDPA	up to 14.4 Mbps, supports Categories 1 to 12
HSUPA	up to 5.7 Mbps, supports Categories 1 to 6
Maximum transmit power UMTS	+13 dBm
Ethernet	WAN IEEE802.3 10/100 Base-T twisted pair Ethernet Physical connector: standard RJ45 socket 8 pins 1 port LAN IEEE802.3 10/100 Base-T twisted pair Ethernet Physical connector: standard RJ45 socket 8 pins 1 port
DC Power	Single DC jack socket for external plug top power supply. Power rating 5v/1A
SIM	Push-push SIM socket on the underside of the case in a covered recess.
Reset Switch	Single push button switch
Indicators	Single dual color LED (Red/Green)
Dimensions	W 168mm x H 29mm x D 114mm (To be confirmed)
Weight	<300g (including external power supply adaptor) (To be confirmed)
Case	Tamper-proof
Mounting options	Free standing
Acoustic noise	None: passive cooled
Operating temperature	0°C to 40°C
Energy consumption	<4W (To be confirmed)
UMTS operating and network listen bands	Band I (2100MHz) Band II/V (850/1900MHz) and Band IV (1700MHz) variants available subject to demand
GSM network listen bands	Band III (1800MHz) & Band VIII (900MHz)
LTE backhul Bands	Band VIII (900MHz) others subject to demand
Interference management	Fully automatic: real-time cognitive radio
Network interface	3GPP GAN, 3GPP Iuh and IMS
Broadband security	IPSec
Device security & authentication	Certificate or (U)SIM
Remote device management	Broadband Forum TR-069
MTTF	100,000 hrs
Product Life	> 5 years
CE Mark	Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999, on radio equipment and telecommunications terminal equipment (R&TTE) and the mutual recognition of their conformity.
1.Health	(Article 3.1(a) of the R&TTE Directive) EN62311: 2008/ EN50385 :2002
2. Safety	(Article 3.1(a) of the R&TTE Directive) EN 60950-1:2006/A12:2011
3. Electromagnetic compatibility	(Article 3.1 (b) of the R&TTE Directive) EN 301 489-1 V1.8.1/-7 V1.3.1/-23V1.4.1
4. Radio frequency spectrum usage	(Article 3.2 of the R&TTE Directive) EN 301 511 V9.0.2 EN 301 908-1 v4.2.1, EN 301 908-2 v5.2.1, EN 301 908-3 v5.2.1
5.EMC Directive	5.EMC Directive

Any technical specifications contained herein are subject to change without notice.

## Zero Touch

No cell-planning or operator installation – this is a self-optimising, plug & play device.

## Network Management

Intelligent, Proactive Service Monitoring & Service Assurance, with detection of service effecting events to trigger service alarm and escalation.