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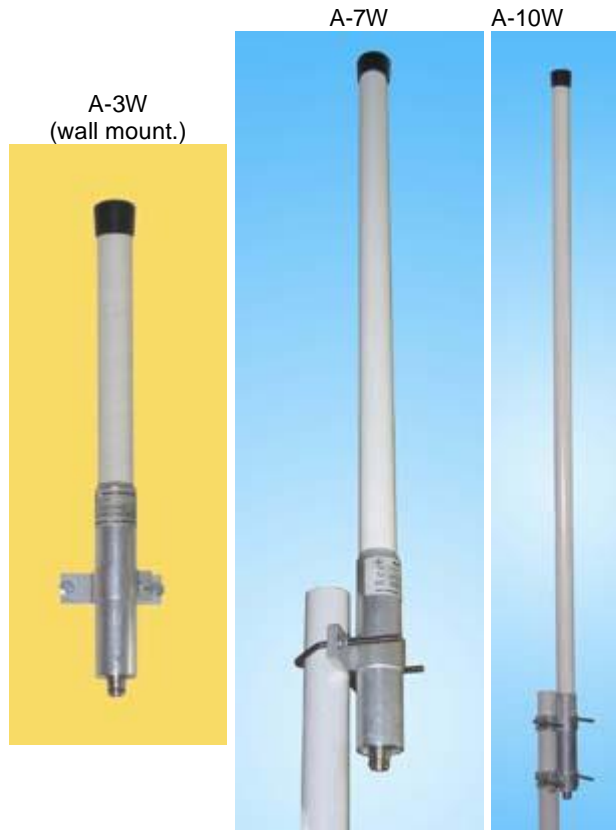
Wi-Fi Antennas

Model	Short description	Band, MHz	Gain, dBi	Price, EUR
A-3W	Collinear, OMNI	2400-2485	3	61
A-7W	Collinear, OMNI	2400-2485	7	75
A-10W	Collinear, OMNI	2400-2485	10	82
SS-1W	Indoor, OMNI	2400-2485	1	20
SU-6W	Subscriber	2400-2485	5,5	20
SU-12W	Subscriber	2400-2485	12	88
SU-15W	Subscriber	2400-2485	15	100
RAS-13W-60	Panel, sector in horiz. plane 60°	2400-2485	13	118
RAS-16W-60	Panel, sector in horiz. plane 60°	2400-2485	16	140
RAS-11W-120	Panel, sector in horiz. plane 120°	2400-2485	11	96
RAS-12W-90	Panel, sector in horiz. plane 90°	2400-2485	12	96
RAS-14W-120	Panel, sector in horiz. plane 120°	2400-2485	14	140
RAS-15W-90	Panel, sector in horiz. plane 90°	2400-2485	15	140
RAH-15W-90	Panel, sector in horiz. plane 90°, horizont.polar.	2400-2485	15	140
G 6W	Parabolic	2400-2485	18	405
G 12W	Parabolic	2400-2485	28	635



WLAN 2400-2485 MHz Collinear antennas A-3W, A-7W, A-10W

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Electrical specifications

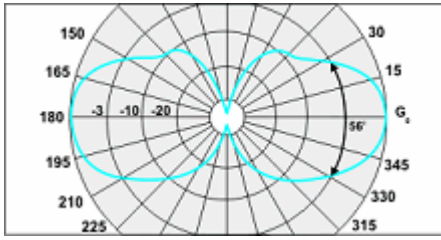
Model	A-3W	A-7W	A-10W
Operating frequency band, MHz	2400-2485	2400-2485	2400-2485
Gain, dBi	3	7	10
VSWR, not more than	1.5	1.5	1.5
Front-to-back ratio, dB			present
Polarization			vertical
Electrical downtilt	0°	6°	9°
Max. power input, W	10	10	10
Sector in H-plane (-3 dB)	360°	360°	360°
Sector in E-plane (-3 dB)	56°	14°	6.5°
Impedance, Ohm	50	50	50

