



NGS-C160A Series

Broadband Slot Antennas for NextGen-TV Networks, Cardioid C160A Azimuth Pattern, Low Wind-load, Elliptically Polarized, High & Low Power versions

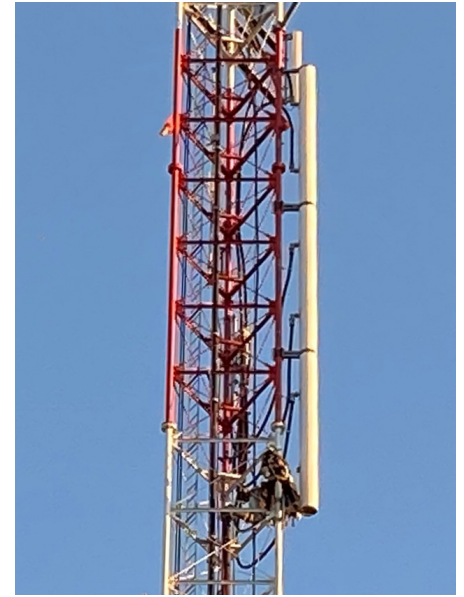
PRODUCT DESCRIPTION

The NG series antennas are ideal for multi-channel Next Generation TV networks. These antennas are typically deployed at SFN sites that surround the main transmission site in a NextGen-TV single frequency network (SFN). The high-power rating and broadband performance allow multiple channels to be transmitted from an SFN site, thus reducing capital costs and providing consistent coverage across channels. Elliptical polarization is available for improved transmission to portable and indoor devices. The NG family of antennas provide both top mounted and side mounted solutions in a low wind load format.

A wide range of radiation patterns are available. The RFS Antenna Selection Tool contains pattern data for all NGS antenna models and works alongside modern SFN planning tools to help you choose the right NextGen antenna for each SFN site. To download, click [Here](#)

FEATURES / BENEFITS

- Broadband performance for multi-channel SFN networks allows SFN infrastructure sharing and reduces overall CAPEX.
- Low wind-load reduces tower loads thus simplifying SFN site acquisition.
- Large range of azimuth radiation patterns – simplifies the SFN planning process to provide optimum network coverage.
- Broadband elliptical polarization performance – improves signal penetration and network performance.
- Radiation patterns with reduced back-radiation are available for SFN sites requiring interference mitigation.
- Supplied with brackets for side mounting to a wide range of tower leg sizes



TECHNICAL FEATURES

DETAILS

Product Type		NextGen-TV Broadcast Antenna
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ELECTRICAL SPECIFICATIONS

Antenna Type		Broadband Slot Antenna
Operating Frequency Range	MHz	470-608
Polarization		Elliptical
Azimuth Radiation Pattern		Cardioid C160A
VSWR		<1.15:1 (1.1 on channel)
Impedance	Ohms	50 (for 1-5/8" to 6-1/8" Inputs) 75 (for 7-3/16" Input)

MECHANICAL SPECIFICATIONS

Radome Diameter	mm (in)	381 (15)
Pressurization Operational	kPa (psi)	10 to 25 (1.4-3.6)
Pressurization Test	kPa (psi)	100 (15)



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MATERIAL

Material - Radome		UV Resistant Fibre Glass
Material - Insulators		Virgin PTFE
Material - Support Pole / Mounting		Hot Dipped Galvanized Steel
Material - Feedline & Radiators		Copper
Material - Reflecting System		Aluminum
Color		White, others on request

