The S-Series Pro includes:

- 1 kHz - 4.4 GHz Spectrum Analyzer
- 10 MHz - 4.4 GHz Tracking Generator
- 1 MHz - 2.5 GHz Power Meter
- 8 MHz - 18 GHz Vector Network Analyzer
- 1 MHz - 2.5 GHz Programmable Attenuator
- 54 MHz - 3.6 GHz Dual Signal Generator
- 17" Controller/Monitor

New features include:

- 8x8 Matrix Switch System
- 17" Controller/Monitor
- RF Pallets
- RF Modules
- RF Amplifiers
- RF Lab Amps
- RF Systems
- Test Equipment
- Custom Products

**Patent Pending**

**Turn-key ATE systems available**

A compact and cost-effective alternative to bulky and expensive test equipment has been the dream of many an engineer. Elite RF tasked its engineers to develop a multi-purpose RF test solution that would be a workhorse for the RF engineer. The goals were to be as versatile as possible, have a small footprint — yet remain affordable compared to the typical RF test equipment on the market. The S-Series Pro product line is the result of that development.

The new S-Series Pro Multi-Purpose RF Test System provides maximum test flexibility and the system can be connected to larger monitor for viewing multiple windows at the same time.

The S-Series Pro Test System features:

- 17" or 28" display with included S-Series Pro software
- Base Model is controllable via a USB port with on alone or with other external equipment. The RF equipment built into the S-Series Pro can be used standalone or with other external equipment.

Base Model is controllable via a USB port with an on-screen GUI. Compatible computer required along with included S-Series Pro software.

Model SP20 includes:

- 100 KHz - 20 GHz Real Time Spectrum Analyzer
- 100 MHz - 20 GHz Signal Generator
- 250 MHz & Channel Scope

**Options:**

- 100 MHz - 18 GHz Vector Network Analyzer
- 1 MHz - 26.5 GHz Power meter
- 10 MHz - 24 GHz Dual Signal Generator
- 100 MHz - 30 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Monitor

**Note:**

- 2 Port Network Analyzer available for all models.
- A power amplifier may be added to fit your custom application. Frequency ranges up to 18 GHz, power levels up to 50 watts.
- Note 3: Controller/Monitor available for all models.
- The system includes: SYSTEM REQUIREMENTS level 1 or 2 in a custom package, a quad core processor, one USB 3.0 port.

Model SA12 includes:

- 100 KHz - 12.4 GHz Spectrum Analyzer
- 10 MHz - 12.4 GHz Tracking Generator
- 1 MHz - 12.5 GHz Power Meter
- 54 MHz - 13.6 GHz Dual Signal Generator
- 10 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Monitor

**Note:**

- 10 Hz to 4.4 MHz Tracking Generator
- 300 KHz - 6 GHz Vector Network Analyzer
- 1 MHz - 8 GHz Power meter
- 1 MHz - 8 GHz Programmable Attenuator
- 1 MHz - 6 GHz Programmable Attenuator
- 10 MHz - 18 GHz / 1 watt amplifier

Model SP6 includes:

- 1 MHz - 8 GHz Real Time Spectrum Analyzer
- 1 MHz - 20 GHz Signal Generator
- 250 MHz & Channel Scope

**Options:**

- 100 MHz - 8 GHz Vector Network Analyzer
- 1 MHz - 8 GHz Power meter
- 1 MHz - 13.6 GHz Dual Signal Generator
- 54 MHz - 3.6 GHz Dual Signal Generator
- 1 MHz - 6 GHz Programmable Attenuator
- 1 MHz - 6 GHz Programmable Attenuator
- 1 MHz - 18 GHz / 1 watt amplifier

The SP20 incorporates...

