

TWAP-5006

EN50155 Multifunction VPN Router w/up to 2x WiFi 11ac + 2 serial ports** + 6 Gigabit X-coded Ethernet Switch w/Load Balancing, Protocol Gateway, VPN, Storage**; WV input

- Built-in 6 Gigabit X-coded Ethernet managed switch
- Up to 2 WIFI radio for 802.11ac/a/b/g/n with 5GHz or 2.4GHz;
- Support WIFI 802.11e traffic prioritization and WMM
- MIMO technology 3T3R up to 6 antennas; Detachable antenna connectors with 6 SMA/QMA** type incl. 3 WIFI
- Advanced wireless security WEP64/128bits/ WPA/ WPA-PSK (TKIP,AES)/ WPA2/ WPA2-PSK (TKIP,AES)
- VPN router for Multi-site VPN, OpenVPN, L2TP over IPsec, IPsec, L2 over GRE , IPGRE
- Load Balancing built-in 5 mechanism
- Support NAT and Firewall
- Support Client-base roaming
- Supports AP/ Bridge/Client/MESH modes
- Support 802.11s Wireless Mesh Network
- Optional EMMC Flash storage on-board**
- Optional support Modbus gateway on serial ports**
- Optional support 2 RS422/RS485 ports with 2.5KV isolation or 2x RS232 ports
- Optional 2 GT smart bypass protection
- Galvanic isolation on WV model from 16.8V~137.5V input
- Environmental monitoring for router inside info with voltage, current, temperature; WIFI graphic signal strength
- Editable login page of captive portal for hot-spot application
- USB port to backup, restore the configuration file and upgrade firmware; Dual image firmware
- EN50155/EN61373/EN45545-2 verification



With 2 serial ports



Without 2 serial ports



OVERVIEW

Lantech TWAP-5006 series is a next generation EN50155 multi-function VPN router w/ up to 2 x 802.11ac Wi-Fi + 6 Gigabit X-coded Ethernet switch + 2 serial ports** that support advanced VPN function, Load-Balancing, EMMC Flash Storage**, Protocol Gateway, Storage**, Wi-Fi roaming for industrial applications for on-board / onboard-to-ground applications. The dual core CPU with 1.6GHz + 256M flash enables the router to multi-task smoothly.

Optional EMMC Flash storage**

The optional EMMC flash storage on router can offer 8G/16G/32G capacity.

Support AP/Bridge/Client mode, Mesh roaming

TWAP-5006 supports AP/Bridge/Client mode for different applications.

It also supports client-base roaming to swap between the APs in a network.

Built-in Wireless Mesh network (WMN)

TWAP-5006 supports Mesh network composed of different nodes. The set of SSIDs allow the wireless client to roam freely without the need for complicated account management. With

Mesh protocol, it can provide a reliable, scalable, stable and seamless network topology.

MIMO technology with 3T3R and standard SMA / optional QMA type connectors

Lantech TWAP-5006 series adapts MIMO technology with smart antenna transmission and reception for 3T3R. With up to six external detachable antenna SMA/QMA** connectors and optional antennas, TWAP-5006 can have better Wi-Fi coverage.

Wireless WMM QoS

TWAP-5006 supports 802.11e standard which defines a set of Quality of Service for wireless LAN applications as well as WMM (WIFI multimedia)

Advanced security & 16 SSIDs

The security support standards including 64/128bits WEP, WPA/WPA2 PSK (TKIP, AES), 802.1x ensures the best security and active defense against security threats. Lantech TWAP-5006 support up to 16 SSIDs, each SSID has its independent security and encryption.

Load Balancing with 5 mechanisms for multi-WANs

TWAP-5006 supports Load Balancing for WAN connections.

There are five schemes for Load Balancing function:

Pack	Algorithm	Description
Basic	Fixed	Manually route by traffic type through fixed WAN link.
	Failover	Routes connections through preferred WAN link while others stand-by. Sequentially activate another link if preferred link fail occurs. Once failover will not failback until link loss.
	Priority	Routes connections through preferred WAN link as primary while others follow by. Ex. Wi-Fi client>LTE>others
	Weighted Round-Robin	Evenly distribute the traffic over all working WAN links in circular order according to the specified weights.
	Custom Route	Routing through the selected WAN for each specific traffic, ex: TCP/UDP port number and IP address.

Optional 2 port serial connection, Modbus gateway

Optional 2 port serial connection for RS232; RS422; RS485 in which RS422/RS485 has 2.5KV isolation protection.

