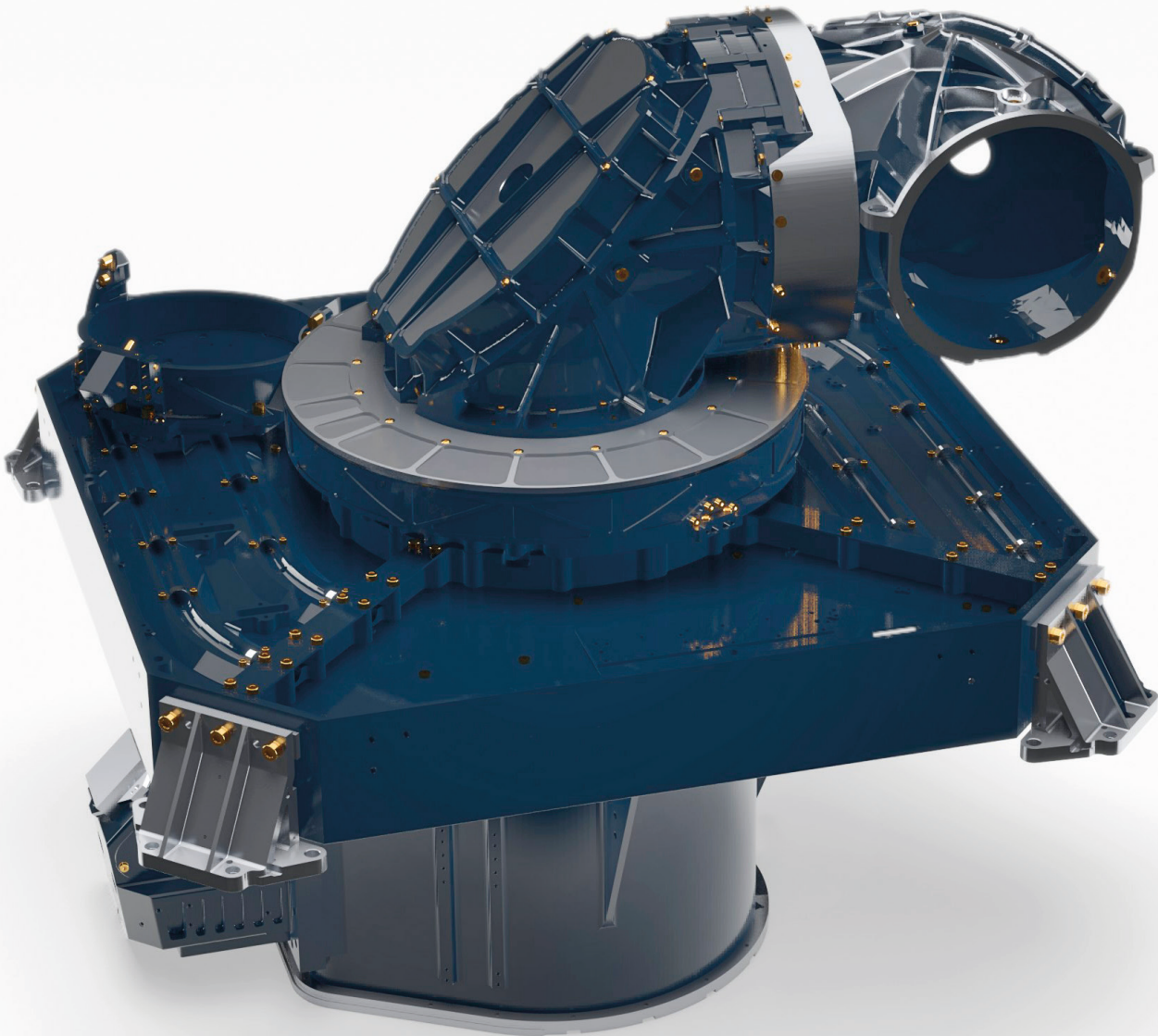


LCT 135

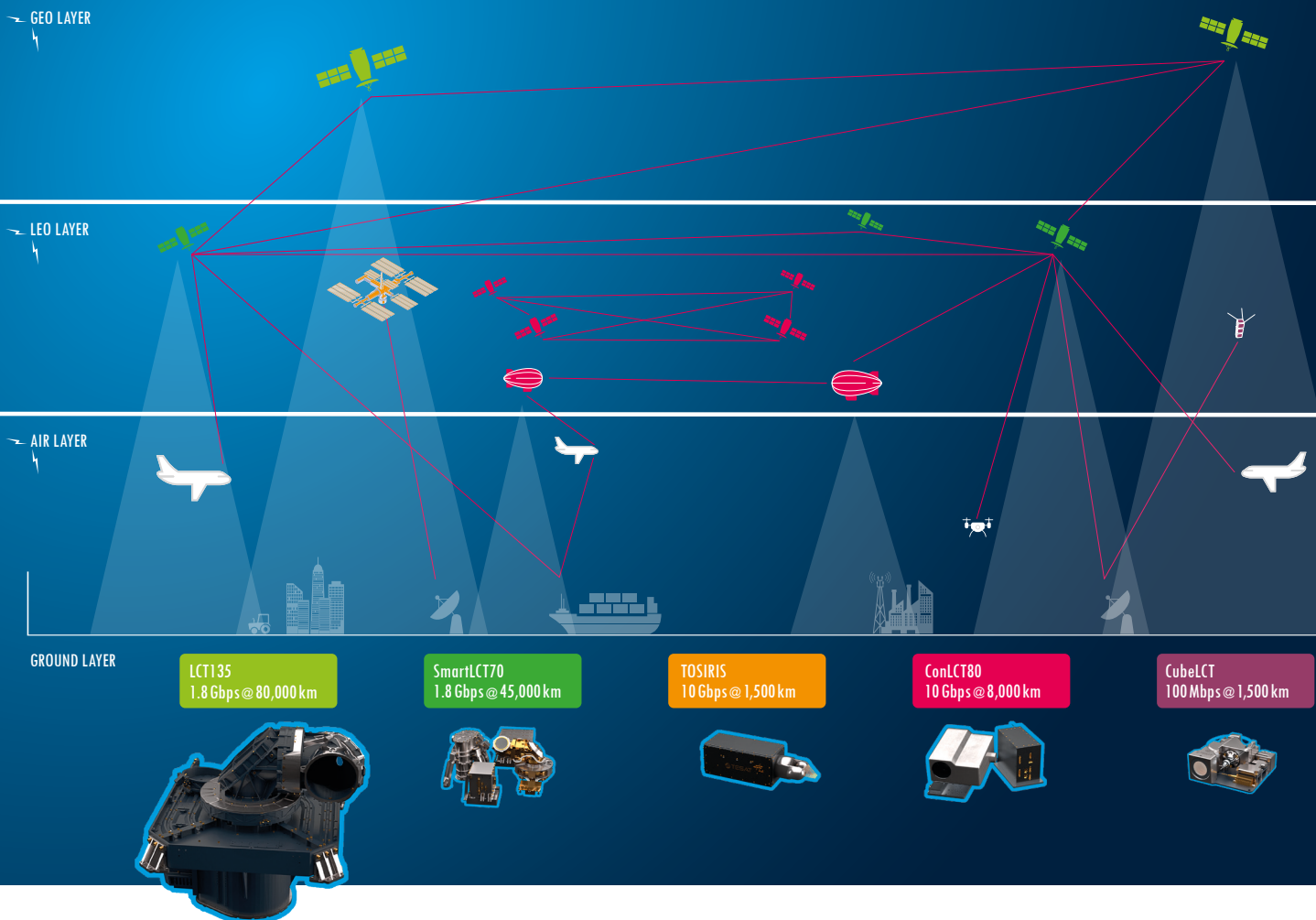
THE GEO BACKBONE



VERSION 2021-10



LCT 135 — GIGABIT OPTICAL INTER-SATELLITE SERVICE OVER 80,000 KM



KEY PARAMETERS

- **Application**
Gigabit Inter-Satellite Link (ISL) for Data Relay on GEO S/C working as reliable backbone; core element of the operational service for the European Data Relay Satellite System (EDRS); 14 flight models delivered / in production
- **Range**
Up to 80,000 km; GEO to GEO, GEO to LEO, GEO to Airborne, GEO to Ground
- **Technical Features**
TESAT LCT with coherent, space qualified 1064 nm laser source, using homodyne BPSK modulation; most efficient design for long range, high data rate transmissions with resiliency to sunlight and jamming.
Next generation features: 2 Mbps forward channel (tasking); 3.6 Gbps data rate increase; dual wavelength (1064 nm + 1550 nm) for interoperability options.

KEY FACTS

- **Data Rate** 1.8 Gbps, bidirectional
- **Mass** 53 kg
- **Size** 60 x 60 x 70 cm³
- **Power Consumption** max. 150 W in acquisition mode, 120 W in communication mode
- **Field of Regard** Full hemispherical with Coarse Pointing Assembly (CPA)
- **Lifetime** 15 years in GEO orbit
- **Data Interface** LVDS / Wizard Link
- **TRL** TRL9