- 100 KHz - 20 GHz Real Time Spectrum Analyzer
- 100 MHz - 20 GHz Signal Generator
- 250 MHz & Channel Scope

**Options:**

- 100 MHz - 18 GHz Vector Network Analyzer
- 1 MHz - 26.5 GHz Power meter
- 10 MHz - 24 GHz Dual Signal Generator
- 100 MHz - 30 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Monitor

**Note 1:** 2 Port Network Analyzer available for all models.

**Note 2:** A power amplifier may be added to fit your custom application. Frequency ranges up to 18 GHz, power levels up to 50 watts.

**Note 3:** Controller/Monitor available for all models.

**Note 4:** System software included: SYSTEM REQUIREMENTS level 1 or 2 in a custom package, a quad core processor, one USB 3.0 port.

The S-Series Pro product line comes with a 2-year warranty and is proudly made in the USA.

The new & innovative S-Series Pro product line is the result of that development. It is a flexible option to your application.

Options:

- 10 MHz - 26.5 GHz Power meter
- 10 MHz - 24 GHz Dual Signal Generator
- 1 MHz - 26.5 GHz Power meter
- 1 MHz - 8 GHz Programmable Attenuator
- 1 MHz - 6 GHz Programmable Attenuator
- 1 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Monitor

The SP20 incorporates...

- 100 KHz - 20 GHz Real Time Spectrum Analyzer
- 100 MHz - 20 GHz Signal Generator
- 250 MHz & Channel Scope

**Options:**

- 100 MHz - 18 GHz Vector Network Analyzer
- 1 MHz - 26.5 GHz Power meter
- 10 MHz - 24 GHz Dual Signal Generator
- 100 MHz - 30 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Monitor

**Note 1:** 2 Port Network Analyzer available for all models.

**Note 2:** A power amplifier may be added to fit your custom application. Frequency ranges up to 18 GHz, power levels up to 50 watts.

**Note 3:** Controller/Monitor available for all models.

**Note 4:** System software included: SYSTEM REQUIREMENTS level 1 or 2 in a custom package, a quad core processor, one USB 3.0 port.

The SP20 incorporates...

- 100 KHz - 20 GHz Real Time Spectrum Analyzer
- 100 MHz - 20 GHz Signal Generator
- 250 MHz & Channel Scope

**Options:**

- 100 MHz - 18 GHz Vector Network Analyzer
- 1 MHz - 26.5 GHz Power meter
- 10 MHz - 24 GHz Dual Signal Generator
- 100 MHz - 30 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Monitor

**Note 1:** 2 Port Network Analyzer available for all models.

**Note 2:** A power amplifier may be added to fit your custom application. Frequency ranges up to 18 GHz, power levels up to 50 watts.

**Note 3:** Controller/Monitor available for all models.

**Note 4:** System software included: SYSTEM REQUIREMENTS level 1 or 2 in a custom package, a quad core processor, one USB 3.0 port.

The S-Series Pro product line comes with a 2-year warranty and is proudly made in the USA.

The S-Series Pro Test System features:

- 17" or 28" display
- USB Ports
- HDMI Output
- LAN
- Internet Access
- Keyboard and trackpad

Independent control of each RF system allows for maximum test flexibility and the system can be connected to a larger monitor for viewing multiple windows at the same time.

The S-Series Pro product line comes with a 2-year warranty and is proudly made in the USA.

Starting at $9,995.00

**Optional Power Amplifier** can be customized to your application.

Purchase, Lease and Rental Options Available

The S-Series Pro product line comes with a 2-year warranty and is proudly made in the USA.
A compact and cost-effective alternative to bulky and expensive test equipment has been the dream of many an engineer. Elite RF tasked its engineers to develop a multi-purpose RF test equipment product that would be a workhorse for the RF engineer. The goals were to be as versatile as possible, have a small footprint — yet remain affordable compared to the typical RF test equipment on the market. The S-Series Pro product line is the result of that development.

The new innovative S-Series Pro Multi-Purpose RF Test System. It is a flexible alternative to expensive & bulky RF test equipment and can be used for R&D characterization on the bench, EMC assessment and automated production test in the factory. The RF equipment built into the S-Series Pro can be used standalone or with other external equipment.

