



# Signal & Spectrum Analyzer Frequency Extension Systems 50 - 170 GHz

Farran's SAE range of frequency extenders are a dedicated Test & Measurement solution for extending the range of Signal & Spectrum Analyzers (SA).

The SAE modules are designed to interface with your existing microwave signal or spectrum analyzer and extend its frequency coverage to 170 GHz.

These modules use Farran's proprietary mixer technology to achieve low conversion loss and noise levels that allow for exceptional levels of measurement sensitivity. Farran's Signal and Spectrum Analyzer Frequency Extension Systems can operate as an analyzer's frequency coverage extenders, or as Up/ Down-converters.

**With Farran's FES signal & spectrum analyzer frequency extension solution you can:**

- Extend the range of your existing equipment in the most cost effective way.
- Achieve full waveguide band coverage with sweep and step frequency capability.
- Use seamlessly with a wide range of signal and spectrum analysis equipment, including Keysight and Rohde & Schwarz.
- Achieve very high sensitivity (dynamic range) and wide analysis bandwidths of your measurements.
- Perform calibrated measurements.
- Obtain 50 – 170 GHz frequency range coverage.

“With a limited budget, we had to find an easy way to extend the range of our spectrum analyzers. Farran recommended the SAE range, as a means of extending the frequency coverage of our analyzers without sacrificing their baseband performance. We were delighted to have acquired top-quality equipment that performs exactly as Farran promised.”

**Head of Test & Production, US Mm-wave Equipment Manufacturer**



## MODES OF OPERATION

- Signal and spectrum analyser mode
- Block down-converter mode
- Block up-converter mode



## MEASUREMENTS & APPLICATIONS

- 5G, IoT & WiGig
- Wireless communications
- 70 / 80 / 90 GHz backhaul radio
- Automotive FMCW radar analysis
- Carrier and modulation analysis
- Harmonics and spurious emission



## COMPATIBILITY

- Keysight PSG, MXG, EXG, UXG: 26.5, 32, 44, 50 GHz
- Agilent 8563/4/5 E/EC, PSA E4440A
- Rohde & Schwarz FSW 26/43/50/67/85
- Support fundamental and x2 LO sources of signal analysers





## Product Features and Benefits

Farran's SAE Signal and Spectrum Analyzer Frequency Extension Systems enable the analysis of millimeter-wave signals up to 170 GHz. The system leverages on seamless compatibility with signal and spectrum analysers of all major equipment suppliers, and can be configured with new or legacy instruments.

The SAE extension modules fulfil the requirements for a high sensitivity and stable millimeter wave signal analysis in a production, scientific and R&D setting. Very high amplitude and phase stability, as well as an exceptionally low noise floor, ensure a very high degree of measurement fidelity, and allow for reducing test time of each DUT, without the need for a frequent system calibration.

Farran's SAE Signal and Spectrum Analyzer Frequency Extension Systems offer unparalleled value when upgrading an existing test system or configuring new equipment for millimeter wave signal analysis.



### SERVICES AVAILABLE

- Technical Support
- Installation and Setup
- Maintenance
- Application Support
- Hardware Support

For more information on any of our products or services please visit our website: [www.farran.com](http://www.farran.com)



### TECHNICAL SUPPORT

- Technical support provided directly by our knowledgeable and friendly engineers.
- Support for pre- and post-purchase: system configuration, installation and troubleshooting.



### GLOBAL REP NETWORK

- Support queries answered by our responsive Global Rep Network in over 25 countries worldwide.



### WARRANTY

- Standard 3 year warranty.
- Up to 5 year warranty optional.

### System Requirements

- Keysight/Agilent signal analyzer with External Mixer Option - EXM.
- Rohde & Schwarz signal analyzer with LO/IF connections for external mixers - option B21.
- Calibration files supplied.
- Power supply provided.
- Custom solutions available.
- For a full check of compatibility with your equipment contact Farran Support on: [www.farran.com/support](http://www.farran.com/support)

