

TAP-M310Rシリーズ

鉄道車両地上間Wi-Fi 6 AP/クライアント



機能と特長

- IEEE 802.11a/b/g/n/ac/ax準拠
- 最大574 Mbps (2.4 GHz)または1,201 Mbps (5 GHz)のデータレートを選択可能なデュアルバンドWi-Fi
- コントローラーベースのTurbo Roaming
- EN 50155全必須検査項目に準拠¹
- 堅牢なIP67保護等級の筐体、-45℃から75℃の動作温度
- AeroLink保護によるワイヤレスネットワークの冗長性

認証



製品紹介

TAP-M310RシリーズのワイヤレスAP/クライアントは、CBTCやCCTV通信を含む鉄道の列車対地上アプリケーション向けの堅牢なIEEE 802.11axワイヤレスソリューションです。

TAP-M310Rシリーズは、防塵・防水性能IP67に準拠したハウジングで保護されており、過酷な条件下でも信頼性の高い動作を保証します。TAP-M310Rシリーズには、車載および沿線用途向けに、ACまたはDC電源モジュール、複数のEthernet/Turbo Chainsをサポートし導入を容易にするイーサネットスイッチモジュールなど、4つの異なる構成が用意されています。TAP-M310Rシリーズは、動作温度範囲、電源入力電圧、サージ保護、ESD、耐振動性など、産業規格および鉄道認証に準拠しています。

厳しい環境向けに構築

- IP67等級の金属筐体、-45℃から75℃の広い動作温度
- 防水・防塵コネクタを備えた耐振動性M12設計

鉄道アプリケーション向けに最適化

- 24 VDC、110 ~ 220 VAC、または24 ~ 110 VDC電源入力 (モデルによって異なります)
- Moxa Turbo Chainをサポートするファイバポート
- コントローラーベースのTurbo Roaming (WAC-M300 使用時)、3チャンネル選択で50 ms未満のハンドオーバー時間
- 2.4GHzおよび5GHzのバンドパスフィルターを内蔵
- 2x2アンテナスプリッタを内蔵

仕様

WLAN Interface

WLAN Standards	2.4 GHz: 802.11b/g/n/ax with 1024 QAM support, 20/40 MHz 5 GHz: 802.11a/n/ac/ax with 1024 QAM support, 20/40/80 MHz
Frequency Band for US (20 MHz operating channels)	2,412 to 2,462 GHz (11 channels) 5,180 to 5,240 GHz (4 channels) 5,745 to 5,825 GHz (5 channels)
Frequency Band for EU (20 MHz operating channels)	2,412 to 2,472 GHz (13 channels) 5,180 to 5,240 GHz (4 channels) 5,745 to 5,825 GHz (5 channels)
Wireless Security	SSID broadcast enable/disable WPA2/WPA3 Personal (AES) WPA2/WPA3 Enterprise (IEEE 802.1X/RADIUS, AES)

1. 本製品は、EN 50155規格で定められた鉄道車両アプリケーションに適しています。詳細については、ここをクリックしてください: www.moxa.com/doc/specs/EN_50155_Compliance.pdf

Transmission Rate	802.11b: 1 to 11 Mbps 802.11a/g: 6 to 54 Mbps 802.11n: 6.5 to 300 Mbps 802.11ac: up to 540 Mbps 802.11ax: 5 GHz up to 1201 Mbps, 2.4 GHz up to 576 Mbps
WLAN Operation Mode	Access point Master Sniffer Client Client-Router Slave
Antenna Connectors	TAP-M310R-NPS-1R and -1P1R models: 2 x N-type (female) TAP-M310R-1P1R1S models: 4 x N-type (female) TAP-M310R-1P2R1S models: 8 x N-type (female)
Transmitter Power for 802.11a	TAP-M310R-NPS-1R and -1P1R models: 22±1.5 dBm @ 6 Mbps 20 MHz 22±1.5 dBm @ 9 Mbps 20 MHz 22±1.5 dBm @ 12 Mbps 20 MHz 22±1.5 dBm @ 18 Mbps 20 MHz 20±1.5 dBm @ 24 Mbps 20 MHz 19.5±1.5 dBm @ 36 Mbps 20 MHz 19±1.5 dBm @ 48 Mbps 20 MHz 19±1.5 dBm @ 54 Mbps 20 MHz TAP-M310R-1P1R1S and -1P2R1S models: 18±1.5 dBm @ 6 Mbps 20 MHz 18±1.5 dBm @ 9 Mbps 20 MHz 18±1.5 dBm @ 12 Mbps 20 MHz 18±1.5 dBm @ 18 Mbps 20 MHz 17±1.5 dBm @ 24 Mbps 20 MHz 17±1.5 dBm @ 36 Mbps 20 MHz 16±1.5 dBm @ 48 Mbps 20 MHz 15.5±1.5 dBm @ 54 Mbps 20 MHz
Transmitter Power for 802.11n (5 GHz)	TAP-M310R-NPS-1R and -1P1R models: 22±1.5 dBm @ MCS0 20 MHz 22±1.5 dBm @ MCS1 20 MHz 21.5±1.5 dBm @ MCS2 20 MHz 21.5±1.5 dBm @ MCS3 20 MHz 19.5±1.5 dBm @ MCS4 20 MHz 19±1.5 dBm @ MCS5 20 MHz 19±1.5 dBm @ MCS6 20 MHz 18.5±1.5 dBm @ MCS7 20 MHz 22±1.5 dBm @ MCS8 20 MHz 22±1.5 dBm @ MCS9 20 MHz 21.5±1.5 dBm @ MCS10 20 MHz 21.5±1.5 dBm @ MCS11 20 MHz 20.5±1.5 dBm @ MCS12 20 MHz 19.5±1.5 dBm @ MCS13 20 MHz 19.5±1.5 dBm @ MCS14 20 MHz 19±1.5 dBm @ MCS15 20 MHz 22±1.5 dBm @ MCS0 40 MHz 22±1.5 dBm @ MCS1 40 MHz 22±1.5 dBm @ MCS2 40 MHz 21.5±1.5 dBm @ MCS3 40 MHz 21±1.5 dBm @ MCS4 40 MHz 20±1.5 dBm @ MCS5 40 MHz 20±1.5 dBm @ MCS6 40 MHz 19.5±1.5 dBm @ MCS7 40 MHz 22±1.5 dBm @ MCS8 40 MHz 22±1.5 dBm @ MCS9 40 MHz 21.5±1.5 dBm @ MCS10 40 MHz 21.5±1.5 dBm @ MCS11 40 MHz 20±1.5 dBm @ MCS12 40 MHz 20±1.5 dBm @ MCS13 40 MHz 20±1.5 dBm @ MCS14 40 MHz 20±1.5 dBm @ MCS15 40 MHz TAP-M310R-1P1R1S and -1P2R1S models: 18.5±1.5 dBm @ MCS0 20 MHz

