

HIGH BAND

2300-2690MHz



Overview

- 2 Ports / One horizontal lobe
- Average gain: 24 dBi
- 2300MHz-2690MHz
- Passive



RI 0302251-10



RF Parameters

All clusters

Parameter Name	Unit	Value
Frequency Range	MHz	2300-2690
Polarization	°	+45 / -45
Electrical Downtilt	°	1,0
Impedance	Ω	50
Voltage Standing Wave Ratio		< 1,5:1
Passive Intermodulation	dBc	< -153
Return loss	dB	> 14
Inter-cluster Isolation	dB	> 39
Maximum Effective Power Per Port	W	500
Maximum Effective Power Per Cluster	W	2000

Parameter Name	Unit	Value
Cluster Name		1
Nominal Direction	°	0
Nominal Horizontal Half-Power Beamwidth	°	38
Port Number		1 / 2
Intra-cluster Isolation	dB	> 39
Frequency Sub Range	MHz	2300-2690
Gain	dBi	23 → 25
Azimuth Beamwidth	°	38
Elevation Beamwidth	°	2,5
Elevation Downtilt Deviation	dB	< 0,3
First Upper Sidelobe Suppression	dB	> 13
Upper Sidelobe Suppression Peak To 20°	dB	> 13
Upper Sidelobe Suppression Horizon To 20°	dB	> 13
Maximum Upper Sidelobe Suppression	dB	> 13
Null Fill	dB	> -27
Front To Back Ratio Total Power +/-30°	dB	> 30
Efficiency	dB	-0,09
Cross Polar Discrimination at Mechanical Boresight	dB	> 27

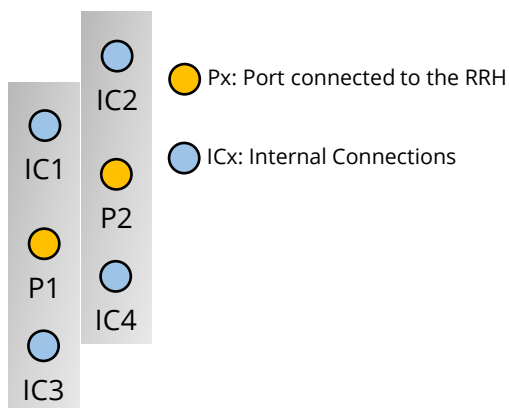
Mechanical Parameters:

Parameter Name	Unit	Value
Connector Type		4.3-10 Female
Location		Back
Mechanical Boresight	°	0
Antenna dimensions H xW x D	mm	2494 x 359 x 270
Packing size H xW x D	mm	2 boxes: 2600 x 390 x 290
Weight without accessories	kg	36,5
Survival Wind Speed	km/h	250
Windload	N	Frontal: 945 Lateral: 572 Maximum 360: 1198
Software simulated results at 150km/h		
Radome Material		PC
Radome Color		RAL7038
Product environmental compliance (general)		ROHS
Product environmental compliance (conditions)		ETSI EN 300019-2-4, Class 4, 1E
Mechanical distance between antenna mounting points	mm	2500
Number of mounting points		2
Lighting protection		Yes

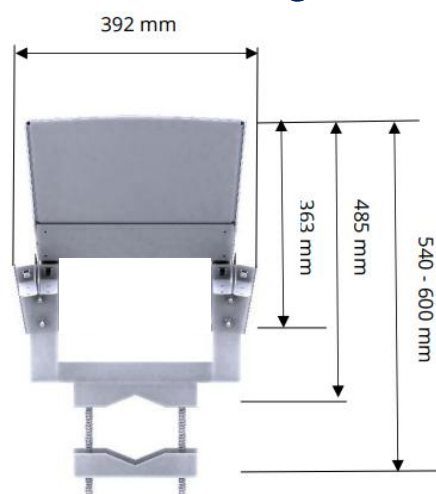
Values based on NGMN-P-BASTA (version 12) requirements

(considering the presence of a surge arrester lightning protection on RRH)

