

Point-to-Point Sync Unit

Designed for PTP 650 Series

Many applications of the PTP 650 require the deployment of a number of point-to-point (PTP) radios on the same tower or installation of a number of links in a large, dense network configuration. This is typically done to minimize tower or rooftop space and reduce operating costs while making the maximum use of available spectrum. By synchronizing the transmit and receive phases of the TDD system the potential for self-interference in these dense networks is minimized. The Cambium Networks PTP-SYNC module synchronizes multiple PTP 650 connections by providing a common clock signal and GPS signal reference.



PTP 650 Sync Front



PTP 650 Sync

Differentiators

- » **PRECISE SYNCHRONIZATION** The effects of self-interference can be greatly reduced by synchronizing the transmit and receive frames of co-located radios so that none are sending while their neighbors are receiving. Cambium Networks PTP 650 Series radios include Time Division Duplex (TDD) synchronization technology which introduces a fixed TDD framing mode. This allows the frame timing in a link to be synchronized with other co-located PTP series units and, where needed, an external GPS (Global Positioning System) timing module can synchronize links on adjacent towers. The PTP-SYNC unit provides a reliable, convenient timing reference for radios. It receives a time signal from a clock source and sends it to the PTP 650 Outdoor Unit (ODU). Then the radio adjusts its own timing to achieve precise synchronization with neighboring radios. This allows customers to co-locate PTP series radios on a tower or rooftop with greatly reduced self-interference.
- » **SIMPLE TO DEPLOY** One PTP-SYNC unit is needed per link. To share the timing information among a group of radios on the same tower or rooftop, it is possible to daisy-chain up to ten PTP-SYNC units together. When multiple radios are mounted on two or more towers or rooftops, a GPS receiver or other synchronized 1 Hz input is required. The indoor-mounted PTP-SYNC is a small-footprint device which can be conveniently mounted in a 1-U rack or on a wall.
- » **PLANNING SUPPORT** The PTP LINKPlanner tool lets network engineers and planners to perform PTP series path calculations accurately predicting link performance and the impact of deploying with or without the PTP-SYNC module.

Specifications

RADIO TECHNOLOGY	
TIMING INPUT SIGNAL	1 Hz or 1 PPS (pulse per second) received from a timing device (GPS module, CMM or other synchronized timing device); PTP-SYNC unit can maintain local synchronization between collocated radios when timing is unavailable
SYSTEM CONFIGURATION	One PTP-SYNC unit per link; up to 10 PTP-SYNC units can be daisy-chained to one timing source
POWERING	
LED INDICATOR	Power status, GPS and SYNC activity
POWERING	56 V DC, phantom powering from PIDU/ODU cable
CABLE	Standard Cat-5e
CONNECTION	Standard RJ-45
PHYSICAL	
DIMENSIONS	Width 7.1" (180 mm), Height 1.4" (35 mm), Depth 3.1" (80 mm), Weight 1.32 lbs (0.6 kg)
OPERATING TEMPERATURE	-40°F (-40°C) to +140°F (+60°C), including solar radiation
HUMIDITY	Up to 95% non-condensing
POWER SUPPLY	Integrated with Indoor Unit
OPERATING VOLTAGE	+39.0 V to +60.0 V, measured at the terminals of the unit
POWER CONSUMPTION	1.5 W max at the terminals of the unit
ENVIRONMENTAL & REGULATORY	
PROTECTION AND SAFETY	UL60950; IEC60950; EN60950; CSA-C22.2 No. 60950; CB Approval for Global
EMC	USA-FCC Part 15, Class A; Europe -EN 301 489-4