

Commissioning and Verifying Mobile Backhaul

Network Master Pro MT1000A



Measurements for Mobile Backhaul Development

Faster wireless communications technologies are being deployed to speed-up and increase the capacity of mobile networks. As well as requiring more precise time and frequency synchronization between high-density base stations, these advances are expected to play a key new role in distributing mobile-backhaul base station synchronization signals and assuring high-quality wireless signals.

With support for the SyncE (G.826x) and PTP (IEEE 1588 v2) standards, the Network Master Pro MT1000A is designed to play an important part in efficient expansion of mobile networks.

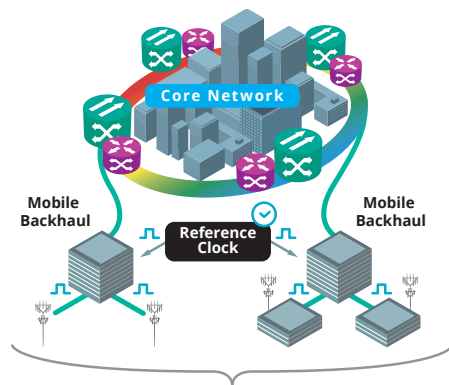


■ Packet Communications Commissioning Tests and Protocol Verification

As well as supporting RFC 2544 and ITU-T Y.1564 Ethernet circuit tests, the MT1000A also supports SyncE and PTP. This all-in-one tester performs both Ethernet circuit tests and synchronization signal distribution function tests.

Both SyncE SSM and PTP signalling messages can be monitored in real time for capture and detailed analyses.

Moreover, the MT1000A independent port architecture supports parallel tests at two network ports, helping cut test costs.



Distribution of Sync Signal to Base Stations

■ G.827x Compliant Network Verification Measurements

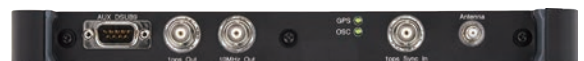
The G.827x Time Sync standard has been released to ensure that phase and time synchronization specifications meet the LTE Advanced requirements. With support for the max|TE|, cTE, and dTE metrics, the MT1000A is G.827x compliant, making it ideal for 4G/5G mobile network I&M.

Required Frequency and Phase Sync Accuracy

Application	Mobile Backhaul		Wireless Interface	
	Frequency	Phase	Frequency	Phase
LTE FDD	±16 ppb	N/A	±50 ppb	N/A
LTE TDD (large cell)		±1.1 µs		±5 µs
LTE TDD (small cell)		±1.1 µs		±1.5 µs
LTE-A MBSFN		±1.1 µs		±1 µs to 5 µs
LTE-A CoMP		±500 ns to 1.1 µs		±500 ns to 5 µs
LTE-A eICIC		±1.1 µs		±1 µs to 5 µs

■ Precision Measurements with High-Stability Oscillator Option

Installing the High Performance GPS Disciplined Oscillator MU100090A with built-in, high-stability, atomic clock assures precision synchronization error measurement results.



High Performance GPS Disciplined Oscillator MU100090A