Port external interface

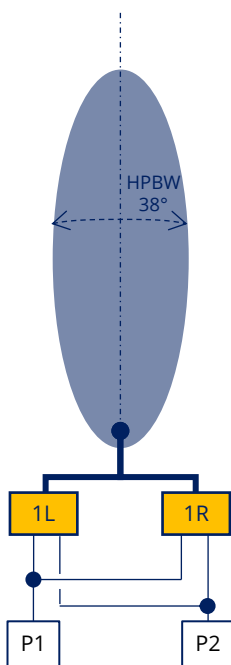


Mounting

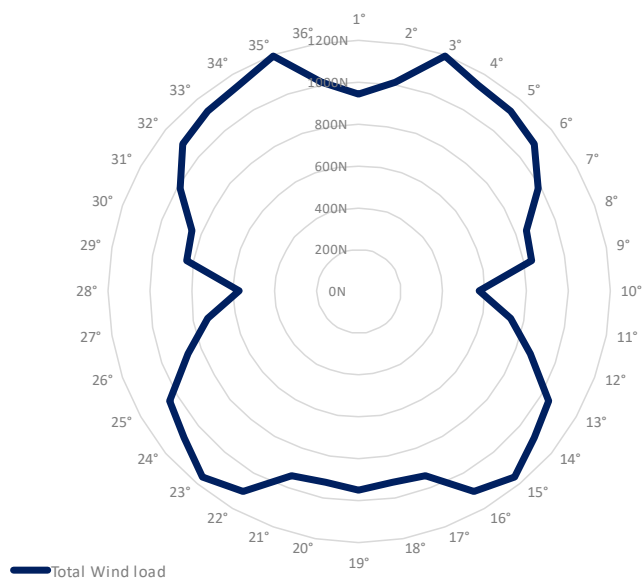


Bracket for tube Ø40-120mm
Can be adapted upon request

Beam configuration



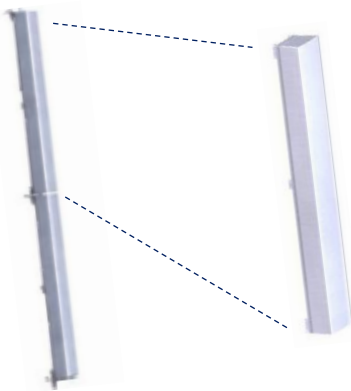
Windload



Overview

-  2 Ports / One horizontal lobe
-  Average gain: 27 dBi
-  2300MHz-2690MHz
-  Passive

RI 0401252-10
RURAL ANTENNA 1 beam x 38° x 27dBi HB



RI 0402251-10
X2



RF Parameters

Parameter Name	Unit	Value
Frequency Range	MHz	2300-2690
Polarization	°	+45 / -45
Electrical Downtilt	°	1,0
Impedance	Ω	50
Voltage Standing Wave Ratio		< 1,5:1
Passive Intermodulation	dBc	< -153
Return loss	dB	> 14
Inter-cluster Isolation	dB	> 39
Maximum Effective Power Per Port	W	500
Maximum Effective Power Per Cluster	W	2000

Parameter Name	Unit	Value
Cluster Name		1
Nominal Direction	°	0
Nominal Horizontal Half-Power Beamwidth	°	38
Port Number		1 / 2
Intra-cluster Isolation	dB	> 39
Frequency Sub Range	MHz	2300-2690
Gain	dBi	26 → 27
Azimuth Beamwidth	°	38
Elevation Beamwidth	°	1,3
Elevation Downtilt Deviation	dB	< 0,1
First Upper Sidelobe Suppression	dB	> 13
Upper Sidelobe Suppression Peak To 20°	dB	> 13
Upper Sidelobe Suppression Horizon To 20°	dB	> 13
Maximum Upper Sidelobe Suppression	dB	> 13
Null Fill	dB	> -19
Front To Back Ratio Total Power +/-30°	dB	> 30
Efficiency	dB	-0,09
Cross Polar Discrimination at Mechanical Boresight	dB	> 27

Mechanical Parameters:

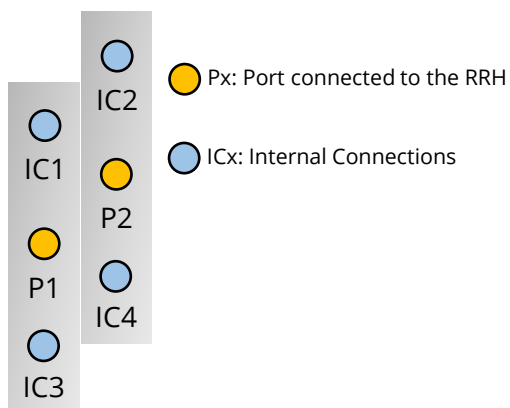
Parameter Name	Unit	Value
Connector Type		4.3-10 Female
Location		Back
Mechanical Boresight	°	0
Antenna dimensions H xW x D	mm	4988 x 359 x 270
Packing size H xW x D	mm	3 boxes: 2600 x 390 x 290
Weight without accessories	kg	91
Survival Wind Speed	km/h	250
Windload	N	Frontal: 1906 Lateral: 1550 Maximum 360: 2541
Software simulated results at 150km/h		
Radome Material		PC
Radome Color		RAL7038
Product environmental compliance (general)		ROHS
Product environmental compliance (conditions)		ETSI EN 300019-2-4, Class 4, 1E
Mechanical distance between antenna mounting points	mm	2500
Number of mounting points		3

Lighting protection

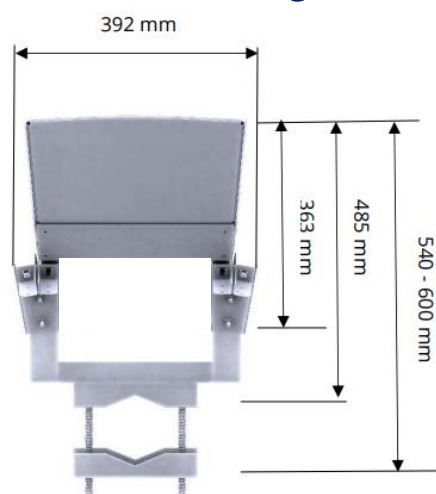
Values based on NGMN-P-BASTA (version 12) requirements

