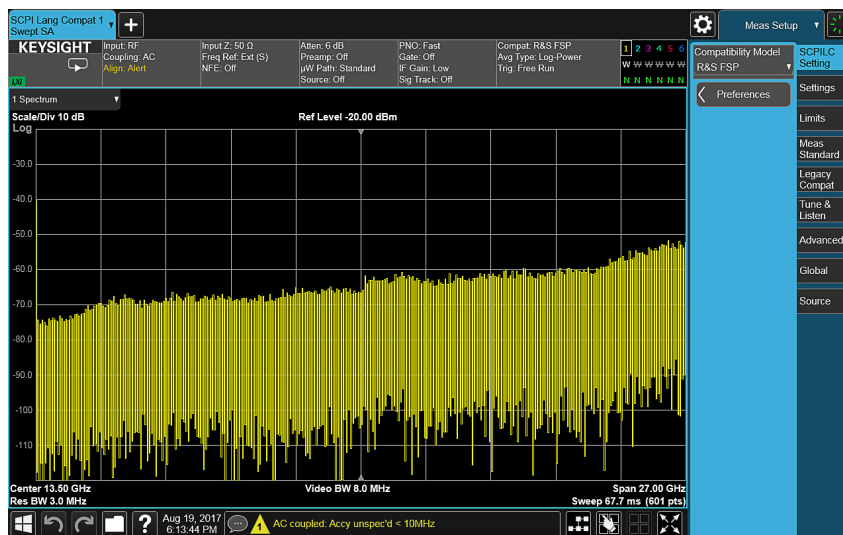


# SCPI Language Compatibility X-Series Measurement App, Multi-Touch UI N9062EMOE



# SCPI Language Compatibility Measurement Application

The SCPI language compatibility measurement application transforms the X-Series signal analyzers into SCPI commands compatibility mode, by supporting over 278 SCPI commands from R&S FSP/FSU/FSE/ESU/FSV/FSL/FSW spectrum analyzers. This application enables the X-Series signal analyzers to easily replace the R&S FSP/FSU/FSE/ESU/FSV/FSL/FSW spectrum analyzers in remotely controlled, automated test equipment (ATE) systems, with minimal or no modifications to your currently used measurement software. Figure 1 shows a simplified working block diagram for the X-Series N9062EM0E application.

## X-Series measurement applications

X-Series measurement applications increase the capability and functionality of Keysight Technologies, Inc. signal analyzers to speed time to insight. They provide essential measurements for specific tasks in general-purpose, cellular communications, wireless connectivity applications, covering established standards or modulation types. Applications are supported on both benchtop and modular, with the only difference being the level of performance achieved by the hardware you select.

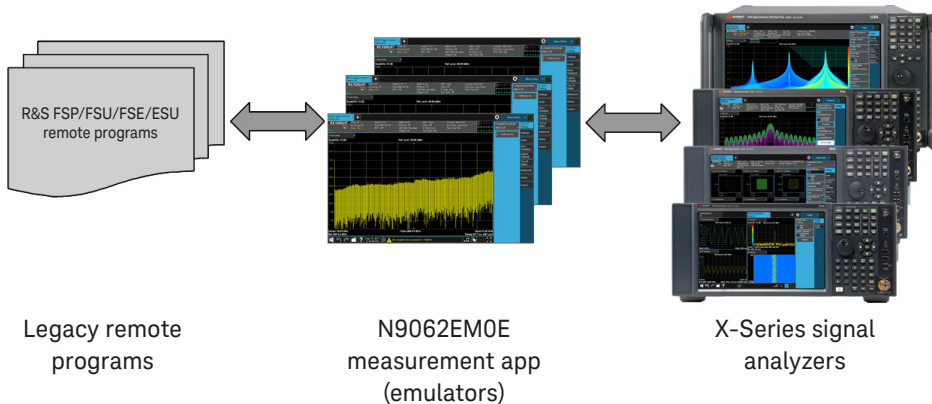


Figure 1. A simplified working block diagram for the SCPI language compatibility application

