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High frequency, wider bandwidth and target simulation are critical for the development of higher resolution automotive radar systems. Rohde & Schwarz offers the only Spectrum Analyzer available that covers the entire E-band with an internal analysis bandwidth of up to 8 GHz.
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Get a quote now at rsna.us/radar-bundle

Example Configurations

Bundle	Bundle Components	Description	List Price	Bundled Discount Price	Savings
FSW85 + AREG	**FSW85 (85 GHz)** Option K60, K60C, B4001 **AREG100A** B181S, B62 (qty.2)	85 GHz spectrum analyzer with 4 GHz internal analysis bandwidth + Automotive Radar Echo generator	$434,000	**$347,000**	**$87,000**
FSW43 + AREG	**FSW43 (43 GHz)** Option K60, K60C, B4001 **AREG100A** B181S, B62 (qty.2)	43 GHz spectrum analyzer with 4 GHz internal analysis bandwidth + Automotive Radar Echo generator that is used as downconverter and echo generator (up to 4 targets)	$365,000	**$293,000**	**$72,000**
Use an Oscilloscope for designs and debug that does not require the precision and dynamic range of a spectrum analyzer					
RTP084 + AREG + VSE Software	**RTP084 (8 GHz)** **AREG100A** B181S, B62 (qty.2) **VSE Software** (equivalent functionality to K60+K60C)	8 GHz 4 channel Oscilloscope + Automotive Radar Echo generator that is used as downconverter and echo generator (up to 4 targets) VSE Software for chirp analysis on the oscilloscope	$232,000	**$186,000**	**$46,000**

Terms & Conditions:
The 20% discount applies to each bundle of one R&S®FSW+R&S®AREG+options on either unit or one R&S®RTP+R&S®AREG+options on either unit as long long as they are purchased on the same purchase order. This program is only valid for purchases made between May 1st, 2020 and October 31st, 2020. Rohde & Schwarz reserves the right to cancel this program at any time by posting changes on rohde-schwarz.com. Offer valid in the US and Canada only. Contact a Rohde & Schwarz representative for complete details. All other promotions and discounts cannot be combined.

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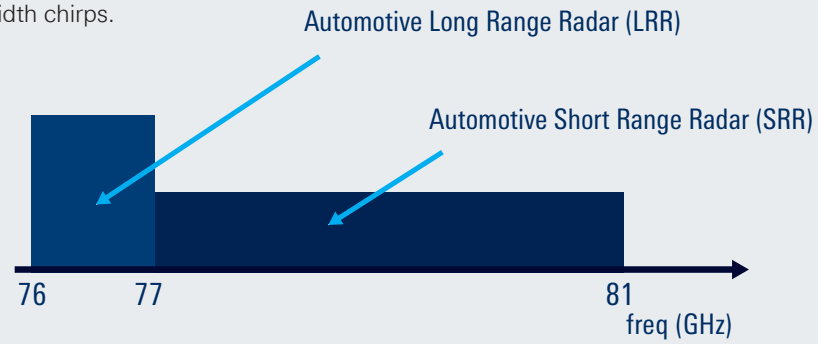
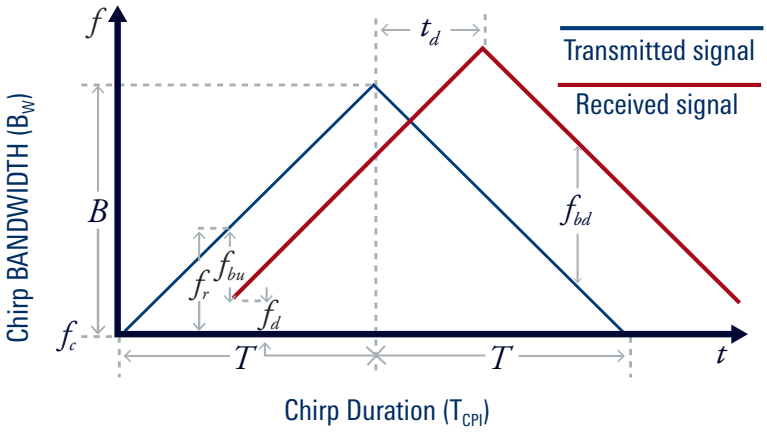
AUTOMOTIVE RADAR ANALYSIS IN THE E-BAND (76–81 GHZ)

- Automotive radar operates in the 76-81 GHz frequency E-band.
- The top 4 GHz of this band may be used for wide bandwidth chirps.
- Wide bandwidths allow for…
  - Narrowband radar to hop within the 5 GHz (interference avoidance).
  - Multiple narrowband radars to share the same band (coexistence).
  - Good range resolution and target separation (important in SRR).





t_d	range resolution
f_{bu}	frequency shift due to range
B_w	chip bandwidth
T_{CPI}	chirp duration

$$t_d = (fb/B_w)*T_{CPI}$$

For more technical background, application notes, webinars and videos about automotive radar analysis and other automotive test solutions, please visit our Rohde & Schwarz Automotive site at **rsna.us/automotive**.

Range Resolution

Range Resolution is inversely proportional to the bandwidth. The larger the bandwidth, the smaller (better) the range resolution.

In FMCW radar, range and Doppler are determined indirectly as the transmitted waveform may be on continuously. Range and Doppler are calculated from the frequency shifts between the transmitted and received waveforms. Accurate measurements of the frequency shift requires a linear waveform transmission.

The R&S®FSW-K60C chirp analysis provides an automated and repeatable way of accurately making chirp deviation measurements.

Rohde & Schwarz USA, Inc.
6821 Benjamin Franklin Drive
Columbia, MD 21046
1-888-TEST-RSA (1-888-837-8772)
www.rohde-schwarz.com/us
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