(considering the presence of a surge arrester lightning protection on RRH)

Port external interface

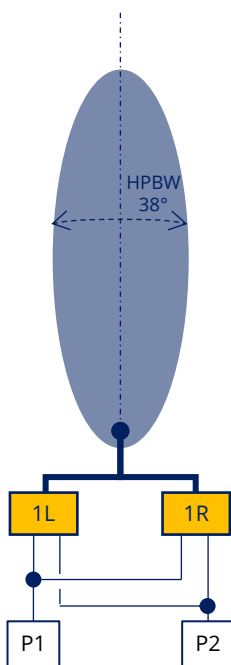


Mounting

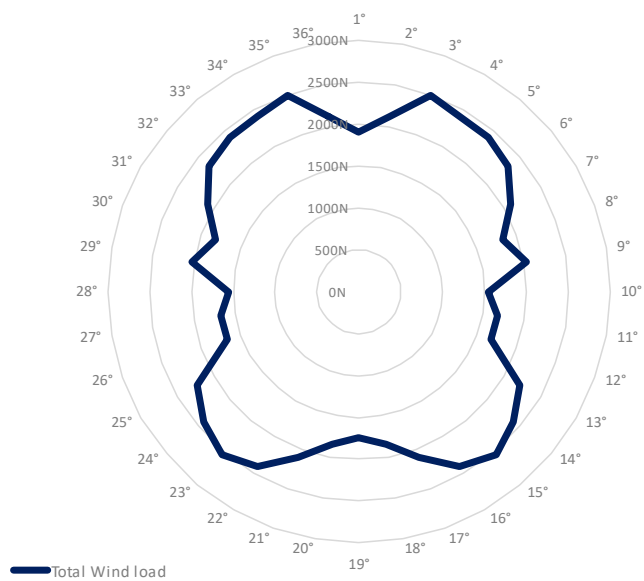


Bracket for tube Ø40-120mm
Can be adapted upon request

Beam configuration

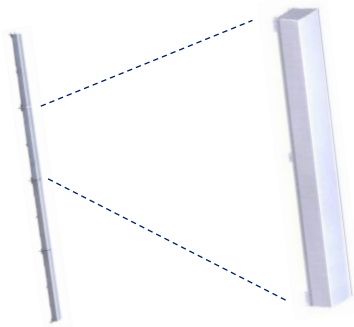


Windload



Overview

- 2 Ports / One horizontal lobe
- Average gain: 29 dBi
- 2300MHz-2690MHz
- Passive



RI 0402251-10
X4



RF Parameters

All clusters

Parameter Name	Unit	Value
Frequency Range	MHz	2300-2690
Polarization	°	+45 / -45
Electrical Downtilt	°	0,5
Impedance	Ω	50
Voltage Standing Wave Ratio		< 1,5:1
Passive Intermodulation	dBc	< -153
Return loss	dB	> 14
Inter-cluster Isolation	dB	> 39
Maximum Effective Power Per Port	W	500
Maximum Effective Power Per Cluster	W	2000

Parameter Name	Unit	Value
Cluster Name		1
Nominal Direction	°	0
Nominal Horizontal Half-Power Beamwidth	°	38
Port Number		1 / 2
Intra-cluster Isolation	dB	> 39
Frequency Sub Range	MHz	2300-2690
Gain	dBi	27 → 31
Azimuth Beamwidth	°	38
Elevation Beamwidth	°	1,3
Elevation Downtilt Deviation	dB	< 0,1
First Upper Sidelobe Suppression	dB	> 18
Upper Sidelobe Suppression Peak To 20°	dB	> 18
Upper Sidelobe Suppression Horizon To 20°	dB	> 18
Maximum Upper Sidelobe Suppression	dB	> 18
Null Fill	dB	> -17
Front To Back Ratio Total Power +/-30°	dB	> 30
Efficiency	dB	-0,09
Cross Polar Discrimination at Mechanical Boresight	dB	> 27

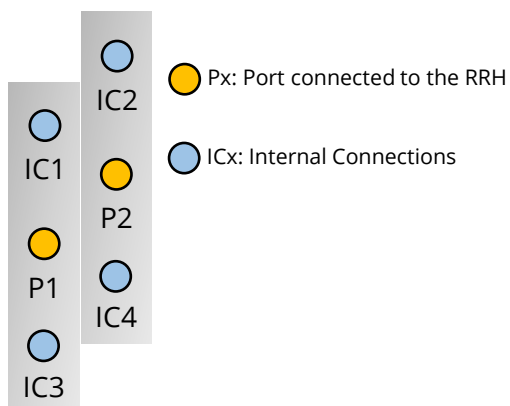
Mechanical Parameters:

Parameter Name	Unit	Value
Connector Type		4.3-10 Female
Location		Back
Mechanical Boresight	°	0
Antenna dimensions H xW x D	mm	9976 x 359 x 270
Packing size H xW x D	mm	5 boxes: 2600 x 390 x 290
Weight without accessories	kg	174
Survival Wind Speed	km/h	250
Windload	N	Frontal: 4034 Lateral: 3545 Maximum 360: 4989
Software simulated results at 150km/h		
Radome Material		PC
Radome Color		RAL7038
Product environmental compliance (general)		ROHS
Product environmental compliance (conditions)		ETSI EN 300019-2-4, Class 4, 1E
Mechanical distance between antenna mounting points	mm	2500
Number of mounting points		5
Lighting protection		Yes

