



Base Antennas for DECT

107497, Moscow Chernicinsky pr-d 7/1
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Model	Short description	Band, MHz
A-5D, A-8D	Collinear, OMNI, fiberglass, white, 5 and 8 dBi	1880-1900
RAS-12D-60, RAS-15D-60	Panel sector antennas 60 ⁰ , ABS-grey	1880-1900
RAS-14D-120 RAS-15D-90	Panel sector antennas 90 ⁰ and 120 ⁰ , ABS-grey	1880-1900
RAX-14D-70	Panel sector antenna, X-pol, ABS-grey	1710-1900

2009



DECT 1880-1900 MHz Collinear antennas A-3D, A-5D, A-8D

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Electrical specifications

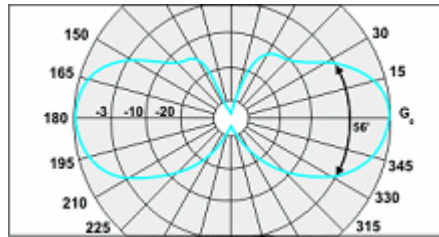
Model	A-3D	A-5D	A-8D
Operating Frequency band, MHz	1880-1900	1880-1900	1880-1900
Gain, dBi	3	5.2	8
VSWR, not more than	1.5	1.5	1.5
Polarization	vertical	vertical	vertical
Electrical downtilt	0°	0°	3°
Max. power input, W	10	10	10
Sector in H-plane (-3 dB)			360°
Sector in E-plane (-3 dB)	56°	22°	10°
Impedance, Ohm	50	50	50

Mechanical specifications

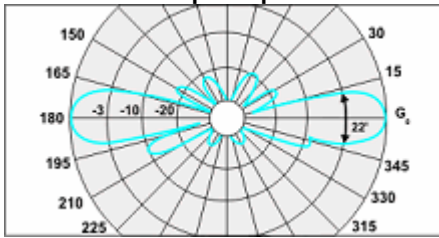
Model	A-3D	A-5D	A-8D
Dimensions (LxWxH), mm	35x35x370	35x35x840	35x35x1330
Weight, kg	0.1	0.28	0.38
Rated Wind Velocity, m/s	50	55	40
Radiator	PCB	PCB	PCB
Radome	grey PVC	grey PVC	grey PVC
Mounting kit	on a wall		on a mast
Connector	TNC-male		N-female (TNC optional)

These antennas are characterized by an ideally circular radiation pattern in horizontal plane and a gain coefficients of 3, 5,2 and 8 dBi correspondingly. The antenna A-3D is recommended to be applied as an inside-the-office antenna, while the rest of antennas - as the base antennas. The model A-8D has an increased gain and a tilt of the radiation pattern in a vertical plane what provides a maximum efficiency at receiving and transmitting the SHF power near the earth surface, where the subscribers are positioned.

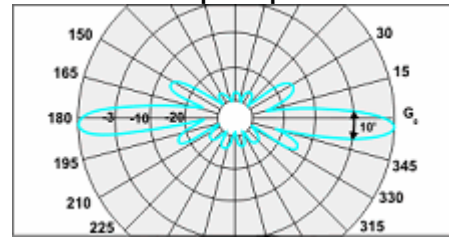
A-3D E-plane pattern



A-5D E-plane pattern



A-8D E-plane pattern





DECT 1880-1900 MHz Panel antennas RAS-12D-60, RAS-15D-60

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RAS-12D-60



RAS-15D-60

Electrical specifications

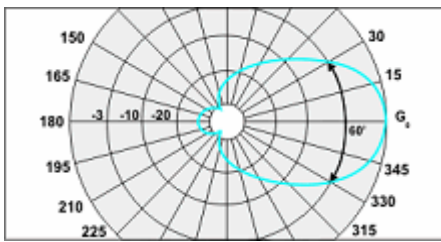
Model	RAS-12D-60	RAS-15D-60
Operating Frequency band, MHz	1880-1900	1880-1900
Gain, dBi	12	15
VSWR, not more than	1.5	1.5
Front-to-back ratio, dB	25	25
Polarization	vertical	vertical
Electrical downtilt	3°	6°
Max. Power input, W	20	20
Sector in H-plane (-3 dB)	60°	60°
Sector in E-plane (-3 dB)	18°	10°
Impedance, Ohm	50	50

