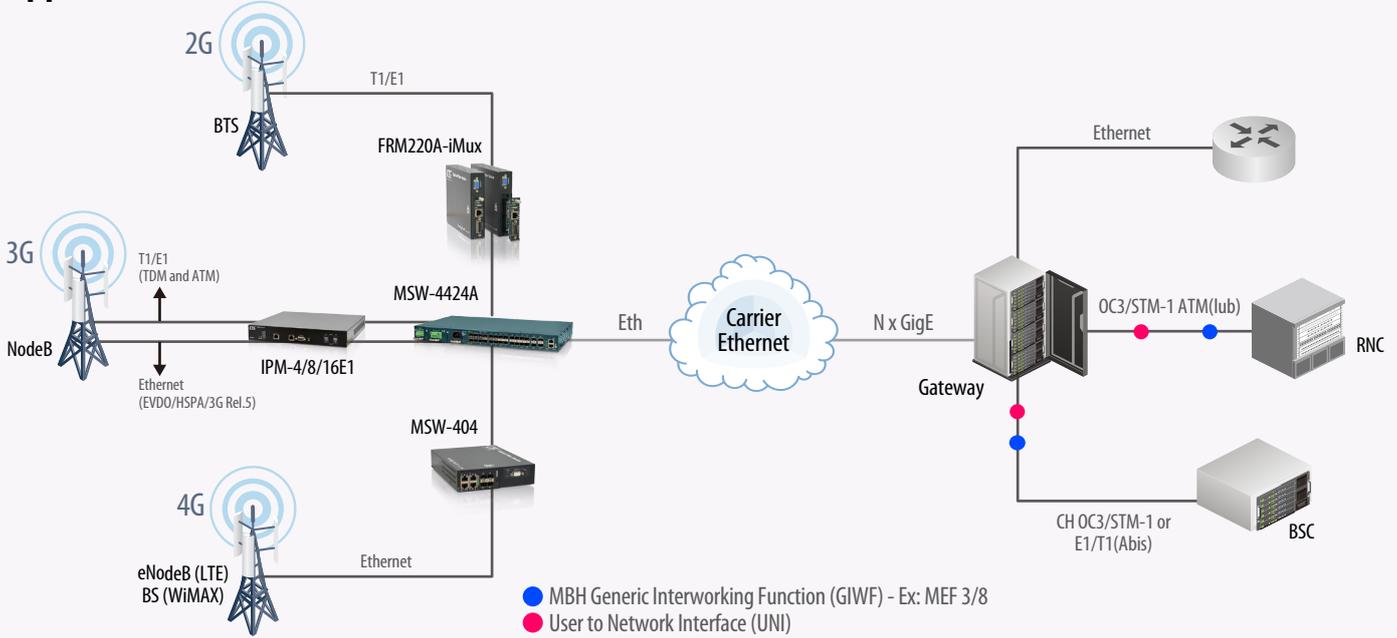




# Why SyncE & IEEE 1588 v2 ?

With the adoption of 4G LTE/LTE-A by the mobile operators world-wide, mobile backhaul transportation has become one topic of significance as it directly influences the operators mobile service quality. The mobile backhaul is the transport segment that links the cell sites to their mobile switching and control centers. Existing legacy PDH/SDH networks have not been able to fulfill the very high transport speeds of increasing bandwidth requirements. Therefore, most mobile operators are gradually considering adopting all IP network as the architecture of mobile backhaul for 4G LTE/LTE-A.

## Application



The timing synchronization of the base stations in frequency and time/phase is a very important requirement of mobile communication technology. The following table summarizes why timing synchronization is important.

Application	Why You Need to Comply	Impact of Non-compliance
LTE(FDD)	Call Initiation	Call Interference Dropped calls
LTE(TDD)	Time slot alignment	Packet loss/collisions Spectral efficiency
LTE MBSFN	Proper time alignment of video signal decoding from multiple BTSs	Video broadcast interruption
LTE-A MIMO/COMP	Coordination of signals to/from multiple base stations	Poor signal quality at edge of cells, LBS accuracy
LTE-A eICIC	Interference coordination	Spectral inefficiency & Service degradation

CTC Union offers a solution for access networks and Ethernet demarcation which are fully compliant to MEF proposed mobile backhaul application for 4G LTE services.

## Application