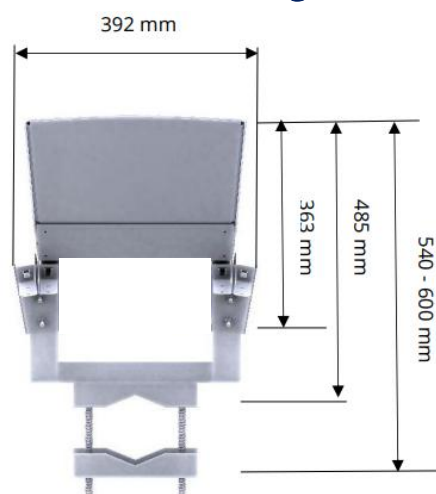
Values based on NGMN-P-BASTA (version 12) requirements

(considering the presence of a surge arrester lightning protection on RRH)

Port external interface

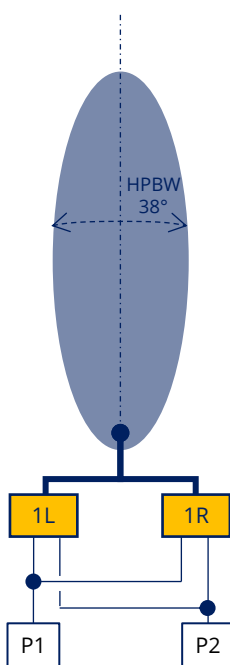


Mounting

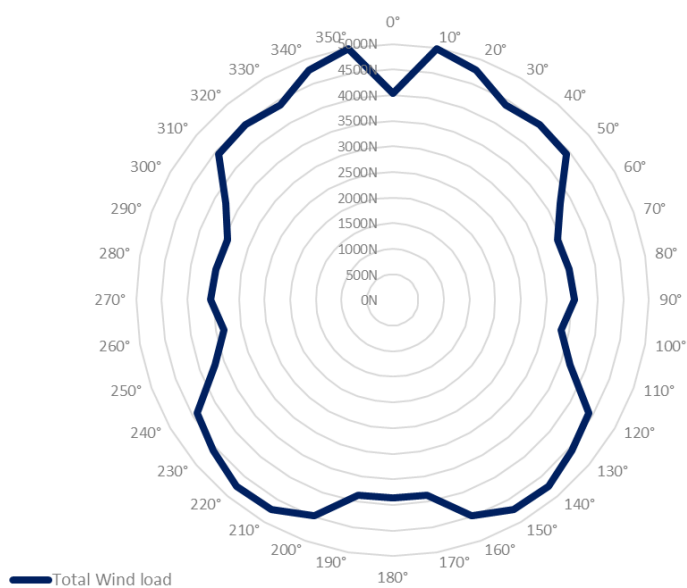


Bracket for tube Ø40-120mm
Can be adapted upon request

Beam configuration



Windload



Overview

- 4 Ports / 2 horizontal lobes
- Average gain: 23 dBi
- 2300MHz-2690MHz
- Passive



RF Parameters

All clusters

Parameter Name	Unit	Value
Frequency Range	MHz	2300-2690
Polarization	°	+45 / -45
Electrical Downtilt	°	1,0
Combined Horizontal Half-Power Beamwidth	°	78
Impedance	Ω	50
Voltage Standing Wave Ratio		< 1,5:1
Passive Intermodulation	dBc	< -153
Return loss	dB	> 14
Inter-cluster Isolation	dB	> 39
Maximum Effective Power Per Port	W	500
Maximum Effective Power Per Cluster	W	2000

Clusters 1L & 1R

Parameter Name	Unit	Value
Cluster Name		1L1R
Nominal Direction	°	-20+20
Nominal Horizontal Half-Power Beamwidth	°	3838
Port Number		1 / 23 / 4
Intra-cluster Isolation	dB	> 39> 39
Frequency Sub Range	MHz	2300-26902300-2690
Gain	dBi	22 → 2422 → 24
Azimuth Beamwidth	°	3838
Elevation Beamwidth	°	2,52,5
Elevation Downtilt Deviation	dB	< 0,3< 0,3
First Upper Sidelobe Suppression	dB	> 12> 12
Upper Sidelobe Suppression Peak To 20°	dB	> 12> 12
Upper Sidelobe Suppression Horizon To 20°	dB	> 12> 12
Maximum Upper Sidelobe Suppression	dB	> 12> 12
Null Fill	dB	> -27> -27
Front To Back Ratio Total Power +/-30°	dB	> 30> 30
Efficiency	dB	-0,09-0,09
Cross Polar Discrimination at Mechanical Boresight	dB	> 27> 27