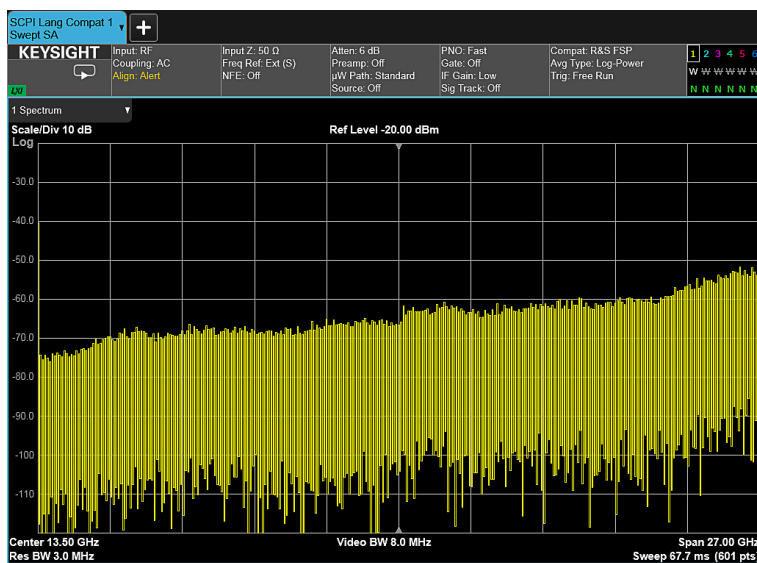


Figure 2. SCPI language compatibility mode example

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## Top Features

The SCPI language compatibility measurement application provides an emulation process that enables the user's legacy FSP/FSU/FSE/FSV/FSL/FSW program and X-Series signal analyzers to understand each other: Not only does this application make the X-Series understand the legacy commands for the correct implementations, it also makes the response from the X-Series signal analyzers such as measurement results and query results, understandable to the legacy remote program.

By running the SCPI language compatibility measurement application, the X-Series signal analyzers support and emulate the following spectrum analyzer functions from your legacy FSP/FSU/FSE/FSV/FSL/FSW remote programs:

- General-purpose spectrum analysis settings: frequency, span, amplitude, RBW, VBW, sweep, detectors, trace averaging, data format and more
- General and delta marker functions, as well as marker noise, band power and power density functions
- Limit line and limit check functions
- Limit check for spectrum emission measurements
- Power measurements: channel power, ACP
- Statistical measurement function: CCDF
- Trace data transfer and IQ data handling
- File saving and screen copy

Refer to N9062A & W9062A SCPI Language Compatibility User Guide (literature number N9062-90001) for a complete list of compatible SCPI commands.

Note: SCPI commands defined in N9062A & W9062A are 100% compatible with N9062EM0E.

## Two ways to access the application

The SCPI language compatibility application emulates FSP/FSU/FSE/ESU/FSV/FSL/FSW spectrum analyzers in SCPI programming environment only, but you can access this mode in two ways:

Depending upon use cases, some of the legacy commands may not technically be possible for the emulation due to the substantial differences in the architecture and implementation between the legacy and X-Series analyzers.

The SCPI language compatibility application supports commands from the spectrum analyzer mode of legacy FSP/FSU/FSE/ESU/FSV/FSL/FSW instruments, including major commands for channel power, OBW/ACP measurements, and IQ traces. Commands from other options or modes are not supported. If a command or query is valid for FSP/FSU/FSE/ESU/FSV/FSL/FSW products but not supported by the SCPI language compatibility application, the X-Series analyzers generate an error message, indicating that this type of SCPI command is not covered in this application.

The SCPI language compatibility application only emulates the FSP/FSU/FSE/ESU/FSV/FSL/FSW spectrum analyzers in SCPI commands programming environment. It does not support the same front panel operations, user interfaces and measurement screen displays.

