

# Multi-beam E-band product Giga Mesh

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**In news :** Astrome, a women-led startup, has developed an innovative wireless product that gives fibre like bandwidth at fraction of cost of fibre to **help telecom operators deliver reliable low-cost internet services to suburban and rural areas.**

## **Need for such technology**

- Reaching internet access to remote places in countries like India is difficult because laying fibre is too expensive.
- There is a need for wireless backhaul products that can deliver low cost, high data capacity, and wide reach.
- Currently available, wireless backhaul products either do not provide sufficient data speeds or the required range or are very expensive to deploy.

## **About the GigaMesh**

- The wireless product called Giga Mesh could enable telecom operators deploy quality, high-speed rural telecom infrastructure at 5 times lower cost.
- Rural connectivity customers and defence customers who have already signed up for pilots will soon witness the demonstration of this product by Astrome.
- The deep tech startup incubated at the **Indian Institute of Science** (IISc), Bangalore, and supported by **DST-ABI** Woman Startup Program of the **Department of Science and Technology** (DST), Government of India proved their **millimeter-wave multi-beam technology** in the lab in 2018, for which the company has been granted a patent in India and US.
- Since then, the technology has been converted to a

powerful and scalable product called **Giga Mesh**, which can solve much of the last mile connectivity telecom needs of our country.

- The product has been proven on the field and also integrated with partner products for its upcoming commercialization.
- The Multi-beam E-band product, Giga Mesh, packs 6 Point-to-Point E-band radios in one, thereby distributing the cost of the device over multiple links and hence reduces capital expenditure.
- The radio provides long-range and multi-Gbps data throughput at each link. Features like automatic link alignment, dynamic power allocation between links, and remote link formation help operators achieve significant operating expenditure cost reduction.