	18.5±1.5 dBm @ MCS1 20 MHz 18.5±1.5 dBm @ MCS2 20 MHz 18±1.5 dBm @ MCS3 20 MHz 17±1.5 dBm @ MCS4 20 MHz 16.5±1.5 dBm @ MCS5 20 MHz 16±1.5 dBm @ MCS6 20 MHz 15.5±1.5 dBm @ MCS7 20 MHz 18.5±1.5 dBm @ MCS8 20 MHz 18.5±1.5 dBm @ MCS9 20 MHz 18.5±1.5 dBm @ MCS10 20 MHz 18±1.5 dBm @ MCS11 20 MHz 17±1.5 dBm @ MCS12 20 MHz 16.5±1.5 dBm @ MCS13 20 MHz 15.5±1.5 dBm @ MCS14 20 MHz 15.5±1.5 dBm @ MCS15 20 MHz 18.5±1.5 dBm @ MCS0 40 MHz 18.5±1.5 dBm @ MCS1 40 MHz 18.5±1.5 dBm @ MCS2 40 MHz 17.5±1.5 dBm @ MCS3 40 MHz 17.5±1.5 dBm @ MCS4 40 MHz 16.5±1.5 dBm @ MCS5 40 MHz 15.5±1.5 dBm @ MCS6 40 MHz 15±1.5 dBm @ MCS7 40 MHz 18±1.5 dBm @ MCS8 40 MHz 18±1.5 dBm @ MCS9 40 MHz 17.5±1.5 dBm @ MCS10 40 MHz 17±1.5 dBm @ MCS11 40 MHz 17±1.5 dBm @ MCS12 40 MHz 16.5±1.5 dBm @ MCS13 40 MHz 15.5±1.5 dBm @ MCS14 40 MHz 15±1.5 dBm @ MCS15 40 MHz
Transmitter Power for 802.11ac (5 GHz, Dual Chain)	TAP-M310R-NPS-1R and -1P1R models: 22±1.5 dBm @ MCS0 20 MHz 22±1.5 dBm @ MCS1 20 MHz 21.5±1.5 dBm @ MCS2 20 MHz 21.5±1.5 dBm @ MCS3 20 MHz 20.5±1.5 dBm @ MCS4 20 MHz 20±1.5 dBm @ MCS5 20 MHz 19.5±1.5 dBm @ MCS6 20 MHz 19.5±1.5 dBm @ MCS7 20 MHz 19±1.5 dBm @ MCS8 20 MHz 21.5±1.5 dBm @ MCS0 40 MHz 21.5±1.5 dBm @ MCS1 40 MHz 21±1.5 dBm @ MCS2 40 MHz 20.5±1.5 dBm @ MCS3 40 MHz 20±1.5 dBm @ MCS4 40 MHz 19.5±1.5 dBm @ MCS5 40 MHz 19.5±1.5 dBm @ MCS6 40 MHz 19.5±1.5 dBm @ MCS7 40 MHz 19±1.5 dBm @ MCS8 40 MHz 18.5±1.5 dBm @ MCS9 40 MHz 21±1.5 dBm @ MCS0 80 MHz 21±1.5 dBm @ MCS1 80 MHz 21±1.5 dBm @ MCS2 80 MHz 21±1.5 dBm @ MCS3 80 MHz 20±1.5 dBm @ MCS4 80 MHz 20±1.5 dBm @ MCS5 80 MHz 19±1.5 dBm @ MCS6 80 MHz 19±1.5 dBm @ MCS7 80 MHz 18.5±1.5 dBm @ MCS8 80 MHz 18.5±1.5 dBm @ MCS9 80 MHz TAP-M310R-1P1R1S and -1P2R1S models: 18±1.5 dBm @ MCS0 20 MHz 18±1.5 dBm @ MCS1 20 MHz 18±1.5 dBm @ MCS2 20 MHz 18±1.5 dBm @ MCS3 20 MHz 17±1.5 dBm @ MCS4 20 MHz 17±1.5 dBm @ MCS5 20 MHz 15.5±1.5 dBm @ MCS6 20 MHz 15±1.5 dBm @ MCS7 20 MHz 14.5±1.5 dBm @ MCS8 20 MHz 18±1.5 dBm @ MCS0 40 MHz

	18±1.5 dBm @ MCS1 40 MHz 18±1.5 dBm @ MCS2 40 MHz 18±1.5 dBm @ MCS3 40 MHz 17±1.5 dBm @ MCS4 40 MHz 17±1.5 dBm @ MCS5 40 MHz 15±1.5 dBm @ MCS6 40 MHz 15.5±1.5 dBm @ MCS7 40 MHz 15±1.5 dBm @ MCS8 40 MHz 14.5±1.5 dBm @ MCS9 40 MHz 18±1.5 dBm @ MCS0 80 MHz 18±1.5 dBm @ MCS1 80 MHz 18±1.5 dBm @ MCS2 80 MHz 18±1.5 dBm @ MCS3 80 MHz 17±1.5 dBm @ MCS4 80 MHz 17±1.5 dBm @ MCS5 80 MHz 15.5±1.5 dBm @ MCS6 80 MHz 15±1.5 dBm @ MCS7 80 MHz 14.5±1.5 dBm @ MCS8 80 MHz 14.5±1.5 dBm @ MCS9 80 MHz
Transmitter Power for 802.11ax (5 GHz, Dual Chain)	TAP-M310R-NPS-1R and -1P1R models: 22±1.5 dBm @ MCS0 20 MHz 22±1.5 dBm @ MCS1 20 MHz 21±1.5 dBm @ MCS2 20 MHz 21±1.5 dBm @ MCS3 20 MHz 19±1.5 dBm @ MCS4 20 MHz 19±1.5 dBm @ MCS5 20 MHz 19±1.5 dBm @ MCS6 20 MHz 19±1.5 dBm @ MCS7 20 MHz 19±1.5 dBm @ MCS8 20 MHz 18.5±1.5 dBm @ MCS9 20 MHz 18±1.5 dBm @ MCS10 20 MHz 17.5±1.5 dBm @ MCS11 20 MHz 21.5±1.5 dBm @ MCS0 40 MHz 21.5±1.5 dBm @ MCS1 40 MHz 21±1.5 dBm @ MCS2 40 MHz 21±1.5 dBm @ MCS3 40 MHz 20±1.5 dBm @ MCS4 40 MHz 20±1.5 dBm @ MCS5 40 MHz 19±1.5 dBm @ MCS6 40 MHz 19±1.5 dBm @ MCS7 40 MHz 19±1.5 dBm @ MCS8 40 MHz 18.5±1.5 dBm @ MCS9 40 MHz 18±1.5 dBm @ MCS10 40 MHz 17.5±1.5 dBm @ MCS11 40 MHz 21±1.5 dBm @ MCS0 80 MHz 21±1.5 dBm @ MCS1 80 MHz 21±1.5 dBm @ MCS2 80 MHz 21±1.5 dBm @ MCS3 80 MHz 20±1.5 dBm @ MCS4 80 MHz 20±1.5 dBm @ MCS5 80 MHz 18.5±1.5 dBm @ MCS6 80 MHz 18.5±1.5 dBm @ MCS7 80 MHz 18.5±1.5 dBm @ MCS8 80 MHz 18±1.5 dBm @ MCS9 80 MHz 18±1.5 dBm @ MCS10 80 MHz 17.5±1.5 dBm @ MCS11 80 MHz TAP-M310R-1P1R1S and -1P2R1S models: 18±1.5 dBm @ MCS0 20 MHz 18±1.5 dBm @ MCS1 20 MHz 18±1.5 dBm @ MCS2 20 MHz 18±1.5 dBm @ MCS3 20 MHz 17±1.5 dBm @ MCS4 20 MHz 17±1.5 dBm @ MCS5 20 MHz 15.5±1.5 dBm @ MCS6 20 MHz 15±1.5 dBm @ MCS7 20 MHz 14.5±1.5 dBm @ MCS8 20 MHz 14±1.5 dBm @ MCS9 20 MHz 13.5±1.5 dBm @ MCS10 20 MHz 13.5±1.5 dBm @ MCS11 20 MHz 18±1.5 dBm @ MCS0 40 MHz 18±1.5 dBm @ MCS1 40 MHz 17.5±1.5 dBm @ MCS2 40 MHz

	17.5±1.5 dBm @ MCS3 40 MHz 16.5±1.5 dBm @ MCS4 40 MHz 16.5±1.5 dBm @ MCS5 40 MHz 16±1.5 dBm @ MCS6 40 MHz 15.5±1.5 dBm @ MCS7 40 MHz 14±1.5 dBm @ MCS8 40 MHz 14±1.5 dBm @ MCS9 40 MHz 13.5±1.5 dBm @ MCS10 40 MHz 13.5±1.5 dBm @ MCS11 40 MHz 18±1.5 dBm @ MCS0 80 MHz 18±1.5 dBm @ MCS1 80 MHz 17.5±1.5 dBm @ MCS2 80 MHz 17.5±1.5 dBm @ MCS3 80 MHz 16.5±1.5 dBm @ MCS4 80 MHz 16.5±1.5 dBm @ MCS5 80 MHz 15.5±1.5 dBm @ MCS6 80 MHz 15.5±1.5 dBm @ MCS7 80 MHz 14.5±1.5 dBm @ MCS8 80 MHz 14±1.5 dBm @ MCS9 80 MHz 13.5±1.5 dBm @ MCS10 80 MHz 13.5±1.5 dBm @ MCS11 80 MHz
Transmitter Power for 802.11b	TAP-M310R-NPS-1R and -1P1R models: 27±1.5 dBm @ 1 Mbps 27±1.5 dBm @ 2 Mbps 27±1.5 dBm @ 5.5 Mbps 27±1.5 dBm @ 11 Mbps TAP-M310R-1P1R1S and -1P2R1S models: 23.5±1.5 dBm @ 1 Mbps 23.5±1.5 dBm @ 2 Mbps 23.5±1.5 dBm @ 5.5 Mbps 23.5±1.5 dBm @ 11 Mbps
Transmitter Power for 802.11g	TAP-M310R-NPS-1R and -1P1R models: 26.5±1.5 dBm @ 6 Mbps 26.5±1.5 dBm @ 9 Mbps 26.5±1.5 dBm @ 12 Mbps 25±1.5 dBm @ 18 Mbps 25±1.5 dBm @ 24 Mbps 25±1.5 dBm @ 36 Mbps 24.5±1.5 dBm @ 48 Mbps 23.5±1.5 dBm @ 54 Mbps TAP-M310R-1P1R1S and -1P2R1S models: 23±1.5 dBm @ 6 Mbps 23±1.5 dBm @ 9 Mbps 23±1.5 dBm @ 12 Mbps 22±1.5 dBm @ 18 Mbps 22±1.5 dBm @ 24 Mbps 22±1.5 dBm @ 36 Mbps 21.5±1.5 dBm @ 48 Mbps 20.5±1.5 dBm @ 54 Mbps
Transmitter Power for 802.11n (2.4 GHz)	TAP-M310R-NPS-1R and -1P1R models: 26.5±1.5 dBm @ MCS0 20 MHz 26.5±1.5 dBm @ MCS1 20 MHz 25±1.5 dBm @ MCS2 20 MHz 25±1.5 dBm @ MCS3 20 MHz 25±1.5 dBm @ MCS4 20 MHz 24.5±1.5 dBm @ MCS5 20 MHz 23.5±1.5 dBm @ MCS6 20 MHz 23±1.5 dBm @ MCS7 20 MHz 25.5±1.5 dBm @ MCS8 20 MHz 25.5±1.5 dBm @ MCS9 20 MHz 24±1.5 dBm @ MCS10 20 MHz 24±1.5 dBm @ MCS11 20 MHz 24±1.5 dBm @ MCS12 20 MHz 24±1.5 dBm @ MCS13 20 MHz 22.5±1.5 dBm @ MCS14 20 MHz 22±1.5 dBm @ MCS15 20 MHz 26±1.5 dBm @ MCS0 40 MHz 26±1.5 dBm @ MCS1 40 MHz