Base Model is controllable via a USB port with its control software included. Computer required along with compatible computer with Windows XP or above. RF Pallets l RF Modules l RF Amplifiers l RF Lab Amps l RF Systems l Test Equipment l Custom Products

The S-Pallet incorporates...  
**100 KHz - 18 GHz Vector Network Analyzer**  
**1 MHz - 26.5 GHz Power meter**  
**10 MHz - 24 GHz Dual Signal Generator**  
**100 MHz - 30 GHz Programmable Attenuator**  
**100 MHz - 18 GHz / 1 watt amplifier**  
**17" Controller/Monitor**  
**28" Controller/Hi-definition Monitor**  
all in one piece of equipment!

Note: 1: Port Network Analyzer available for all models.
Note 2: A power amplifier may be added to fit your custom application, frequency ranges up to 18 GHz, power levels up to 50 Watts.
Note 3: Controller/Monitor available for all models.
Note 4: System software included! SPECIFICATIONS TMD

The S-Series Pro includes:

**6 GHz system with 17 inch Controller/Monitor**

**Internet Access**

**LAN**

**USB Ports**

**54 MHz - 13.6 GHz Dual Signal Generator**

**1 MHz - 6 GHz Programmable Attenuator**

**100 MHz - 18 GHz / 1 watt amplifier**

**17" Controller/Monitor**

**28" Controller/Hi-definition Monitor**

all in one piece of equipment!

Purchase, Lease and Rental Options Available

Independent control of each RF system allows for maximum test flexibility and the system can be connected to a larger monitor for viewing multiple windows at the same time.

**The SP4 includes:**

- Keyboard and trackpad
- Internet Access
- LAN
- USB Ports
- 17” or 28” display with included S-Series Pro software screen GUI. Compatible computer required along with optional software.

**Base Model** is controllable via a USB port with on-alone or with other external equipment. Control/Monitor available for all models.

**Turn-key ATE systems available:**

**Purchase, Lease and Rental Options Available**

**NEW!! S-Series Pro Models UP to 20 GHz**

**Model SP9 includes:**

- 9 KHz - 6 GHz Real Time Spectrum Analyzer
- 1 MHz - 30 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Hi-definition Monitor

**Model SP8 includes:**

- 100 KHz - 6 GHz Vector Network Analyzer
- 1 MHz - 24 GHz Dual Signal Generator
- 1 MHz - 6 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Hi-definition Monitor

**Model SP7 includes:**

- 100 KHz - 6 GHz Vector Network Analyzer
- 1 MHz - 24 GHz Dual Signal Generator
- 1 MHz - 6 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Hi-definition Monitor

**Model SP6 includes:**

- 100 KHz - 6 GHz Vector Network Analyzer
- 1 MHz - 24 GHz Dual Signal Generator
- 1 MHz - 6 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Hi-definition Monitor

**Model SP5 includes:**

- 100 KHz - 6 GHz Vector Network Analyzer
- 1 MHz - 6 GHz Programmable Attenuator
- 1 MHz - 6 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Hi-definition Monitor

**Model SP4 includes:**

- 1 KHz - 4.4 GHz Spectrum Analyzer
- 34 MHz - 4.4 MHz Signal Generator
- 250 MHz 4 Channel Scope

**Options:**

- 300 KHz - 6 GHz Vector Network Analyzer
- 10 Hz to 4.4 MHz Tracking Generator
- 1 MHz - 6 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Hi-definition Monitor

**Model SP3 includes:**

- 1 KHz - 6 GHz Vector Network Analyzer
- 1 MHz - 6 GHz Programmable Attenuator
- 1 MHz - 6 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Hi-definition Monitor

**Model SP2 includes:**

- 100 KHz - 30 GHz Programmable Attenuator
- 1 MHz - 6 GHz Programmable Attenuator
- 1 MHz - 6 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17" Controller/Monitor
- 28" Controller/Hi-definition Monitor

**Note: Custom configurations available upon request.**
is provided from modular power supplies and a centralized RF test environment. The Labview environment software on the PC. As one example, a Labview test program platform running Windows 10, allows independent control testing.