Mechanical specifications

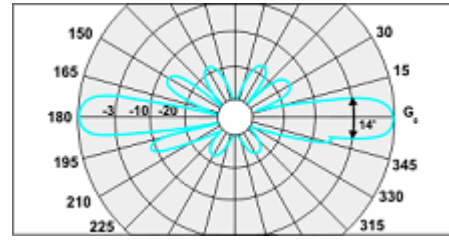
Model	A-3W	A-7W	A-10W
Dimensions (LxWxH), mm	35x35x370	35x35x840	35x35x1330
Weight, kg	0.1	0.28	0.38
Rated wind velocity, m/s	50	50	40
Radiator	PCB	PCB	PCB
Radome	white PVC		grey, PVC
Mounting		on a mast diam. 35-70 mm or on a wall	
Connector		N-female (TNC optional)	

These spike antennas possess an ideally circular radiation pattern in horizontal plane and a gain of 3, 7 and 10 dBi, correspondingly. The antenna A-3W is recommended to be applied as the inside-the-office antenna, where it is not possible to use the antennas with high gain. The models A-7W and A-10W have an increased gain and a tilt of the radiation pattern in the vertical plane what ensures the most efficient reception and transmission of SHF energy near the earth surface where the subscribers are positioned. These models are applied in the case of the central disposition of the base station or in the case when the objects are non- significantly distanced.

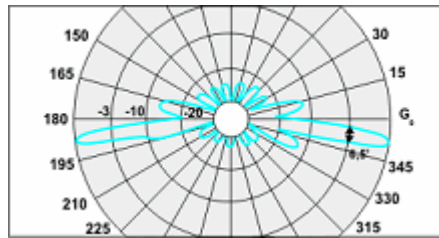
A-3W E-plane pattern



A-7W E-plane pattern (2.485 GHz)



A-10W E-plane pattern (2.4 GHz)





WLAN 2400-2485 MHz Indoor Antennas SS-1W, SU-6W

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Electrical specifications

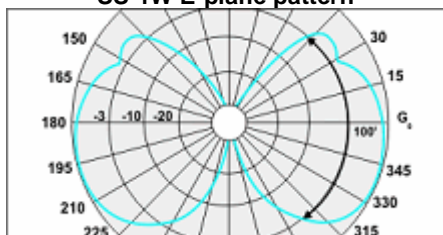
Model	SS-1W	SS-6W
Operating frequency band, MHz	2400-2485	2400-2485
Gain, dBi	1	5.5
VSWR, not more than	1.5	1.5
Front-to-back ratio, dB	present	20
Polarization		vertical
Max. power input, W	10	10
Sector in H-plane (-3 dB)	360°	78°
Sector in E-plane (-3 dB)	100°	42°
Impedance, Ohm	50	50

Mechanical specifications

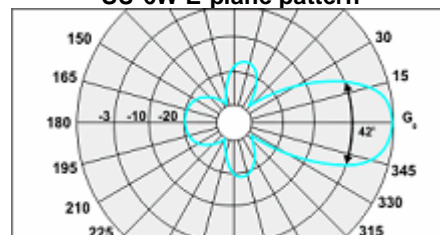
Model	SS-1W	SU-6W
Dimensions (LxWxH), mm	172x172x68	102x42x133
Weight, kg	0.08	0.25
Rated wind velocity, m/s	no data	55
Radiator	PCB	copper
Radome	Polystyrene white	ABS
Mounting	On a ceiling	On a wall
Connector		R-SMA (R-TNC, N-female, TNC, SMA - optional)
Additional complete set	-	low loss cable 2.5 m

To construct an inside-the-office network WLAN these models would be very suitable. An antenna SS-1W is mounted on the ceiling and provides a circular radiation pattern, and antenna SU-6W, while being mounted at any horizontal and vertical plane, provides a directional radiation of the SHF energy. An antenna SU-6W is supplied with a sufficiently long feeding cable (2,5 m) which is ended by a connector that is necessary for switching directly to the corresponding equipment. That's why the necessity in additional cables and transmit elements is eliminated.