25.5±1.5 dBm @ MCS2 40 MHz
 25±1.5 dBm @ MCS3 40 MHz
 24.5±1.5 dBm @ MCS4 40 MHz
 24±1.5 dBm @ MCS5 40 MHz
 23±1.5 dBm @ MCS6 40 MHz
 22.5±1.5 dBm @ MCS7 40 MHz
 24±1.5 dBm @ MCS8 40 MHz
 24±1.5 dBm @ MCS9 40 MHz
 23.5±1.5 dBm @ MCS10 40 MHz
 23.5±1.5 dBm @ MCS11 40 MHz
 22±1.5 dBm @ MCS12 40 MHz
 22±1.5 dBm @ MCS13 40 MHz
 21.5±1.5 dBm @ MCS14 40 MHz
 21.5±1.5 dBm @ MCS15 40 MHz

TAP-M310R-1P1R1S and -1P2R1S models:

23±1.5 dBm @ MCS0 20 MHz
 23±1.5 dBm @ MCS1 20 MHz
 22±1.5 dBm @ MCS2 20 MHz
 22±1.5 dBm @ MCS3 20 MHz
 21.5±1.5 dBm @ MCS4 20 MHz
 21±1.5 dBm @ MCS5 20 MHz
 20.5±1.5 dBm @ MCS6 20 MHz
 19.5±1.5 dBm @ MCS7 20 MHz
 23±1.5 dBm @ MCS8 20 MHz
 23±1.5 dBm @ MCS9 20 MHz
 21±1.5 dBm @ MCS10 20 MHz
 21±1.5 dBm @ MCS11 20 MHz
 21±1.5 dBm @ MCS12 20 MHz
 21±1.5 dBm @ MCS13 20 MHz
 20±1.5 dBm @ MCS14 20 MHz
 19±1.5 dBm @ MCS15 20 MHz
 22.5±1.5 dBm @ MCS0 40 MHz
 22.5±1.5 dBm @ MCS1 40 MHz
 22.5±1.5 dBm @ MCS2 40 MHz
 21.5±1.5 dBm @ MCS3 40 MHz
 21±1.5 dBm @ MCS4 40 MHz
 20.5±1.5 dBm @ MCS5 40 MHz
 20±1.5 dBm @ MCS6 40 MHz
 19.5±1.5 dBm @ MCS7 40 MHz
 22±1.5 dBm @ MCS8 40 MHz
 22±1.5 dBm @ MCS9 40 MHz
 21±1.5 dBm @ MCS10 40 MHz
 20±1.5 dBm @ MCS11 40 MHz
 19±1.5 dBm @ MCS12 40 MHz
 19±1.5 dBm @ MCS13 40 MHz
 18.5±1.5 dBm @ MCS14 40 MHz
 19±1.5 dBm @ MCS15 40 MHz

Transmitter Power for 802.11ac (2.4 GHz, Dual Chain)

TAP-M310R-NPS-1R and -1P1R models:

26±1.5 dBm @ MCS0 20 MHz
 26±1.5 dBm @ MCS1 20 MHz
 24.5±1.5 dBm @ MCS2 20 MHz
 24.5±1.5 dBm @ MCS3 20 MHz
 24.5±1.5 dBm @ MCS4 20 MHz
 24±1.5 dBm @ MCS5 20 MHz
 23±1.5 dBm @ MCS6 20 MHz
 22.5±1.5 dBm @ MCS7 20 MHz
 22.5±1.5 dBm @ MCS8 20 MHz
 25±1.5 dBm @ MCS0 40 MHz
 25±1.5 dBm @ MCS1 40 MHz
 24±1.5 dBm @ MCS2 40 MHz
 24±1.5 dBm @ MCS3 40 MHz
 22.5±1.5 dBm @ MCS4 40 MHz
 22.5±1.5 dBm @ MCS5 40 MHz
 22.5±1.5 dBm @ MCS6 40 MHz
 22.5±1.5 dBm @ MCS7 40 MHz
 22.5±1.5 dBm @ MCS8 40 MHz
 22±1.5 dBm @ MCS9 40 MHz

TAP-M310R-1P1R1S and -1P2R1S models:

22.5±1.5 dBm @ MCS0 20 MHz
 22.5±1.5 dBm @ MCS1 20 MHz
 22±1.5 dBm @ MCS2 20 MHz

	21.5±1.5 dBm @ MCS3 20 MHz 21.5±1.5 dBm @ MCS4 20 MHz 21±1.5 dBm @ MCS5 20 MHz 20±1.5 dBm @ MCS6 20 MHz 19.5±1.5 dBm @ MCS7 20 MHz 19.5±1.5 dBm @ MCS8 20 MHz 22±1.5 dBm @ MCS0 40 MHz 22±1.5 dBm @ MCS1 40 MHz 22±1.5 dBm @ MCS2 40 MHz 21±1.5 dBm @ MCS3 40 MHz 21±1.5 dBm @ MCS4 40 MHz 20±1.5 dBm @ MCS5 40 MHz 19.5±1.5 dBm @ MCS6 40 MHz 19.5±1.5 dBm @ MCS7 40 MHz 19±1.5 dBm @ MCS8 40 MHz 18.5±1.5 dBm @ MCS9 40 MHz
Transmitter Power for 802.11ax (2.4 GHz, Dual Chain)	TAP-M310R-NPS-1R and -1P1R models: 26.5±1.5 dBm @ MCS0 20 MHz 26.5±1.5 dBm @ MCS1 20 MHz 24.5±1.5 dBm @ MCS2 20 MHz 24.5±1.5 dBm @ MCS3 20 MHz 24±1.5 dBm @ MCS4 20 MHz 24±1.5 dBm @ MCS5 20 MHz 23.5±1.5 dBm @ MCS6 20 MHz 23.5±1.5 dBm @ MCS7 20 MHz 22.5±1.5 dBm @ MCS8 20 MHz 22±1.5 dBm @ MCS9 20 MHz 21.5±1.5 dBm @ MCS10 20 MHz 21.5±1.5 dBm @ MCS11 20 MHz 25±1.5 dBm @ MCS0 40 MHz 25±1.5 dBm @ MCS1 40 MHz 24±1.5 dBm @ MCS2 40 MHz 24±1.5 dBm @ MCS3 40 MHz 24±1.5 dBm @ MCS4 40 MHz 22±1.5 dBm @ MCS5 40 MHz 22±1.5 dBm @ MCS6 40 MHz 22±1.5 dBm @ MCS7 40 MHz 22±1.5 dBm @ MCS8 40 MHz 22±1.5 dBm @ MCS9 40 MHz 21.5±1.5 dBm @ MCS10 40 MHz 21.5±1.5 dBm @ MCS11 40 MHz TAP-M310R-1P1R1S and -1P2R1S models: 22.5±1.5 dBm @ MCS0 20 MHz 22.5±1.5 dBm @ MCS1 20 MHz 21±1.5 dBm @ MCS2 20 MHz 21±1.5 dBm @ MCS3 20 MHz 21±1.5 dBm @ MCS4 20 MHz 20.5±1.5 dBm @ MCS5 20 MHz 20±1.5 dBm @ MCS6 20 MHz 19.5±1.5 dBm @ MCS7 20 MHz 19±1.5 dBm @ MCS8 20 MHz 19±1.5 dBm @ MCS9 20 MHz 18.5±1.5 dBm @ MCS10 20 MHz 18.5±1.5 dBm @ MCS11 20 MHz 22±1.5 dBm @ MCS0 40 MHz 22±1.5 dBm @ MCS1 40 MHz 21±1.5 dBm @ MCS2 40 MHz 21±1.5 dBm @ MCS3 40 MHz 21±1.5 dBm @ MCS4 40 MHz 20.5±1.5 dBm @ MCS5 40 MHz 19.5±1.5 dBm @ MCS6 40 MHz 19.5±1.5 dBm @ MCS7 40 MHz 19±1.5 dBm @ MCS8 40 MHz 18.5±1.5 dBm @ MCS9 40 MHz 18±1.5 dBm @ MCS10 40 MHz 18±1.5 dBm @ MCS11 40 MHz
Receiver Sensitivity for 802.11a	TAP-M310R-NPS-1R and -1P1R models: Typ. -89 @ 6 Mbps Typ. -87 @ 9 Mbps Typ. -86 @ 12 Mbps Typ. -84 @ 18 Mbps

