### Proven Space Heritage

The primary satellite functions of navigation, broadband communication and environmental sciences not only require the highest performance components, but also ultra-high reliability since operating conditions are extreme.

Smiths Interconnect designs compact and reliable products suitable for launchers, satellites, manned space flight and ground systems support. Our solutions use space approved materials and controlled processes for minimum mission lifetimes of 15 to 20 years.

We are an approved vendor for international space agencies including ESA, ISRO, JAXA and NASA, and have proudly delivered failure-free performance in numerous spaceflight programs. We work globally with our customers and space agencies to design the next generation of solutions for deep space mission-critical applications.

# DEO LEO

**ORBIT TYPES** 

## LEO LOW EARTH ORBIT

- Altitude above the earth's surface
  300 to 1600 km
- Time to orbit the Earth 10-40 Minutes
- Satellites to cover majority of the Earth - 40 to 1,000's
- Satellite lifetime Typically up to 5 years
- Propagation delay (latency) approx. 40 ms
- Cost of ground stations Highest need multiple

### Applications:

- Earth Observation
- Surveillance
- Telecom
- Space Telescopes
- Earth Sensing
- Space Cubes

# MEO MED EARTH ORBIT

- Altitude above the earth's surface - 10,000 to 20000 km
- Time to orbit the Earth 2-8 hours
- Satellites to cover majority of the Earth 8-10
- Satellite lifetime Typically up to 10 - 15 years
- Propagation delay (latency) approx. 180 ms
- Cost of ground stations Medium

### Applications:

- Navigation & Communication
- Gamma Ray Detection
- Weather Monitoring
- GPS
- Broadband
- Space Environmental Sciences

# GEO GEOSTATIONARY ORBIT

- Altitude above the earth's surface - 36000 km
- Time to orbit the Earth Fixed (24hrs)
- Satellites to cover majority of the Earth - 3
- Satellite lifetime Typically up to 15-20 years
- Propagation delay (latency) approx. 600 ms
- Cost of ground stations Lowest need only one

### Applications:

- Military Satellites
- Communication Satellites
- Weather Monitoring
- Radio/TV Networks
- Broadband

# LEO Product Line Offerings

- SpaceNXT<sup>™</sup> Ku Series -High Power Ku-Band Passive Waveguide Components
- SpaceNXT™ HC Series High Reliability Temperature Variable Attenuators
- SpaceNXT™ Aurora Series -ESA Space Qualified Backplane
   Connector
- CTX Series High Frequency Chip Terminations
- CEX Series Surface Mount Chip Equalizer
- Lab-Flex® T Series Cable Assemblies
- SpaceNXT<sup>™</sup> Q Series Cable Assemblies
- Spring Probe Interposers
- Antenna Systems
- Telemetry & Tracking Beacon Antennas
- RF Filter Components and Assemblies
- KVPX Series High Speed VITA Backplane Connector
- High Frequency Amplifiers

# MEO Product Line Offerings

- SpaceNXT™ Ku Series -High Power Ku-Band Passive Waveguide Components
- SpaceNXT™ MWC Series -Ku-Band Multiway Isolated Splitter
- Low Loss Semi-Rigid Cable Assemblies
- SpaceNXT<sup>™</sup> Q Series Cable Assemblies
- SpaceABLE® Series Radiation Resistant Transceiver Series
- RF Ferrites and Passives
- Diamond RF Resistives®
- RF Filter Components and Assemblies
- RF Ferrites and Passives
- KVPX Series High Speed VITA Backplane Connector

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