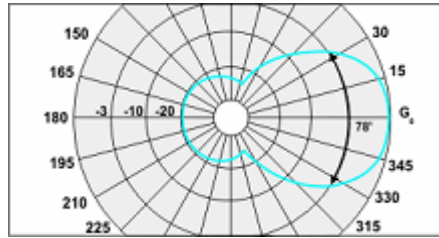
SS-1W E-plane pattern



SU-6W E-plane pattern



SU-6W H-plane pattern





WLAN 2400-2485 MHz Subscribers' antennas SU-12W, SU-12W(M), SU-15W, SU-15W(M)

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SU-12W with MN-3



SU-15W



SU-15W(M)



SU-12W(M)



SU-12W(M) Underside



Electrical specifications

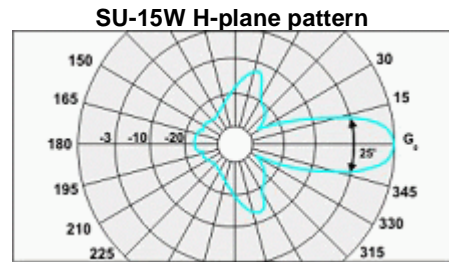
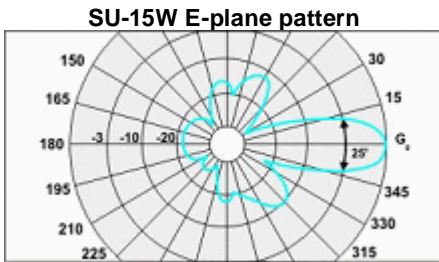
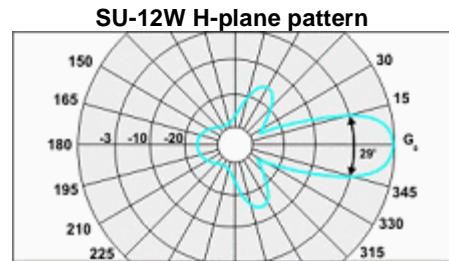
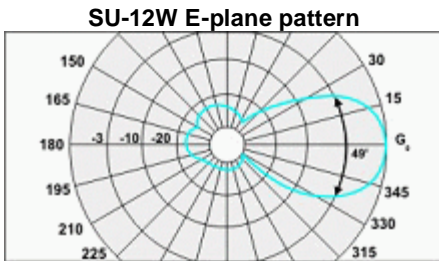
Model	SU-12W/SU-12W(M)	SU-15W/SU-15W(M)
Operating frequency band, MHz	2400-2485	2400-2485
Gain, dBi	12	15
VSWR, not more than	1.5	1.5
Front-to-back ratio, dB	23	23

Polarization		vertical
Max. power input, W	10	10
Sector in H-plane (-3 dB)	29°	25°
Sector in E-plane (-3 dB)	49°	25°
Impedance, Ohm	50	50

Mechanical specifications

Model	SU-12W	SU-12W(M)	SU-15W	SU-15W(M)
Dimensions (LxWxH), mm	284x95x164	284x95x164	294x103x294	294x103x294
Weight, kg	0.7	0.7	1.05	1.05
Rated wind velocity, m/s	55	55	55	55
Radiator	copper	copper	copper	copper
Radome			ABS	
Mounting	on a mast (30-220 mm) with "Norma" or CP-55D, CP-115, CP-220			
Connector	N-female on a cable	N-female	N-female on a cable	N-female

The directional subscribers` antennas SU-12W and SU-15W with the gain of 12 and 15 dBi, correspondingly, have a performance which is suitable for all kinds of the weather conditions due to the frost-resistant radome made of ABC-plastic. Because of its construction (arrays of active "patch" and passive elements) the antennas have an increased gain if compared with the classic flat antennas of the same sizes. The cable output is implemented on the high-quality cable of Huber-Suhner production and on a connector of Rosenberger production what ensures a stability of the characteristics.