MODEL NUMBER SPECIFICATIONS

Antenna Model		NGS04-C160A	NGS08-C160A	NGS12-C160A	NGS16-C160A	NGS20-C160A	NGS24-C160A
Number of Bays		4	8	12	16	20	24
Elevation Gain at 539 MHz	Numerical	4.9	8.4	12.1	16.0	20.1	24.0
Azimuth Pattern Directivity	Numerical	1.6					
Peak Gain at 539 MHz	Numerical	7.9	13.4	19.4	25.5	32.1	38.4
Peak Gain at 539 MHz	dBd	9.0	11.3	12.9	14.1	15.1	15.8
Standard Beam-Tilt	[note 1]	1.5	1.0	1.0	0.75	0.75	0.75
Power Rating: High Power Model	kW	15	34	50	60	70	80
Connector: High Power Model		3-1/8" EIA	4-1/16"	6-1/8" EIA	6-1/8" EIA	6-1/8" EIA	7-3/16"
Power Rating: Low power Model	kW	5	10	15	20	25	30
Connector: Low Power Model		1-5/8" EIA	3-1/8" EIA	3-1/8" EIA	3-1/8" EIA	4-1/16"	4-1/16"
Mounting Type		Top or Side	Top or Side	Top or Side	Side	Side	Side
Height	m (ft) [note2]	2.29 (7.5)	4.30 (14.1)	6.49 (21.3)	8.69 (28.5)	10.91 (35.8)	13.11 (43.0)
Weight	kg (lb) [note2]	114 (251)	238 (525)	445 (981)	621 (1370)	804 (1773)	1050 (2315)
Effective Area Front (No Ice)	m ² (ft ²) [note 2,3,4]	0.50 (5.3)	1.00 (10.8)	1.51 (16.2)	2.01 (21.7)	2.52 (27.1)	3.02 (32.5)

External Document Links

Antenna Selection Tool: [Download](#)

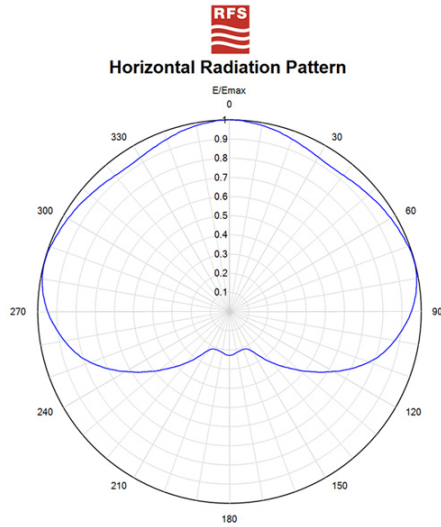
Notes

- Note 1:** Other Beam-tilts available on request
- Note 2:** Data shown is for side mounted antennas
- Note 3:** Design Parameters in accordance with TIA-222-G are:
 - 160 kmh (100 mph) Basic Wind Speed with no ice
 - Structure Class II
 - Topographic category 1, Exposure category C
 - Interface steelwork to tower not included in calculations.
- Note 4:** Moment of arm from mounting pole to centre of antenna = 0.65m (2.1ft).

