

# PTP820G Support of Redundant MPLS Routers in Public Safety Network

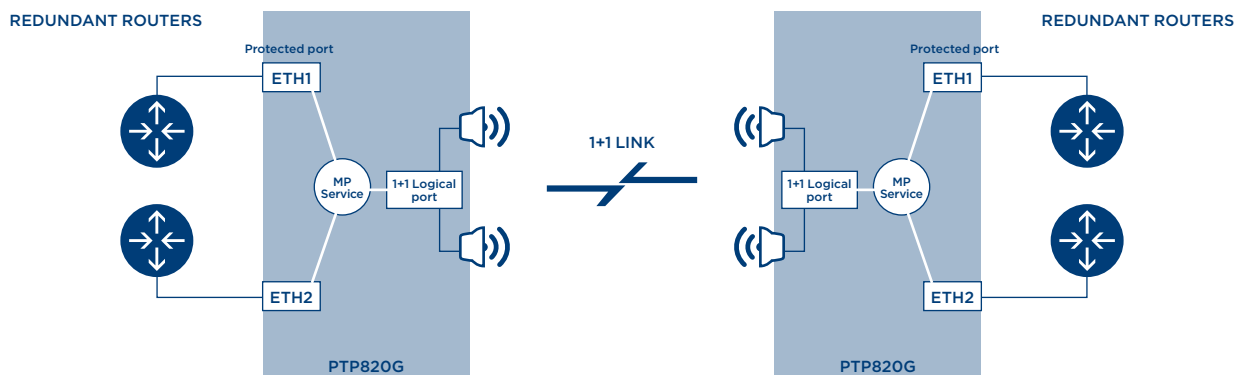
## OVERVIEW

Public safety networks demand the highest levels of network availability and as such, many network deployments include equipment redundancies. This paper explains how to implement PTP820G to support redundant routers.



## NETWORK SETUP

The following diagram shows a PTP820G 1+1 link deployment in which redundant routers are used to connect to the customer application.



In this network configuration, a pair of redundant MPLS routers are connected to a PTP820G Chassis at each end. The PTP820G is configured with 1+1 Hot Standby for radio redundancy. The implementation needs to make sure that on a sunny day, all four routers can talk to each other. Failure of any of the 1+1 radios will not affect the traffic going through the routers if the 1+1 radio link is up.

## IMPLEMENTATION

---

The above configuration can be implemented easily using MP Ethernet Services capability provided by the PTP820G product line.

An MP Service is created by two Ethernet ports and one logical 1+1 radio port as the service points, which allow traffic to pass from either Ethernet port through the 1+1 radio link to the remote side.

### ▼ Ethernet Services

<input type="checkbox"/>	Service ID ▲	Service Type	EVC ID	EVC description	Admin
<input type="checkbox"/>	1	MP	N.A.	N.A.	Operational
<input type="checkbox"/>	1025	MNG	N.A.	N.A.	Operational

To make the link transparent to user traffic, set all the service points to SAP/all-2-one.

### ▼ Ethernet Service Points - General SP Attributes

<input type="checkbox"/>	Service point ID ▲	Service point name	Service point type	Interface location	Attached interface type	C-Vlan encapsulation	S-Vlan encapsulation
<input type="checkbox"/>	1	N.A.	SAP	Ethernet Slot 1, Port 1	All-to-One	N.A.	N.A.
<input type="checkbox"/>	2	N.A.	SAP	Ethernet Slot 1, Port 2	All-to-One	N.A.	N.A.
<input type="checkbox"/>	3	N.A.	SAP	Radio Protection: Group #1	All-to-One	N.A.	N.A.

PTP820 supports MPLS QoS by default, automatically enabling MPLS EXP priority.

## SUMMARY

---

Using PTP820G with MP services, additional MPLS routers can be deployed at each network site to ensure network equipment redundancy. Traffic transparency can be achieved by using All-2-One service points for MP Service. The radio will automatically honor MPLS QoS.



Cambium Networks, Ltd.  
3800 Golf Road, Suite 360,  
Rolling Meadows, IL 60008

Cambium Networks, the Cambium Networks logo, cnPilot and cnMaestro are trademarks of Cambium Networks, Ltd.

© Copyright 2016 Cambium Networks, Ltd. All rights reserved.