WLAN 2400-2485 MHz Panel antennas RAS-13W-60, RAS-16W-60

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Electrical specifications

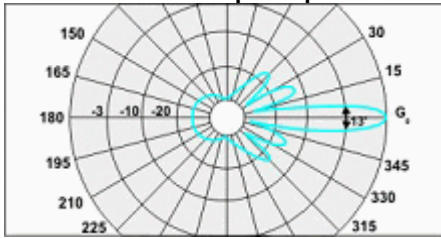
Model	RAS-13W-60	RAS-16W-60
Operating frequency band, MHz	2400-2485	2400-2485
Gain, dBi	13	16
VSWR, not more than	1.5	1.5
Front-to-back ratio, dB	25	25
Polarization		vertical
Electrical downtilt	0°	7°
Max. power input, W	20	20
Sector in H-plane (-3 dB)	60°	60°
Sector in E-plane (-3 dB)	13°	9°
Impedance, Ohm	50	50

Mechanical specifications

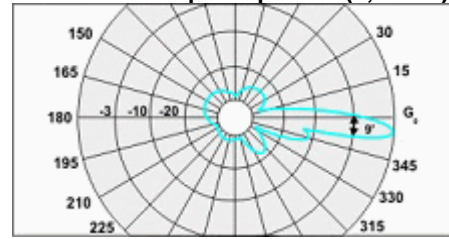
Model	RAS-13W-60	RAS-16W-60
Dimensions (LxWxH), mm	204x63x518	204x63x1015
Weight, kg	1.2	2
Rated wind velocity, m/s	55	43
Radiator	copper	copper
Radome	grey, ABS	grey, ABS
Mounting	on a mast 30-220 mm with "Norma" or CP-55D, CP-115, CP-220	
Connector	N-female on a cable	

As the base sector antennas for the WLAN networks we suggest to use these antennas (RAS-13W-60, RAS-16W-60) which have a standard servicing area within the sector of 60° and a high gain - up to 16 dBi. The antennas have a small electrical tilt of the radiation pattern beam in a vertical plane. To achieve a narrower main lobe one can use our inclination mechanism MN-1. The cable output is very convenient for the encapsulating of the connector, especially in the case when the antenna is mounted on the wall. The cable output is implemented on the high-quality cable of Huber-Suhner production and on a connector of Rosenberger production what ensures a stability of the characteristics.

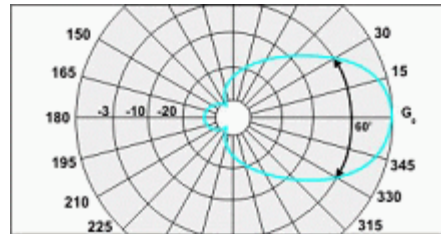
RAS-13W-60 E-plane pattern



RAS-16W-60 E-plane pattern (2,4 GHz)



"RAS-60" antennas H-plane pattern





WLAN 2400-2485 MHz
Panel antennas
RAS-11W-120, RAS-14W-120,
RAS-12W-90, RAS-15W-90

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RAS-11W-120



RAS-15W-90



Electrical specifications

Model	RAS-11W-120	RAS-12W-90	RAS-14W-120	RAS-15W-90
Operating frequency band, MHz	2400-2485	2400-2485	2400-2485	2400-2485
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	3°	3°	7°	7°
Max. power input, W	10	10	10	10
Sector in H-plane (-3 dB)	120°	90°	120°	90°
Sector in E-plane (-3 dB)	13°	13°	7°	7°
Impedance, Ohm	50	50	50	50

