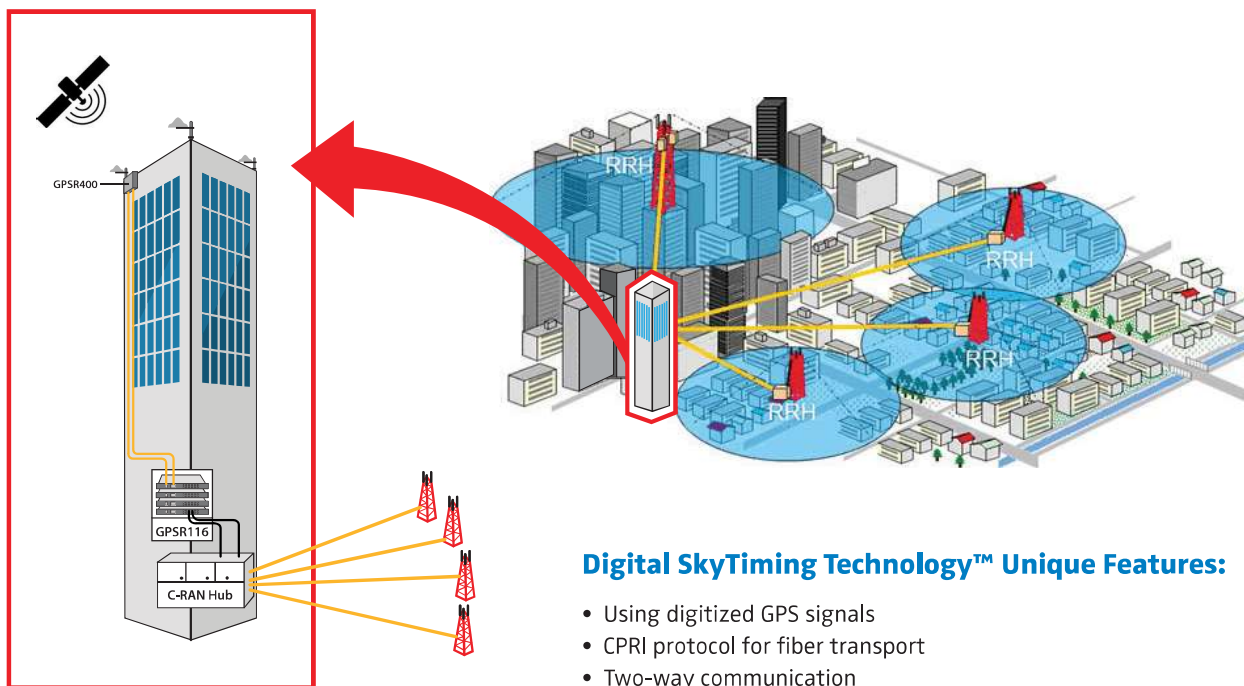


Digital Skytiming Technology™

Digital SkyTiming Technology™ is a patent-pending technique to transport GPS signals digitally over fiber for wireless network timing applications in C-RAN hubs and Distributed Antenna Systems (DAS). It is used in wireless systems where GPS signals are not readily available (where no skyview exists) close to the basestation or where remote monitoring and advanced alarms are required in the NOC by the carrier.

GPS signal is converted from RF to digital and transported over a fiber optic cable using Common Public Radio Interface (CPRI) protocol. The digital GPS signal is analyzed for number of satellites and the signal quality, and monitored for robust network operation. The fiber link is also analyzed for round trip delay times and link quality to support advanced wireless features. The digital signals are then converted back to RF and distributed to the wireless network.



Impact of Digital GPS Signal Repeaters

- Solves network timing distance limitation in C-RAN and DAS systems
- Redundancy for fiber, GPS antenna and power supply for reliability.
- Remote control and monitoring allows system management and reduces network troubleshooting
- Provides accurate timing required for advanced wireless services

Digital Skytiming™ Benefits

- Allows GPS signals to be transmitted up to 15km from antenna to BTS/BBU
- New web-based interface provides remote system control and monitoring over Ethernet
- Monitors antenna status with automatic switch-over
- Redundant fiber optic links monitored with auto switch-over
- Provides synchronization accuracy upto 100ns alignment for LTE and LTE-A
- Reduces temperature sensitivity
- Detects the presence of interference or jamming
- Eliminates signal degradation
- Advanced intelligent SNMP alarms

	<p>GPSR400 - Outdoor Remote Unit</p> <ul style="list-style-type: none"> • Up to 4 GPS antenna inputs • Outdoor Rated Wall-mount enclosure • Redundant fiber optic links • Loss of signal alarms • LED system health monitors • Ethernet local port • Connects to GPSR116 Indoor Head-End Unit
	<p>GPSR116 - Indoor Head-End Unit</p> <ul style="list-style-type: none"> • Up to 16 GPS RF outputs • Redundant fiber optic links • 1RU rack-mounted controller • LED system health monitors • Ethernet local port • Connects to GPSR400 Outdoor Remote Unit
	<p>GPSS216 - GPS RF Signal Splitter</p> <ul style="list-style-type: none"> • Up to 16 GPS RF outputs • 2 GPS antenna inputs • GPS signal quality monitoring • Compatible with GPSR116 Indoor Head-End Unit
	<p>GPSS232 - GPS RF Signal Splitter</p> <ul style="list-style-type: none"> • Up to 32 GPS RF outputs • 2 GPS antenna inputs • GPS signal quality monitoring • Compatible with GPSR116 Indoor Head-End Unit