

Steatite Q-par Antennas SIGINT Microwave Wideband Antennas, Subsystems and Consultancy



Steatite Q-par Antennas has been at the designing and manufacturing microwave antennas and subsystem solutions for more than 40 years.

Custom-design microwave antennas and subsystems operating from 100MHz to 500GHz

Steatite researches, designs, and manufactures commercial-off-the-shelf (COTS) and custom-designed microwave antennas and subsystems, which operate between 100MHz and 500GHz.

These antennas and subsystems are using for electronic warfare (EW) and signals intelligence (SIGINT) applications, as well as for the sensor markets.

COTS and custom-designed solid and segmented reflector / feed antenna combinations are also produced by Steatite.

These combinations provide high-gain and low sidelobes, with low voltage standing wave ratio (VSWR) levels. They are ideal for applications such as threat emitters, direction-finding, EW, and communication systems.

In-house antenna design and engineering capabilities

Steatite manufactures its microwave antennas, subsystems, and high-specification COTS in-house.

Leading commercial electromagnetic design software is used to produce these antennas and subsystems, which are then also tested at the firm's facilities.

Meanwhile, the firm uses a combination of wideband antennas, using custom mounting structures, COTS, and custom-designed multi-axis all weather antenna positioners to create its antenna subsystems. These are housed in custom-designed microwave transparent radomes up to 40GHz.

Steatite also regularly carries out antenna-related research, design and manufacture for defence and government clients. The company performs development studies, prototyping and technical concept studies for these clients.

Ultra-wideband and omnidirectional antennas for direction-finding applications

Ultra-wideband omnidirectional antennas allow customers to replace several antennas with just one product. This saves the user weight and space, as well as reducing costs.

These antennas are available vertically or slant polarised and typically produce up to 42.5GHz. They are used for direction-finding and spectrum management applications.

Direction-finding and omnidirectional high-performance spinning antenna subsystems typically produce 0.50GHz to 18GHz

These antennas are mounted on high-speed direct drive positioners with complex scan control. They are then housed in a microwave transparent, low-loss radome.

Spiral antennas producing wide beamwidth with low squint

Spiral antennas provide smooth radiation patterns, purity of circular polarisation, and a wide beamwidth with low squint.

Dual linear and dual circular polarised, sinuous antennas can handle two orthogonal polarisation signals, which provides intercept opportunities for a wide range of randomly polarised hostile signals, producing a wide bandwidth with broad beamwidth.

Meanwhile, usual airborne and ground-based application comprise radar warning receiver (RWR), electronic surveillance measure (ESM), spectrum management, and 360° direction-finding.

Octave and multi-octave wideband horn antennas for EW and SIGINT applications

Typically, octave and multi-octave wideband horn antennas produce gain values of 10dBi to 20dBi, however high gain horn antennas can generate gain values of more than 20dBi.

These antennas can come in a variety of customised options, such as conical, multimode, rectangular, sectoral, dual polarised, as well as double and quad ridged.

Wideband horn antennas have maximum frequencies of up to 500GHz and can be adapted to meet the specific needs of customers.

They are used for applications such as SIGINT, EW, and for test and measuring, such as high intensity radiated field (HiRF) testing and electromagnetic compatibility immunity.