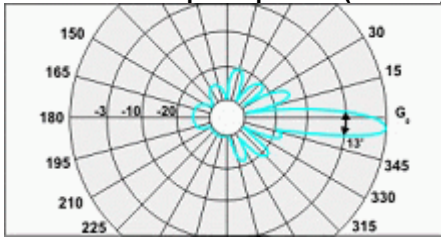
Mechanical specifications

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

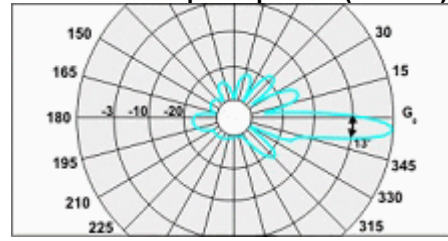
These antennas are assigned for their operation within the compound of the base stations while the service zones are sectored. By means of thee antennas it is also possible to create a circular antenna array if the allocation of the antennas with the circular radiation pattern is prevented by the various superconstructions and the building walls. The antennas are characterized by an increased gain and the standard sectors of the radiation pattern what will allow to use the radio-waves` energy with the maximum efficiency.

In spite of the existing electrical tilt of the beam which positively influences upon the energy distribution of the irradiation in the near-field zone the mechanical tilt is also possible by means of the mechanism MN-1.

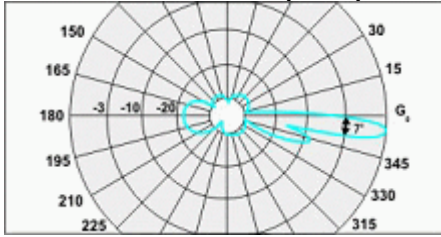
RAS-11W-120 E-plane pattern (2.4 GHz)



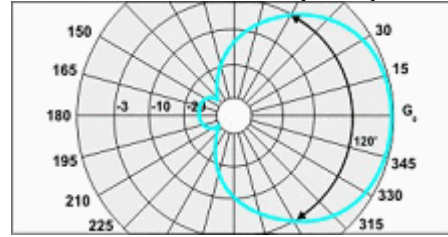
RAS-12W-90 E-plane pattern (2.4 GHz)



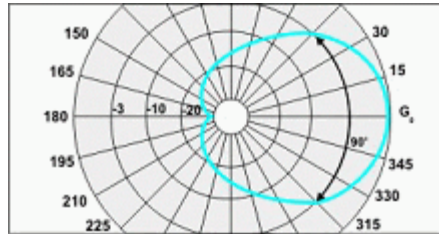
RAS-15W-90 and RAS-14W-120 E-plane pattern (2.4 GHz)



"RAS-120" antennas H-plane pattern



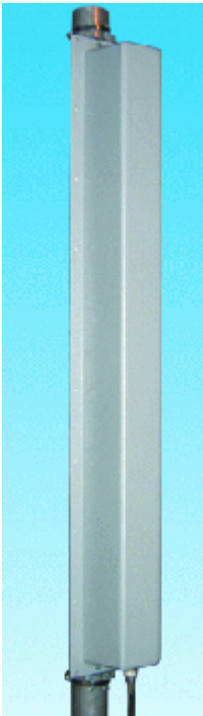
"RAS-90" antennas H-plane pattern





WLAN 2400-2485 MHz Panel antennas horizontal polarization RAH-15W-90

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Electrical specifications

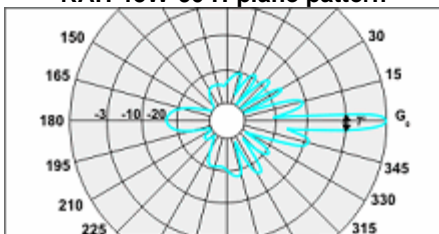
Model	RAH-15W-90
Operating frequency band, MHz	2400-2485
Gain, dBi	15
VSWR, not more than	1.5
Front-to-back ratio, dB	15
Polarization	horizontal
Max. power input, W	10
Sector in H-plane (-3 dB)	7°
Sector in E-plane (-3 dB)	90°
Impedance, Ohm	50

