Product Brochure

MiCLK

1588 Grandmaster SFP with Built-in GNSS

RAD's miniature MiCLK® is the world's first distributed IEEE 1588 Grandmaster on an SFP with a built-in GNSS receiver. It plugs into existing devices in the access network, thus bringing highly accurate frequency and time distribution closer to the cell site at a fraction of the cost of alternative solutions. The patented MiCLK is ideal for LTE/LTE-A and 5G macro-cell and small-cell deployments, including underground and in-building installations, among others.

In addition to lowering CapEx and simplifying network upgrades, MiCLK dramatically reduces installation and engineering costs by eliminating the need for additional space or an independent power source. To ensure a highly reliable service offering, it features superior backup and resiliency options.

Part of
RAD's Service Assured
Access Solutions

RAD

Your Network's Edge®

MiCLK

1588 Grandmaster on an SFP with Built-in GNSS

Key Takeaways:

- Cost efficiency by bringing PTP Grandmaster closer to the cell site
- High timing and frequency accuracy for LTE/LTE-A and 5G macro and small cells
- Superior backup and resiliency options to ensure optimal service uptime
- Full network coverage, even in underground and indoor installations
- Miniature pluggable device: no installation, engineering or dedicated training required

MiCLK Superior Backup and Resiliency:

Timing Synchronization Options

INPUT	MiCLK MODE	OUTPUT
GNSS	MiCLK GNSS is active	1588 (Frequency, Time, Phase)
GNSS is down, use Sync-E input from network: ~~GNSS~~, Sync-E	MiCLK Sync-E holdover	1588 (Frequency, Time, Phase) Frequency distribution per Sync-E, Time and Phase from last GNSS update
GNSS is down, use PTP input from network: ~~GNSS~~, 1588	MiCLK APTS holdover	1588 (Frequency, Time, Phase) Frequency distribution per 1588, Time and Phase from last GNSS update

Device Backup Options

- Backup unit in the same router, antenna sharing
- Backup unit at a different location

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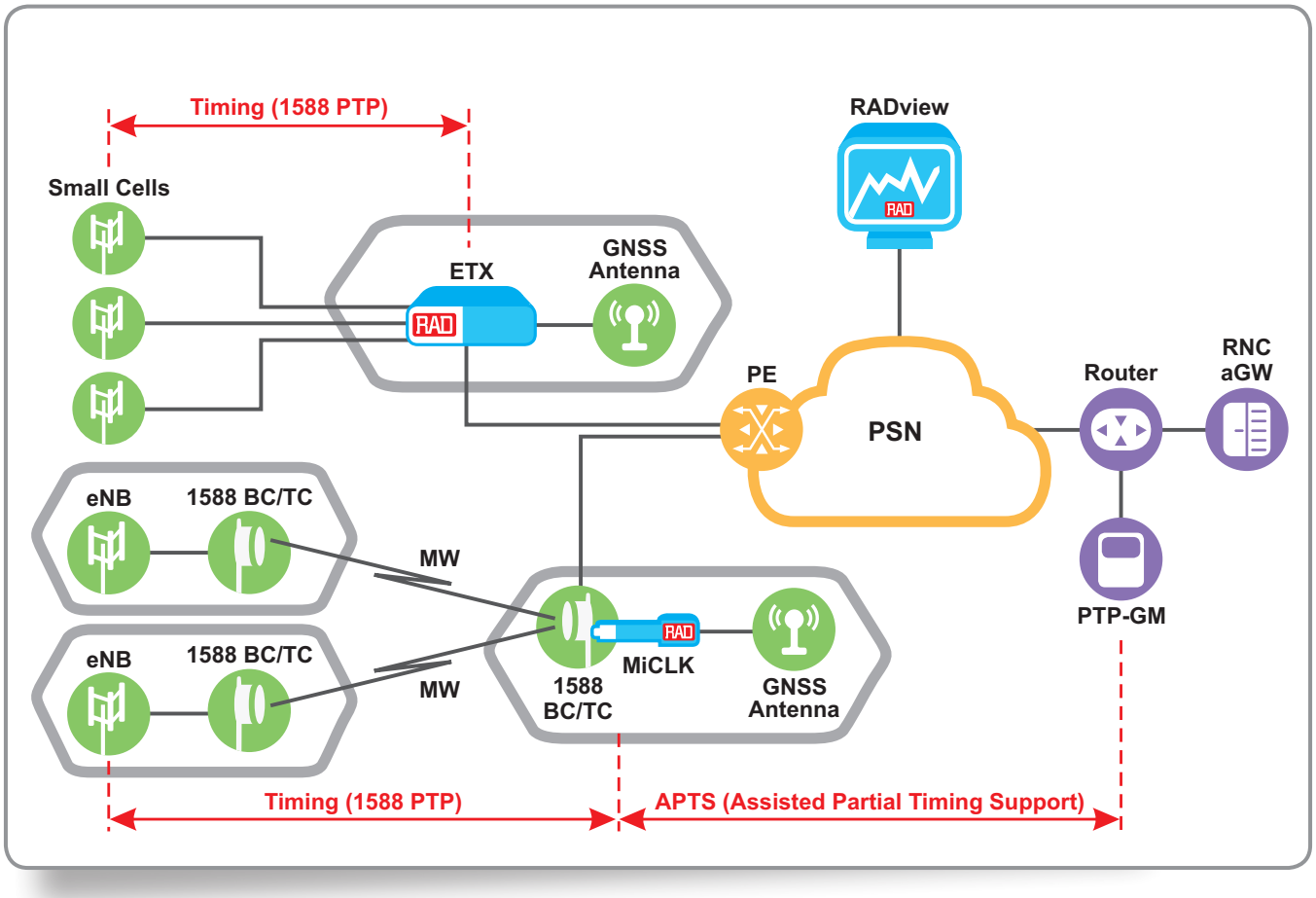
Use MiCLK for:

Timing Synchronization for Mobile Networks

Timing Synchronization for Mobile Backhaul



Quick Specs:

- Fully-featured standard IEEE 1588 Grandmaster including phase/Time of Day (ToD) to meet stringent LTE-Advanced requirements
- Built-in GNSS receiver
- Robust GNSS backup – time holdover when GNSS reception is lost, using Sync-E or 1588 frequency reference from the network (Assisted Partial Timing Support) to deliver continuous and accurate synchronization to the base station
- Miniature pluggable device fits in any standard SFP port
- Scalable solution supports 64 slaves
- Power consumption <1.65 w
- Remote software upgrades
- Security protocols: SFTP, SSH, ACL