	Typ. -81 @ 24 Mbps Typ. -78 @ 36 Mbps Typ. -73 @ 48 Mbps Typ. -72 @ 54 Mbps TAP-M310R-1P1R1S and -1P2R1S models: Typ. -86 @ 6 Mbps Typ. -84 @ 9 Mbps Typ. -83 @ 12 Mbps Typ. -80 @ 18 Mbps Typ. -77 @ 24 Mbps Typ. -74 @ 36 Mbps Typ. -70 @ 48 Mbps Typ. -68 @ 54 Mbps
Receiver Sensitivity for 802.11n (5 GHz)	TAP-M310R-NPS-1R and -1P1R models: Typ. -89 dBm @ MCS0 20 MHz Typ. -86 dBm @ MCS1 20 MHz Typ. -83 dBm @ MCS2 20 MHz Typ. -80 dBm @ MCS3 20 MHz Typ. -76 dBm @ MCS4 20 MHz Typ. -72 dBm @ MCS5 20 MHz Typ. -70 dBm @ MCS6 20 MHz Typ. -69 dBm @ MCS7 20 MHz Typ. -89 dBm @ MCS8 20 MHz Typ. -86 dBm @ MCS9 20 MHz Typ. -84 dBm @ MCS10 20 MHz Typ. -81 dBm @ MCS11 20 MHz Typ. -78 dBm @ MCS12 20 MHz Typ. -74 dBm @ MCS13 20 MHz Typ. -72 dBm @ MCS14 20 MHz Typ. -70 dBm @ MCS15 20 MHz Typ. -86 dBm @ MCS0 40 MHz Typ. -83 dBm @ MCS1 40 MHz Typ. -80 dBm @ MCS2 40 MHz Typ. -77 dBm @ MCS3 40 MHz Typ. -74 dBm @ MCS4 40 MHz Typ. -69 dBm @ MCS5 40 MHz Typ. -68 dBm @ MCS6 40 MHz Typ. -66 dBm @ MCS7 40 MHz Typ. -87 dBm @ MCS8 40 MHz Typ. -83 dBm @ MCS9 40 MHz Typ. -81 dBm @ MCS10 40 MHz Typ. -78 dBm @ MCS11 40 MHz Typ. -75 dBm @ MCS12 40 MHz Typ. -71 dBm @ MCS13 40 MHz Typ. -70 dBm @ MCS14 40 MHz Typ. -68 dBm @ MCS15 40 MHz TAP-M310R-1P1R1S and -1P2R1S models: Typ. -85 dBm @ MCS0 20 MHz Typ. -82 dBm @ MCS1 20 MHz Typ. -80 dBm @ MCS2 20 MHz Typ. -76 dBm @ MCS3 20 MHz Typ. -73 dBm @ MCS4 20 MHz Typ. -68 dBm @ MCS5 20 MHz Typ. -67 dBm @ MCS6 20 MHz Typ. -65 dBm @ MCS7 20 MHz Typ. -86 dBm @ MCS8 20 MHz Typ. -83 dBm @ MCS9 20 MHz Typ. -81 dBm @ MCS10 20 MHz Typ. -78 dBm @ MCS11 20 MHz Typ. -75 dBm @ MCS12 20 MHz Typ. -71 dBm @ MCS13 20 MHz Typ. -69 dBm @ MCS14 20 MHz Typ. -66 dBm @ MCS15 20 MHz Typ. -83 dBm @ MCS0 40 MHz Typ. -79 dBm @ MCS1 40 MHz Typ. -77 dBm @ MCS2 40 MHz Typ. -74 dBm @ MCS3 40 MHz Typ. -70 dBm @ MCS4 40 MHz Typ. -66 dBm @ MCS5 40 MHz Typ. -65 dBm @ MCS6 40 MHz Typ. -63 dBm @ MCS7 40 MHz

	Typ. -84 dBm @ MCS8 40 MHz Typ. -80 dBm @ MCS9 40 MHz Typ. -78 dBm @ MCS10 40 MHz Typ. -74 dBm @ MCS11 40 MHz Typ. -72 dBm @ MCS12 40 MHz Typ. -68 dBm @ MCS13 40 MHz Typ. -67 dBm @ MCS14 40 MHz Typ. -65 dBm @ MCS15 40 MHz
Receiver Sensitivity for 802.11ac (5 GHz)	TAP-M310R-NPS-1R and -1P1R models: Typ. -89 dBm @ MCS0 20 MHz Typ. -86 dBm @ MCS1 20 MHz Typ. -83 dBm @ MCS2 20 MHz Typ. -80 dBm @ MCS3 20 MHz Typ. -78 dBm @ MCS4 20 MHz Typ. -73 dBm @ MCS5 20 MHz Typ. -72 dBm @ MCS6 20 MHz Typ. -70 dBm @ MCS7 20 MHz Typ. -66 dBm @ MCS8 20 MHz Typ. -87 dBm @ MCS0 40 MHz Typ. -83 dBm @ MCS1 40 MHz Typ. -81 dBm @ MCS2 40 MHz Typ. -78 dBm @ MCS3 40 MHz Typ. -75 dBm @ MCS4 40 MHz Typ. -71 dBm @ MCS5 40 MHz Typ. -70 dBm @ MCS6 40 MHz Typ. -68 dBm @ MCS7 40 MHz Typ. -64 dBm @ MCS8 40 MHz Typ. -62 dBm @ MCS9 40 MHz Typ. -84 dBm @ MCS0 80 MHz Typ. -81 dBm @ MCS1 80 MHz Typ. -78 dBm @ MCS2 80 MHz Typ. -75 dBm @ MCS3 80 MHz Typ. -72 dBm @ MCS4 80 MHz Typ. -68 dBm @ MCS5 80 MHz Typ. -66 dBm @ MCS6 80 MHz Typ. -64 dBm @ MCS7 80 MHz Typ. -61 dBm @ MCS8 80 MHz Typ. -59 dBm @ MCS9 80 MHz TAP-M310R-1P1R1S and -1P2R1S models: Typ. -86 dBm @ MCS0 20 MHz Typ. -82 dBm @ MCS1 20 MHz Typ. -80 dBm @ MCS2 20 MHz Typ. -77 dBm @ MCS3 20 MHz Typ. -74 dBm @ MCS4 20 MHz Typ. -70 dBm @ MCS5 20 MHz Typ. -68 dBm @ MCS6 20 MHz Typ. -67 dBm @ MCS7 20 MHz Typ. -63 dBm @ MCS8 20 MHz Typ. -83 dBm @ MCS0 40 MHz Typ. -80 dBm @ MCS1 40 MHz Typ. -78 dBm @ MCS2 40 MHz Typ. -74 dBm @ MCS3 40 MHz Typ. -72 dBm @ MCS4 40 MHz Typ. -68 dBm @ MCS5 40 MHz Typ. -66 dBm @ MCS6 40 MHz Typ. -65 dBm @ MCS7 40 MHz Typ. -61 dBm @ MCS8 40 MHz Typ. -59 dBm @ MCS9 40 MHz Typ. -81 dBm @ MCS0 80 MHz Typ. -77 dBm @ MCS1 80 MHz Typ. -75 dBm @ MCS2 80 MHz Typ. -71 dBm @ MCS3 80 MHz Typ. -68 dBm @ MCS4 80 MHz Typ. -65 dBm @ MCS5 80 MHz Typ. -63 dBm @ MCS6 80 MHz Typ. -61 dBm @ MCS7 80 MHz Typ. -57 dBm @ MCS8 80 MHz Typ. -56 dBm @ MCS9 80 MHz
Receiver Sensitivity for 802.11ax (5 GHz)	TAP-M310R-NPS-1R and -1P1R models: Typ. -89 dBm @ MCS0 20 MHz Typ. -86 dBm @ MCS1 20 MHz