All of the instruments are accessible through front-panel connectors. With the Controller/Monitor options panel connectors. With the Controller/Monitor options, the display can be configured to show just one of the instruments, such as the spectrum analyzer for a closer view of the amplifier’s harmonics.

Setup and Calibration of an Amplifier: In this example, the S-Series Pro is used to calibrate an amplifier (above), which covers 500 to 2000 MHz and provide 25 W output power. The S-Series Pro power meter will be used to calibrate the S-series RF power sensor and a power meter with a custom program to do the calibration. The Power Amplifiers test setup uses the voltage signal and power meter with a custom program to do the calibration. The RF signals are generated using an HP 8370B VNA and a HP 86143A, 14 GHz spectrum analyzer. The Labview GUI can be viewed and controlled using the monitor (internal or external), and integrated power amplifiers (depending on the model).

Vector Network Analyzer: The S-Series Pro is a general-purpose, all-inclusive RF test platform running Windows 10, allows independent control of the instruments. The Labview environment software on the PC. As one example, a Labview test program platform running Windows 10, allows independent control testing.

All of the instruments are accessible through front-panel connectors. With the Controller/Monitor options panel connectors. With the Controller/Monitor options, the display can be configured to show just one of the instruments, such as the spectrum analyzer for a closer view of the amplifier’s harmonics.

Real Time Spectrum Analyzer

FREQUENCY

- Frequency Range: 6 kHz to 8 GHz
- Fractional bandwidth (FBW): 10 kHz to 256 MHz
- Interpolated bandwidth (IBW): 50 Hz
- Time Base Accuracy: ±1 µs per year

AMPLITUDE (RBW=100 kHz)

- -123 dBm (10 mV peak)
- -156 dBm (1 mV peak)
- 140 kHz, 70 kHz, 35 kHz, 15 kHz, 10 kHz
- Display: True RMS Power Sensor

DISPLAYED AVERAGE NOISE LEVEL (DANL)

- Frequency Range: 6 kHz to 8 GHz
- Displayed Average Noise Level: -140 dBM (1 mV peak)
- -156 dBM (1 mV peak)

Trace noise, dBm

- 5% RBW: -183 dBM
- 10 kHz: -140 dBM
- 1 MHz: -156 dBM
- 10 MHz: -130 dBm

Sweep Speed (RBW ≥10 kHz):

- 24GHz/sec
- 1 THz/sec
- 1 MHz/sec
- 1 kHz/sec

Sweep types: Linear frequency, frequency sweep, segment, power sweep, and power sweep. The S-Series Pro is a general-purpose, all-inclusive RF test platform running Windows 10, allows independent control testing.

All of the instruments are accessible through front-panel connectors. With the Controller/Monitor options panel connectors. With the Controller/Monitor options, the display can be configured to show just one of the instruments, such as the spectrum analyzer for a closer view of the amplifier’s harmonics.

True RMS Power Sensor

Specifications:

- Frequency Range: 6 kHz to 8 GHz
- Fractional bandwidth (FBW): 10 kHz to 256 MHz
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- Time Base Accuracy: ±1 µs per year
- True RMS Power Sensor

TEST, MEASURE AND ANALYZE EXAMPLES

Power Amplifiers: Power amplifier testing uses the signal generator, spectrum analyzer and power meter. The measurement setup only requires the S-Series Pro produce a power and external source for the amplifier to support. In this example, the harmonic performance of the amplifier, which is putting out 10 W at 915 MHz, is measured with the spectrum analyzer. While all the measurement windows are open and flat on the external monitor, the display can be configured to show just one of the instruments, such as the spectrum analyzer for a closer view of the amplifier’s harmonics.

