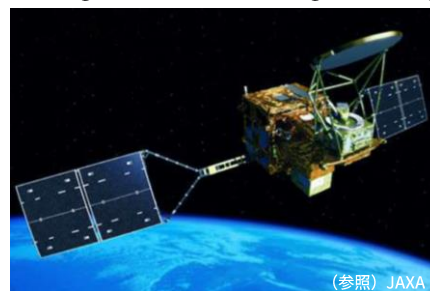
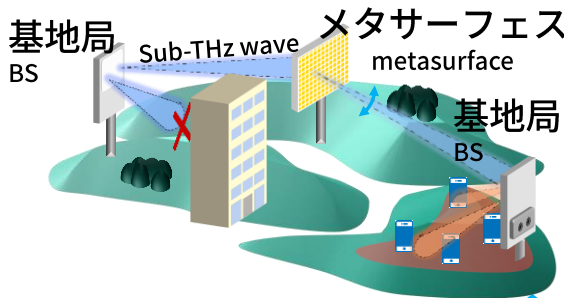


サブテラヘルツ帯ユースケース

Sub-THz-band use cases

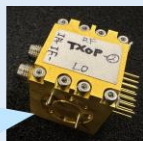
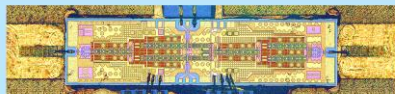
- ・ 超高速無線通信
- Ultra high-speed wireless communication
- ・ 高分解能レーダ
・ 宇宙センシング
- High resolution radar, gas sensing



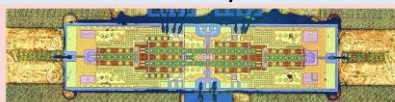
デバイス技術

化合物半導体InP高速電子デバイス
InP High-speed electron devices

300GHz TX IC/module

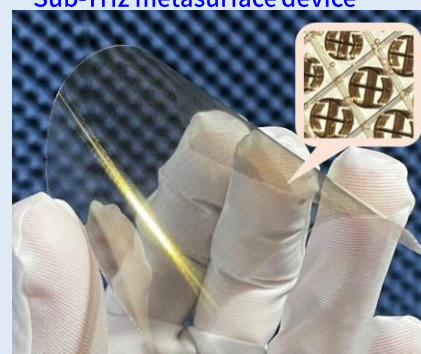


300GHz RX IC/module



伝搬制御技術

サブテラヘルツ帯メタサーフェス
Sub-THz metasurface device



///Technical Issue

The sub-terahertz band were not industrially developed yet, and device technology capable of generating high-output, broadband signals and controlling their propagation has yet to be established.

///Research Goal

Creating communication areas that can support 6G technology with wireless transmission exceeding 100 Gbps and realizing innovative sensing capabilities using unexplored frequency bands.

---Technology

- ・ Sub-terahertz band devices realized using NTT's compound semiconductors and circuit design/implementation technologies.
- ・ Sub-terahertz band propagation control devices using NTT's unique process and metasurface design technology.

---Novelty

By creating the world's most advanced high-speed device technology (compound semiconductors, metasurfaces), we have achieved the world's largest wireless transmission capacity and low-loss propagation control in the sub-terahertz band.

---Applicable Business

In the field of information and communications, it can be used to create ultra-high-speed wireless areas that support 6G (technology establishment period: 2030).