Typ. -84 dBm @ MCS2 20 MHz
 Typ. -81 dBm @ MCS3 20 MHz
 Typ. -78 dBm @ MCS4 20 MHz
 Typ. -73 dBm @ MCS5 20 MHz
 Typ. -72 dBm @ MCS6 20 MHz
 Typ. -70 dBm @ MCS7 20 MHz
 Typ. -66 dBm @ MCS8 20 MHz
 Typ. -65 dBm @ MCS9 20 MHz
 Typ. -61 dBm @ MCS10 20 MHz
 Typ. -59 dBm @ MCS11 20 MHz
 Typ. -87 dBm @ MCS0 40 MHz
 Typ. -84 dBm @ MCS1 40 MHz
 Typ. -82 dBm @ MCS2 40 MHz
 Typ. -78 dBm @ MCS3 40 MHz
 Typ. -75 dBm @ MCS4 40 MHz
 Typ. -71 dBm @ MCS5 40 MHz
 Typ. -70 dBm @ MCS6 40 MHz
 Typ. -68 dBm @ MCS7 40 MHz
 Typ. -65 dBm @ MCS8 40 MHz
 Typ. -63 dBm @ MCS9 40 MHz
 Typ. -59 dBm @ MCS10 40 MHz
 Typ. -57 dBm @ MCS11 40 MHz
 Typ. -84 dBm @ MCS0 80 MHz
 Typ. -81 dBm @ MCS1 80 MHz
 Typ. -78 dBm @ MCS2 80 MHz
 Typ. -76 dBm @ MCS3 80 MHz
 Typ. -72 dBm @ MCS4 80 MHz
 Typ. -68 dBm @ MCS5 80 MHz
 Typ. -67 dBm @ MCS6 80 MHz
 Typ. -65 dBm @ MCS7 80 MHz
 Typ. -61 dBm @ MCS8 80 MHz
 Typ. -59 dBm @ MCS9 80 MHz
 Typ. -55 dBm @ MCS10 80 MHz
 Typ. -53 dBm @ MCS11 80 MHz

TAP-M310R-1P1R1S and -1P2R1S models:

Typ. -87 dBm @ MCS0 20 MHz
 Typ. -83 dBm @ MCS1 20 MHz
 Typ. -81 dBm @ MCS2 20 MHz
 Typ. -78 dBm @ MCS3 20 MHz
 Typ. -75 dBm @ MCS4 20 MHz
 Typ. -71 dBm @ MCS5 20 MHz
 Typ. -69 dBm @ MCS6 20 MHz
 Typ. -67 dBm @ MCS7 20 MHz
 Typ. -64 dBm @ MCS8 20 MHz
 Typ. -62 dBm @ MCS9 20 MHz
 Typ. -58 dBm @ MCS10 20 MHz
 Typ. -56 dBm @ MCS11 20 MHz
 Typ. -84 dBm @ MCS0 40 MHz
 Typ. -81 dBm @ MCS1 40 MHz
 Typ. -79 dBm @ MCS2 40 MHz
 Typ. -76 dBm @ MCS3 40 MHz
 Typ. -72 dBm @ MCS4 40 MHz
 Typ. -63 dBm @ MCS5 40 MHz
 Typ. -67 dBm @ MCS6 40 MHz
 Typ. -65 dBm @ MCS7 40 MHz
 Typ. -62 dBm @ MCS8 40 MHz
 Typ. -60 dBm @ MCS9 40 MHz
 Typ. -56 dBm @ MCS10 40 MHz
 Typ. -54 dBm @ MCS11 40 MHz
 Typ. -81 dBm @ MCS0 80 MHz
 Typ. -78 dBm @ MCS1 80 MHz
 Typ. -75 dBm @ MCS2 80 MHz
 Typ. -72 dBm @ MCS3 80 MHz
 Typ. -69 dBm @ MCS4 80 MHz
 Typ. -65 dBm @ MCS5 80 MHz
 Typ. -64 dBm @ MCS6 80 MHz
 Typ. -62 dBm @ MCS7 80 MHz
 Typ. -58 dBm @ MCS8 80 MHz
 Typ. -56 dBm @ MCS9 80 MHz
 Typ. -52 dBm @ MCS10 80 MHz
 Typ. -50 dBm @ MCS11 80 MHz

Receiver Sensitivity for 802.11b

TAP-M310R-NPS-1R and -1P1R models:

	Typ. -94 dBm @ 1 Mbps Typ. -90 dBm @ 2 Mbps Typ. -88 dBm @ 5.5 Mbps Typ. -85 dBm @ 11 Mbps TAP-M310R-1P1R1S and -1P2R1S models: Typ. -91 dBm @ 1 Mbps Typ. -87 dBm @ 2 Mbps Typ. -85 dBm @ 5.5 Mbps Typ. -83 dBm @ 11 Mbps
Receiver Sensitivity for 802.11g	TAP-M310R-NPS-1R and -1P1R models: Typ. -89 dBm @ 6 Mbps Typ. -87 dBm @ 9 Mbps Typ. -86 dBm @ 12 Mbps Typ. -84 dBm @ 18 Mbps Typ. -81 dBm @ 24 Mbps Typ. -78 dBm @ 36 Mbps Typ. -73 dBm @ 48 Mbps Typ. -72 dBm @ 54 Mbps TAP-M310R-1P1R1S and -1P2R1S models: Typ. -86 dBm @ 6 Mbps Typ. -84 dBm @ 9 Mbps Typ. -83 dBm @ 12 Mbps Typ. -81 dBm @ 18 Mbps Typ. -78 dBm @ 24 Mbps Typ. -74 dBm @ 36 Mbps Typ. -70 dBm @ 48 Mbps Typ. -69 dBm @ 54 Mbps
Receiver Sensitivity for 802.11n (2.4 GHz)	TAP-M310R-NPS-1R and -1P1R models: Typ. -88 dBm @ MCS0 20 MHz Typ. -86 dBm @ MCS1 20 MHz Typ. -83 dBm @ MCS2 20 MHz Typ. -80 dBm @ MCS3 20 MHz Typ. -77 dBm @ MCS4 20 MHz Typ. -72 dBm @ MCS5 20 MHz Typ. -71 dBm @ MCS6 20 MHz Typ. -69 dBm @ MCS7 20 MHz Typ. -90 dBm @ MCS8 20 MHz Typ. -87 dBm @ MCS9 20 MHz Typ. -85 dBm @ MCS10 20 MHz Typ. -82 dBm @ MCS11 20 MHz Typ. -78 dBm @ MCS12 20 MHz Typ. -74 dBm @ MCS13 20 MHz Typ. -73 dBm @ MCS14 20 MHz Typ. -71 dBm @ MCS15 20 MHz Typ. -86 dBm @ MCS0 40 MHz Typ. -84 dBm @ MCS1 40 MHz Typ. -81 dBm @ MCS2 40 MHz Typ. -78 dBm @ MCS3 40 MHz Typ. -74 dBm @ MCS4 40 MHz Typ. -70 dBm @ MCS5 40 MHz Typ. -68 dBm @ MCS6 40 MHz Typ. -67 dBm @ MCS7 40 MHz Typ. -88 dBm @ MCS8 40 MHz Typ. -85 dBm @ MCS9 40 MHz Typ. -83 dBm @ MCS10 40 MHz Typ. -79 dBm @ MCS11 40 MHz Typ. -76 dBm @ MCS12 40 MHz Typ. -72 dBm @ MCS13 40 MHz Typ. -70 dBm @ MCS14 40 MHz Typ. -68 dBm @ MCS15 40 MHz TAP-M310R-1P1R1S and -1P2R1S models: Typ. -85 dBm @ MCS0 20 MHz Typ. -82 dBm @ MCS1 20 MHz Typ. -80 dBm @ MCS2 20 MHz Typ. -77 dBm @ MCS3 20 MHz Typ. -73 dBm @ MCS4 20 MHz Typ. -69 dBm @ MCS5 20 MHz Typ. -68 dBm @ MCS6 20 MHz Typ. -66 dBm @ MCS7 20 MHz