S-Series Pro SPE Test System Specifications

Signal Generator

- Frequency Range: 1 MHz to 8 GHz
- Dynamic Range: 85 dB
- Frequency Accuracy: ±1 ppb
- S11 (mm): <-15 dBi
- S12 (mm): <-15 dB

Vector Network Analyzer

- Frequency Range: 1 MHz to 8 GHz
- Frequency Accuracy: ±1 ppb
- S11 (mm): <-15 dBi
- S12 (mm): <-15 dB
- Phase Noise: -170 dBc/Hz
- Power: 500 Watts
- Harmonic Distortion: -70 dBc
- Power Output: 1 Watt
- Power Meter: -120 dBm
- Power Output: 0.1 mW
- Power Output: 1 kW
- Power Output: 10 kW

S-Series Pro SP20 Test System Specifications

Specifications:

- Frequency Range: 1 MHz to 8 GHz
- Power Output: 1 kW
- Power Output: 0.1 mW
- Power Output: 10 kW
- Power Output: 100 kW
- Power Output: 500 kW
- Power Output: 1 Megawatt

Harmonic Distortion

- Harmonic Distortion: -70 dBc
- Power Output: 1 kW
- Power Output: 0.1 mW
- Power Output: 10 kW
- Power Output: 100 kW
- Power Output: 500 kW
- Power Output: 1 Megawatt

Specifications:

- Frequency Range: 6 kHz to 8 GHz
- Displayed Average Noise Level: -140 dBM (1 mV peak)
- -156 dBM (1 mV peak)
- 140 kHz, 70 kHz, 35 kHz, 15 kHz, 10 kHz
- Display: True RMS Power Sensor

DISPLAYED AVERAGE NOISE LEVEL (DANL)

- Frequency Range: 6 kHz to 8 GHz
- Displayed Average Noise Level: -140 dBM (1 mV peak)
- -156 dBM (1 mV peak)
- 140 kHz, 70 kHz, 35 kHz, 15 kHz, 10 kHz
- Display: True RMS Power Sensor

Trace noise, dBm

- 5% RBW: -183 dBM
- 10 kHz: -140 dBM
- 1 MHz: -156 dBM
- 10 MHz: -130 dBm

Sweep Speed (RBW ≥10 kHz):

- 24GHz/sec
- 1 THz/sec
- 1 MHz/sec
- 1 kHz/sec

Sweep types: Linear frequency, frequency sweep, segment, power sweep, and power sweep. The S-Series Pro is a general-purpose, all-inclusive RF test platform running Windows 10, allows independent control testing.

All of the instruments are accessible through front-panel connectors. With the Controller/Monitor options panel connectors. With the Controller/Monitor options, the display can be configured to show just one of the instruments, such as the spectrum analyzer for a closer view of the amplifier’s harmonics.

True RMS Power Sensor

Specifications:

- Frequency Range: 6 kHz to 8 GHz
- Fractional bandwidth (FBW): 10 kHz to 256 MHz
- Interpolated bandwidth (IBW): 50 Hz
- Time Base Accuracy: ±1 µs per year
- True RMS Power Sensor
**S-Series Pro SP2 Test System Specifications**

**Signal Generator**
- **Frequency Range:** 1 Hz to 6 GHz
- **Output Power Range:** +7 dBm to -100 dBm
- **Phase Noise:** –130 dBc/Hz (10 kHz offset from 10 GHz)
- **Spurious Signals:** <-70 dBc typical
- **Frequency Accuracy:** 1 PPM

**Vector Network Analyzer**
- **Frequency Range:** 10 MHz to 18 GHz
- **Dynamic Range:** 100 dB
- **Resolution Bandwidth:** (RBW) 0.1 Hz (25kHz bandwidth)