The built-in Modbus gateway can convert Modbus RTU/ASCII to Modbus TCP for device control.

VPN and firewall

Besides traditional VPN peer to peer tunneling, TWAP-5006 support latest Multi-Site VPN function that is an efficient way for Mesh tunneling. The registration is under cloud service and

encrypted by SSH makes the connection easy and safe.

It supports Multi-Site VPN, OpenVPN, L2TP over IPsec, IPsec, L2 over GRE, IPGRE, and NAT for various VPN applications.

The built-in Layer-4 firewall includes DDoS, IP address filter / Mac address filter / TCP / UDP port number.

Optional 2 GT smart bypass protection

The optional bypass relay is set to bypass the router to the next one when power is off in order to protect the network from crashing. Lantech bypass caters to remain in bypass mode until the router is completely booting up when power is back to avoid another network lost. Also it will be activated when detecting the router is hanged or link down.

DIDO for alarm & Email notice; Event log; Remote Web control

2 sets of DIDO function can support additional high/low physical contact for designate applications besides Port / Power events, for example, DIDO function can trigger alarm if the router was moved or stolen. In case of events, the TWAP-5006 will immediately send email and trap.

The event log can be sent via syslog, emails or trigger the alarm relay. When the router is at remote area with limited access, Web control can help to get router status or remotely reboot by Web.

Wide range dual input voltage from 16.8-137.5V (WV model)

The TWAP-5006 is able to work from dual 16.8V ~137.5V DC input (WV model) that is particular good for vehicle, rail train, depot etc applications.

Environmental monitoring for inside router info& alerting; Graphic WIFI signal strength

The built-in environmental monitoring can detect router ambient temperature, voltage, current where can send the syslog, email alert when abnormal.

The graphic WIFI signal strength shows connection status at a glance

Built-in Managed Switch Function

Managed switch function is built-in and provides various L2+ functions for network access deployment. It delivers ports and PoE management, VLAN, QoS, multicast, redundant ring, and security functions.

Dual image firmware

It supports dual-image firmware to choose which one to start.

Editable login page of captive portal

The TWAP-5006 supports editable captive portal function that allows administrator to force end-users redirect to authentication page.

USB port for back up, restore configuration and upgrade firmware

The built-in USB port can upload/download the configuration and upgrade firmware through USB dongle for router replacement.

Ruggedized EN50155 design and FCC/CE & E-marking certificate**

The TWAP-5006 series is verified with EN50155, EN61373, EN45545 standard with IP65/54 housing. It passed tests under extensive Industrial EMI and environmental vibration and shocks standards. With CE & FCC radio certification for Wi-Fi and E-marking** certificate, the TWAP-5006 is best for outdoor community, vehicle, power substation, process control automation etc application. For more usage flexibilities, TWAP-5006 supports operating temperature from -20°C to 70°C or -40°C to 70°C(-E).

FEATURES & BENEFITS

- High Speed Air Connectivity: WLAN interface support up to 2.6Gbps link speed(2AC)
- Built-in 6 Gigabit X-coded Ethernet ports
- Dual DC input from 16.8V~137.5VDC power input (WV model)
- EMMC-FLASH storage**8/16/32G
- Optional 2 GT smart bypass relay protection when detecting power lost as well as CPU hang-up or link down. Deferring bypass time until router is completely boot-up.
- Dual band 2.4G and 5GHz with 802.11ac/a/b/g/n
- Support 2.4Ghz operating within the following frequency bands:
 - 2.412~2.472 GHz
- Support 5Ghz operating within the following frequency bands:
 - 5.180~5.825 GHz
- MIMO smart antenna technology with 3T3R
- 6 STANDARD SMA / OPTIONAL QMA type connectors for Wi-Fi
- Output power : <24Dbm
- Support AP/Bridge/Client/Mesh mode
- Support Client-base roaming
- Support 802.11s Wireless Mesh Network
- Transmit power adjustment
- VAP (virtual access point) support up to 16 SSIDs
- Operation modes : AP/ Bridge / Client / MESH
- Traffic control for each SSID
- Band preference for same SSID services on dual band
- Highly Security Capability: WEP64/128bits/ WPA/ WPA-PSK (TKIP,AES)/ WPA2/ WPA2-PSK (TKIP,AES)
- HTTP/HTTPS/Telnet/SSH & Administration access
- Support IPv6 & IPv4 protocol
- Radius Authentication, EAP-TLS, EAP-TTLS, PEAP; SSID broadcast disable supported
- Multiple channel bandwidths of 20MHz and 40MHz for 2.4G.
- Multiple channel bandwidths of 20MHz, 40MHz and 80MHz for 5G only.
- Wi-Fi Multimedia (WMM) and 802.11e traffic prioritization
- Support Multi-Site VPN for Mesh tunneling as well as Open VPN, L2TP over IPsec, IPsec, L2 over GRE ,