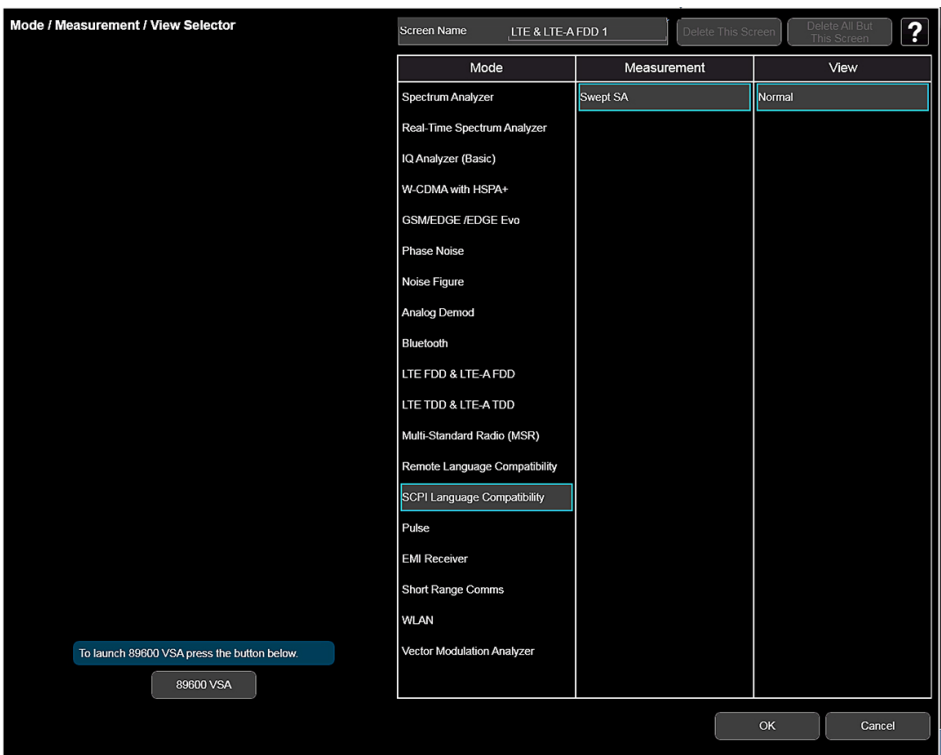


Figure 3. Accessing the SCPI language compatibility mode

### 1. Front panel access

Use the "SCPI Language Compatibility" soft-key under the "Mode" menu

### 2. Remote access

Activate the SCPI command mode

```
:INST SCPIRLC
::INST:SElect 270
```

## Ordering Information

### Flexible licensing and configuration

- **Perpetual:** License can be used in perpetuity.
- **Time-based:** License is time limited to a defined period, such as 12-months.
- **Node-locked:** Allows you to use the license on one specified instrument/computer.
- **Transportable:** Allows you to use the license on one instrument/computer at a time. This license may be transferred to another instrument/computer using Keysight's online tool.
- **Floating:** Allows you to access the license on networked instruments/computers from a server, one at a time. For concurrent access, multiple licenses may be purchased.
- **USB portable:** Allows you to move the license from one instrument/computer to another by end-user only with certified USB dongle, purchased separately.
- **Software support subscription:** Allows the license holder access to Keysight technical support and all software upgrades

### You Can Upgrade!

All of our X-Series application options are license-key upgradeable.