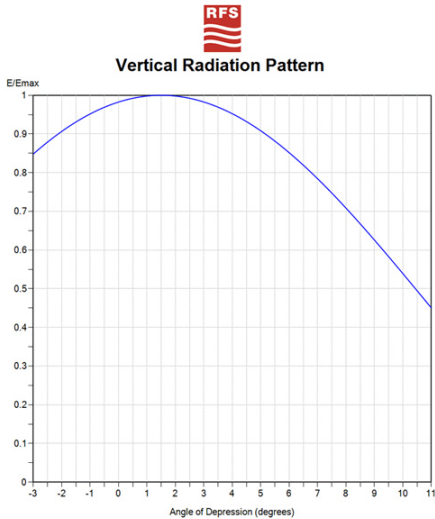


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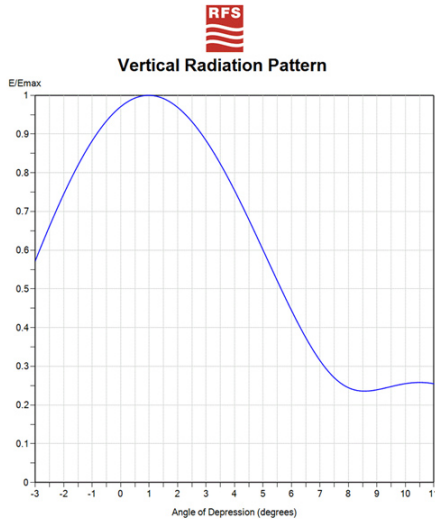
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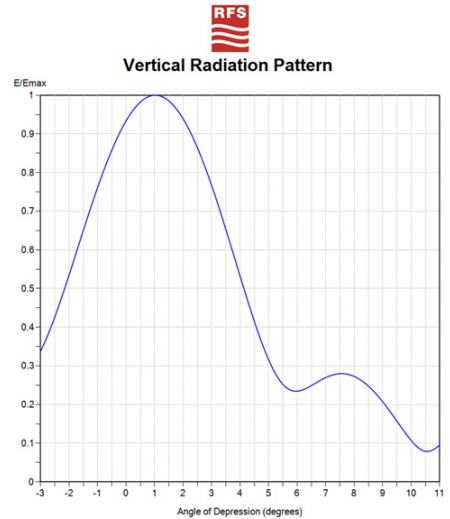
Azimuth Pattern: NGS-C160A Antennas



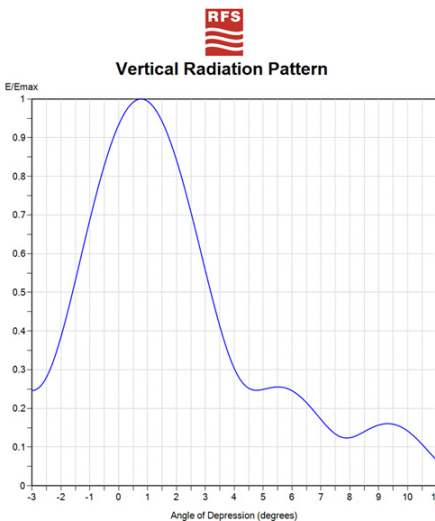
Elevation Pattern: NGS 4 Bay Antennas



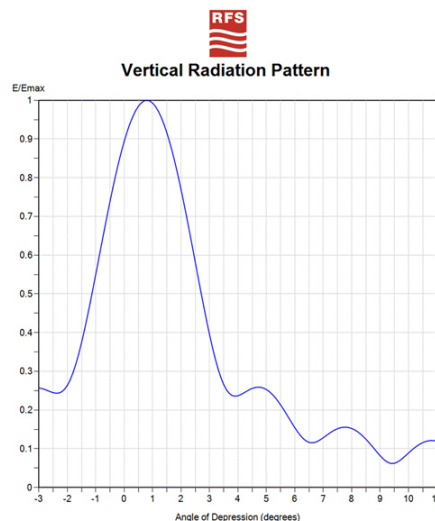
Elevation Pattern: NGS 8 Bay Antennas



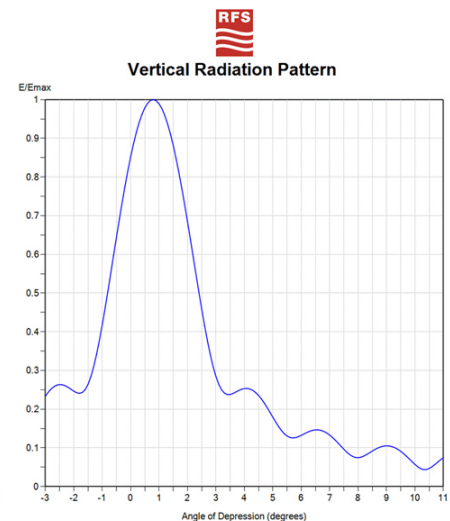
Elevation Pattern: NGS 12 Bay Antennas



Elevation Pattern: NGS 16 Bay Antennas



Elevation Pattern: NGS 20 Bay Antennas



Elevation Pattern: NGS 24 Bay Antennas