

## FTSX-XD-RR-01 S- and X- Band TT&C Feed

Suitable for TT&C applications requiring S- Band transmit and X- Band receive

Orbital Systems FTSX-XD-RR-01 feed is suitable for TT&C applications with S Band Transmit (TX), and X- Band Receive (RX) both in RHCP. The feed incorporates a built in block downconverter to convert the X- Band Receive (RX) signal to a L- Band IF output centered on 1250 MHz.

### Features

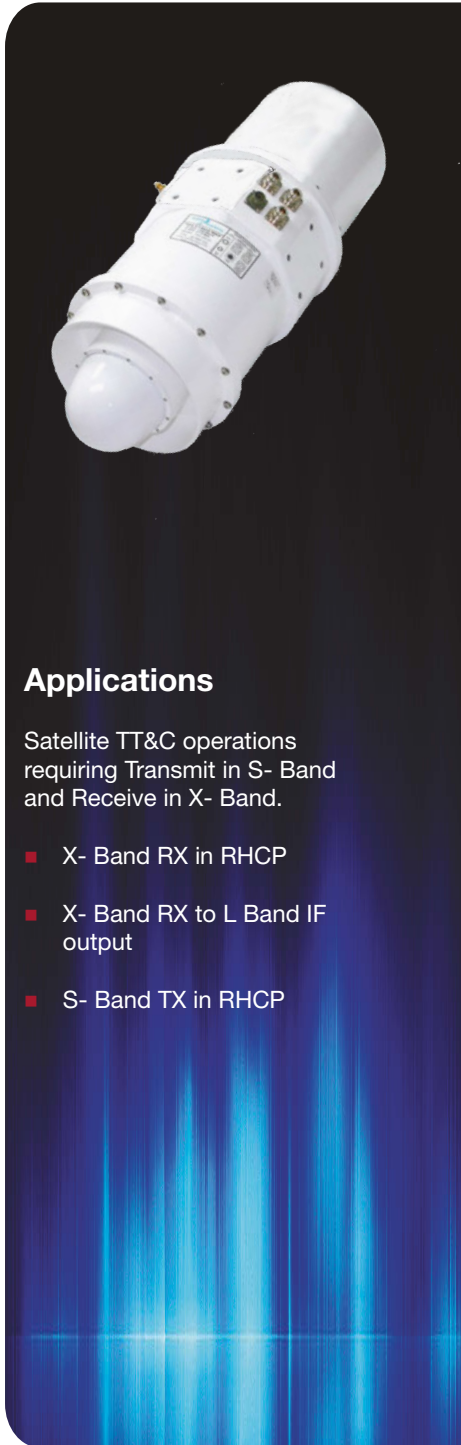
- X- Band reception in RHCP
- X- Band septum polarizer for low noise performance and low axial ratio
- S- Band transmission in RHCP
- X- Band Loopback test injection port for testing the complete X Band reception chain
- Two Band coaxial waveguide feed, both bands on axis
- Optional X- Band waveguide filter for radar rejection
- Feed is controlled over the Orbital Data Bus (ODB)
- Integrated low phase noise X- Band block downconverter to L- Band IF output
- Heavy-duty aluminum enclosure, powder coated and assembled with stainless steel fasteners to eliminate external corrosion
- Pressurized feed with temperature and humidity sensors
- Built in purge valve to ventilate the entire antenna when excess humidity is detected in the electrical cabinet or feed

### X- Band Reception

X- Band Receive (RX) .....	RHCP
X- Band Receive (RX) .....	8000 - 8400 MHz
L- Band IF Output.....	1050 - 1450 MHz
X- Band LNA noise temperature .....	45K typ 23C
X- Band LO frequency.....	6950 MHz (no frequency inversion)
Phase noise 1kHz.....	-110dBc / Hz
Phase noise 10kHz.....	-120dBc / Hz
LO Stability.....	OCXO +/-15ppb

