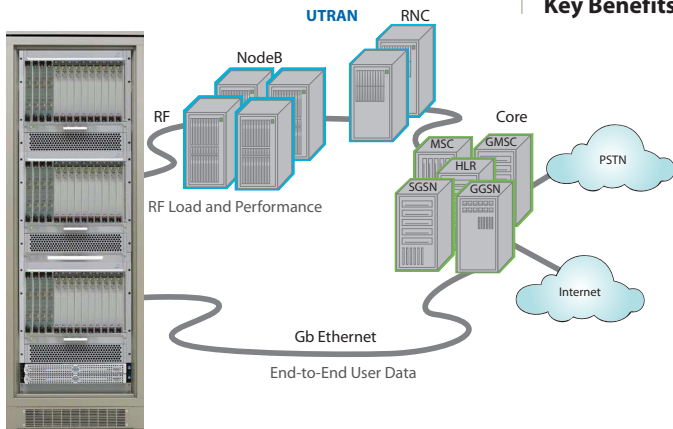


DMTS-9000 UMTS/HSPA Capacity Test Solutions

Measuring user experience with real-world traffic generation



JDSU DMTS Capacity Test

- Key Benefits**
- Up to 1000 software-defined radio test terminals per rack
 - High-traffic load of mixed voice and data services
 - Easily defined call models for services and mobile behavior
 - Highly scalable, upgradeable, reconfigurable, and programmable
 - Easily defined test cases via workbench GUI for advanced protocol testing
 - Network troubleshooting, fault diagnosis, and data analysis
 - Realistic call model simulation

Applications

- Mixed voice and data traffic
- UMTS radio channel emulation
- Network performance measurements
- Data service rollout planning
- Predicting end-user experience
- Background load and terminal verification
- Easily define real-world traffic models

The JDSU DMTS Capacity Test product family provides advanced load generation for 3G and 4G networks, giving customers an unmatched ability to test equipment and services under realistic traffic loads in their labs. For equipment manufacturers and wireless network operators seeking to establish the true performance and capacity of their UMTS infrastructure in a controlled environment, the UMTS/HSPA Capacity Test creates a “city in a lab,” providing deterministic, predictable, and repeatable loads. Testing under load with the capacity test systems ensures optimal wireless network performance, ultimately resulting in the best possible end-user experience. The solution includes:

- **Functional feature tests** — to verify RF performance of UMTS/HSPA subsystems
- **System performance tests** — with mixed voice and data applications to measure maximum data throughput, packet latency, and jitter, among other things, under dynamic RF environments
- **Call model tests** — to verify system performance under real-world traffic scenarios
- **Stress testing under traffic load** — to measure the impact on RF resources as well as the integrity of signaling under load.
- **Data application performance tests** — to measure quality of service (QoS) and its impact on voice and data throughput for mixed data traffic
- **Mobile perspective** — to provide logging and performance analysis
- **Deterministic analysis** — unlike test beds, the capacity test system provides repeatable and deterministic performance.

The JDSU DMTS Capacity Test system provides increased test coverage and capacity for UMTS wireless network operators and network equipment vendors.

JDSU® Zephyr™

SOLUTIONS TO ADVANCE YOUR MOBILE NETWORK



Specifications

System configuration

Up to 1,000 SDR test terminals (STTs) in a rack
 Up to 1,000 calls per hour per STT
 RF connections

- 1 to 64 sectors (3 carriers per sector)
- 1 to 80 sector-carriers (for simultaneous tests)

Logging storage capacity **450 GB**
 Multi-user support
 34U (w x d) 19-in x 36-in cabinet
 (interconnect multiple cabinets to achieve maximum capacity)

Traffic model

Mix of circuit- and packet-switched data

Voice

- configurable call duration, inter-call delay
- voice activity factor, speech burst time
- internal/external number dialing

Data application simulator (optional upgrade):

- data traffic options
 - Ping
 - UDP streaming
 - FTP file transfer
 - HTTP browsing SMTP/POP3 e-mail

STT identities and grouping

- create groups from USIM database
- coordinated or random behavior

Supports multiple RAB/SRB combinations

SDR test terminal (STT) control

GUI-based test case definition
 Create virtual propagation environment, virtual pilot strength/path loss
 Control of STT mobility including support for soft/softer/hard handover
 Test termination conditions and triggers

- time-based
- until statistic achieved
- until pass or fail condition achieved

Terminal ramping based on:

- number of terminals (control of single or multiple STTs in group)
- ramp-up period

Statistical or time-based conditions under which ramping is considered complete

Air interface protocols

UMTS R99 voice and data
 UMTS HSPA

Statistics collection

Logging at NAS, RRC
 Statistical analysis by STT or group, by sector carrier
 Statistics (total counts, averaged) such as:

- calls in progress
- dropped calls
- access attempts
- erlangs
- soft handover
- call control
- data application
- voice and data application-level stats

Management and administration

GUI-based workbench (Windows XP)
 Configure base station connections
 Configure system resources
 Log and storage management
 Import/export and group USIM records
 Manage user accounts and software licenses
 Backup/restore test cases and system configuration

RF bands

Band	Uplink (UL) (MHz)	Downlink (DL) (MHz)
1	1920 to 1980	2110 to 2170
2	1850 to 1910	1930 to 1990
3	1710 to 1785	1805 to 1880
4	1710 to 1755	2110 to 2155
7	2500 to 2570	2620 to 2690
9	1749 to 1784	1844.9 to 1879
10	1710 to 1770	2110 to 2170
11	1427 to 1447	1475.9 to 1495

Test & Measurement Regional Sales

NORTH AMERICA TEL: 1 866 228 3762 FAX: +1 301 353 9216	LATIN AMERICA TEL: +1 954 688 5660 FAX: +1 954 345 4668	ASIA PACIFIC TEL: +852 2892 0990 FAX: +852 2892 0770	EMEA TEL: +49 7121 86 2222 FAX: +49 7121 86 1222	WEBSITE: www.jdsu.com/test
---	--	---	---	--