

UltraScan DR II

2, 7, and 13 GHz

Central Receive Antenna

The UltraScan is a ruggedized offset fed antenna enclosed in a low profile radome that minimizes space needs and wind loading. The UltraScan is available in single, dual, and tri-band systems covering standard bands from 2 to 15 GHz.

Broadband Design:

- Wideband, 2/2.5 GHz
- Optional dual band, 2/7 GHz
- Optional tri-band 2/7/13 GHz

The UltraScan antenna uses modern solid-state MMICs to perform RF switching in the feed, thus eliminating all electro-mechanical RF switches. To provide optimal performance, the UltraScan feed assembly includes low noise amplifiers, solid state RF switches, RF band filter, and microstrip combiners and hybrids in an integrated RF assembly. LNA gain reduction is provided as a standard feature to reduce receiver overloading under strong signal conditions.

The dual-speed rotator is enclosed in a low-profile, aesthetically pleasing radome. It has been designed using proven technology for reliability. Lightning and surge suppression is provided within the unit. The rotator and enclosure are constructed of aluminum and stainless steel, thus eliminating the possibility of corrosion.

Key Features

- All solid state switching; no RF electro-mechanical switches.
- New, improved low noise amplifier and filter integrated into the feed for PCS interference protection.
- New LNB design offers low noise figure, high dynamic range, and third order intercept point.
- New, improved lower noise block downconverter (used with 7 & 13 GHz systems).
- Low noise amplifier and filter integrated into the feed.
- Low profile and lightweight.
- Right circular, left circular, horizontal, and vertical polarization.



The combination of a high dynamic range LNA and sharper filtering make the UltraScan a "bullet-proof" solution to the problem of PCS interference.

The UltraScan can be ordered with a continuous rotation option, which includes slip rings and an RF rotary joint. Vislink also offers a range of modern, easy-to-use antenna control systems for the UltraScan antenna.

Typical Application

- Steerable Central Receive Antennas

SPECIFICATIONS

GENERAL

Antenna Type

- Offset Feed Parabola

Front to Back Rejection

- -25 dB minimum

Side Lobe Rejection

- -20 dB minimum

ULTRASCAN OPTIONS

842746-2-x

- Control cable and connectors (x = specify length in feet)

101609-1

- High Gain Linear Amp
- 22 dB, DC without bypass

ORDERING INFORMATION

URA-2 2/2.5 GHz

- UltraScan II Quad Polarization

URA-27:2/7 GHz

- UltraScan II Dual-Band, Quad Polarization

URA-2C 2/2.5 GHz

- Quad Polarization, Continuous Rotation

URA-27C 2/7 GHz

- Dual-Band, Quad Polarization, Continuous Rotation

URA-2713

- Tri-band, Quad Polarization

URA-2713C

- Tri-band, Quad Polarization, Continuous Rotation

REFLECTOR

Type

- 18" x 30" offset

Construction

- High strength, lightweight

Polarization

- Quad polarization standard (left circular, right circular, horizontal, and vertical)

FEED

Configurations

- 2 GHz Broadband
- 2/7 GHz Dual Band
- 2/7/13 GHz Tri-band

LNA

- Built-in 26 dB gain LNA

Dual Band

- 6.4/7 GHz block downconverter

Tri-band

- 6/13 GHz block downconverter

ROTATOR

Dual Speed

- Low: 3°/second
- Fast: 15°/second

Operating Wind Load:

- Exceeding 100 mph

Rotation

- 360°, -5° overlap

ROTATOR FEATURES

- Ruggedized rotating mechanism
- Dual speed
- Easily removed top radome for ease of access
- Build-in surge suppression
- All external metal parts are aluminum with stainless steel hardware
- LNA/Block Downconverter
- 26 dB gain LNA
- 6.4/7 and 13 GHz block downconverter (used with dual-band and tri-band systems)

ENVIRONMENTAL

Temperature Range

- -22° to 140° F [-30° to +60° C]

PHYSICAL

Reflector Size

- 18" h x 30" w (46 x 76 cm)

Antenna Size with Radome

- 28" h x 35" dia (71 x 89 cm)

System Weight

- 65 lbs (29.5 kg)

MODEL SPECIFICATIONS

Model	2 GHz	6.5/7 GHz	13 GHz
Frequency Range, GHz*	1.99 to 2.5	6.45 to 7.125	12.7 to 13.2
Gain, Nominal†	20 dBi	29 dBi	31 dBi
Beamwidth, Horizontal**	14°	4.2°	3.5°
Beamwidth, Vertical**	22°	7.2°	5°

* 1.7 to 1.85 and 2.3 to 2.7 GHz also available.

† Gain for basic antenna net of switching option.

** HPBW specifications are mid-band.



UltraScan Antenna with Radome Removed