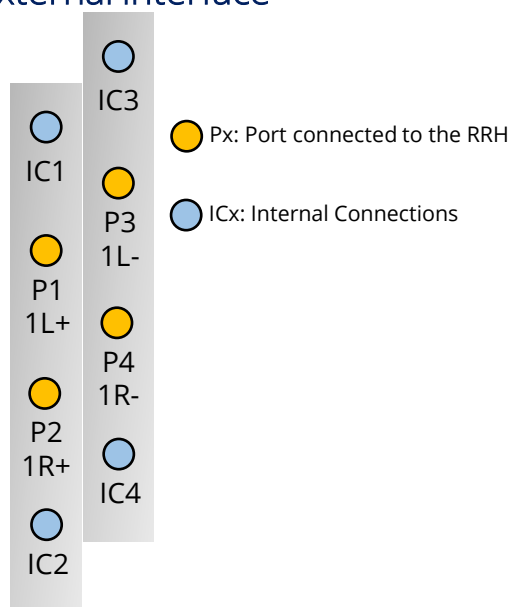
Mechanical Parameters:

Parameter Name	Unit	Value
Connector Type		4.3-10 Female
Location		Back
Mechanical Boresight	°	0
Antenna dimensions H xW x D	mm	2494 x 359 x 270
Packing size H xW x D	mm	2 boxes: 2600 x 390 x 290
Weight without accessories	kg	36,5
Survival Wind Speed	km/h	250
Windload	N	Frontal: 945 Lateral: 572 Maximum 360: 1198
Software simulated results at 150km/h		
Radome Material		PC
Radome Color		RAL7038
Product environmental compliance (general)		ROHS
Product environmental compliance (conditions)		ETSI EN 300019-2-4, Class 4, 1E
Mechanical distance between antenna mounting points	mm	2500
Number of mounting points		2
Lighting protection		Yes

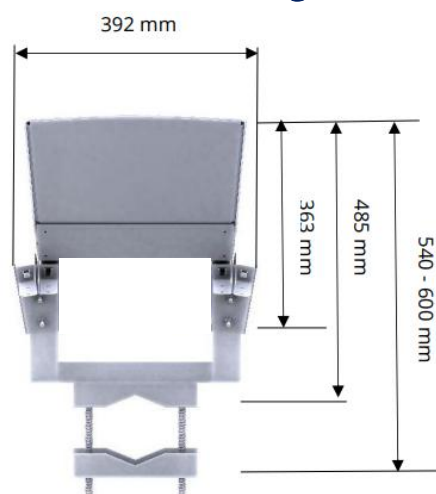
Values based on NGMN-P-BASTA (version 12) requirements

(considering the presence of a surge arrester lightning protection on RRH)

Port external interface

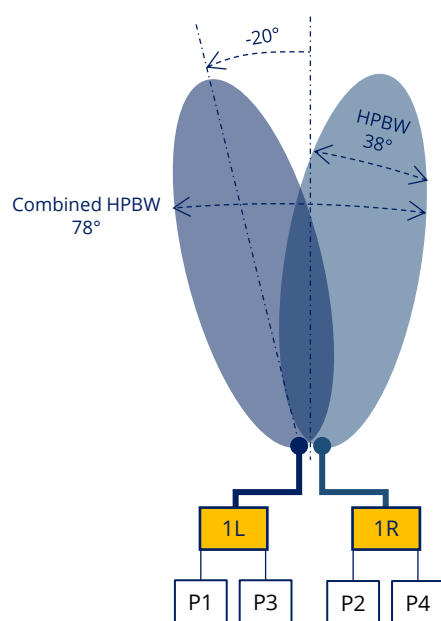


Mounting

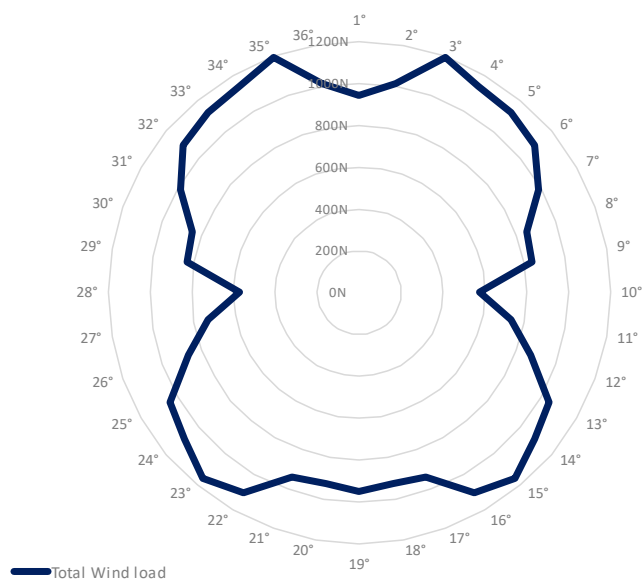


Bracket for tube Ø40-120mm
Can be adapted upon request

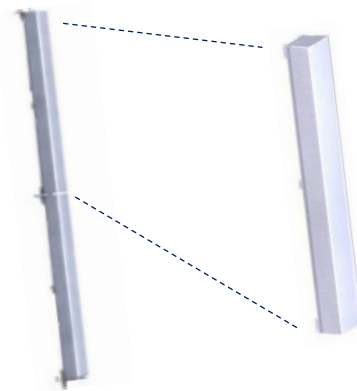
Beam configuration



Windload



RI 0402252-10
RURAL ANTENNA 2 beams x 38° x 26dBi HB



RI 0402251-10
X2



Overview

- 4 Ports / 2 horizontal lobes
- Average gain: 26 dBi
- 2300MHz-2690MHz
- Passive

