Micro Cell Base Station

Global RF Solution.
One Source : from the Antenna to the PCB

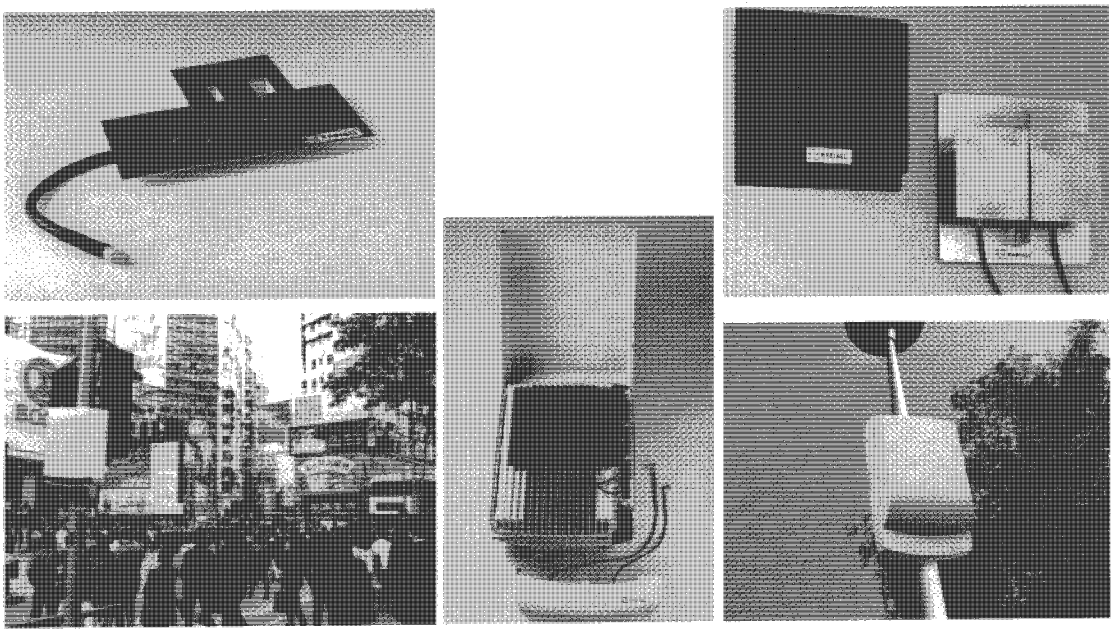
GSM 900 MHz

Embedded omnidirectional wire patch antennas

- Excellent efficiency
- Excellent impedance matching
- Omnidirectional
- Miniaturized

Embedded sectorial patch antennas

- Wide bandwidth
- Low intermodulation level
- Wide horizontal coverage
- High efficiency
- Easy to integrate
- High reliability



RADIALL antennas are well suited to Micro Cell Base Station applications : a wide horizontal beamwidth with a high efficiency of radiation.

RADIALL embedded antennas eliminate the need for connection to an external antenna and especially improve the visual aspect of the Base Station.

RADIALL is able to offer a wide range of coaxial connectors and different cable types. RADIALL coaxial cable assemblies are especially designed to meet the low intermodulation level for Cellular Base Station applications. The low loss coaxial cable assembly enables distancing the radio PCB from the antenna. Pigtail lengths can be modified upon request.

RADIALL®
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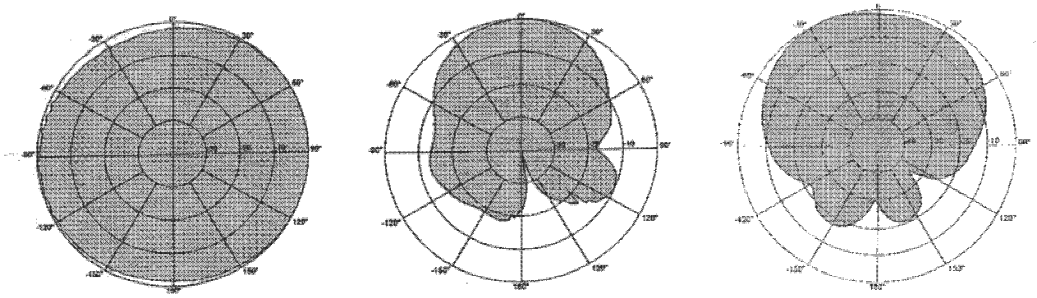
Tel. : +33 1 49 35 35 15 - Fax : +33 1 48 54 63 63 - E.mail : antenna@radiall.fr - Web : http://www.radiall.com