Mechanical specifications

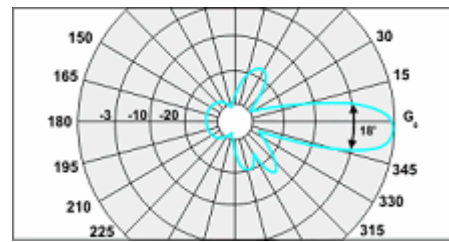
Model	RAS-12D-60	RAS-15D-60
Dimensions (LxWxH), mm	204x63x518	204x63x1015
Weight, kg	1.2	2
Rated Wind Velocity, m/s	55	43
Radiator	copper	copper
Radome		grey, ABS
Mounting	on a mast 30-220 mm with "Norma" or CP-55D, CP-115, CP-220	
Connector	N-female on a cable	

As the base antennas for DECT networks we suggest to use these narrow-sector antennas which have a standard servicing area within the sector of 60°. The antennas have a small electrical tilt of the radiation pattern beam in a vertical plane. For better narrowing of the main lobe it is possible to use our tilt mechanism MN-1. The cable output is very much convenient for the encapsulating of the connector, especially if the antenna is mounted on the wall.

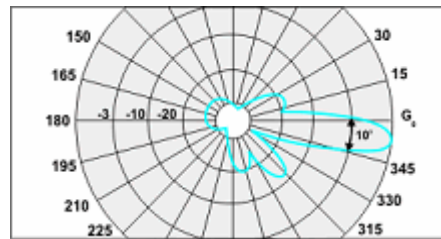
H-plane pattern "RAS-60"



RAS-12D-60 E-plane pattern



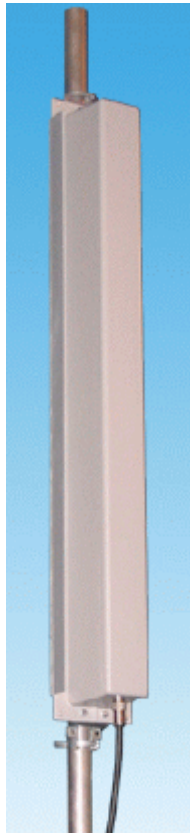
RAS-15D-60 E-plane pattern





DECT 1880-1900 MHz
Panel antennas
RAS-11D-120, RAS-14D-120,
RAS-12D-90, RAS-15D-90

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RAS-15D-90 (mast mount.)



RAS-11D-120 (wall mount.)

Electrical specifications

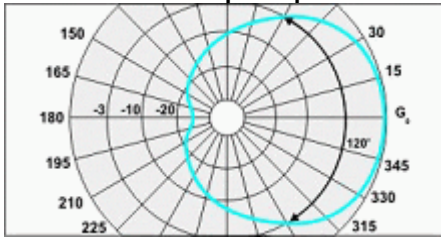
Model	RAS-11D-120	RAS-12D-90	RAS-14D-120	RAS-15D-90
Operating frequency band, MHz	1880-1900	1880-1900	1880-1900	1880-1900
Gain, dBi	11	12	14	15
VSWR, not more than	1.5	1,5	1.5	1.5
Front-to-back ratio, dB	22	25	23	25
Polarization			vertical	
Electrical downtilt	0°	0°	2°	2°
Max. power input, W	10	10	10	10
Sector in H-plane (-3 dB)	120°	90°	120°	90°
Sector in E-plane (-3 dB)	17°	17°	10°	9°
Impedance, Ohm	50	50	50	50