### SCPI language compatibility measurement app (N9062EM0E)

Software License Type	Software License	Support Subscription
Node-locked perpetual	R-Y5C-001-A	R-Y6C-001-z <sup>2</sup>
Node-locked time-based	R-Y4C-001-z <sup>1</sup>	Included
Transportable perpetual	R-Y5C-004-D	R-Y6C-004- z <sup>2</sup>
Transportable time-based	R-Y4C-004-z <sup>1</sup>	Included
Floating perpetual	R-Y5C-002-B	R-Y6C-002-z <sup>2</sup>
Floating time-based	R-Y4C-002-z <sup>1</sup>	Included
USB portable perpetual	R-Y5C-005-E	R-Y6C-005- z <sup>2</sup>
USB portable time-based	R-Y4C-005-z <sup>1</sup>	Included

### Try Before You Buy!

Evaluate a full-featured version of our X-Series measurement application with our **FREE** trial. Redeem one 30-day trial license of each measurement application online at: [www.keysight.com/find/X-Series\\_apps\\_trial](http://www.keysight.com/find/X-Series_apps_trial)

### Hardware Configurations

To learn more about compatible platforms and required configurations, please visit: [www.keysight.com/find/X-Series\\_apps\\_platform](http://www.keysight.com/find/X-Series_apps_platform)

### Software Models & Options

To learn more about X-Series measurement application licensing, model numbers and options, please visit: [www.keysight.com/find/X-Series\\_apps\\_model](http://www.keysight.com/find/X-Series_apps_model)

### One month software support subscription extensions <sup>3</sup>

Support Subscription	Description
R-Y6C-501	1-month of support subscription for node-locked perpetual license
R-Y6C-502	1-month of support subscription for floating perpetual license
R-Y6C-504	1-month of support subscription for transportable perpetual license
R-Y6C-505	1-month of support subscription for USB portable perpetual license

1. z means different time-based license duration. F for six months, L for 12 months, X for 24 months, and Y for 36 months. All time-based licenses have included the support subscription same as the time-base duration.
2. z means different support subscription duration. L for 12 months (as default), X for 24 months, Y for 36 months, and Z for 60-months. Support subscription must be purchased for all perpetual licenses with 12-months as the default. All software upgrades and KeysightCare support are provided for software licenses with valid support subscription.
3. Support subscription for all perpetual licenses can be extended with monthly extensions.

# Hardware Configuration

For optimizing measurements on the SCPI language compatibility measurement applications, we require Keysight X-Series multi-touch firmware version 19.54 or higher.

Supported instruments include:

- UXA N9040B
- PXA N9030B
- MXA N9020B
- EXA N9010B
- CXA N9000B

## N90x0B X-Series signal analyzer

Capability	Instrument Option	Benefit
Analysis bandwidth	10 or 25 MHz as default or higher	<b>Required:</b> Wider analysis bandwidth options such as 25/40/85/125/160/255/510 MHz or 1 GHz can be selected depending on the specified signal analyzer model
Precision frequency reference	-PFR	<b>Recommended:</b> For enhanced frequency accuracy and repeatability for lower measurement uncertainty
Electronic attenuator	-EA3	<b>Recommended:</b> Fast and reliable attenuation changes ideal for manufacturing without the wear associated with mechanical attenuators up to 3.6 GHz in 1 dB steps
Pre-amplifier	3.6 GHz (-P03) or higher	<b>Recommended:</b> For maximizing the measurement sensitivity
Fine resolution step attenuator	-FSA	<b>Recommended:</b> Useful for maximizing useable dynamic range to see signals
Analog baseband I/Q inputs	-BBA on PXA and MXA only	<b>Optional:</b> To extend measurements at baseband if required by device under test

## Related Literature

N9062A & W9062A SCPI Language Compatibility User Guide,  
Literature Number N9062-90001

## Web

SCPI language compatibility X-Series measurement app, multi-touch UI product webpage  
[www.keysight.com/find/N9062E](http://www.keysight.com/find/N9062E)

X-Series applications:  
[www.keysight.com/find/X-Series\\_Apps](http://www.keysight.com/find/X-Series_Apps)

X-Series signal analyzers:  
[www.keysight.com/find/X-Series](http://www.keysight.com/find/X-Series)

Learn more at: [www.keysight.com](http://www.keysight.com)

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