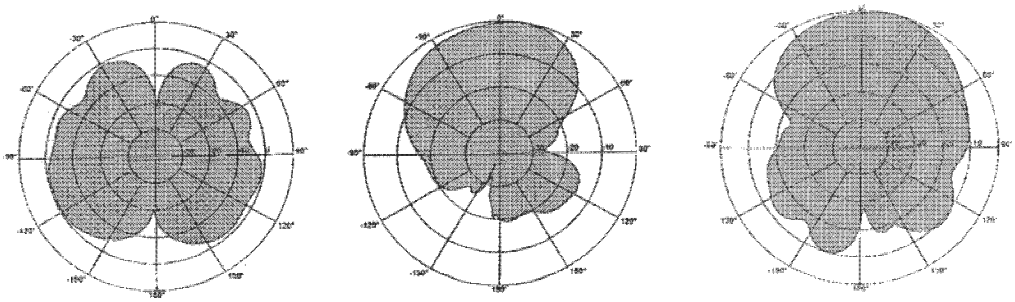
Micro Cell Base Station — GSM 900 MHz

Part Number	R380.200.500	R380.200.001	R380.200.000
Antenna type	Embedded omnidiredirectional wire patch	Embedded sectorial patch 2 ports	Embedded sectorial patch 2 ports
Electrical specifications			
Operating frequency range	880 - 960 MHz	880 - 960 MHz	880 - 960 MHz
Nominal impedance	50 Ω	50 Ω	50 Ω
VSWR	1.8 : 1 max	1.5 : 1 max	1.8 : 1 max
Gain	1 dBi	6 dBi	6.5 dBi
Horizontal plane beamwidth (- 3 dB)	Omni directionnal	75°	85°
Vertical plane beamwidth (-3 dB)		70°	70°
Intermodulation	-165 dBc under 2 x 35 dBm	-165 dBc under 2 x 35 dBm	-165 dBc under 2 x 35 dBm
Isolation between ports	- 17 dB	21 dB	21 dB
Polarisation	Linear vertical	Dual linear ± 45°	Linear vertical
Power input	50 W	50 W	50 W
Mechanical specifications			
Operating temperature	-40°C to +90°C	-40°C to +90°C	-40°C to +90°C
Dimensions	135 x 50 x 25 mm	320 x 275 x 30 mm	270 x 255 x 35 mm
Connector	TNC right angle	N right angle	TNC right angle

Horizontal



Vertical



Rad-Slim technology meets the advantages of conventional and monopole antennas : omnidirectional radiation. In addition, this technology provides an excellent impedance match and high efficiency.
Rad-Slim technology features high performance in a small volume : 6 times smaller than conventional antennas with the same cost effectiveness.

Rad-Air technology enables high isolation between antennas (-20 dB) and low squint difference so as to eliminate the need for a costly duplexer. This technology is especially adapted to avoid the intermodulation product.

Patents pending

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Micro Cell Base Station

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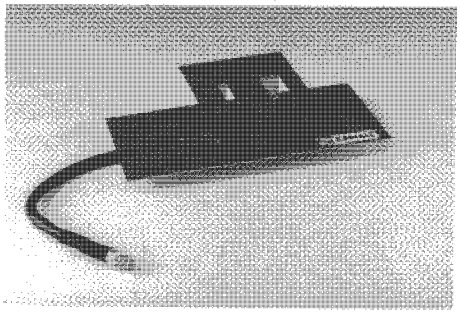
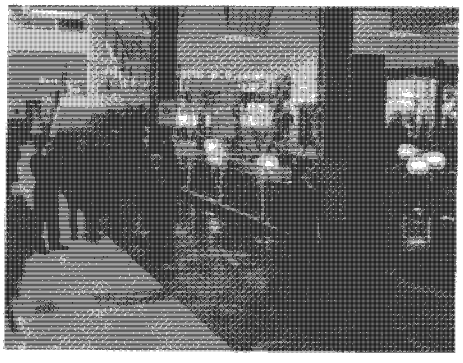
One Source : from the Antenna to the PCB