Mechanical specifications

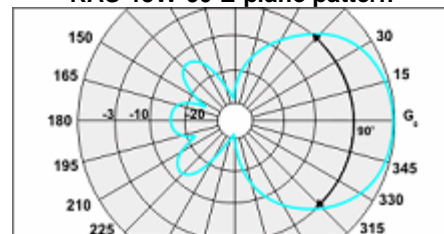
Model	RAH-15W-90
Dimencions (LxWxH), mm	138x103x1034
Weight, kg	2.6
Rated wind velocity, m/s	43
Radiator	copper
Radome	grey, ABS
Mounting	on a wall or on a mast 30-220 mm with "Norma" or CP-55D, CP-115, CP-220
Connector	N-female on a cable

This base antenna with the horizontal polarization is ideally suitable for sectoring the servicing areas. The width of the radiation pattern by the level -3 dB is equal to 90°. By its construction this antenna is represented by an antenna array whole elements of which are fed in parallel what makes it possible to ensure the direction of the main lobe to be strictly horizontal within the whole working frequency band. The feeding circuit is made on the printed circuit board made of the high-quality SHF material.

RAH-15W-90 H-plane pattern



RAS-15W-90 E-plane pattern





**DECT 1880-1900 MHz/WLAN
2400-2485 MHz
Parabolic Antennas G 6D, G
12D, G 6W, G 12W**

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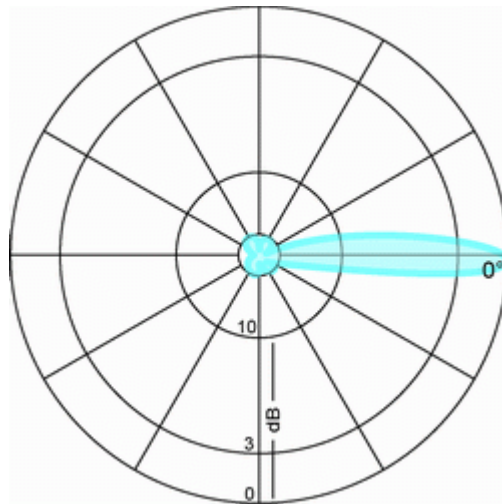
Model	G 6D	G 12D	G 6W	G 12W
Operating Frequency band, MHz		1880-1900		2400-2485
Gain, dBi	17	27	18	28
VSWR, not more than			1,3	
Front-to-back ratio			25	
Polarization			vert. -	horizont.
Max. power input, W			100	
Sector in H-plane	17°	12°	15°	10°
Sector in E-plane	15°	10°	13°	8°

Mechanical specifications

	G 6D	G 12D	G 6W	G 12W
Length/Width/Depth, mm	600x600x590	1200x1200x400	600x600x590	1200x1200x400
Weight, kg	7	20	7	20
Mast diameter, mm	36-68	38-115	36-68	38-115
Rated Wind Velocity, m/s				
Parabola diam., mm	600	1200	600	1200
Radiator			coppler	
Reflector			aluminum	
Radome			optional	
Mounting			Steel	

This unusual subscriber's equipment is a grave SHF antenna that is supposed to be used first of all for ensuring high reliability of the communication channel in all-weather conditions. The blasts of the wind, snow, ice, impudent ravens attacks - all these factors can hardly damage the all-welded array of aluminum profile of the 25mm cross section. The antenna feed is reliably protected by the plastic radio transparent case. The antenna mounting implies the change in polarization, and in 120-cm "plate" - also the adjusting of the beam taking into account the mast tilt and the direction to the object. Because of the fact that the antenna is made as an array, its windage is significantly lower than in the case of classical all-metal reflectors. Naturally the cost of these antennas is relatively high comparing with the mass products. However, if compared with the prices of the worldwide leader RFS for the similar production, our price seems to be very attractive.

G 6D, G 6W E-plane pattern



G 6D, G 6W H-plane pattern