### S- Band Transmission

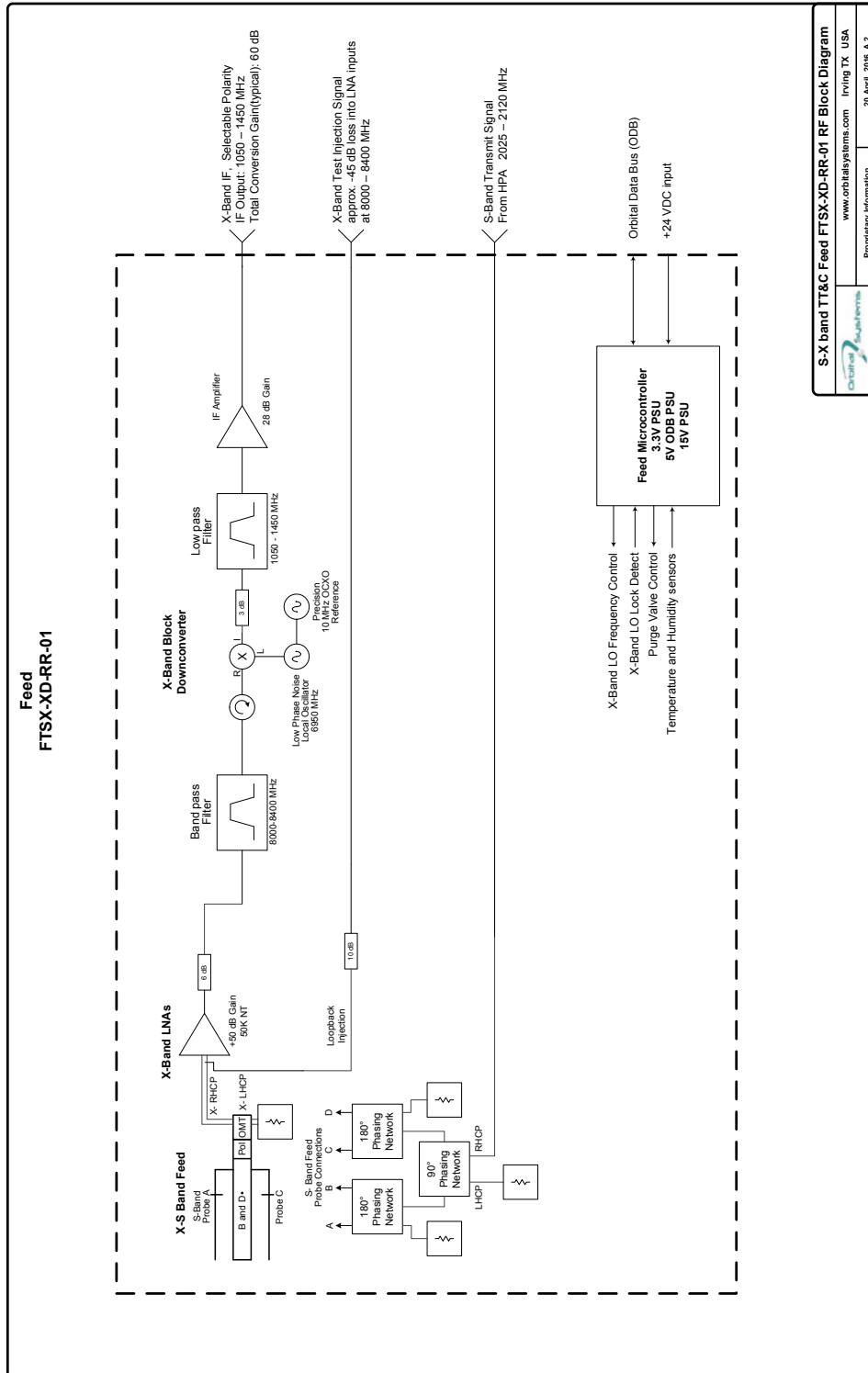
S- Band Transmit (TX).....	RHCP
S- Band Transmit Frequency .....	2025 - 2120 MHz



### Applications

Satellite TT&C operations requiring Transmit in S- Band and Receive in X- Band.

- X- Band RX in RHCP
- X- Band RX to L Band IF output
- S- Band TX in RHCP



S-X band TT&C Feed FTSX-XD-RR-01 RF Block Diagram  
 www.orbitalsystems.com Irving TX USA  
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