DCS 1800 MHz

Embedded omnidirectional wire patch antennas

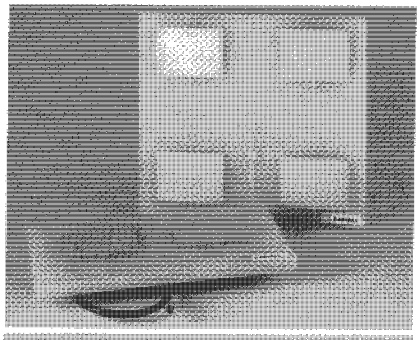
- Excellent efficiency
- Excellent impedance matching
- Omnidirectional
- Miniaturized

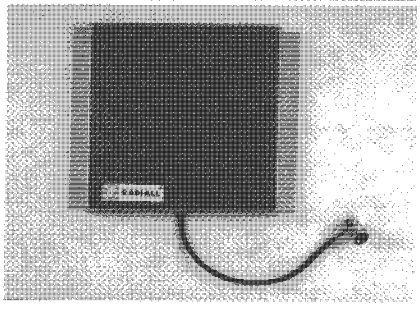




Embedded patch array antennas

- Wide bandwidth
- Low intermodulation level
- Wide horizontal coverage
- High efficiency
- Easy to integrate
- High reliability





RADIALL antennas meet the main characteristics for Micro Cell Base Station applications : a wide horizontal beamwidth with a high efficiency of radiation.

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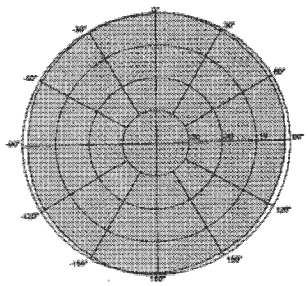
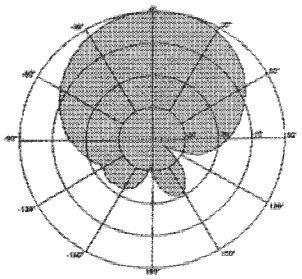
Micro Cell Base Station DCS 1800 MHz

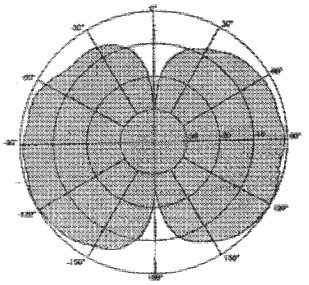
Part Number	R380.300.500	R380.400.206	R380.300.200
Antenna type	Embedded omni-directional wire patch	Embedded patch array	Embedded patch array 2 ports
Electrical specifications			
Operating frequency range	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Nominal impedance	50 Ω	50 Ω	50 Ω
VSWR	1.8 : 1 max	1.4 : 1 max	1.4 : 1 max
Gain	1 dBi	9 dBi	9 dBi
Horizontal plane beamwidth (- 3 dB)	Omni directionnal	60°	60°
Vertical plane beamwidth (-3 dB)		45°	45°
Side lobe level		-20 dB	-20 dB
Intermodulation	-165 dBc under 2 x 35 dBm	-165 dBc under 2 x 35 dBm	-165 dBc under 2 x 35 dBm
Isolation between ports	21 dB		21 dB
Polarisation	Linear vertical	Linear vertical	Linear vertical
Power input	50 W	50 W	50 W
Mechanical specifications			
Operating temperature	-40°C to +90°C	-40°C to +90°C	-40°C to +90°C
Dimensions	135 x 50 x 25 mm	245 x 205 x 20 mm	275 x 275 x 18 mm
Connector	TNC right angle	N right angle plug	N right angle plug

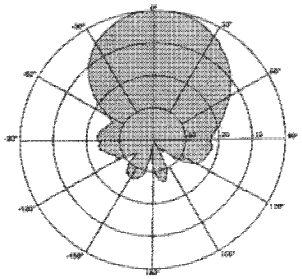
Horizontal





Vertical





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