- IPGRE and NAT for secured network connection
- The built-in Layer-4 firewall includes DDoS, IP address filter / Mac address filter / TCP/UDP port number
- NAT/DMZ/Port Forwarding
- Support SNMP v1/v2c/v3
- Load Balancing supports 5 mechanism between multiple WANs

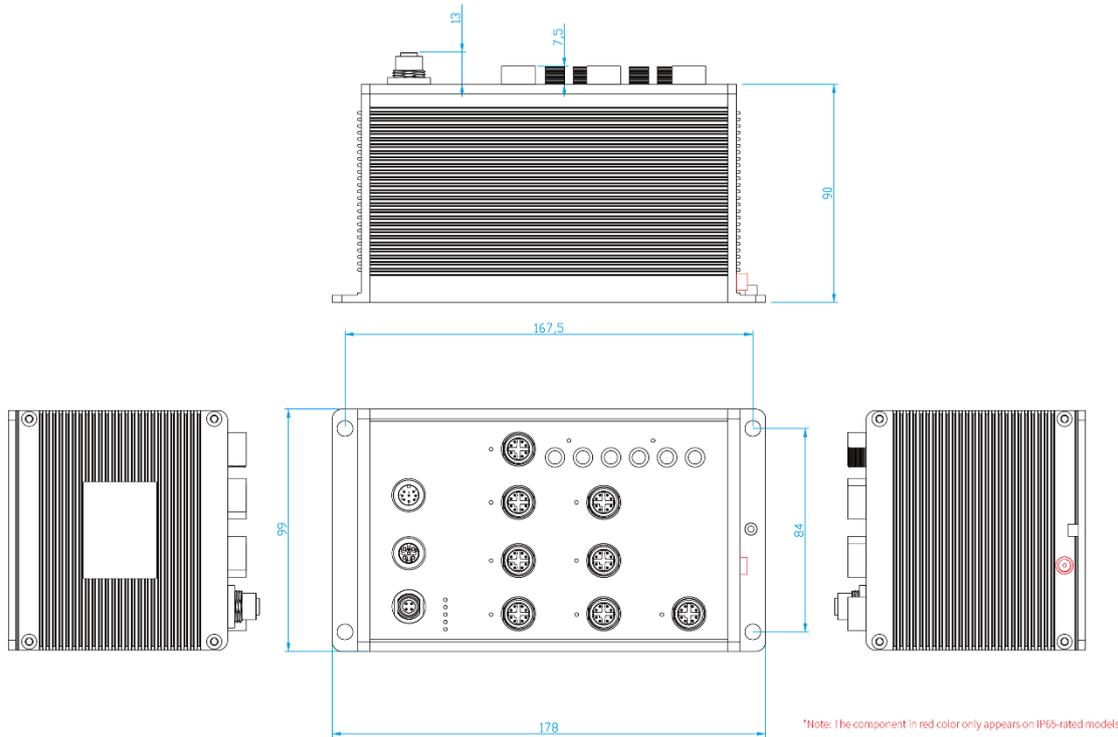
Pack	Algorithm	Description
Basic	Fixed	Manually route by traffic type through fixed WAN link.
	Failover	Routes connections through preferred WAN link while others stand-by. Sequentially activate another link if preferred link fail occurs. Once failover will not fallback until link loss.
	Priority	Routes connections through preferred WAN link as primary while others follow by. Ex. Wi-Fi client>LTE>others
	Weighted Round-Robin	Evenly distribute the traffic over all working WAN links in circular order according to the specified weights.
	Custom Route	Routing through the selected WAN for each specific traffic, ex: TCP/UDP port number and IP address.