**Real Time Spectrum Analyzer**
- **Frequency Range:** 100 kHz to 18 GHz
- **Resolution BW:** 0.1 Hz to 18 GHz
- **Spurious Signals:** <-70 dBc/Hz typical

**Real-Time Sampling Oscilloscope**
- **Sample Rate:** 1 GSa/s
- **Time Base Precision:** ±50 ppm
- **Memory:** 64K

**True RMS Power Sensor**
- **Frequency Range:** 0.1 MHz to 600 MHz
- **Power Range:** 0 to 500 Watts
- **Accuracy:** ±0.1% or ±20 mW, whichever is greater

**Four Channel Digital Oscilloscope**
- **Sample Rate:** 1 GSa/s
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- **Memory:** 64K

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- **Dynamic Range:** 100 dB
- **Resolution Bandwidth:** (RBW) 0.1 Hz (25kHz bandwidth)

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- **Frequency Range:** 100 kHz to 18 GHz
- **Resolution BW:** 0.1 Hz to 18 GHz
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**Real-Time Sampling Oscilloscope**
- **Sample Rate:** 1 GSa/s
- **Time Base Precision:** ±50 ppm
- **Memory:** 64K

**True RMS Power Sensor**
- **Frequency Range:** 0.1 MHz to 600 MHz
- **Power Range:** 0 to 500 Watts
- **Accuracy:** ±0.1% or ±20 mW, whichever is greater

**Four Channel Digital Oscilloscope**
- **Sample Rate:** 1 GSa/s
- **Time Base Precision:** ±50 ppm
- **Memory:** 64K

**Four Channel Digital Oscilloscope**
- **Sample Rate:** 1 GSa/s
- **Time Base Precision:** ±50 ppm
- **Memory:** 64K

**S-Series Pro SP2 Test System Specifications**

**Signal Generator**
- **Frequency Range:** 1 Hz to 6 GHz
- **Output Power Range:** +7 dBm to –100 dBm
- **Phase Noise:** –130 dBc/Hz (10 kHz offset from 10 GHz)
- **Spurious Signals:** <-70 dBc typical
- **Frequency Accuracy:** 1 PPM

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- **Power Range:** 0 to 500 Watts
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**Four Channel Digital Oscilloscope**
- **Sample Rate:** 1 GSa/s
- **Time Base Precision:** ±50 ppm
- **Memory:** 64K
The S-Series Pro is a general-purpose, all-inclusive RF test system that is compatible with 100 to 240 VAC power lines. It is designed to work in a unique RF test environment. The Labview environment uses a PC as a base station, which can run a Labview test program application that interfaces with the PC and allows control of the instruments. Each instrument has a unique software platform running Windows 10, allowing independent control of the test equipment. The system is accessible through front-panel controls, and back-panel interfaces can be used to connect up to 16 devices to a single test system.

### System Specifications
- **Power Output**: 1 watt
- **Frequency Range**: 1 MHz to 18 GHz
- **Bandwidth**: 10 MHz to 18 GHz
- **Displayable Averaged Noise Level (DANL)**: 18 GHz/sec
- **Trace Noise**: 30 kHz to 18 GHz
- **Baseband Sampling Rate**: 128 GSPS
- **Real-Time Sampling Rate**: 10GS/s
- **Input Impedance**: 50 Ω
- **Input Sensitivity**: 200mV~1000V/div @ x100 probe
- **Channel Number**: Dual independent channels
- **Channel Separation**: 200kHz to 20MHz
- **Channel Bandwidth**: 25MHz
- **Clock Frequency**: 25MHz
- **Clock Resolution**: 25ns/div-1000s/div (1-2-4 sequences)
- **Trigger Source**: External, Internal
- **Trigger Delay**: 0 to 25000 μs
- **Trigger Level**: 0 to 1 volt
- **Data Rate**: 50 Ω
- **Output Impedance**: 50 Ω
- **Waveform**: 20 MHz
- **Frequency Sweep**: 1 MHz to 18 GHz
- **Power Output**: 1 watt

### Power Amplifiers
Power amplifiers are tested using the signal generator, spectrum analyzer and power meter. The measurement setup only requires the S-Series Pro power supply and additional cables for the amplifier to be tested. In this example, the harmonic performance of the amplifier, which is outputting 10 W at 0 dBm, is measured with the spectrum analyzer. While all the measurement windows are open and flat on the external monitor, the display can be configured to view one of the instruments, such as the spectrum analyzer for a closer view of the amplifier's harmonics.

