

TECHNICAL CHARACTERISTICS

1. TECHNICAL CHARACTERISTICS

The following paragraphs list the technical characteristics of the XDD-1000C transmitter/receiver.

1.1 TRANSMITTER TECHNICAL CHARACTERISTICS

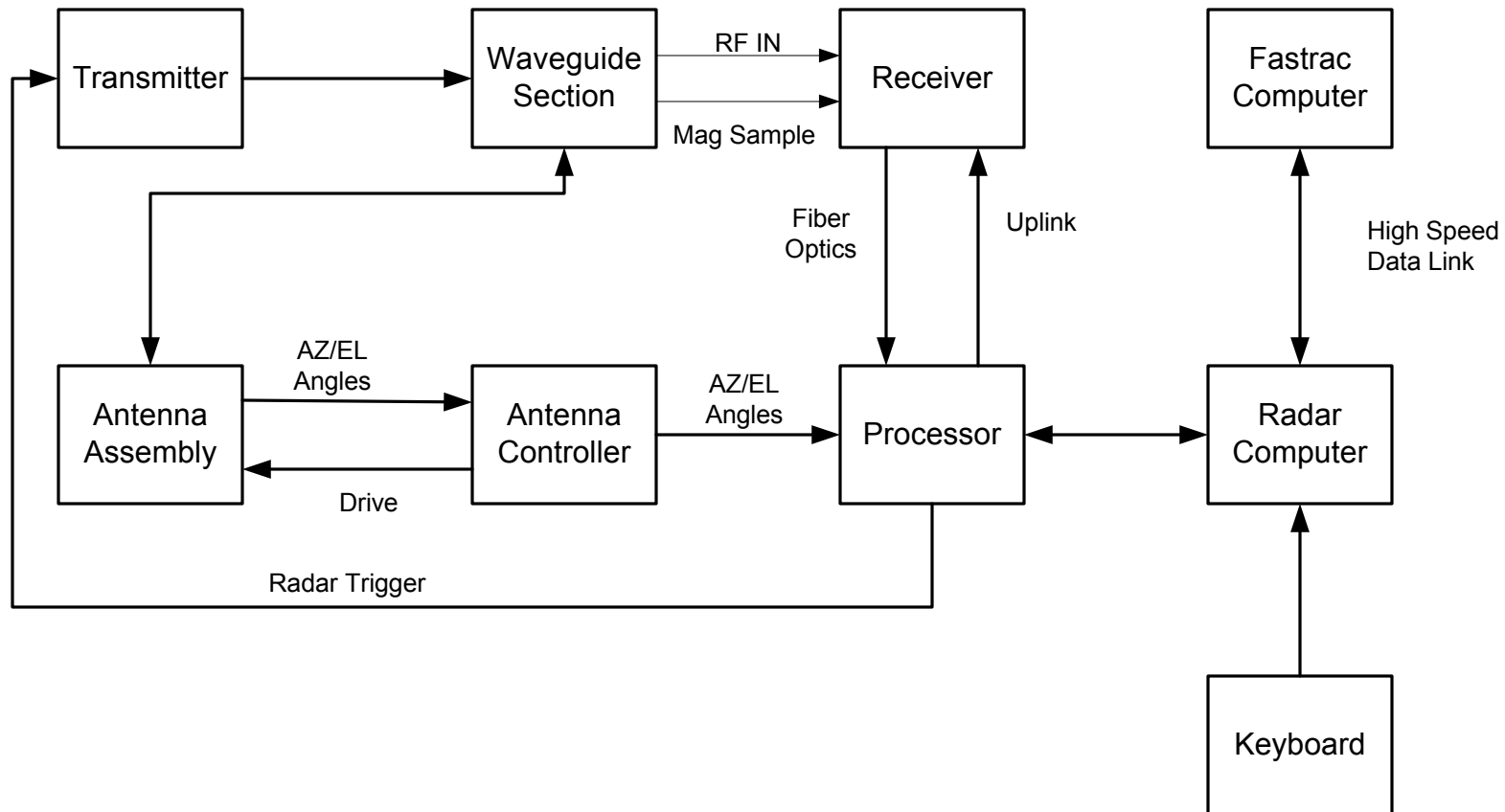
Magnetron Type	SFD-313A										
Operation Frequency	5400 to 5650 MHz										
Pulse Repetition Frequency (PRF) And Pulse Duration (Pulsewidth)	<table><tr><td>Pulsewidth</td><td>PRF</td></tr><tr><td>2.0 usec</td><td>250</td></tr><tr><td>1.0 usec</td><td>500</td></tr><tr><td>0.8 usec</td><td>1140</td></tr><tr><td>0.4 usec</td><td>1180</td></tr></table> (All pulse widths and PRF's are variable within duty cycle limits)	Pulsewidth	PRF	2.0 usec	250	1.0 usec	500	0.8 usec	1140	0.4 usec	1180
Pulsewidth	PRF										
2.0 usec	250										
1.0 usec	500										
0.8 usec	1140										
0.4 usec	1180										
Peak Power	1000 kW										
TR Switching	Ferrite Duplexer with 5 usec Recovery time. Isolation of 20 dB Minimum with a solid state single long-life TR limiter.										

1.2 RECEIVER TECHNICAL CHARACTERISTICS

RF Frequency	5400 to 5650 MHz (see transmitter Frequency)
Noise Figure (input to receiver)	3dB maximum, using low noise
Mixer	Balanced Coaxial
Local Oscillator	Frequency Synthesizer with AFC
IF Amplifiers	Digital
Intermediate Frequency	30 MHz

IF Bandwidth	Intensity- 0.60 MHz +/- 250 KHz Velocity- 1.20 MHz +/- 250 KHz 3.00 MHz +/- 250 KHz
Dynamic Range	90 dB nominal
Sensitivity	-114 dBm @ .060 MHz Bandwidth
Range Normalization	Provided by the radar control processor with one over range squared or other values downloaded from the host computer.

XDD Block Diagram



Receiver Block Diagram