	Typ. -87 dBm @ MCS8 20 MHz Typ. -84 dBm @ MCS9 20 MHz Typ. -82 dBm @ MCS10 20 MHz Typ. -79 dBm @ MCS11 20 MHz Typ. -75 dBm @ MCS12 20 MHz Typ. -71 dBm @ MCS13 20 MHz Typ. -70 dBm @ MCS14 20 MHz Typ. -68 dBm @ MCS15 20 MHz Typ. -83 dBm @ MCS0 40 MHz Typ. -80 dBm @ MCS1 40 MHz Typ. -78 dBm @ MCS2 40 MHz Typ. -74 dBm @ MCS3 40 MHz Typ. -71 dBm @ MCS4 40 MHz Typ. -67 dBm @ MCS5 40 MHz Typ. -65 dBm @ MCS6 40 MHz Typ. -64 dBm @ MCS7 40 MHz Typ. -85 dBm @ MCS8 40 MHz Typ. -81 dBm @ MCS9 40 MHz Typ. -79 dBm @ MCS10 40 MHz Typ. -75 dBm @ MCS11 40 MHz Typ. -72 dBm @ MCS12 40 MHz Typ. -69 dBm @ MCS13 40 MHz Typ. -67 dBm @ MCS14 40 MHz Typ. -65 dBm @ MCS15 40 MHz
Receiver Sensitivity for 802.11ac (2.4 GHz)	TAP-M310R-NPS-1R and -1P1R models: Typ. -90 dBm @ MCS0 20 MHz Typ. -86 dBm @ MCS1 20 MHz Typ. -84 dBm @ MCS2 20 MHz Typ. -81 dBm @ MCS3 20 MHz Typ. -78 dBm @ MCS4 20 MHz Typ. -74 dBm @ MCS5 20 MHz Typ. -72 dBm @ MCS6 20 MHz Typ. -71 dBm @ MCS7 20 MHz Typ. -67 dBm @ MCS8 20 MHz Typ. -87 dBm @ MCS0 40 MHz Typ. -84 dBm @ MCS1 40 MHz Typ. -82 dBm @ MCS2 40 MHz Typ. -78 dBm @ MCS3 40 MHz Typ. -75 dBm @ MCS4 40 MHz Typ. -71 dBm @ MCS5 40 MHz Typ. -70 dBm @ MCS6 40 MHz Typ. -68 dBm @ MCS7 40 MHz Typ. -65 dBm @ MCS8 40 MHz Typ. -63 dBm @ MCS9 40 MHz TAP-M310R-1P1R1S and -1P2R1S models: Typ. -86 dBm @ MCS0 20 MHz Typ. -83 dBm @ MCS1 20 MHz Typ. -81 dBm @ MCS2 20 MHz Typ. -78 dBm @ MCS3 20 MHz Typ. -75 dBm @ MCS4 20 MHz Typ. -71 dBm @ MCS5 20 MHz Typ. -69 dBm @ MCS6 20 MHz Typ. -67 dBm @ MCS7 20 MHz Typ. -64 dBm @ MCS8 20 MHz Typ. -84 dBm @ MCS0 40 MHz Typ. -81 dBm @ MCS1 40 MHz Typ. -79 dBm @ MCS2 40 MHz Typ. -75 dBm @ MCS3 40 MHz Typ. -72 dBm @ MCS4 40 MHz Typ. -68 dBm @ MCS5 40 MHz Typ. -67 dBm @ MCS6 40 MHz Typ. -65 dBm @ MCS7 40 MHz Typ. -61 dBm @ MCS8 40 MHz Typ. -60 dBm @ MCS9 40 MHz

Receiver Sensitivity for 802.11ax (2.4 GHz)	TAP-M310R-NPS-1R and -1P1R models: Typ. -89 dBm @ MCS0 20 MHz Typ. -87 dBm @ MCS1 20 MHz Typ. -84 dBm @ MCS2 20 MHz Typ. -81 dBm @ MCS3 20 MHz Typ. -78 dBm @ MCS4 20 MHz Typ. -74 dBm @ MCS5 20 MHz Typ. -73 dBm @ MCS6 20 MHz Typ. -71 dBm @ MCS7 20 MHz Typ. -67 dBm @ MCS8 20 MHz Typ. -65 dBm @ MCS9 20 MHz Typ. -62 dBm @ MCS10 20 MHz Typ. -60 dBm @ MCS11 20 MHz Typ. -87 dBm @ MCS0 40 MHz Typ. -85 dBm @ MCS1 40 MHz Typ. -83 dBm @ MCS2 40 MHz Typ. -80 dBm @ MCS3 40 MHz Typ. -76 dBm @ MCS4 40 MHz Typ. -72 dBm @ MCS5 40 MHz Typ. -71 dBm @ MCS6 40 MHz Typ. -69 dBm @ MCS7 40 MHz Typ. -65 dBm @ MCS8 40 MHz Typ. -63 dBm @ MCS9 40 MHz Typ. -60 dBm @ MCS10 40 MHz Typ. -58 dBm @ MCS11 40 MHz TAP-M310R-1P1R1S and -1P2R1S models: Typ. -87 dBm @ MCS0 20 MHz Typ. -84 dBm @ MCS1 20 MHz Typ. -81 dBm @ MCS2 20 MHz Typ. -78 dBm @ MCS3 20 MHz Typ. -75 dBm @ MCS4 20 MHz Typ. -71 dBm @ MCS5 20 MHz Typ. -70 dBm @ MCS6 20 MHz Typ. -68 dBm @ MCS7 20 MHz Typ. -64 dBm @ MCS8 20 MHz Typ. -62 dBm @ MCS9 20 MHz Typ. -59 dBm @ MCS10 20 MHz Typ. -56 dBm @ MCS11 20 MHz Typ. -85 dBm @ MCS0 40 MHz Typ. -82 dBm @ MCS1 40 MHz Typ. -79 dBm @ MCS2 40 MHz Typ. -76 dBm @ MCS3 40 MHz Typ. -73 dBm @ MCS4 40 MHz Typ. -69 dBm @ MCS5 40 MHz Typ. -68 dBm @ MCS6 40 MHz Typ. -66 dBm @ MCS7 40 MHz Typ. -62 dBm @ MCS8 40 MHz Typ. -60 dBm @ MCS9 40 MHz Typ. -57 dBm @ MCS10 40 MHz Typ. -54 dBm @ MCS11 40 MHz
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Ethernet Interface

Standards	All models: IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3bz for 2.5GBaseT IEEE 802.1Q for VLAN Tagging TAP-M310R-1P1R1S and -1P2R1S models only: IEEE 802.3z for 1000BaseX
10/100/1000/2500BaseT(X) Ports (M12 X-coded 8-pin female connector)	TAP-M310R-NPS-1R, -1P1R models: 1 TAP-M310R-1P1R1S models: 1 TAP-M310R-1P2R1S models: 2
10/100/1000BaseT(X) Ports (M12 X-coded 8-pin female connector)	TAP-M310R-1P1R1S, -1P2R1S models: 2
1000/2500BaseSFP Slots	TAP-M310R-1P1R1S, 1P2R1S models: 2

Ethernet Software Features

Management	DHCP Server DHCP Client DNS HTTP IPv4 LLDP SMTP SNMPv1/v2c/v3 Syslog TCP/IP Telnet UDP VLAN MXconfig
Security	HTTPS/SSL RADIUS SSH Certificate Management
Time Management	SNTP Client

Firewall

Filter	ICMP MAC address IP protocol Port-based Wi-Fi ACL Client Isolation
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Serial Interface

Console Port	RS-232 (M12 A-coded 5-pin male connector)
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LED Interface

LED Indicators	TAP-M310R-NPS-1R, -1P1R models: PWR, PWR R, PWR L, SYS, 2.4G, 5G, LAN 1 TAP-M310R-1P1R1S, -1P2R1S models: PWR, PWR R, PWR L, SYS, 2.4G, 5G, LAN 1, LAN 2, LAN 3, LAN 4, LAN 5, HEAD, TAIL
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Input/Output Interface

Buttons	Reset button
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Physical Characteristics

Housing	Metal
IP Rating	IP67
Dimensions	TAP-M310R-NPS-1R models: 74.25 x 150 x 130 mm (2.92 x 5.91 x 5.12 in) TAP-M310R-NPS-1P1R models: 136.65 x 150 x 130 mm (5.38 x 5.91 x 5.12 in) TAP-M310R-1P1R1S models: 198.75 x 150 x 130 mm (7.83 x 5.91 x 5.12 in) TAP-M310R-1P2R1S models: 268.15 x 150 x 130 mm (10.56 x 5.91 x 5.12 in)
Weight	TAP-M310R-NPS-1R models: 1,688 g (3.72 lb) TAP-M310R-NPS-1P1R models: 3,263.5 g (7.19 lb) TAP-M310R-1P1R1S models: 4,508.5 g (9.94 lb) TAP-M310R-1P2R1S models: 6,281 g (13.85 lb)
Installation	TAP-M310R-NPS-1R, -1P1R models: Wall mounting, DIN-rail mounting (optional) TAP-M310R-1P1R1S, -1P2R1S models: DIN-rail mounting

Power Parameters

Input Current	TAP-M310R-NPS-1R models: 1.35 A @ 24 VDC TAP-M310R-NPS-1P1R models: 1.35 A @ 24 VDC, 0.3 A @ 110 VDC TAP-M310R-1P1R1S models: 110 to 220 VAC, 50 to 60 Hz, 0.36 to 0.18 A (max.) TAP-M310R-1P2R1S models: 110 to 220 VAC, 50 to 60 Hz, 0.62 to 0.31 A (max.)
Input Voltage	TAP-M310R-NPS-1R models: 24 VDC TAP-M310R-NPS-1P1R models: 24 to 110 VDC TAP-M310R-1P1R1S, -1P2R1S models: 110 to 220 VAC
Power Connector	TAP-M310R-NPS-1R models: M12 A-coded 4-pin male connector TAP-M310R-NPS-1P1R models: M12 K-coded 5-pin male connector TAP-M310R-1P1R1S, -1P2R1S models: M12 K-coded 5-pin male connector
Power Consumption	TAP-M310R-NPS-1R models: 32.4 W (max.) TAP-M310R-NPS-1P1R models: 33W (max.) TAP-M310R-1P1R1S models: 39.6 W (max.) TAP-M310R-1P2R1S models: 68.2 W (max.)