RF Parameters

All clusters

Parameter Name	Unit	Value
Frequency Range	MHz	2300-2690
Polarization	°	+45 / -45
Electrical Downtilt	°	1,0
Combined Horizontal Half-Power Beamwidth	°	78
Impedance	Ω	50
Voltage Standing Wave Ratio		< 1,5:1
Passive Intermodulation	dBc	< -153
Return loss	dB	> 14
Inter-cluster Isolation	dB	> 39
Maximum Effective Power Per Port	W	500
Maximum Effective Power Per Cluster	W	2000

Clusters 1L & 1R

Parameter Name	Unit	Value
Cluster Name		1L 1R
Nominal Direction	°	-20 +20
Nominal Horizontal Half-Power Beamwidth	°	38 38
Port Number		1 / 2 3 / 4
Intra-cluster Isolation	dB	> 39 > 39
Frequency Sub Range	MHz	2300-2690 2300-2690
Gain	dBi	26 → 27 26 → 27
Azimuth Beamwidth	°	38 38
Elevation Beamwidth	°	1,3 1,3
Elevation Downtilt Deviation	dB	< 0,1 < 0,1
First Upper Sidelobe Suppression	dB	> 12 > 13
Upper Sidelobe Suppression Peak To 20°	dB	> 12 > 13
Upper Sidelobe Suppression Horizon To 20°	dB	> 12 > 13
Maximum Upper Sidelobe Suppression	dB	> 12 > 13
Null Fill	dB	> -16 > -16
Front To Back Ratio Total Power +/-30°	dB	> 30 > 30
Efficiency	dB	-0,09 -0,09
Cross Polar Discrimination at Mechanical Boresight	dB	> 27 > 27

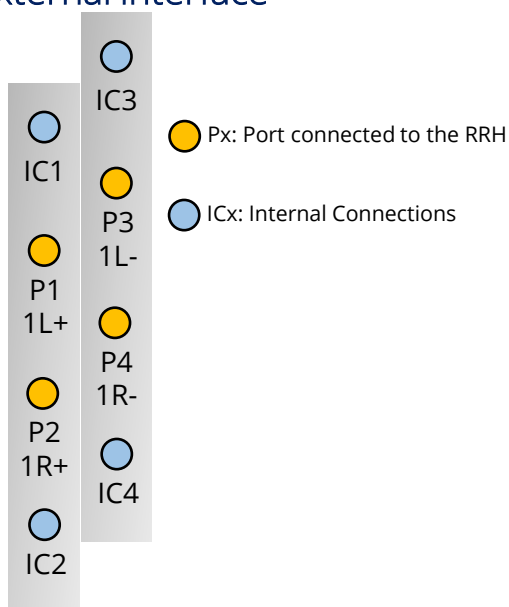
Mechanical Parameters:

Parameter Name	Unit	Value
Connector Type		4.3-10 Female
Location		Back
Mechanical Boresight	°	0
Antenna dimensions H x W x D	mm	4988 x 359 x 270
Packing size H x W x D	mm	3 boxes: 2600 x 390 x 290
Weight without accessories	kg	91
Survival Wind Speed	km/h	250
Windload	N	Frontal: 1906 Lateral: 1550 Maximum 360: 2541
Software simulated results at 150km/h		
Radome Material		PC
Radome Color		RAL7038
Product environmental compliance (general)		ROHS
Product environmental compliance (conditions)		ETSI EN 300019-2-4, Class 4, 1E
Mechanical distance between antenna mounting points	mm	2500
Number of mounting points		3
Lighting protection		Yes

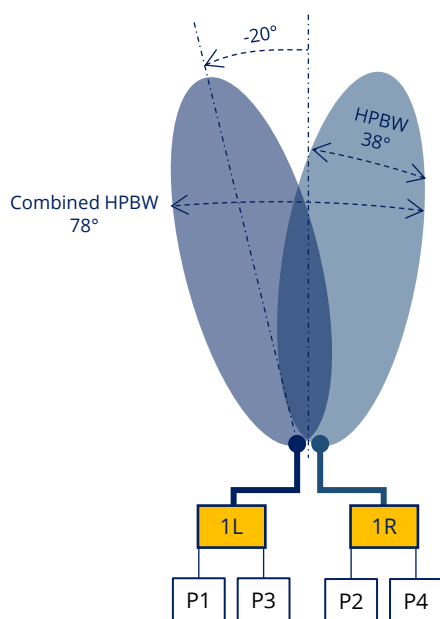
(considering the presence of a surge arrester lightning protection on RRH)

