nano3G®
E-class Access Points for enterprise and public access

nano3G generates a high quality 3G signal inside enterprises, shops, homes and public spaces, using broadband backhaul for rapid deployment and low-cost operation.

The E-class Access Points

The E16 and E24 APs support 16 and 24 simultaneous active users respectively.

A full +24dBm (250mW) of transmit power, 14.4 Mbps HSDPA and 1.45 Mbps HSUPA (software upgradeable to HSPA+), make the E-class range of Access Points extremely effective for medium and large in-building deployments.

Full mobility is provided with configurable Open or Closed Access, bi-directional handover (i.e. both hand-out and hand-in) to 3G and 2G macro networks, and support for the 3GPP Rel 9 Iuh femto standard.

The E-class APs also feature integrated Power over Ethernet (PoE+) to simplify cabling in complex sites by removing the need for power to be available where the picocell is deployed. They have removable antennae with SMA connectors to enable connectivity into external antennas or DAS.

A high-stability oscillator eliminates the need for multiple high quality NTP servers that are normally required for maintaining oscillator discipline on femtocells, and gives picocell-class timing synchronisation and optimised startup time.

Easy deployment

The E-class APs offer a flexible commissioning capability enabling a choice of approaches to suit any type or scale of deployment.

Easy installation combined with fast commissioning and AP startup times mean that sites can be brought into service quickly and efficiently.

Proven in the real world

nano3G is built on ip.access' Oyster 3G® technology, which is field-proven in the world's largest femtocell deployment. Used by Cisco within its end-to-end femtocell solution, Oyster 3G is the core femto technology in AT&T's 3G MicroCell, deployed nationwide in the United States.

Extensive real-world deployment experience and expert knowledge are particularly important in the design of Radio Resource Management algorithms that deliver high performance and reliable mobility whilst minimizing handset battery impact.

nano3G E-Class Access Point

The nano3G end-to-end solution
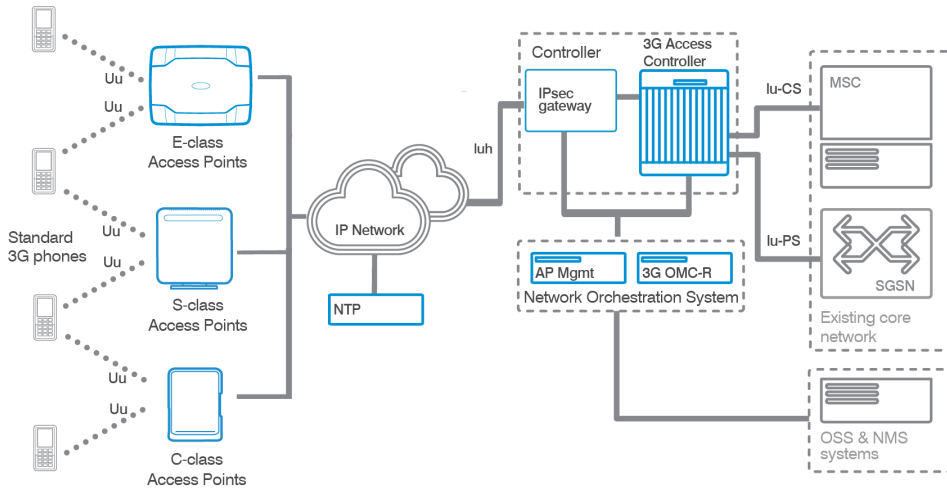
Picocells and femotells are changing the way mobile operators serve their subscribers and manage their networks. They're simply the best way to get 3G coverage and capacity where the customers are, inside buildings.

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nano3G E-class Access Points

E-class picocells

	E16 AP	E24 AP
Simultaneous dedicated users	16	24
RF Output Power	250 mW/+24 dBm (+13dBm for Band 5)	
UMTS bands	1, 2/5, 4	
Electrical Power	<18 W 12V DC socket for AC/DC adaptor	
PoE	PoE+ integrated	
External antennas	Optional	
Oscillator	OCXO better than 100ppb	
NTP	Time stamp for certificate validation	
Access Mode	Open/closed access	

Environmental & physical

Dimensions	247 x 213 x 56 mm
Temp. range	0° to 45°C
Operating	10 to 70% non-condensing
Ingress protection	IP40
Mounting	Wall Mounted

Network Listen

3G & 2G Network listen to support radio synchronisation and RF planning

Security

3GPP air interface security

IPsec IKEv2 on AP-SeGW links

X509 certificate authentification with CRL

Interfaces

Iu+ or Iuh interface to AC

Uu air interface to standard 3G UEs

UTRAN mobility

Reselection & handover to/from macro layer

Reselection & handover between APs

Intra-frequency, Inter-frequency, Inter-RAT

UTRAN services

12.2 AMR CS Voice

Rel 99 PS 64/ 128/ 384 kbps

HSDPA to 14.4 Mbps (21 Mbps upgradable)
HSUPA to 1.45 Mbps (5 Mbps upgradeable)

Supplementary Service transparency

SMS, MMS, Cell Broadcast

Multi-RAB combinations to each UE
  Voice+ up to 3 HSPA RABs
  Voice+ up to 2 R99 PS

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