Environmental Limits

Operating Temperature	-40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 61000-6-2/-6-4 EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V/m IEC 61000-4-8 PFMF: 30 A/m
Safety	IEC 62368-1 UL 62368-1
Railway	EN 50121-4 EN 50155
Railway Fire Protection	EN 45545-2
Radio	EN 300 328, EN 301 489-1/17, EN 301 893, EN 300 440, FCC

MTBF

Time	TAP-M310R-NPS-1R models: 2,531,479 hrs TAP-M310R-NPS-1P1R models: 1,872,508 hrs TAP-M310R-1P1R1S models: 1,414,473 hrs TAP-M310R-1P2R1S models: 922,834 hrs
Standards	Telcordia Standard SR-332

Warranty

Warranty Period	5 years
Details	See www.moxa.com/jp/warranty

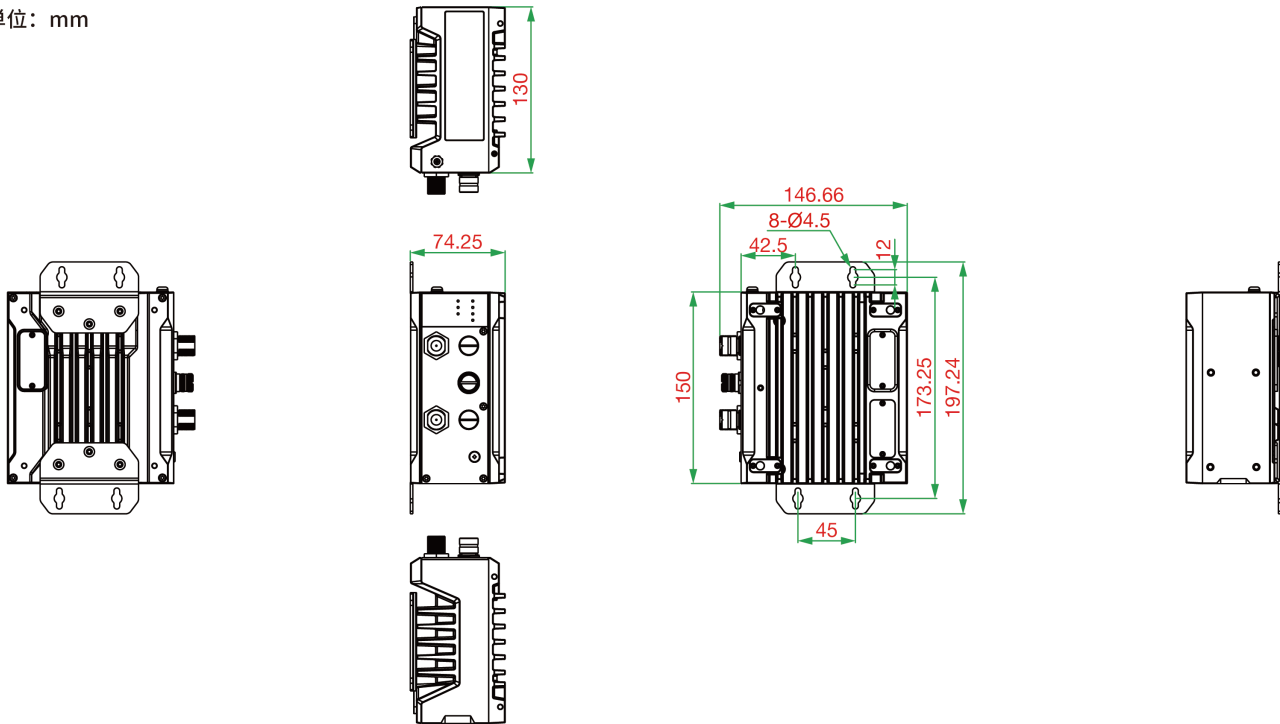
Package Contents

Device	1 x TAP-M310R Series wireless AP/Client
Installation Kit	TAP-M310R-NPS-1R, -1P1R models: 1 x Wall mounting kit
Documentation	1 x quick installation guide 1 x warranty card

