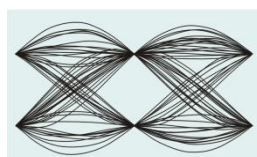


MaxEye Wireless Tester (MWT-100/200)

Cellular Network Emulator

Specifications

R&D and Production Test



TM
**MAXEYE
TECHNOLOGIES**

1. Overview

The MaxEye MWT100/200 Cellular Network Emulator is a universal wireless signaling tester for validation of various RF and wireless standards including cellular standards (4G LTE/5G NR), Connectivity standards (WLAN and Bluetooth), Audio, Video and Navigation Broadcast standards (AM/FM/RDS/DAB/DVB/ISDB-T/GNSS). MWT 100/200 cellular network emulator is a complete integrated solution that supports parallel testing of multiple User Equipments (UEs) or mobile devices compared to the traditional single UE testing, adding significant advantages in improving test performance.

The MaxEye MWT100/200 wireless test platform offers the support for the latest 4G LTE and 5G NR features, making it ideal for testing mobile devices such as smart phones, tablets, automotive infotainment, telematics, eCockpit and many other devices. For smoother testing and faster debugging, the MWT 100/200 Basestation emulator presents various statistics to users to measure performance and validate the functionality. An extensive log is also made available for each protocol layer within the basestation. This can expedite testing and measurement at every stage of the product development from design to deployment.

2. Key Features

eNB Technical Specification	
3GPP Release	Release 10
Frequency Bands	All FDD and TDD Bands
Bandwidth	5 MHz, 10 MHz and 20 MHz
Max number of antennas	2
Number of supported UEs	16
Modulation Schemes	DL : 64 QAM UL : 16 QAM
AS Encryption and Integrity Protection	AES, SNOW 3G, ZUC
Network Interfaces	S1-AP and GTP-U
Transmission Modes	TM:1 and 2
Data Throughput	DL throughput : 70 Mbits/s UL throughput : 20 Mbits/s

gNB Technical Specification	
3GPP Release	Release 15
Frequency Bands	All FDD and TDD Bands
Bandwidth	10MHz, 20MHz, 40MHz, 60MHz, 80MHz, 100MHz.
Subcarrier Spacing	15 KHz, 30 kHz and 60 kHz
Max number of antennas	4
Number of supported UEs	4

Modulation Schemes	DL : 256 QAM UL : 64 QAM
Supported modes	NSA , SA
AS Encryption and Integrity Protection	AES,SNOW 3G, ZUC
Network Interfaces	NGAP, XnAP and GTP-U to 5GC
Functional Split	7.2
Data Throughput	DL throughput : 800 Mbits/s UL throughput : 200 Mbits/s

EPC Technical Specification

Network elements	Mobility Management Entity (MME), Serving Gateway (SGW), Packet Data Network Gateway (PGW), Home Subscriber Server (HSS)
NAS encryption and integrity protection	AES, SNOW3G, ZUC
USIM authentication	XOR, Milenage, TUAK
IP version	IPv4 and IPv6
QoS	Support of all LTE QCI as well TFT and dedicated bearers
Power saving features	PSM and extended DRX
Handover	Intra-MME and and EPS 5GS IRAT handover support

5GC Technical Specification

Network elements	Access and Mobility Management Function (AMF), Authentication Server Function (AUSF), Session Management Function (SMF), User plane Function (UPF) and UDM (Unified Data Management) all integrated within the same software component
NAS encryption and integrity protection	AES, SNOW3G, ZUC
USIM authentication	XOR, Milenage, TUAK 5G-AKA
IP version	IPv4 and IPv6
Network interfaces	NGAP and GTP-U protocols
QoS	Configurable QoS flows
Handover	intra-AMF
Handover	Intra-MME and and EPS 5GS IRAT handover support

IMS Server Technical Specifications

Network elements	Proxy-CSCF (P-CSCF), Interrogating-CSCF (I-CSCF), Serving-CSCF (S-CSCF), and Home Subscriber Server (HSS) all integrated within the same software component
ISIM authentication	XOR, Milenage, TUAK
Security features	MD5, AKAv1 and AKAv2 for authentication and IPSec at transport level

IP versions	IPv4 and IPv6
Services	Voice call, Video call, Call hold, SMS over SIP and SMS over SG

Hardware Specification		
	MWT - 100	MWT - 200
CPU	Intel i7	Intel i9
Maximum Clock Speed	3.2 GHz	4.4 GHz
Number of Cores	16	24
Operating System	Ubuntu 22.04	Ubuntu 22.04
Disk Space	1 TB	1 TB
PCI Cards	Dual 10G NIC card	Dual 100G NIC card
Number of RF Ports	2	4
RF Frequency Range	10 MHz to 6 GHz	1MHz to 7.2 GHz
Maximum I/Q Sampling Rate	200 MS/s	500 MS/s
RF Bandwidth	160 MHz	400 MHz
Operation Mode	FDD and TDD	FDD and TDD
Wireless Range	10 Meters	10 Meters

For more information about MaxEye Technologies products and services, please contact

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