



Tetley FEM

Multi-band, 5G NR mmWave Frequency Extender Module

FEATURES

- Augments Tetley Scanner so it can support FR2 5G mmWave Survey
- Down-converts FR2 mmWave signals so they can be fed into existing Tetley Scanner (via High RF port)
- Tunable millimeter wave downconverter compatible with Tetley Scanner that supports all 5G NR frequency bands for FR2 up to 44 GHz
- 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,N261,N259,N260

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: 100 20000.000 NR-ARFCN: 2001750 PCI: 100

Showing 10 entries

SSB Index	NR-RSSI	SS-RSRP	SS-RSRQ	SS-SINR
4	-75.8	-106.6	-11.8	2.5
5	-80.2	-110.6	-11.8	2.2
6	-81.4	-112.6	-11	2.2
7	-83.5	-114.6	-12	1.2
12	-77.7	-108.9	-12.1	2
18	-82.1	-112.9	-11.8	2.1
14	-79.2	-116.3	-12.1	2.2
15	-79.9	-118.9	-12	1
20	-78.5	-109.6	-12.1	2.2
21	-87.2	-118.7	-12.5	0.7

Showing 1 to 10 of 32 entries

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 configured does not require swapping of RF cables to support sub 6 GHz and FR2 survey. Both Tetley Scanner’s FR2 antenna and the High band antenna (3 to 6 GHz) are connected to FEM unit. FEM supports FR2 bypass mode that allows it to route 3 to 6 GHz signals from the High Band antenna to Tetley Scanner. 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
TETLEY FEM	15.9”L x 12.4”W x 2.4”H	5 lbs.	Consumption: 15 W
SWaP Details			Input: 10-30 VDC
Frequency Range in FR2 Mode	24 GHz to 44 GHz		
Frequency Range in Bypass Mode	20 MHz to 6GHz		

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



PROVIDING NEXT GENERATION WIRELESS SOLUTIONS

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