

# ORanGaN

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Digital, Culture,  
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**UK  
5G**

**Innovation  
Network**

# Project **ORanGaN** in a nutshell

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## Partners

- **Inex Microtechnology** – Semiconductor Development and Manufacturing
- **Custom Interconnect** – Semiconductor Packaging and Electronics System Manufacturing
- **Viper RF** – RF Semiconductor Design House
- **Compound Semiconductor Applications Catapult** – RF Semiconductor Device Testing

## Main outcome

- **To create a sovereign UK supply chain for 5G RF GaN MMICs**
- **Enabling and driving the creation of new RF products and services that will aid the diversification and security of the UK's Open RAN supply chain**

# Our Impact on the market

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**ORanGaN** is building Open RAN supply-chain resilience, delivering key infrastructure components designed and manufactured in the UK.

- Address global semiconductor supply shortage, forecast to continue for 10 years
- Geopolitical security concerns increase uncertainty of supply

**ORanGaN** sovereign UK source mitigates security risks

- Risks integrating foreign-sourced hardware into UK 5G infrastructure
- Risk of IP leakage with designs fabricated in the Far East

**ORanGaN** enables export opportunities for 5G hardware manufactured by UK-based supply chains.

- Key building block for UK presence in growth semiconductor markets dominated by US and Asia
- UK supply chain enables specialist manufacture of customised components with secure, ITAR-free supply



## Collaboration possibilities

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The **ORanGaN** project would like to engage with 5G system builders to guide the development of the project's MMIC devices.

Potential collaborations exist between **ORanGaN** and the following projects

- Future RAN Radio Test System
- Best of British RAN Development
- Secure 5G Platform using Novel, Efficient Wideband PA
- Flexible, Efficient and High-Performance 5G Open RAN (Flex-5G)
- CoMP-O-RAN (Coordinated Multipoint Open Radio Access Network)

**Synergies may exist with other FRANC projects; we are eager to explore all possibilities.**