

RF INTERCONNECT SOLUTIONS FOR GEOSPATIAL SENSING AND IMAGING

Mapping the unseen requires technology that delivers precision, reliability, and seamless connectivity. From penetrating underground surfaces with GPR to capturing high-resolution terrain data with radar and LiDAR, advanced imaging solutions depend on RF technology to ensure uninterrupted signal transmission and real-time data collection. Drones, autonomous survey vehicles, and satellite systems rely on high-frequency interconnects to power applications. Amphenol RF's rugged, high-performance components power the next generation of geospatial intelligence by delivering clear, accurate data—even in the harshest environments.



RF technology is crucial in geospatial sensing and imaging applications for radar signal transmission, real-time data links, GNSS positioning, and communication between hardwares.

TECHNOLOGIES

- **Ground Penetrating Radar (GPR) Imaging**

Applications: Utility detection, geotechnical studies, unexploded ordnance detection.

- **Synthetic Aperture Radar (SAR) Mapping**

Applications: Military reconnaissance, environmental monitoring, disaster response.

- **Seismic RF Telemetry for Geophysical Surveys**

Applications: Oil & gas exploration, underground water detection, earthquake studies.

- **LiDAR Terrain Mapping**

Applications: Floodplain mapping, forest inventory, urban modeling, infrastructure development.

- **GNSS-Based 3D Terrain Mapping**

Applications: Geological surveys, agricultural mapping, environmental monitoring.

- **Electromagnetic Induction (EMI) Mapping**

Applications: Agriculture, pollution studies, underground infrastructure detection.

- **Infrared (IR) and Thermal Terrain Imaging**

Applications: Wildfire tracking, urban heat mapping, geothermal studies.

CORE COMPETENCIES

- Ruggedized products offering dust, vibration, and corrosion resistance
- Waterproof IP67/68 sealed solutions ideal for outdoor applications
- Low-loss cable assemblies supporting long-distance signal transmission

- High-precision RF Performance
- Customized hybrid solutions supporting RF signal and power
- Lightweight and compact high-frequency products

PRODUCTS



ALSO AVAILABLE

- Board-to-Board Solutions
- Adapters
- Custom Solutions
- Non-Magnetic Solutions

DESIGN FEATURES



IP-Rated Waterproof

Waterproof sealed solutions are engineered to protect your application from outside elements and are fully tested to IP67 or higher specifications in the mated and unmated condition.



Vibration-Resistant

One-piece bodies and other design considerations are taken into account to provide a more robust option for applications where there are concerns for the security of the locking interface due to extreme conditions.