

# E500-D

24 Cell Cabinet Real Data Application - RDA R630

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

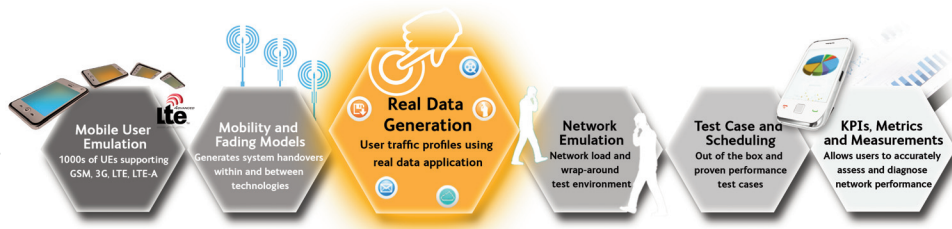
## Default Applications

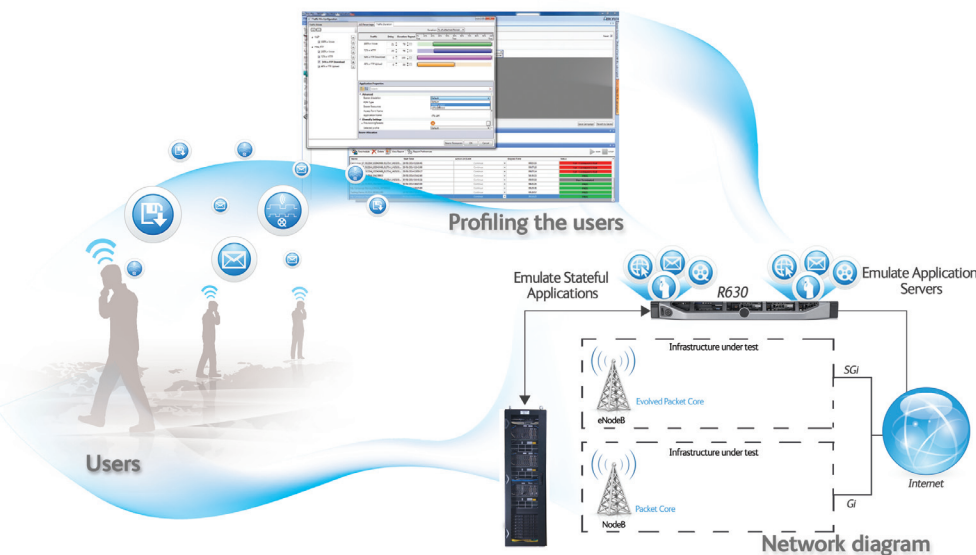
Web (HTTP and HTTPS)  
File Transfer (FTP)  
ICMP (PING)  
Email (SMTP and POP3)  
Name Server resolution (DNS)

## Default 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





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 288 000 Concurrent Applications

Up to 288 000 provisioned applications

Up to 3 000 000 pps

Up to 3.6 Gbps DL application traffic processing (Total Application processing 10.8 Gbps)

Up to 6 Users

## WEIGHT AND DIMENSIONS (NOMINAL)

Dimensions (per unit)

42.4 x 43.4 x 68.3 mm

## POWER REQUIREMENTS

AC input voltage range 90-264 VAC

Power Consumption 550 watts

## INTERFACES

1 x Management - Gb1 (100/1000 Base-T)

2 x Test - GbE1 & GbE2 (10 GbE Base-T)

## ORDERING INFORMATION

RDA R630 Server and 1.8 Gbps DL Traffic	TK961-D
RDA upgrade to 2.7 Gbps DL Traffic	TK962-D
RDA upgrade to 3.6 Gbps DL Traffic	TK963-D
Voice services for RDA R630	TK971-D
Video services for RDA R630	TK972-D
Passive Analysis for RDA R630	TK973-D
Thresholding for RDA R630	TK974-D
TWAMP for RDA R630	TK975-D
TeraFlow for RDA R630	TK976-D
SMS over IMS for RDA R630	TK977-D