

TEMBO Africa

Transformative Environmental Monitoring to Boost Observations in Africa

X-Band radar for spatial rainfall estimates



Overview

TEMBO Africa X-Band radar is a small radar for spatial rainfall estimates, which scans its environment, using X-band rays with a frequency of 9410 MHz up to a distance of 200 km. It detects precipitation as low as 10 dBZ, reconstructing the wind field, and providing real-time insight into the weather.

Where?

The system can be applied all over Sub-Saharan Africa, while a pilot is being implemented in Ghana.

For whom?

Ideal for stakeholders interested in providing flood early warnings, dam reservoir managers, crop insurance providers, meteorological agencies, aviation, and farming and fishing sectors.

Small, smart and simple

✂️ **5 times cheaper** than the traditional C-band radar.

⚡ **40 times lower consumption** in contrast to C-band radar, being ideal for areas with limited power infrastructure.

⚙️ **Reduced installation and maintenance costs** compared to standard large meteorological radars, thanks to its smaller size and simpler construction.

👤 Can be supported and maintained by **local technicians**, reducing dependency on specialised external support.

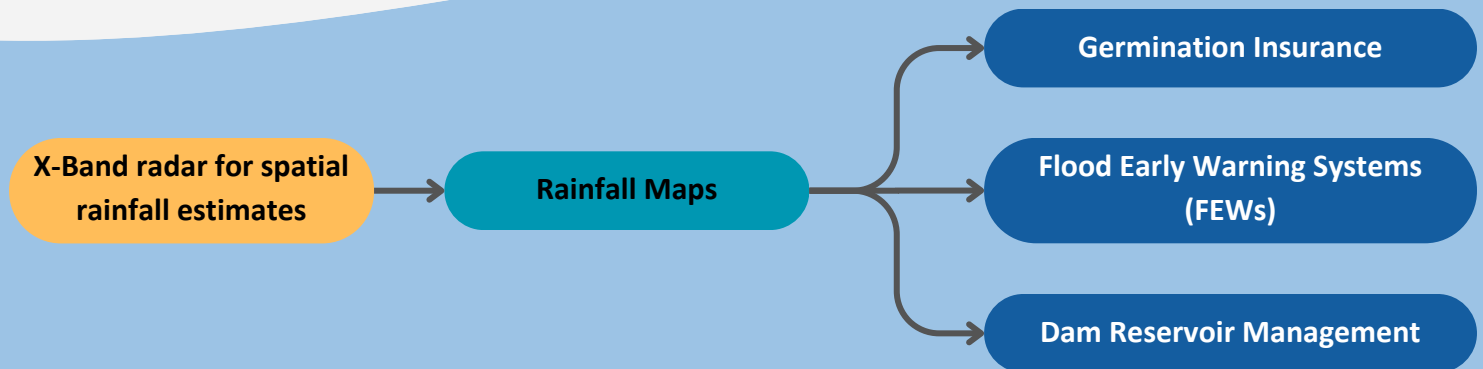
🔄 **Faster data update** rates, achieving a full 3D scan in 1 minute versus 5 minutes of the C-band, enhancing real-time weather monitoring and nowcasting.

💡 Additional uses in FFG, aviation, fishing, and farming.

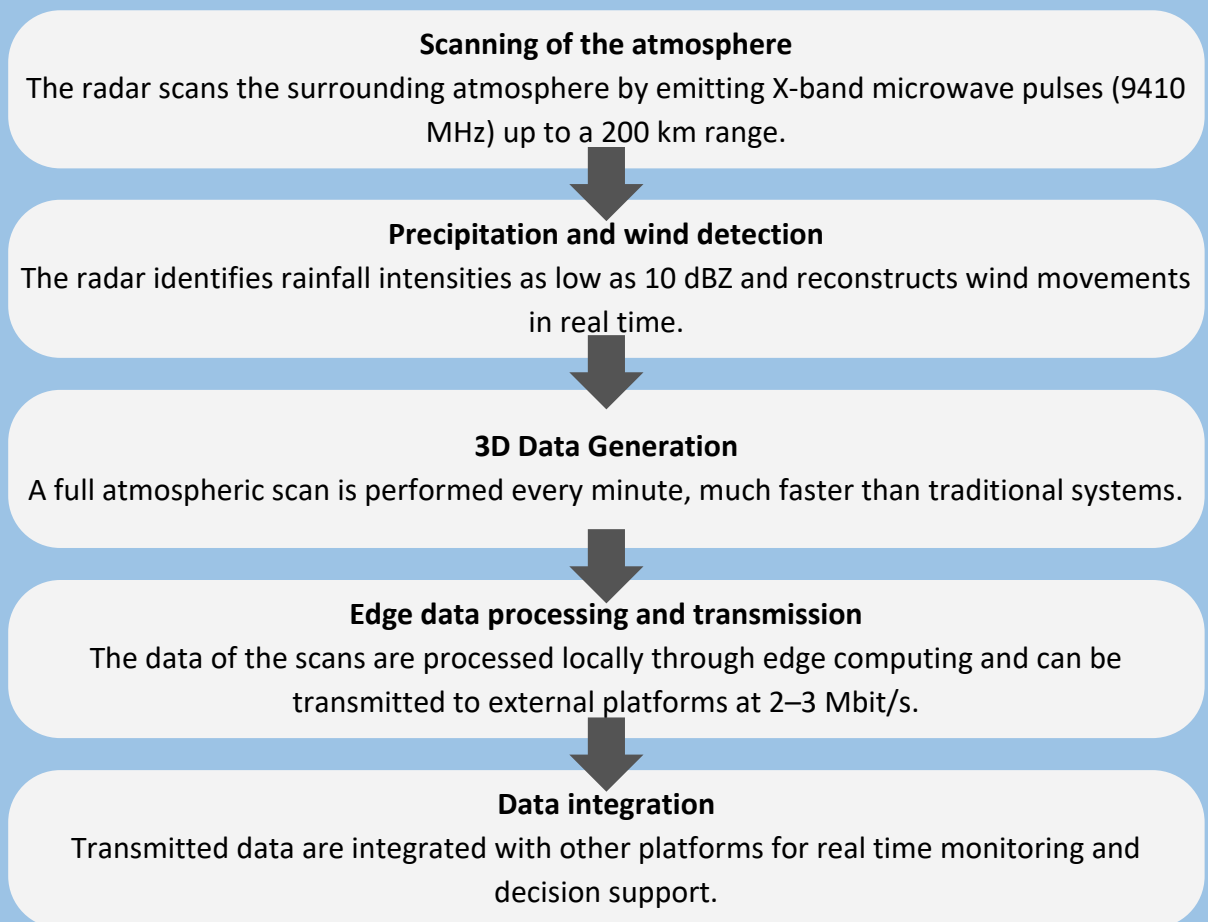


This project has received funding from the European Union under the Horizon Europe Research & Innovation Programme 2021-2027 (grant agreement no. 101086209). The Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither can the European Union nor the granting authority be held responsible for them.

A **sensor** that can be used for one of the **TEMBO products**, while it can be leveraged by all **services** in the context of a “Lego®-ised” approach, which enables flexible integration with other systems!



How it works



Responsible partner for the X-Band radar

MicroStep - MIS

Contact us and learn more!

