

Item Requirements

- Article Name: Automatic Monitoring and Detection System for RF Spectrum of LEO(Low earth orbit) satellites
- Type and Quantity

Item No.	Item	Q'ty
1	Automatic monitoring and detection system for RF Spectrum of LEO(Low earth orbit) satellites - LPT-3000RX4-8 H/W (1EA) - LPT-LEO S/W (1EA)	1 set

- Delivery Date: Within 30days after the contraction
- LPT-3000RX4-8 H/W Requirements:
 : This system is remote control monitoring spectrum analyze for 9kHz to 3GHz. And also This system is built with 8 RF input ports.

Input Channel	8 port	19inch 1RU
Frequency	Range	9 kHz to 3.0 GHz
	Resolution	1 Hz
Frequency Readout Accuracy	Start, Stop, Center, Marker	±(marker frequency indication X frequency reference accuracy + 10% x RBW + frequency resolution1)
Marker Frequency Counter	Resolution	1 Hz, 10 Hz, 100 Hz, 1 kHz
Frequency Span	Range	0 Hz (zero span), 100 Hz to 3 GHz
	Resolution	1 Hz
Phase Noise	10 kHz	<-88 dBc/Hz
	100 kHz	<-95 dBc/Hz
	1 MHz	<-113 dBc/Hz
Resolution Bandwidth	Filter Bandwidth	1 Hz to 1 MHz in 1-3-10 sequence

(RBW) Filter		
	Accuracy	$\pm 8\%$, RBW = 1MHz
Video Bandwidth (VBW)	Filter Bandwidth	1 Hz to 1 MHz in 1-3-10 sequence
Amplitude Range	Measurement Range	100 kHz to 1 MHz DANL to 18 dBm 1 MHz to 10 MHz DANL to 21 dBm 10 MHz to 3 GHz DANL to 25 dBm
Attenuator	Input Attenuator Range	0 to 50 dB, in 1 dB step
Maximum Safe Input Level	Average Total Power	$\leq +27$ dBm,
	DC Voltage	± 50 V
Level Measurement Uncertainty	Overall Amplitude Accuracy	± 0.5 dB typical
RF Preamplifier	Frequency Range	1 MHz to 3 GHz
	Gain	18 dB
Sweep Time	Range	310 us to 1000 s , Span > 0 Hz
		50 us to 1000 s, Span = 0 Hz
RF Port Characteristic	Channel Frequency Response	± 1.5 dB
	Switching Time	0.5 ms
	Isolation	55 dB
	Connector Type	8-port SMA female
	Impedance	50 ohm
Reference Input	Connector Type	BNC female
	Input Reference Frequency	10 MHz (-5 dBm to +10 dBm)
Interface	RS232 Interface	
	LAN TCP/IP Interface	

o LPT-LEO S/W Requirements:

: This system is automatic monitoring and detection S/W for RF Spectrum of LEO(Low earth orbit) satellites in conjunction with LPT-3000RX4-8 H/W

1	Available Client monitoring and control all channel	
2	Continuously trace updates as low as 20msec per sweep	
3	Allowing the system watch, detect, report, record for thousands of satellites pass per month	
4	Unlimited number of client users Limitless recording for all traces	
5	Support API to compatible with planning software of customer	
6	Available Multiple interference Detection as below <ul style="list-style-type: none"> - C/N Alarm - Monitoring - Spectrum Mask - Adaptive Mask 	
7	Available Multiple Measurements as below <ul style="list-style-type: none"> - Channel power - Power Spectral density - Cross-pol - C/N - Delta marker 	
8	Available post pass data analysis	
9	This s/w (server and client) must be operated as below spec <ul style="list-style-type: none"> - Above windows 2013 	