

## Cassegrain Reflector System, Ø340 mm WR15 to WR1.9, 42 to 64 dBi Directivity

### DESCRIPTION

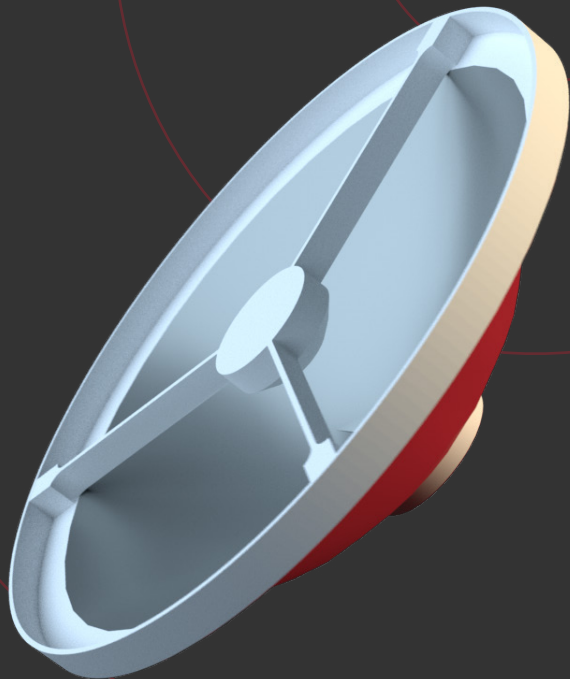
Anteral's Cassegrain Reflector Systems (CRS) are high frequency parabolic antennas composed by a pyramidal feedhorn antenna, a primary parabolic mirror and a secondary hyperbolic mirror. The feed and the primary mirror are designed to maximize the spillover efficiency while reducing the blockage to the minimum. The secondary mirror is specially manufactured to have the best reflecting surface at the highest frequencies. The whole structure presents a robust design and it is covered with a radome for outdoor applications.

The CRS-340-WRxx models have a main reflector with a diameter of 340 mm and variable directivity from 42 to 61 dBi depending on the selected frequency band. The CRS exhibits a typical maximum crosspolar level of -35 dB and Secondary Side Lobes of -17 dB.

### APPLICATIONS

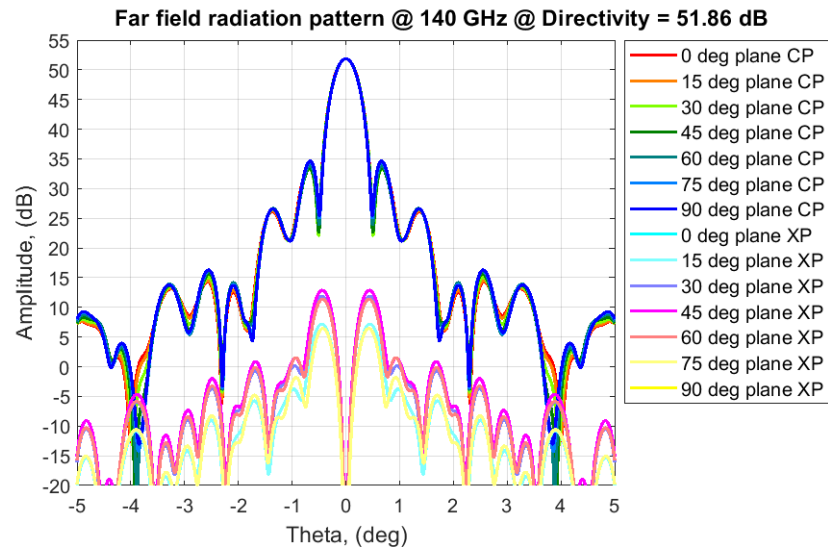
The CRS are especially useful for high-capacity data links at the new high frequency bands as well as any application where maximum gain is required. Anteral also offers custom clamping structures. Specific directivity values can be requested. Contact us for further information.

Anteral also offers **High Gain Lens Horn Antennas** that exhibit also high gain (>40 dB) with minimum size at frequencies from 110 to 330 GHz.



