



## 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

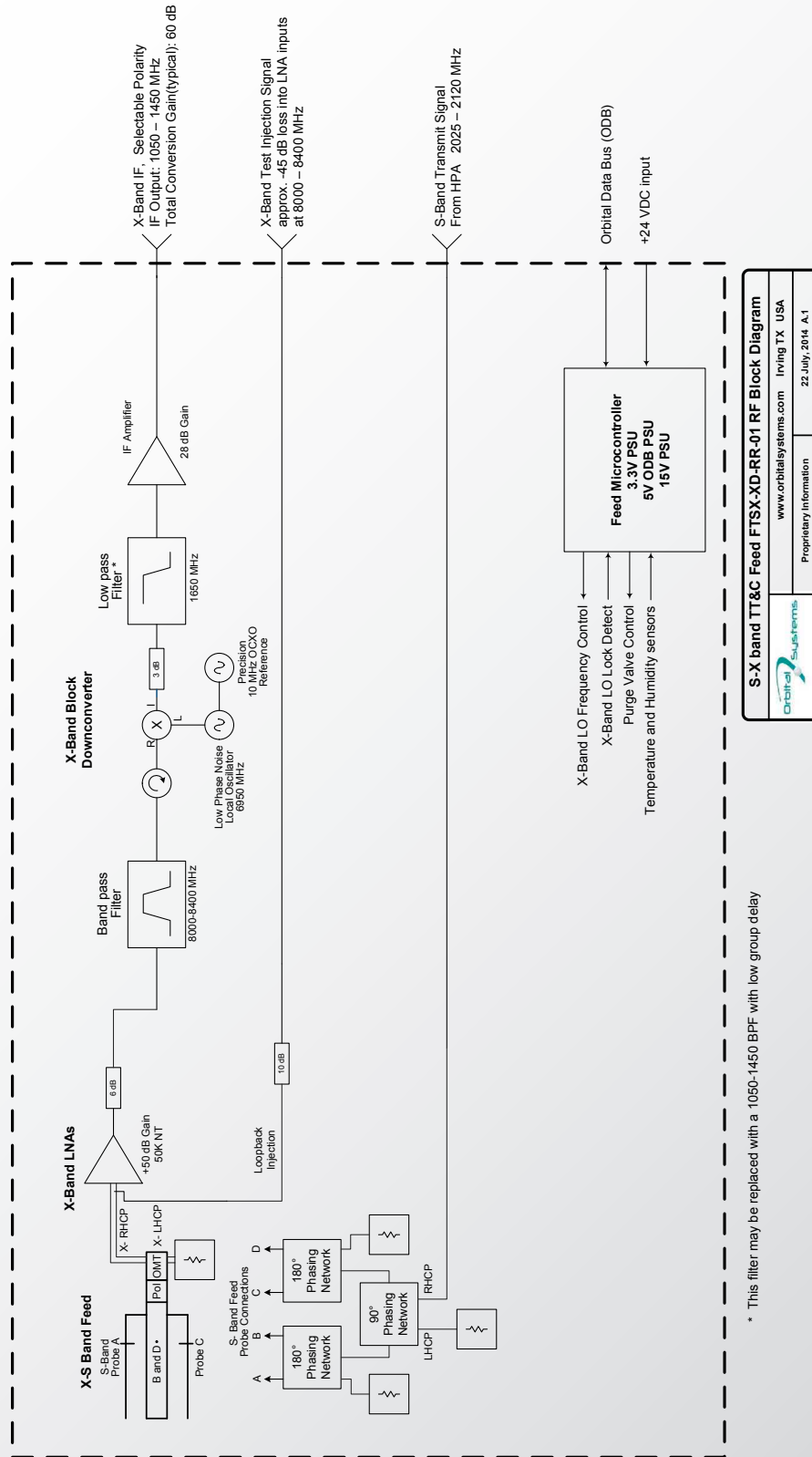
### Applications

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

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

# Block Diagram



<b>S-X band TT&amp;C Feed FTSX-XD-RR-01 RF Block Diagram</b>	
	www.orbitalsystems.com Irving TX, USA
Proprietary Information	22 July, 2014, A.1

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Please contact us for more information: [sales@orbitalsystems.com](mailto:sales@orbitalsystems.com) ■ [www.orbitalsystems.com](http://www.orbitalsystems.com) ■ +1 (972) 915-3669