- Built-in 2 x serial ports**(RS232/RS422/RS485)
- Serial port** with 2.5KV isolation on RS422/RS485
- Supports 2DI/ 2DO(Digital Input / Output)
- Built-in Modbus gateway converting Modbus RTU/ASCII to Modbus/TCP for serial ports**
- Event alerting by Syslog, Email, Relay ; Permanent local log rotation / Maxi 1K records
- EN45545-2 Fire & Smoke, EN50155 and EN61373 shock/vibration verification
- Remote Web control to get status or re-boot by Web Support SNTP to synchronize system clock
- Support LLDP discovery protocol
- Support DHCP Server and Client
- Graphic WIFI signal strength
- Built-in environmental monitoring for system input voltage, current and ambient temperature; Able to set alert when abnormal

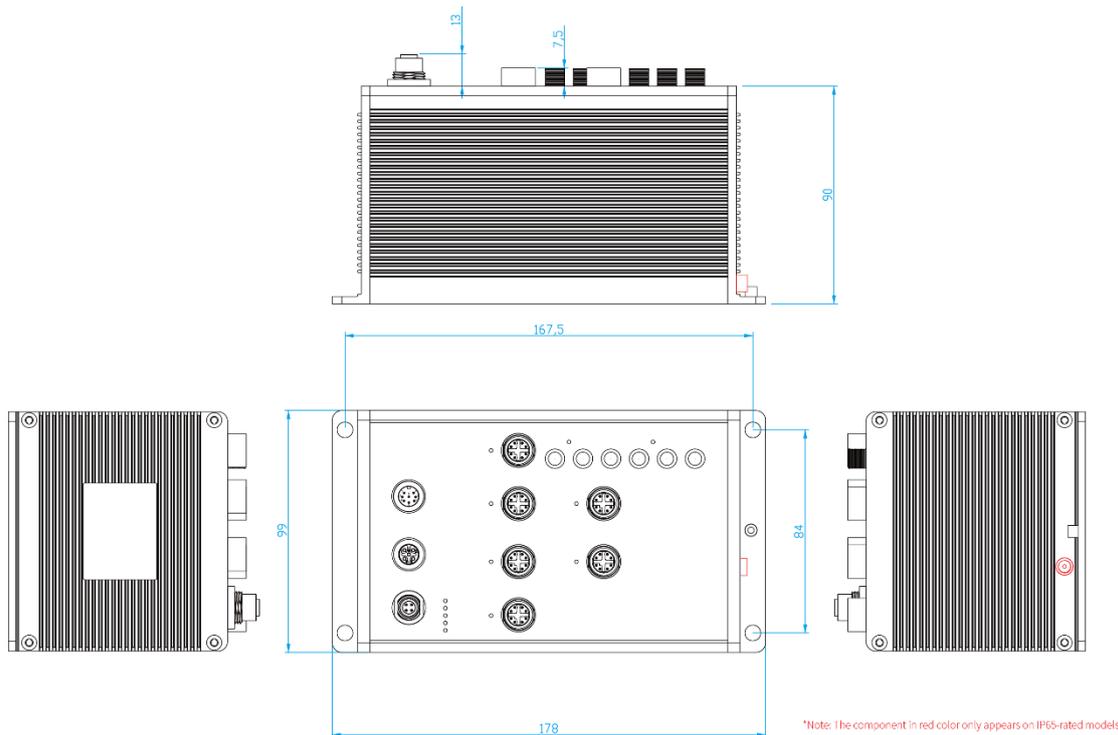
- Firmware upgradeable through TFTP/HTTP
- Configuration backup and restoration
 - Supports text configuration file for system quick installation
 - USB port to upload/download firmware by USB dongle
- Dual image firmware
- IP 65/54 housing for water proof environment
- Wall-mount installation
- Support editable captive portal login page
- Visible LED to show the power & port link and activity
- Operation temperature -20~70C or -40~70C(-E)

DIMENSIONS (unit=mm)