### ELECTRICAL SPECIFICATIONS

| Model         | Frequency Band | Directivity     | S11 Typical | Crosspolar Typical | Secondary Side Lobes |
|---------------|----------------|-----------------|-------------|--------------------|----------------------|
| CRS-340-WR15  | 50 – 75 GHz    | 42.5 – 45.6 dBi | -20 dB      | -35 dB             | -17 dB               |
| CRS-340-WR12  | 60 – 90 GHz    | 44.3 – 47.2 dBi | -20 dB      | -35 dB             | -17 dB               |
| CRS-340-WR10  | 75 – 110 GHz   | 46.2 – 49.1 dBi | -20 dB      | -35 dB             | -17 dB               |
| CRS-340-WR08  | 90 – 140 GHz   | 47.8 – 51.0 dBi | -20 dB      | -35 dB             | -17 dB               |
| CRS-340-WR06  | 110 – 170 GHz  | 49.6 – 52.7 dBi | -20 dB      | -35 dB             | -17 dB               |
| CRS-340-WR05  | 140 – 220 GHz  | 51.6 – 54.9 dBi | -20 dB      | -35 dB             | -17 dB               |
| CRS-340-WR04  | 170 – 260 GHz  | 53.4 – 56.6 dBi | -17 dB      | -35 dB             | -17 dB               |
| CRS-340-WR03  | 220 – 330 GHz  | 55.7 – 58.4 dBi | -17 dB      | -35 dB             | -17 dB               |
| CRS-340-WR2.8 | 260 – 400 GHz  | 57.1 – 60.2 dBi | -17 dB      | -35 dB             | -17 dB               |
| CRS-340-WR2.2 | 330 – 500 GHz  | 59.3 – 62.1 dBi | -17 dB      | -35 dB             | -17 dB               |
| CRS-340-WR1.9 | 400 – 600 GHz  | 60.8 – 63.8 dBi | -17 dB      | -35 dB             | -17 dB               |



\* Radiation Pattern of CRS-340-WR06.  
Contact us for the performance of any model.

### MECHANICAL SPECIFICATIONS

| Parameter          | Description          |
|--------------------|----------------------|
| Total length       | 129 mm               |
| Total diameter     | 400 mm               |
| Total weight       | 4.4 kg               |
| Reflector Material | Aluminum             |
| Radome Material    | Waterproof Polyester |
| External Color     | Ruby Red             |

| Model         | Antenna Port                   | Flange   |
|---------------|--------------------------------|----------|
| CRS-340-WR15  | WR-15 (3.759 mm x 1.880 mm)    | UG-385/U |
| CRS-340-WR12  | WR-12 (3.099 mm x 1.549 mm)    | UG-387/U |
| CRS-340-WR10  | WR-10 (2.540 mm x 1.270 mm)    | UG-387/U |
| CRS-340-WR08  | WR-8.0 (2.032 mm x 1.016 mm)   | UG-387/U |
| CRS-340-WR06  | WR-6.5 (1.6510 mm x 0.8255 mm) | UG-387/U |
| CRS-340-WR05  | WR-5.1 (1.295 mm x 0.6475 mm)  | UG-387/U |
| CRS-340-WR04  | WR-4.3 (1.092 mm x 0.546 mm)   | UG-387/U |
| CRS-340-WR03  | WR-3.4 (0.864 mm x 0.432 mm)   | UG-387/U |
| CRS-340-WR2.8 | WR-2.8 (0.710 mm x 0.356 mm)   | UG-387/U |
| CRS-340-WR2.2 | WR-2.2 (0.570 mm x 0.285 mm)   | UG-387/U |
| CRS-340-WR1.9 | WR-1.9 (0.470 mm x 0.235 mm)   | UG-387/U |

### Additional notes

Directivity and radiation pattern data are simulated. Actual values have been checked experimentally but they could vary slightly.  
Return loss data is measured from a sample.  
The return loss performance of all items is checked before delivery to fulfill specifications.



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### MECHANICAL OUTLINE

