E500

6 Cell Cabinet Real Data Application - D500 EDGE + CORE

Data Sheet

COBHAM

The most important thing we build is trust

"E500 Real Data Applications provides the industry's most comprehensive test suite with over 3,000 unique metrics"

Introduction

Comprehensive Test Capability

E500 Real Data Applications provides the industry's most comprehensive test suite with over 3,000 unique metrics; ranging from application performance to simple port enabled testing with throughput and latency metrics. User defined thresholds can be set on any of these metrics to easily pinpoint and isolate problems.

Real Application Performance Testing

Emulate unique application traffic per UE. Assess quality on multiple applications including delay sensitive applications such as voice and video. Determine quality on an end to end basis across the full LTE / WCDMA delivery path. Emulate application servers or connect to real 3rd party application servers.

Application Prioritization and Optimization

Ensure that all emulated applications are classified correctly, with minimum errors in terms of handling. Test that applications are not misclassified e.g. SIP enabled RTSP versus SIP RTP.

Applications

Real LTE / WCDMA data bearer services such as VoLTE calls, FTP data, web browsing and video broadcasts can be verified by using sophisticated application data generation features of the E500. This enables end-user quality of experience measurements to be made based upon real data application traffic.

Performance Measurements

Measure quality of experience for each and every UE on each and each and every emulated application traffic..

VoLTE Performance Testing

Emulate on a per UE basis voice calls using adaptive multirate (AMR) multi-media codecs, test using both narrow and wide band codec types. Using real voice samples performance test LTE network configurations. E500 Real Data Applications supports VoLTE AKA (Authentication and Key Agreement) to establish secure VoLTE calls. Determine performance limitations when using unsecure and secure VoLTE (AKA/IPsec).

Typical Performance Metrics per Application Type

Packets per second, Dropped/Out of Sequence Packets, Retransmitted Packets, Jitter, Latency, TCP Connection Rate, Application Throughput, Unique Application timings, Video/ Audio quality score.
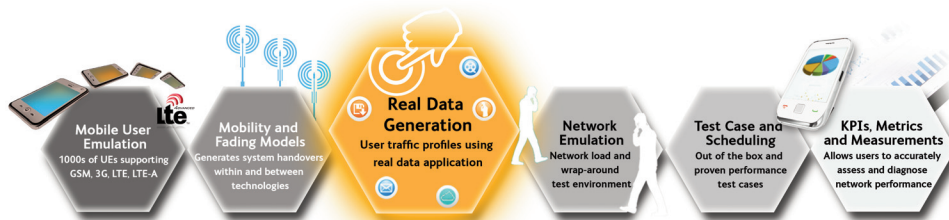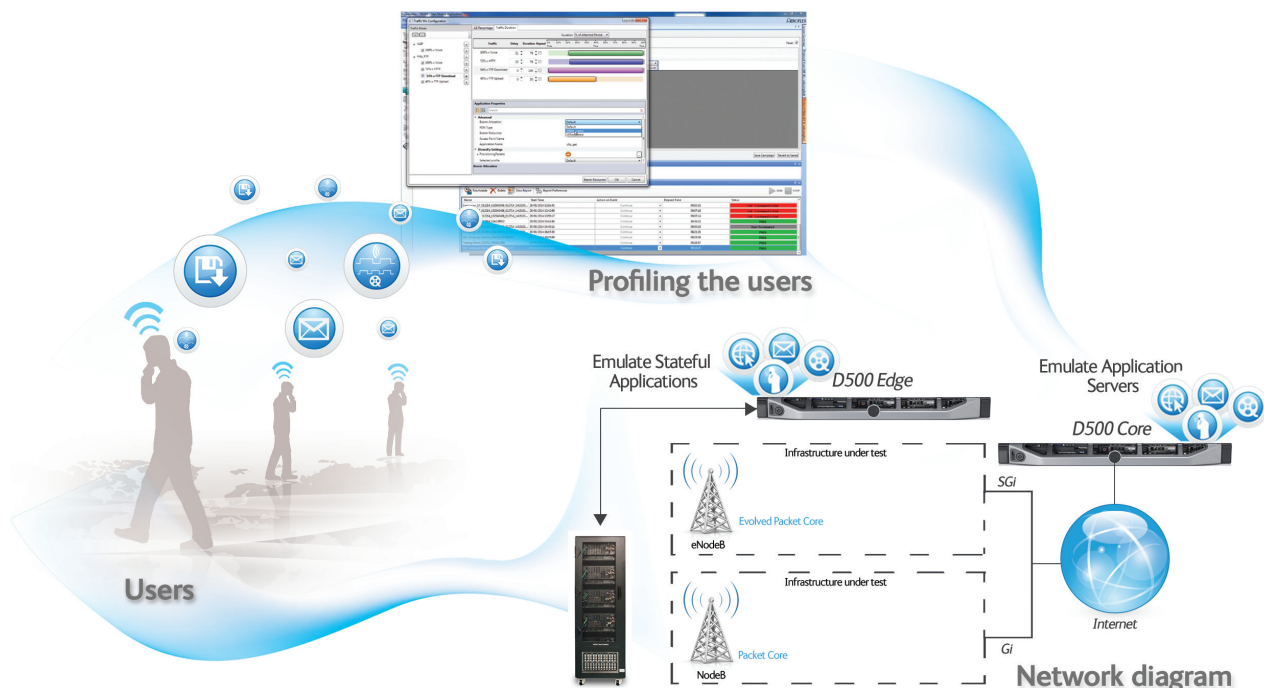
Standard Applications