### Setup and Calibration of an Amplifier
In this example, the S-Series Pro is used to calibrate an amplifier (above), which covers 500 to 2500 MHz and provides 25 W output power. The S-Series Pro power supply and data acquisition system are used to calibrate the large-signal S21 of the amplifier using a built-in function of the S-Series Pro. The power and detected signal voltage are passed through the test setup, which is then used to measure the output power and gain. The power meter measures the output power and gain and the spectrum analyzer measures the harmonic and spurious signal levels.

### Scalar Network Analysis
The spectrum analyzer and tracking generator can be combined to provide a scalar network analysis ... measurement of carrier power level, and the spectrum analyzer measures the harmonic and spurious signal levels.

### Digital Demodulation
The S-Series Pro also has the capability to demodulate digitally-modulated RF signals using the signal generator as a vector signal analyzer (VSA). Complex communications protocols can be analyzed as an AM or FM (see Figure 2) can be characterized. The built-in software offers common VSAs, such as constellation diagrams, signal-to-noise ratio, pulse width, etc., and the vector signal analyzer demodulates ASK, BPSK, QPSK, DQPSK, BPSK, QPSK, BPSK, 4QAM, QPSK, DQPSK, and 16-QAM.

### True RMS Power Sensor Specifications
- **Power Range**: 0 dBm to 90 dBm
- **Accuracy**: ±3.5V Max.
- **Input Voltage**: ±33V
- **Input Current**: ±33A
- **Input Power**: ±33W
- **Input Frequency**: DC to 20kHz
- **Power Output**: 1 watt

### TEST, MEASURE AND ANALYZE EXAMPLES

#### TEST, MEASURE AND ANALYZE EXAMPLES

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#### TEST, MEASURE AND ANALYZE EXAMPLES

#### TEST, MEASURE AND ANALYZE EXAMPLES
The S-Series Pro with controller features:
- 17" or 28" display
- Internet Access
- LAN
- HDMI Output
- USB Ports

Note 1: Controller/Monitor available for all models.

Note 2: A power amplifier may be added to fit your custom application. Frequency ranges up to 18 GHz, power levels up to 50 watts.

Note 3: Controller/Monitor available for all models.

Note 4: System software included. SPECIFICATIONS: 3rd generation or later with a quad core processor, one USB 3.0 port.

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The new & innovative S-Series Pro Multi-Purpose RF Test System. It is a flexible alternative to expensive & bulky RF test equipment and can be used for R&D characterization on the bench, EMC assessment and automated production test in the factory. The RF equipment built into the S-Series Pro can be used standalone or with other external equipment.

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- 10 MHz to 4.4 MHz Tracking Generator
- 1 MHz - 6 GHz Programmable Attenuator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17” Controller/Monitor
- 28” Controller/Monitor

Model SP4 includes:
- 9 KHz - 6 GHz Real Time Spectrum Analyzer
- 54 MHz - 6 GHz Signal Generator
- 100 MHz - 18 GHz / 1 watt amplifier
- 17” Controller/Monitor
- 28” Controller/Monitor

Model SAS2 includes:
- 100 KHz - 12.4 GHz Spectrum Analyzer
- 54 MHz - 13.6 GHz Dual Signal Generator
- 28” Controller/Hi-definition Monitor

Options:
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Note: Consult factory for options desired as some options are not compatible with each other.

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