


WIRELESS NETWORK SOLUTIONS

PTP-SYNC

Synchronization Unit for PTP 600 Series Bridges


**Motorola PTP-SYNC
Part Numbers**

WB3665 PTP-SYNC

Collocation Challenge

In situations where a number of point-to-point (PTP) radios are deployed on the same tower or rooftop, or where a large number of links are installed in a sizeable, dense network configuration, it is possible that the performance or throughput of some of the links can be significantly reduced. This is due to interference between the units, and the levels of interference can worsen when the links are operating on the same or adjacent channels.

The effect of this cross interference can be greatly reduced when the radios are synchronized, meaning that transmit and receive frames of the units are synchronized so that none are transmitting when their collocated neighbors are receiving.

Precise Synchronization for TDD Cycles

Motorola's PTP 600 Series radios include Time Division Duplex (TDD) synchronization technology, which introduces a fixed TDD framing mode and allows the frame timing in a link to be synchronized with other PTP 600 units or an external Global Positioning System (GPS) timing module.

To provide you with a reliable, convenient timing reference for PTP 600 Series links, Motorola offers a synchronization unit, the PTP-SYNC. The PTP-SYNC unit receives a time signal from a clock source and sends it to the PTP 600's outdoor radio unit. The radio then adjusts its own timing until precise synchronization is achieved, allowing you to collocate multiple PTP radios on a tower or rooftop with greatly reduced interference.

Only one PTP-SYNC unit is required per link, and you can daisy-chain up to ten PTP-SYNC units together to share the timing information among a group of radios located on the same tower or rooftop. The cost-effective, indoor-mounted PTP-SYNC unit is a small-footprint device which can be conveniently mounted in a 1-U rack or on a wall. The units can even be placed on a desktop. When multiple radios are mounted on two or more towers or rooftops, a GPS receiver or other synchronized 1 Hz input is required. Motorola's PTP LINKPlanner tool lets you perform PTP 600 path calculations and accurately project link performance with a PTP-SYNC unit as the timing reference.

SPECIFICATION SHEET – PTP-SYNC

Motorola PTP-SYNC Synchronization Unit for PTP 600 Series Radios

Performance	Remarks
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

Wireless Network Solutions

Motorola delivers seamless connectivity that puts real-time information in the hands of users, giving customers the agility they need to grow their business or better protect and serve the public. Working seamlessly together with its world-class devices, Motorola's unrivalled wireless network solutions include indoor WLAN, outdoor wireless mesh, point-to-multipoint, point-to-point networks and voice over WLAN solutions. Combined with powerful software for wireless network design, security, management and troubleshooting, Motorola's solutions deliver trusted networking and anywhere access to organizations across the globe.



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