# **On-Orbit service**





## **About SSC**

Swedish Space Corporation (SSC) provides advanced space services to institutional and commercial customers worldwide. Built on decades of experience, we offer proven expertise in space engineering, satellite ground station services and launch services.

We help Earth benefit from space.

## SSC On-Orbit service

SSC performs over 3.2 million pass minutes per year and supports more than 200 On-Orbit routine passes each day for customers around the world. The On-Orbit routine support services are performed by SSC Technical Operations team which operates from Network Management Centers (NMC) in both Sweden and the United States.

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SSC's Telemetry, Tracking and Control (TT&C) service and Data Reception (DR) service allows the satellite owners to manage their satellites, payload data and end-user needs fully with outstanding coverage and availability.

The On-Orbit service is automated, highly reliable and cost-effective, utilizing an unparalleled network of worldwide locations.

SSC's Global Ground Station Network is designed to provide comprehensive communications and ground system support to a variety of satellite missions. The network has been constructed for high availability in a multi-mission concept.

SSC has vast competence in providing satellite support and has developed software, hardware and processes optimized for this service. Optimization provides a cost efficient, secure and reliable service support.

**Establishment** 



TT&C



Data reception (DR)



**Data handling** 

#### Service characteristics

- Services
  - o S-band (Up/Down)
  - o X-band (Down)
  - o Ka-band (Down)
- Full motion antenna

### S-band

2025-2120 MHz TΧ **FIRP** > 54.0 dBW 2200-2400 MHz RX

≥ 17.5 dB/K G/T

#### X-band

RX 8000-8500 MHz G/T ≥ 30.5 dB/K

#### Ka-band

RX 25500-27000 MHz

G/T ≥ 34 dB/K

#### Included in the service

- Establishment
- Automated Scheduling support
- Data Reception
- Uplink telecommand
- Downlink telemetry
- Telemetry playback
- Ground Network Communication
- Reporting

#### Options in the service

- Localization
- Angular
- Doppler
- Ranging
- Data Handling
- On-line Voice support
- Priority service levels
- Engineering support Service Level Agreements
- Tailor-made solution

#### Communication - SSC Network to PoP

Primary: MPLS

Backup: Internet VPN

## **MPLS Specification**

Latency	≤ 45 ms
Jitter	≤ 15 ms
QoS	Available

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#### **Automation**

SSC evolves the On-Orbit service by adding automation that enables machine to machine interface allowing full automation operational concepts. Your scheduling system is now able to directly make scheduling using best IT industry practice RESTful API with SSC's scheduling system choosing from all the antennas qualified for your mission. SSC also provides a website for your convenience to manually book passes at your own discretion. Our teams of operators supervise the scheduling and oversee the passes making sure everything is done to the highest standard. The technical interfaces are built on latest state of the art websocket and RESTful API concept.