Mechanical specifications

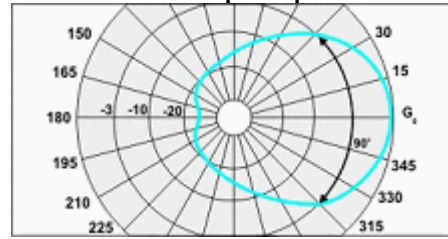
Model	RAS-11D-120	RAS-12D-90	RAS-14D-120	RAS-15D-90
Dimencions (LxWxH), mm	138x103x580	138x103x580	138x103x1034	138x103x1034
Weight, kg	1.45	1.4	2.7	2.6
Rated wind velocity, m/s	40	43	40	43
Radiator	PCB	PCB	PCB	PCB
Radome			grey, ABS	
Mounting	on a mast 30-220 mm with "Norma" or CP-55D, CP-115, CP-220			
Connector	N-female on a cable			

These antennas are assigned for the work within a compound of the base stations while sectoring the servicing area. Due to the increased gain and the standard sectors of the radiation pattern the adequately matched arrays from these antennas will provide the needed traffic and a high range of coverage of the DECT base station. Despite of the existing electrical tilt of the beam which positively influences upon the distribution of the irradiation energetic characteristics within the near-field zone, a mechanical tilt is also possible by means of the mechanism MN-1.

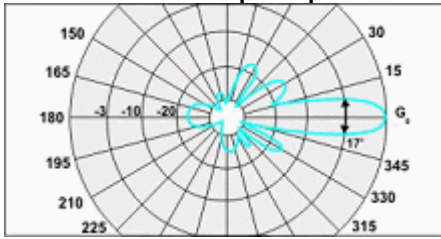
"RAS-120" E-plane pattern



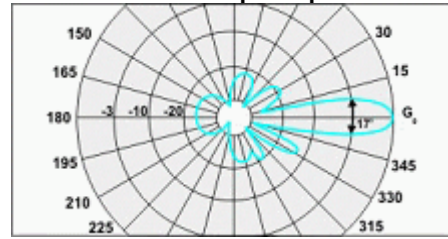
"RAS-90" E-plane pattern



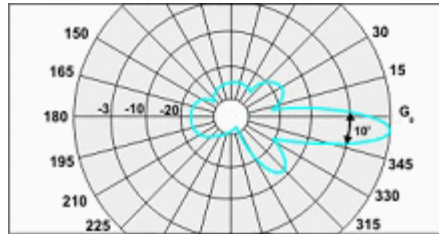
RAS-11D-120 E-plane pattern



RAS-12D-90 E-plane pattern



RAS-14D-120 and RAS-15D-90 E-plane pattern





DECT 1880-1900 MHz X-polarization Panel Antenna RAX-14D-70

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Electrical specifications

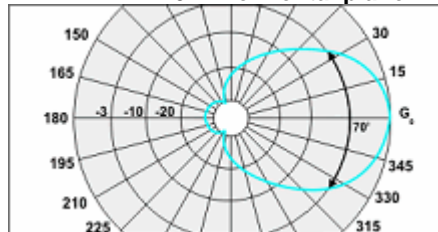
Model	RAX-14D-70
Operating Frequency band, MHz	1710-1900
Gain, dBi	14
VSWR, not more than	1.5
Front-to back ratio, dB	20
Polarization	$\pm 45^\circ$
Isolation, dB	-20
Electrical downtilt	0°
Max. power input, W	10
Sector in horizontal plane	70°
Sector in vertical plane	17°

Mechanical specifications

Model	RAX-14D-70
Dimensions (LxWxH), mm	204x63x518
Weight, kg	2
Rated Wind Velocity, m/s	50
Radiator	copper
Radome	grey, ABS
Mounting	on a mast (30-220 M) with "Norma" or CP-55D, CP-115, CP-220
Connector	N-female on a cable

Specially for the DECT standard an antenna RAX-14D-70 with the inclined polarization has been developed for the implementation of the spaced receiving technique. This panel consists of two independent antennas of polarization $\pm 45^\circ$, the gain of 14 dBi and the outputs separation not less than 30 dB. The irradiation sector by the level of a half power value is about 70°. For the adjustment of the radiation pattern in a vertical plane we suggest to use the tilt mechanism MN-1.

RAX-14D-70 in horizontal plane



RAX-14D-70 in vertical plane

