

Purchase Request
Electrical Engineering

Description	Quantity
Item # 1	
N 9021B MXA Signal Analyzer Extended, Multitouch, 10 Hz-50 GHz	1
N9021B-B2X Analysis Bandwidth, 255 MHZ	1
N9021B-532 Frequency range to 32 GHz	1
N9021B-PFR Precision Frequency reference	1
N9021B-MPB Microwave preselector bypass	1
N9021B-P32 Preamplifier	1
89601200C Basic Vector Signal Analysis and hardware connectivity	1
89601AYAC Digital demodulation analysis software	1
89601BHFC Custom OFDM modulation analysis software	1
1CP105A Rack mount flange and handle kit 177 mm two brackets and front handle	1
Sub total for this item # 1	
Item # 2	
33622A Waveform generator 33600A series, 120 MHz, 2 channel	1
33622A-OCX ADD high stability OCXO time base	1
3622A-MEM samples memory per channel	1
Sub total for this item # 2	
Item # 3	
U2063A USB wide dynamic range peak and average power sensor	1
U2000A-301 Power sensor cable 1.5 m	
U2063XA-100 Type 3.5 mm connector	
Sub total for this item # 3	
Item # 4	
N9952A 50 GHz FieldFox Microwave Analyzer	1
AC/DC Adapter for US	

N9952A-233 Spectrum Analyzer		1	
Sub total for item # 4			

3-5-year warranty

Scope of Work

Item # 1

Signal Analyzer

Signal Analyzer capable of analyzing up to 32 GHz signals. It will have bandwidth of minimum of 255 MHz. The equipment will have enhanced phase noise performance, frequency range of 32 GHz with precision frequency reference, Microwave pre-selector bypass, and pre-amplifier. Vector signal analysis capability and software license to use the equipment. The equipment shall contain digital demodulation analysis software, OFDM modulation analysis software. The equipment will have rack mount flange and handle kit.

Item # 2

Waveform generator

The waveform generator will have 120 MHz signal generation capability with minimum of 2 channels. It will have minimum of 64 Mega samples memory storage per channel. The equipment shall have high stability OCXO time base.

Item # 3

USB wide dynamic range peak and average power sensor capable of operating up to 33 GHz. A power sensor cable of minimum of 5-ft. It will also have Type 3.5 mm (m) connector.

Item # 4

Spectrum Analyzer

The equipment will be capable of analyzing up to 50 GHz signal. It will have ± 0.5 dB amplitude accuracy with InstAlign (no warm-up needed) and Spur-free dynamic range ≥ 105 dB with phase noise ≤ -111 dBc/Hz @ 10 kHz offset. It should appropriate support software with measurement capabilities, can handle routine maintenance and in-depth trouble shooting. It will also have built in power meter, vector voltmeter. The software will have demodulation and vector signal analysis capability. Able to decode and verify MAC, RLC and RRC layer messages across multiple radio frames. It should be for cellular, wireless connectivity.

All equipment shall have 3- 5 year warranty, supply hard and electronic copies of manuals, user guides and tutorial for easy use for students.

Delivery time October 30, 2020.