Values based on NGMN-P-BASTA (version 12) requirements

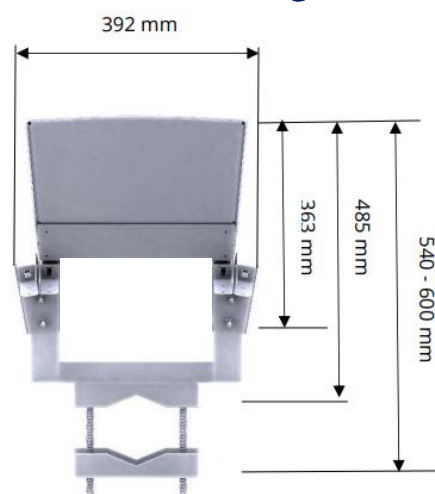
Port external interface



Beam configuration

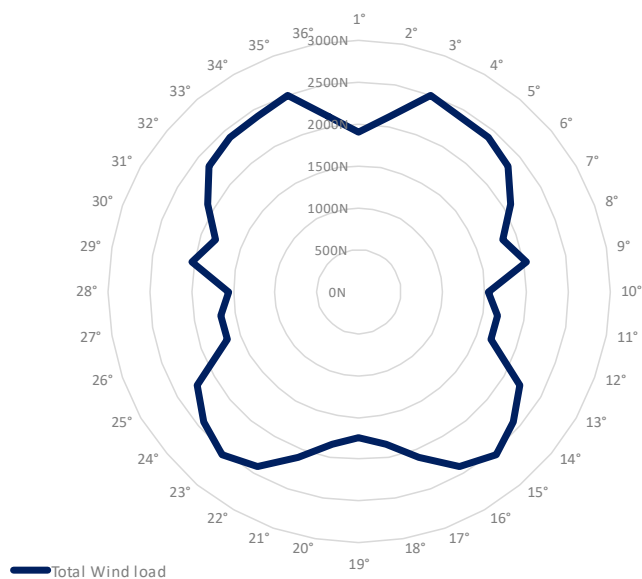


Mounting



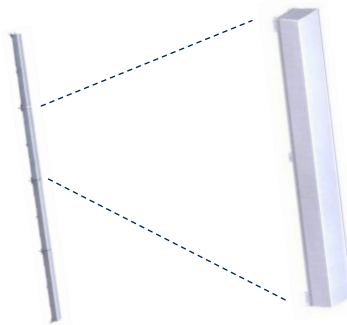
Bracket for tube Ø40-120mm
Can be adapted upon request

Windload



Overview

- 4 Ports / 2 horizontal lobes
- Average gain: 29 dBi
- 2300MHz-2690MHz
- Passive



RI 0402251-10
X4



RF Parameters

All clusters

Parameter Name	Unit	Value
Frequency Range	MHz	2300-2690
Polarization	°	+45 / -45
Electrical Downtilt	°	0,5
Combined Horizontal Half-Power Beamwidth	°	78
Impedance	Ω	50
Voltage Standing Wave Ratio		< 1,5:1
Passive Intermodulation	dBc	< -153
Return loss	dB	> 14
Inter-cluster Isolation	dB	> 39
Maximum Effective Power Per Port	W	500
Maximum Effective Power Per Cluster	W	2000

Clusters 1L & 1R

Parameter Name	Unit	Value
Cluster Name		1L 1R
Nominal Direction	°	-20 +20
Nominal Horizontal Half-Power Beamwidth	°	38 38
Port Number		1 / 2 3 / 4
Intra-cluster Isolation	dB	> 39 > 39
Frequency Sub Range	MHz	2300-2690 2300-2690
Gain	dBi	27 → 30 27 → 30
Azimuth Beamwidth	°	38 38
Elevation Beamwidth	°	0,7 0,7
Elevation Downtilt Deviation	dB	< 0,1 < 0,1
First Upper Sidelobe Suppression	dB	> 17 > 17
Upper Sidelobe Suppression Peak To 20°	dB	> 17 > 17
Upper Sidelobe Suppression Horizon To 20°	dB	> 17 > 17
Maximum Upper Sidelobe Suppression	dB	> 17 > 17
Null Fill	dB	> -15 > -15
Front To Back Ratio Total Power +/-30°	dB	> 30 > 30
Efficiency	dB	-0,09 -0,09
Cross Polar Discrimination at Mechanical Boresight	dB	> 27 > 27

Mechanical Parameters:

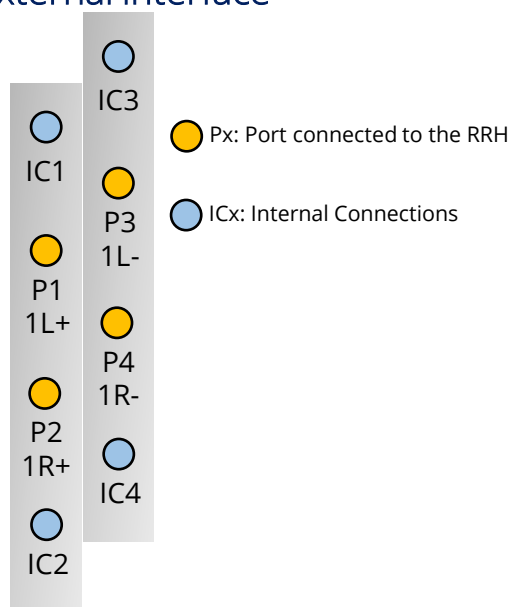
Parameter Name	Unit	Value
Connector Type		4.3-10 Female
Location		Back
Mechanical Boresight	°	0
Antenna dimensions H x W x D	mm	9976 x 359 x 270
Packing size H x W x D	mm	5 boxes: 2600 x 390 x 290
Weight without accessories	kg	174
Survival Wind Speed	km/h	250
Windload	N	Frontal: 4034 Lateral: 3545 Maximum 360: 4989
Software simulated results at 150km/h		
Radome Material		PC
Radome Color		RAL7038
Product environmental compliance (general)		ROHS
Product environmental compliance (conditions)		ETSI EN 300019-2-4, Class 4, 1E
Mechanical distance between antenna mounting points	mm	2500
Number of mounting points		5

Lighting protection

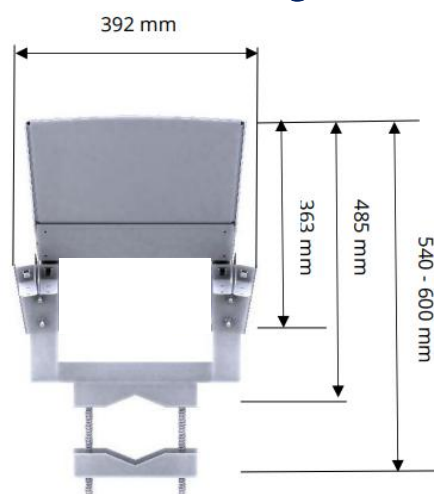
(considering the presence of a surge arrester lightning protection on RRH)

Values based on NGMN-P-BASTA (version 12) requirements

Port external interface

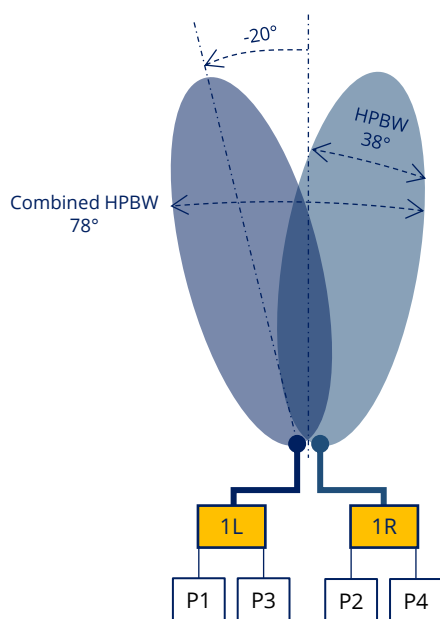


Mounting

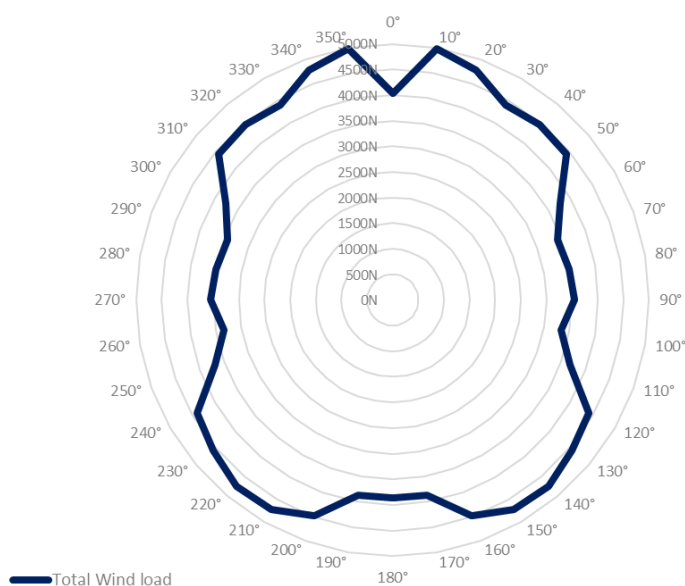


Bracket for tube Ø40-120mm
Can be adapted upon request

Beam configuration



Windload



Kit for 1-stack		
Parameter Name	Unit	Value
Weight	kg	34
Maximum downtilt	°	-5
Pipe recommended length	m	2.5

Kit for 2-stacks		
Parameter Name	Unit	Value
Weight	kg	21
Maximum downtilt	°	-5
Pipe recommended length	m	2.5

Compatible product	MTB kit
RI 0101251-12	Kit for 1-stack
RI 0101252-15	Kit for 2-stacks
RI 0102251-13	Kit for 1-stack
RI 0102252-16	Kit for 2-stacks
RI 0301251-05	Kit for 1-stack
RI 0301252-05	Kit for 2-stacks
RI 0302251-04	Kit for 1-stack
RI 0302252-07	Kit for 2-stacks
RI 0401251-10	Kit for 1-stack
RI 0401252-10	Kit for 2-stacks
RI 0402251-10	Kit for 1-stack
RI 0402252-10	Kit for 2-stacks