寸法

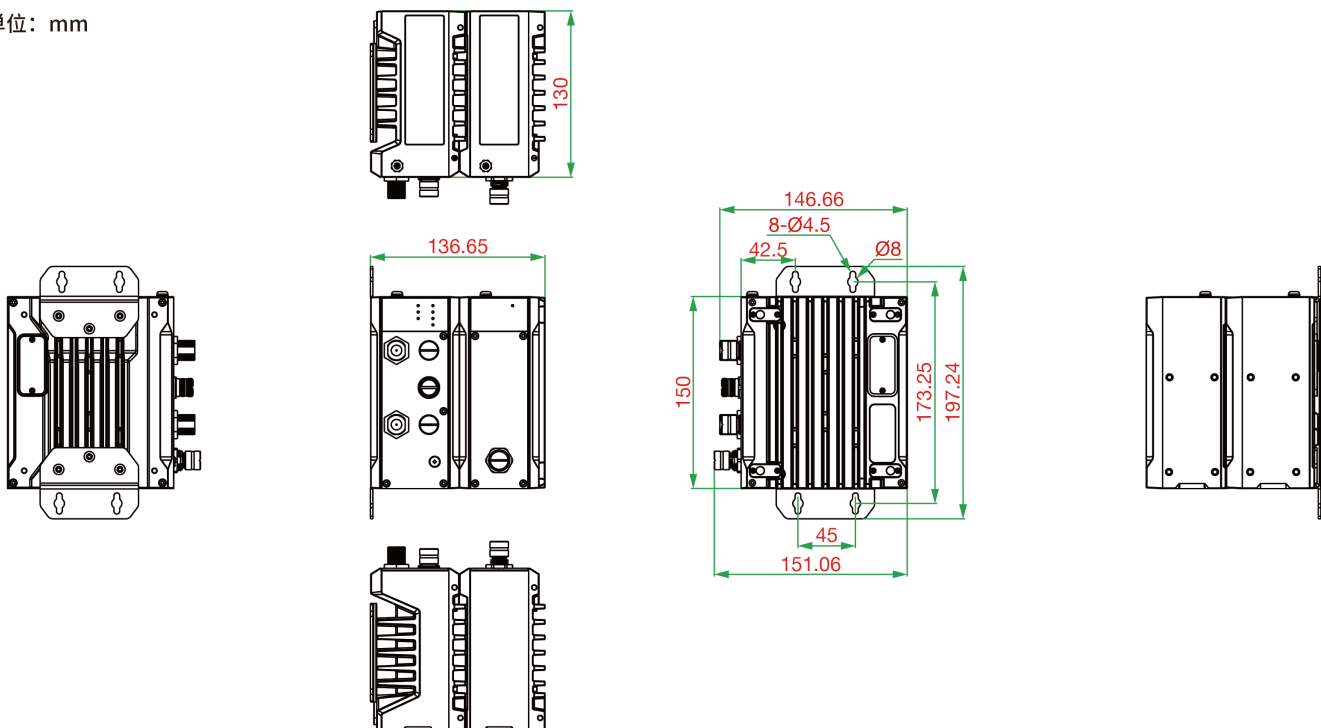
TAP-M310R-NPS-1Rモデル

単位: mm



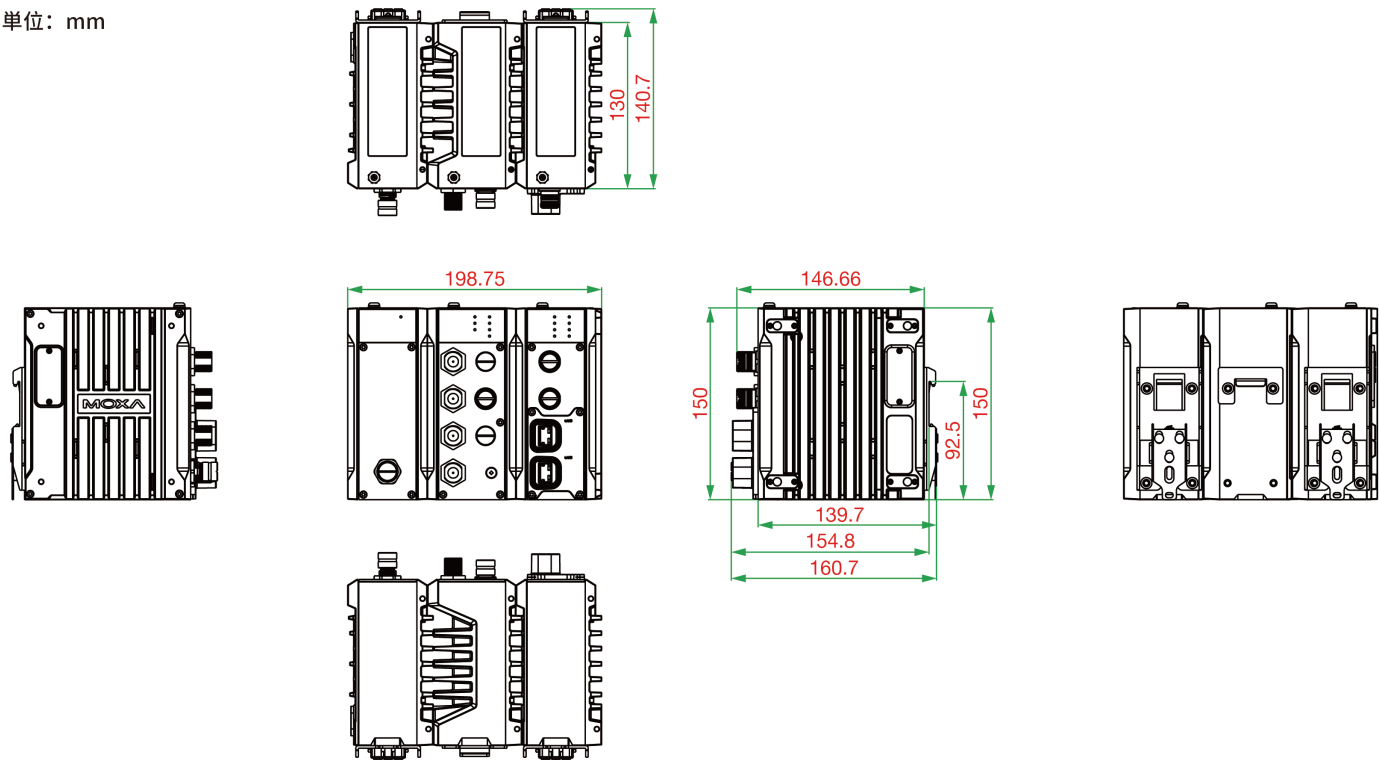
TAP-M310R-NPS-1P1Rモデル

単位: mm



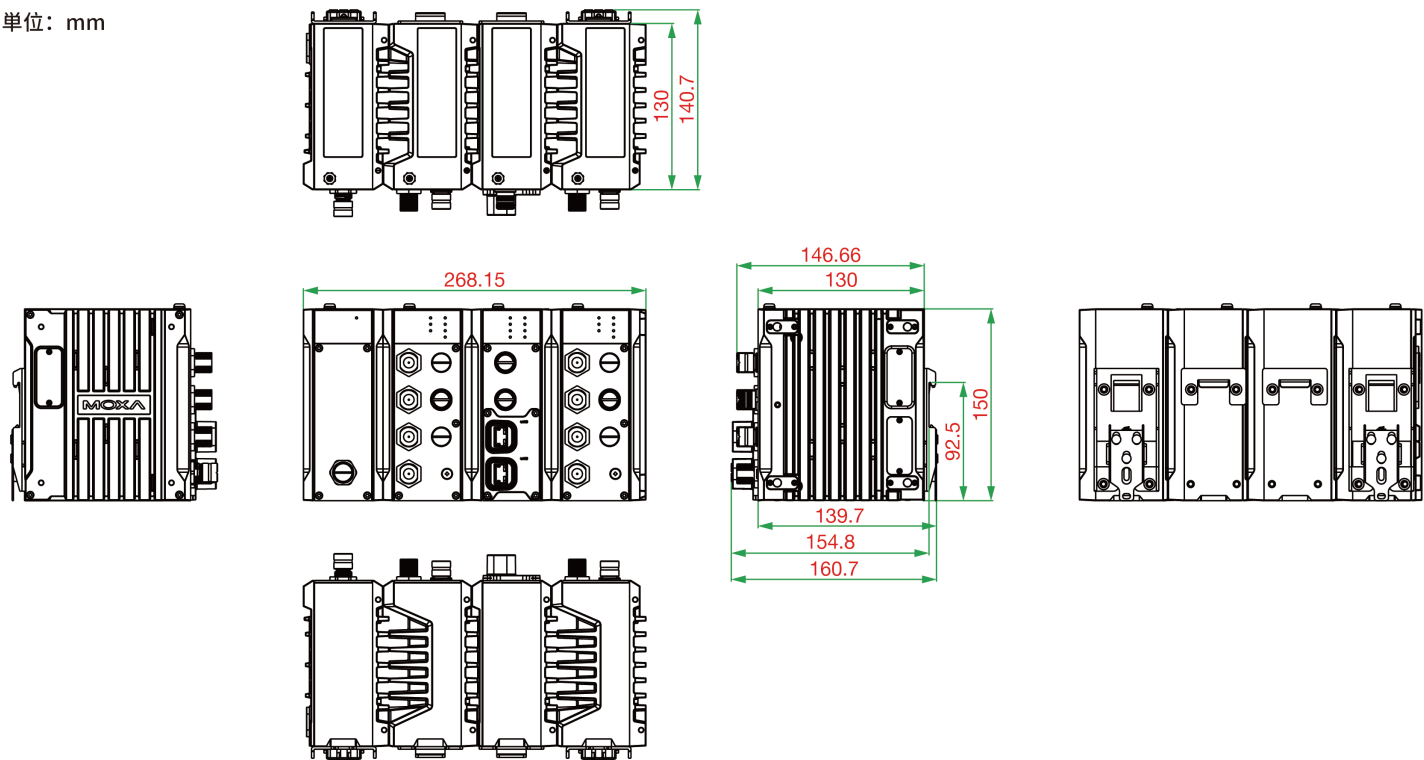
TAP-M310R-1P1R1Sモデル

単位: mm



TAP-M310R-1P2R1Sモデル

単位: mm



注文情報

Model Name	Application	Band	Operating Temp.
TAP-M310R-NPS-1R-EU-CT-T	Onboard	EU	-40 to 75°C
TAP-M310R-NPS-1R-US-CT-T	Onboard	US	-40 to 75°C
TAP-M310R-NPS-1P1R-EU-CT-T	Onboard	EU	-40 to 75°C

Model Name	Application	Band	Operating Temp.
TAP-M310R-NPS-1P1R-US-CT-T	Onboard	US	-40 to 75°C
TAP-M310R-1P1R1S-EU-CT-T	Wayside	EU	-40 to 75°C
TAP-M310R-1P1R1S-US-CT-T	Wayside	US	-40 to 75°C
TAP-M310R-1P2R1S-EU-CT-T	Wayside	EU	-40 to 75°C
TAP-M310R-1P2R1S-US-CT-T	Wayside	US	-40 to 75°C

アクセサリ（別売）

Cables

CBL-M12KFF5POPEN-O-150-IP67	K-coded female M12-to-5-pin open wire power cable, orange, IP67-rated, 1.5 m
CBL-M12FF5PF9-BK-150-IP67	A-coded female M12-to-5-pin DB9 console cable, black, IP67-rated, 1.5 m
CBL-M12(FF4P)/Open-BK-100-IP68	A-coded female M12-to-4-pin open cable, black, IP68-rated, 1 m
CBL-M12XMM8PRJ45-Y-200-IP67	X-coded male M12-to-RJ45 Ethernet cable, yellow, IP67-rated, 2 m

Connectors

M12K-5PFF-IP65-PxC	Crimp type M12 connector, female 5-pin, K-coded, IP65-rated
A-PLG-WPSFP-IP67	SFP cable gland for TAP-M310R Series, IP67-rated

SFP Modules

SFP-2.5GMLC-T	SFP module with 1 2.5GBaseFX port with LC connector, multi-mode, for 170, 200, 550, 600 m transmission, -40 to 85 °C operating temperature
SFP-2.5GSLC-T	SFP module with 1 2.5GBaseFX port with LC connector, single-mode, for 5 km transmission, -40 to 85 °C operating temperature
SFP-2.5GSLSLC-T	SFP module with 1 2.5GBaseFX port with LC connector, single-mode, for 20 km transmission, -40 to 85 °C operating temperature
SFP-2.5GSLHLC-T	SFP module with 1 2.5GBaseFX port with LC connector, single-mode, for 45 km transmission, -40 to 85 °C operating temperature
SFP-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, -40 to 85°C operating temperature

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