

Company Description

FRACTOM is an engineering research laboratory founded in 2008 that specializes in design, development and manufacturing of high-class antennas.

Our philosophy is to deliver products of uncompromising quality. We achieve it by performing a scientific research in the field of antenna technologies, holding our own patents, hiring extremely qualified employees, and extensively studying engineering solutions.

FRACTOM designs and manufactures antennas in the range of 20 MHz - 14 GHz with all types of polarization and technological implementations.

Our products are applicable to all wireless technologies in which antennas with offered specifications are required. Our work is focused on reliable and effective solutions, while our range of products is intended for commercial and military applications.

FRACTOM is ISO 9001 certified. All antenna products comply with ETSI standards. They also comply with the RoHS Directive.

We offer the best electrical and operating featured antennas for reasonable prices.

A known factor that influences the performance of microstrip antenna is the structural design of the patch. However, most of the known structures for patches of microstrip antenna do not provide optimum geometrical structures that allow transmission at a wide range of frequencies, while maintaining a high antenna gain level. Thus, there is a widely recognized need for a compact microstrip antenna having a patch with an optimum geometrical structure which is easy to fabricate and is devoid of the above limitations.

In 2008 we were granted with the US patent # US 7,403,159 B2 (Microstrip antenna having a hexagonal patch and a method of radiating electromagnetic energy over a wide predetermined frequency range). This patent describes the unique structure of the patch intended for the microstrip patch antennas. The structure of the hexagonal patch elements has been designed to enable high antenna gain while using the microstrip antenna for transmitting electromagnetic transmissions having a frequency from a wide bandwidth.

Inter alia, narrow frequency bandwidth and low efficiency factor, which results from low antenna gain, are some of the commonly known disadvantages of known microstrip antennas. To overcome the aforementioned disadvantages, the geometrical form of the hexagonal patch has been chosen to maximize the efficiency factor while extending the frequency range.

The main feature for all our developments is the ability to achieve the maximum possible operating frequency range with the maximum possible gain (G) of the antenna. This allows using our antennas in a wide variety of telecom standards with a greater functioning efficiency while a given antenna dimensions. Moreover, our antennas have much better results in side lobes and cross polarization because of the wide range of frequencies.

Significant BOM cost reduction due to re-designing of existing client antennas is another major advantage of our technology and know-how experience. Thanks to our unique patch and technology, we are able to provide our clients with superior and cheaper solutions.

Our target customers include: telecom companies which use wireless standards, inter alia firms that deal with mobile communication; firms that use GSM, WiMAX and LTE standards (and other standards which operate within the bandwidth that FRACTOM offers). Our antennas may be used in the followings: wireless local area networks (WLAN), base stations, point-to-point and point-to-multipoint applications, in access to broadband communication systems, GPS, cellular communications, computers, navigation systems, confidential data broadcast, mobile and stationary objects, television and radio broadcasting, aircraft systems, as transmitters, etc.

UAV companies; antenna developers and manufacturers that use our solutions as an outsourcing company; manufacturers and exporters of network solutions and broadband solutions providers; suppliers of advanced RF wireless systems, networks and solutions for the M2M industry are some of our clients among many others.