Cambium Networks cnMatrix TX 2K Tower WISP Switches Port User Guide

Contents

1 Cambium Networks cnMatrix TX 2K Tower WISP Switches Port
2 Documents / Resources
2.1 References
3 Related Posts

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CAMBIUM NETWORKS' CNMATRIX SWITCHES ENHANCE PERFORMANCE, SECURITY AND END-USER SATISFACTION WHILE REDUCING COSTS. THE TX 2K TOWER/WISP SWITCH SERIES IS A FULLY INTEGRATED SOLUTION WITH AUTOMATED CONFIGURATION THAT SIMPLIFIES TOWER DEPLOYMENT AND IMPROVES EFFICIENCY.

- Our cnMatrix TX 2K switch series is a new family of switches that are purpose built for wireless ISP (WISP) tower deployments. Designed based on the specific needs of wireless ISPs, the cnMatrix TX series of switches provides a fully integrated switching solution that simplifies deployment operations while improving network performance.
- The TX 2K series of switches supports many types of PoE and enables you to connect a wide variety of both Cambium products as well as third party devices. This guide will help you understand the PoE capabilities of the switch and necessary configurations.
- These TX 2K switches support:
  - 802.3af/at/bt standards based PoE (up to 90W)

- 54V Passive PoE (up to 90W)
- 24V Passive PoE (up to 30W)

- In most cases, zero configuration is necessary to get the device to power up correctly using PoE. This is especially true when the ‘Auto Detect’ mode is enabled. The ‘Auto Detect’ mode is enabled by default but can be disabled if desired. By default, the PoE mode of a port is set to ‘802.3af/at/bt’ mode. Most devices can be powered up when the port is in this mode. However, some devices need to be in one of the ‘Passive PoE’ modes. In some cases, the ‘Auto Detect’ mode will automatically change the port’s PoE mode for you. For example, the PMP 450m requires the port to be in a passive mode (hybrid). You can leave the port in the default ‘802.3af/at/bt’ mode and the auto detect feature will automatically configure the port mode for proper connectivity.
- For these TX switches, the ports are equally divided into Bank #1 and Bank #2.
  - Bank #1 supports:
    - 802.3af/at/bt (up to 30W)
    - 54V Passive mode (up to 90W)
  - Bank #2 supports:
    - 802.3af/at/bt (up to 30W)
    - 54V Passive mode (up to 30W)
    - 24V Passive mode (up to 15W)

Ports	TX2012R-P Port Numbers	TX2020R-P Port Numbers	TX2028RF-P Port Numbers
Bank #1	1-4	1-8	1-8
Bank #2	5-8	9-16	9-16

  - A Cambium sync signal is also provided by the TX 2K switches. Cambium sync is disabled by default but can be enabled on a per port basis. If you use a PBA policy, you can have Cambium sync enabled automatically with Zero Touch.
- Please note, the TX 2K switches do not support devices that require reverse polarity power. Some older devices do require this. In this case, you will need to use a power injector.
- For detailed configuration commands for PoE, Cambium sync or any other capability of the switch via the CLI, Web GUI and cnMaestro, please see the appropriate document.

- The table below gives examples for Cambium radios.

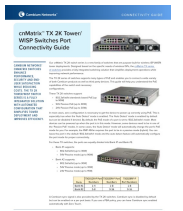
Series	Radio	Powers via PoE	Required PoE Mode Setting of Port		Ports
			With Auto-Detect enabled	With Auto-Detect disabled	
CANOPY 450	450m AP - 5Ghz	Yes	802.3 (default mode)	Hybrid	Bank #1
	450m AP - 3Ghz	No (Requires DC)	NA	NA	NA
	450i AP	Yes	802.3 (default mode)	802.3 (default mode)	Bank #1 or Bank #2
	450 AP	No (Old Canopy power)	NA	NA	NA
	450b MicroPoP AP	Yes	802.3 (default mode)	802.3 (default mode)	Bank #1 or Bank #2
	450b Connectorized AP	Yes	802.3 (default mode)	802.3 (default mode)	Bank #1 or Bank #2
CANOPY 450 PTP	PTP 450b BHM	yes	Passive 24V	Passive 24V	Bank #2
	PTP 450b Retro BHM	Yes	Passive 24V	Passive 24V	Bank #2
	PTP 450 BHM	No (Old Canopy power)	NA	NA	NA
ePMP SERIES	ePMP 2000 AP	Yes	802.3 (default mode)	802.3 (default mode)	Bank #1 or Bank #2
	ePMP 3000 AP	Yes	802.3 (default mode)	802.3 (default mode)	Bank #1 or Bank #2
	PTP 550 BHM	Yes	802.3 (default mode)	802.3 (default mode)	Bank #1 or Bank #2
POINT TO POINT	PTP 650 BHM	Yes	Passive 54V	Passive 54V	Bank #1
	PTP 670 BHM	Yes	Passive 54V	Passive 54V	Bank #1
	PTP 700 BHM	Yes	Passive 54V	Passive 54V	Bank #1
LICENSED POINT TO POINT	PTP 820C	Yes	Passive 54V	Passive 54V	Bank #1
	PTP 820E	Yes	Passive 54V	Passive 54V	Bank #1
	PTP 820S	Yes	Passive 54V	Passive 54V	Bank #1
	PTP 850C	Yes	Passive 54V	Passive 54V	Bank #1
	PTP 850E	Yes	Passive 54V	Passive 54V	Bank #1
cnWave	V1000	Yes	802.3 (default mode)	802.3 (default mode)	Bank #1 or Bank #2
	V3000	Yes	802.3 (default mode)	Hybrid	Bank #1
	V5000	Yes	802.3 (default mode)	Hybrid	Bank #1

Cambium Networks' full range of solutions are available through its global network of partners.

ABOUT CAMBIUM NETWORKS

Cambium Networks delivers wireless communications that work for businesses, communities and cities worldwide. Millions of our radios are deployed to connect people, places and things with a unified wireless fabric that spans multiple standards and frequencies of fixed wireless and Wi-Fi, all managed centrally via the cloud. Our multi-gigabit wireless fabric offers a compelling value proposition over traditional fiber and alternative wireless solutions. We work with our Cambium certified ConnectedPartners to deliver purpose-built networks for service provider, enterprise, industrial, and government connectivity solutions in urban, suburban, and rural environments, with wireless that just works.
cambiumnetworks.com

Documents / Resources

	Cambium Networks cnMatrix TX 2K Tower WISP Switches Port [pdf] User Guide cnMatrix TX 2K Tower WISP Switches Port, cnMatrix TX 2K, cnMatrix Tower WISP Switches Port, WISP Switches Port, Switches Port, Port

References

- Cambium Networks | Wireless Solutions that Just Work