

The R60 helps operators meet coverage obligations in remote areas where ARPU is low; the R60 is a low cost complete LTE/3G cell with flexible backhaul options

R60

Ruggedised LTE/3G small cell for outdoor, rural and remote

4G
SOLUTION

3G
SOLUTION

R60 Access Point

Optimum Performance

The R60 has up to 10W output power with a range of up to 10km. To provide mobile internet access to users, the R60 provides standard support for LTE or 3G data services (software switchable).

Satellite Backhaul

The R60 is optimised for high-latency backhaul links. The R60 can be deployed with a range of different backhaul options including satellite, WiMAX, point to point microwave or DSL. The R60 can be deployed over satellite in many different places including remote rural locations, ships and aircraft.

Low Power

In remote locations providing power can be a significant part of the deployment cost. The R60 is optimised to use the minimum power to provide the required coverage. For example, the R60 is suitable for use with solar powered systems.

Easy Integration

The R60 connects to the nanoVirt system for S1 aggregation in the nanoLTE GW and management from the NOS.

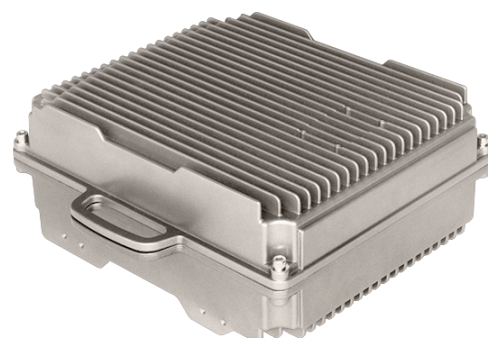
EAP Option

The R60 has an option for a factory-fitted Embedded Applications Processor (EAP) for custom applications, such as satellite backhaul management software and local voice and data switching.

Viper™ virtualised enterprise RAN platform

The R60 access point is part of ip.access' Viper end-to-end small cell platform for enterprise RAN, which integrates the following components:

- A range of plug-and-play 2G, 3G and 4G small cell Access Points for small, medium and large enterprise deployments
- Virtualised Gateways which securely handle and route all traffic between the APs and the operator's core network
- SUMO™ Multi-Operator technology, allowing a single access point to provide coverage for all networks
- As A Service deployment models, including core network integration, AP deployment, and network operation.



R60 Access Point



“Targeted specifically at the Remote and Rural Extension market, the R60 combines best-in-class transmitter efficiency, a lightweight pole-mountable package, and the Viper™ multi-operator platform for a simple, low TCO coverage solution.”

R60 Access Point

Radio

Antennas	2 x External antennas 2 x 2 MIMO (LTE) 1 x SISO (3G)
Max. output power	+37dBm per port
Min. output power	+5dBm

LTE Radio Interface

LTE FDD Bands	1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 20, 28
LTE TDD Bands	38, 40, 41, 42, 43, 48 (CBRS/ASA)
LTE Bandwidths	FDD: 3, 5, 10, 15, 20MHz TDD: 10, 20MHz

LTE Features

32 active users
Up to 150/50 Mbps depending on the bandwidth configured
VoLTE and CSFB to GERAN/UTRAN
SMS/MMS support
Warning system broadcast - CMAS and ETWS supported
Full GBR and non-GBR support with QoS aware scheduler
S1 (S1-Flex via gateway), X2 (via gateway)

LTE Mobility

Reselection to/from macro layer & APs Intra-frequency, inter-frequency, Inter-RAT
Handover to/from macro layer & between APs Intra-frequency, Inter-frequency, Inter-RAT S1 & X2-based

3G Radio Interface

3G Bands	All standard UMTS bands up to 2.1GHz
----------	--------------------------------------

3G Features

24 active users
CS voice: AMR and WB-AMR
HSPA: 21/5.75 Mbps
SMS/MMS support
Cell broadcast
Multi-RAB per UE: up to 1 x CS + 3 x HSPA

3G Mobility

Reselection to/from macro layer & APs Intra-frequency, Inter-frequency, Inter-RAT
Handover to/from macro layer & between APs Intra-frequency, inter-frequency, Inter-RAT

Security

3GPP air interface security
IPsec over IP (IKEv2) backhaul interface to SecGW
X509 certificate authentication with CRL
Secure boot and code signing

System Features

Uu LTE/3G air interfaces to standard LTE/3G UEs
Fully TR-069 compliant
LTE/3G software update via NOS
Performance monitoring
Network listen to support radio synchronisation and RF planning
SUMO Multi-Operator under license
Optional Embedded Applications Processor (EAP) for additional on-site functionality

Physical & Electrical

Power supply	
Supply voltage range	24V to 48V DC
Power consumption	90W
EAP option	+16W

Environmental & Physical

Dimensions (HxWxD)	355 x 345 x 150mm (unit only)
Weight	13kg unit 15kg with solar shield and fixings
Ambient temp. range	-40° to +55°C
Humidity	5%-90% non-condensing
Mounting	Mounting bracket for pole or wall mounting
Ingress protection	IP67

R60 block diagram

