



## Tetley FEM Multi-band, 5G NR mmWave Frequency Extender Module

### FEATURES

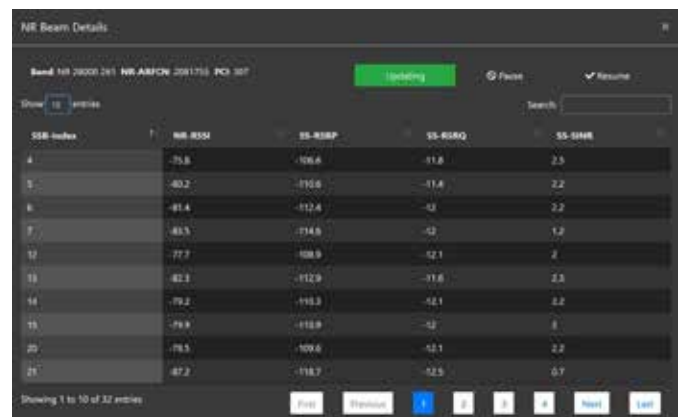
- Enhances Tetley Scanner capabilities to support 5G mmWave Survey
- Tunable millimeter wave downconverter compatible with Tetley Scanner that supports all 5G NR frequency bands for FR2 up to 44 GHz
- Down converts FR2 mmWave signals so they can be fed into existing Tetley Scanner (via High RF port)
- Controlled via USB port from Tetley Scanner (Tunes FEM to desired FR2 band, frequency, controls FR1 pass-thru mode)
- FEM module supports DC output to support external mmWave amplifier
- Single FEM module/model supports all FR2 bands defined : N257, N258, N259, N260, N261

### APPLICATIONS

- Commercial Wireless Communications Network Survey of 5G mmWave
- Drive Testing
- Spectrum Interference Monitoring

### KIT CONTENTS

- Frequency Extender Module (FEM)
- Multiple Antennas and Cable Assemblies
- Rugged Transportation Case
- Power cable to integrate with Tetley Scanner



NR Beam Details

Band: NR 2600 241 NR-ARFOW 2601750 PCI: 107

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SSB Index	NR-RSSP	SS-RSRP	SS-RSRQ	SS-SINR
4	-75.8	-106.6	-11.8	2.5
5	-82.2	-110.6	-11.6	2.2
6	-81.4	-112.4	-12	2.2
7	-85.5	-114.5	-12	1.2
12	-77.7	-108.9	-12.1	2
18	-82.3	-112.9	-11.6	2.5
14	-79.2	-110.3	-12.1	2.2
15	-78.9	-110.9	-12	1
20	-78.5	-109.6	-12.1	2.2
21	-87.2	-118.7	-12.5	0.7

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**DESCRIPTION**

The Frequency Extender Module (FEM) is a powerful autonomous add-on module that enhances the existing capabilities of our 5G-capable Tetley Scanners. It allows Tetley Scanner to survey 5G FR2 frequencies in mmWave range between 26.5GHz – 43.5GHz for real-time and post-processing analysis. The FEM seamlessly integrates with the Tetley Scanner with minimal user interaction required. It digitally down-converts 5G New Radio FR2 frequencies and displays them on the existing user interface along with all 5G overhead messages following the 3GPP specification.

Once the FEM is configured with the Tetley Scanner, there is no need to swap RF cables to support sub 6 GHz and FR2 survey. The FEM supports a bypass mode which allows it to route 3 to 6 GHz signals directly to the Tetley Scanner. This bypass is achieved by connecting both the Tetley Scanner’s High band antenna (3 to 6 GHz) and the FEM’s FR2 antenna to the FEM unit. Controlled by Tetley Scanner via USB interface.

The FEM kit is compact and portable, making it ideal for drive-testing 5G mmWave operating between 26.5 GHz – 43.5 GHz.

**FREQUENCY RANGES SUPPORTED**

- N257                    26.5 - 29.5GHz
- N258                    24.25 – 27.5GHz
- N259                    39.5 – 43.5GHz
- N260                    37 – 40GHz
- N261                    27.5 – 28.35GHz



FEM Front View



TETLEY Scanner Connected to FEM  
Back View



FEM Back View

**SPECIFICATIONS**

	Size	Weight	Power
<b>TETLEY FEM</b>	15.9”L x 12.4”W x 2.4”H	5 lbs.	Consumption: 15 W
<b>SWaP Details</b>			Input: 10-30 VDC
<b>Frequency Range in FR2 Mode</b>	24 GHz to 44 GHz		
<b>Frequency Range in Bypass Mode</b>	20 MHz to 6GHz		

System specifications subject to change without notice, contact factory for current specifications.



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