Web (HTTP and HTTPS)
File Transfer (FTP)
ICMP (PING)
Email (SMTP and POP3)
Name Server resolution (DNS)

Standard Features

Multi-user support (up to 6 users)

Graphical and Command Line Interface

IPv4 and IPv6 addressing

Real-time isolation of problematic applications and UEs

TM500 Family - the most realistic environment for network performance validation

Mobile User Emulation
1000s of UEs supporting GSM, 3G, LTE, LTE-A

Mobility and Fading Models
Generates system handovers within and between technologies

Real Data Generation
User traffic profiles using real data application

Network Emulation
Network load and wrap-around test environment

Test Case and Scheduling
Out of the box and proven performance test cases

KPIs, Metrics and Measurements
Allows users to accurately assess and diagnose network performance

Profiling the users

Modeling real world user data application use scenarios

OPTIONAL APPLICATIONS

Voice Services

Cobham VoLTE option allows emulation of VoLTE UEs with different audio codecs to ensure that the coveted QoE improvements are achieved, VoLTE traffic is prioritized appropriately through the entire network and performance can be optimized.

Video Services

Cobham Video service option allows emulation of UEs connecting to VoD or VS servers as well as emulation of these servers to see the impact on the network performance or to see the network impact on the Video service performance.

Media and Voice Passive Analysis

Cobham's Passive Analysis option allows quantifying how network layer imperfections affect this quality of experience (QoE) factor. Cobham's passive analysis package uses proprietary algorithm to calculate Mean Opinion Score (MOS) and supports both audio and video quality analysis.

Thresholding

Saves time by identifying what, where and when it has been outside of acceptable performance. Different UE groups (for example VIP customers and data only subscriptions) can have individual criteria for violation and clearance duration.

TWAMP - Two Way Active Measurement Protocol

Allows measuring round trip IP performance among any two devices in a network and provides full visibility into network performance.

TeraFlow

Cobham TeraFlow Option creates TCP and/or UDP protocol traffic. This allows easily create "background" traffic while validating that other applications maintain acceptable level of performance.

SMS over IMS

Cobham SMS option allows emulation UEs to connect to IMS SMS servers and ensure that the coveted integration of SMS services function properly and transmission and reception of SMS messaging works properly through the entire network.

SPECIFICATION

Up to 12 000 concurrent applications

Up to 24 000 provisioned applications

Up to 250 000 pps

Up to 900 Mbps application traffic processing

WEIGHT AND DIMENSIONS (NOMINAL)

Dimensions (per unit)

42.4 x 434 x 434 mm

POWER REQUIREMENTS

AC input voltage range 90-264 VAC

Power Consumption 500 watts

INTERFACES

2 x Management (100/1000 Base-T)

2 x Test (1000 Base-T)

ORDERING INFORMATION

D500 Edge + Core	TK780-C
Real Data Applications	
Voice services	TK784-C
Video services	TK786-C
Media and Voice Passive Analysis	TK787-C
Thresholding	TK788-C
TWAMP	TK789-C
TeraFlow	TK792-C
SMS over IMS	TK767-C