



## FXSL-DDD-02 X- S- and L-Band EOS-DB Feed

Suitable for EOS DB applications requiring simultaneous X-, S- and L- Band reception

**Orbital Systems FXSL-DDD-02 feed is a concentric X-, S- and L-Band feed complete with low noise amplifiers and downconverters for all three bands. X-Band downconverter is fully synthesized, L- and S- Bands are block downconverted.**

### Features

- Concentric X-, S-, and L Band feed on a common axis eliminates loss and pointing issues of off axis multi-band feeds
- X- Band feed operates fixed RHCP
- S- and L Band feed software selectable LHCP or RHCP
- Simultaneous reception of X- and S- or L- Band signals
- Heavy duty aluminum enclosure, powder coated and assembled with stainless steel fasteners to eliminate external corrosion
- Complete feed control and monitoring via serial RS-422 data link
- Pressurized feed with temperature and humidity sensors as well as a built in purge valve to ventilate the entire antenna when excess humidity is detected in the electrical cabinet or feed

### Performance Specifications

#### X- Band Feed / Downconverter

X- Band Operating Frequency	7750 - 8400 MHz
LNA Noise Temperature	45 K max at 23°C
Local Oscillator Frequency	7.03-7.68 GHz, 100 KHz typical (no spectrum inversion)
Local Oscillator Stability	± 5ppm
Oscillator Phase Noise	-100 dBc/ Hz at 10 KHz typical
Output Frequency	720 MHz (3 dB BW - 120 MHz)
IF Filter	4 pole tubular, 120MHz BW
Conversion Gain	65 dB typical
Output 1 dB Compression Point	> +10 dBm

#### S- Band Feed / Downconverter

S- Band Operating Frequency	2200 - 2260 MHz
S- Band Converter Noise Temperature	70 K typical
Local Oscillator Frequency	Selectable: 2072/2096/2120 MHz
Local Oscillator Stability	± 2.5 ppm
Oscillator Phase Noise	-100 dBc/Hz at 10 KHz typical
Output Frequency	126 MHz to 154 MHz
Filter	7 pole cavity pre-LNB filter
Conversion Gain	65 dB typical
Output 1 dB Compression Point	> +10 dBm

#### L- Band Feed / Downconverter

L Band Operating Frequency	1682 MHz to 1710 MHz
L Band Converter Noise Temperature	70 K typical
Local Oscillator Frequency	Selectable: 1550/1556 MHz
Local Oscillator Stability	± 2.5 ppm
Oscillator Phase Noise	-100 dBc/Hz at 10 KHz typical
Output Frequency	126 MHz to 154 MHz
Filter	7 pole cavity pre-LNB filter
Conversion Gain	65 dB typical
Output 1 dB Compression Point	> +10 dBm

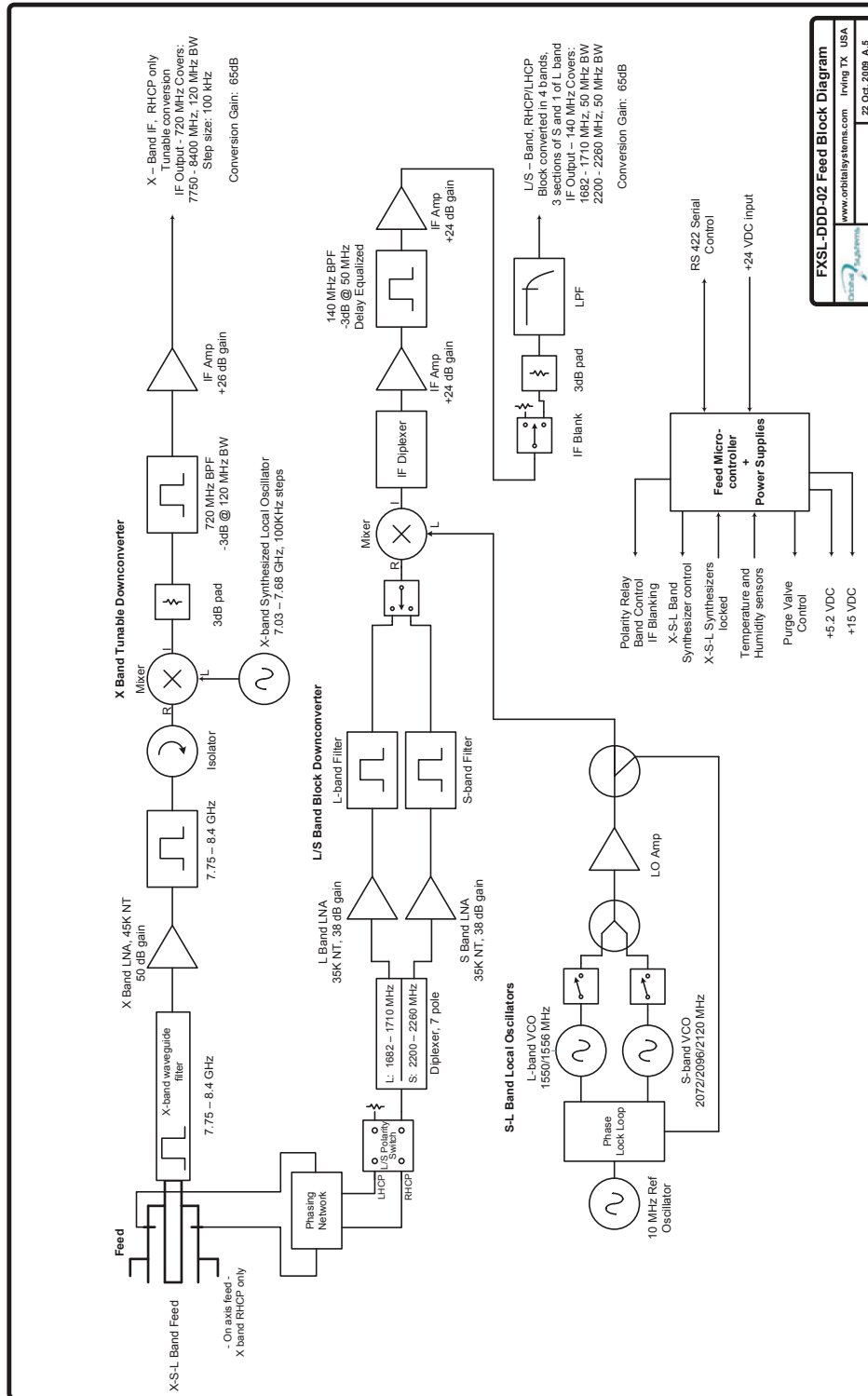
### Electrical, Mechanical, and Environmental

Input Voltage Frequency	24V DC at 1A
Input Power/Data Connector	8 pin MS style connector
Operating Temperature	-40°C to +55°C
X- S- and L- Band IF Outputs	Female Type N
Pressurization Tube Connector	1/4" compression fitting (supplied)
Size	26cm (10.25") dia x 58.4cm (23") long
Weight	13.2 kg (29 lbs)



### Applications:

- Reception of X-, S- and L-Band EOS-DB satellites, including satellites that downlink simultaneously in X- and S- Band, or L- Band
- Reception of NOAA and DMSP satellites including reverse polarity NOAA satellites



FXSL-DDD-02 Feed Block Diagram  
 www.orbitalsystems.com Irving TX USA  
 22 Oct, 2009 A.5



Document Number: MA 130-002, rev D.01  
 ©Orbital Systems LLC, 2020 - Patents Pending, 2013 - 2020  
 Prices and specifications are subject to change without notice