With serial ports



Without serial ports



SPECIFICATION

WLAN Interface		19/18dBm @ MCS0 (HT20/40) 16/16dBm @ MCS7 (HT20/40) 19/18/18dBm @ MCS0 (VHT20/40/80) 13/13/13dBm @ MCS8 (VHT20/40/80) 13/13dBm @ MCS9 (VHT40/80) Receiver Sensitivity Rx +/- 2dB ≤ -92dBm @ 6~18Mbps ≤ -86dBm @ 24Mbps ≤ -84dBm @ 36Mbps ≤ -81dBm @ 48Mbps ≤ -80dBm @ 54Mbps ≤ -93dBm @ MCS0 (HT20/40) ≤ -71dBm/≤ -80dBm @ MCS7 (HT20/40) ≤ -90dBm @ MCS0 (VHT20/40/80) ≤ -69dBm @ MCS8 (VHT20/40/80) ≤ -66dBm @ MCS9 (VHT40/80)	
Radio Frequency Type	DSSS, OFDM	Encryption Security	WEP : (64-bit , 128-bit key supported) WPA /WPA2 : IEEE802.11i(WEP and AES encryption) WPA-PSK (256-bit key pre-shared key supported) EAP-TLS,EAP-TTLS, PEAP
Wireless Standard	IEEE 802.11ac/n/a 5GHz IEEE 802.11b/g/n 2.4GHz	Wireless Security	SSID broadcast disable
Wireless bandwidth	5GHz: Up to 1300Mbps 2.4GHz: Up to 450Mbps	Software	
Modulation	802.11b: DSSS 802.11a/g: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11ac: OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM)	IPv6/4	Present
Operating Frequency	IEEE 802.11 a/b/g/n ISM Band, 2.412GHz~2.472GHz, 5150MHz~5850MHz	Operation Mode	AP/Bridge/Client/MESH mode
Transmission Rate	IEEE802.11ac: up to 1300Mbps IEEE802.11b: 1 / 2 / 5.5 / 11 Mbps IEEE802.11a/g: 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbps IEEE802.11n: up to 450Mbps	Login Security	Supports IEEE802.1x Authentication/RADIUS
IEEE 802.11b/g/n(2.4Gbps)	Output Power Tx +/- 2dB(per chain) 18dBm @ 1~11Mbps 18dBm @ 6~54Mbps 20/20dBm @ MCS0-MCS7 (HT20/40) Receiver Sensitivity Rx +/- 2dB ≤ -95dBm @ 1~11Mbps ≤ -92dBm @ 6~18Mbps ≤ -88dBm @ 24Mbps ≤ -85dBm @ 36Mbps ≤ -81dBm @ 48Mbps ≤ -80dBm @ 54Mbps ≤ -94dBm @ MCS0 (HT20/40) ≤ -76dBm @ MCS7 (HT20/40)	Access Security	HTTP/HTTPS/Telnet/SSH & Administration; SNMP v1/v2/v3 access for authentication via MD5/SHA(v3) and Encryption via DES/AES(v3)
IEEE 802.11a/n/ac(5Gbps)	Output Power Tx +/- 2dB(per chain) 20dBm @ 6~24Mbps 16dBm @ 36~54Mbps	Protocol	PPPoE Client, DHCP server/client, Adjustable MTU, Port forwarding (NAPT), DMZ; NAT, SNTP, Firewall(Firewall(DDoS; IP address filter / Mac address filter / TCP/UDP port number), VRRP, DDNS
		Management	SNMP v1,v2c,v3/ Web/Telnet/CLI
		Load Balancing	5 schemes for multiple WAN
		Basic	
		Fixed	Manually route by traffic type through fixed WAN link.

Failover	Routes connections through preferred WAN link while others stand-by. Sequentially activate another link if preferred link failure occurs.	Isolation protection	RS422/RS485 2.5KV isolation; 8KV contact & 15KV air RS232 8KV contact and 15KV air ESD DIDO 2.5KV isolation Input power 1.5KVA isolation
Priority	Routes connections through preferred WAN link while others stand-by. Sequentially activate other links if overflow occurs.	DI/DO	2 Digital Input (DI) : Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output(DO): Open collector to 40 VDC, 200mA
Weighted Round-Robin	Evenly distribute the traffic over all working WAN links in circular order according to the specified weights	LED Indicators	
Custom Route	Routing through the selected WAN for each specific traffic ex: TCP/UDP port number and IP address.	Power & System indicator	Per unit: Power 1 (Green), Power 2 (Green), P-Fail (Red) , Ring Master(Green), System Ready(Green), Serial1/Serial2(Green)**
Roaming	Client-base roaming	10/100/1000Base-T(X) port indicator	Link/Activity (Green), Speed (Yellow)
MESH	Support 802.11s Wireless Mesh Network	Fault	Red: Ethernet link down or power down
WMM	Wi-Fi multimedia and 802.11e traffic prioritization	Fault contact	
Security	WEP64/128bits/ WPA/ WPA-PSK (TKIP,AES)/ WPA2/ WPA2-PSK (TKIP,AES)/SSH/SSL/HTTPS	Relay	Relay output to carry capacity of 1A at 24VDC
Authentication	Radius Authentication, EAP-TLS, EAP-TTLS, PEAP; SSID broadcast disable supported	Power	
SSID	16 sets	Input power	Dual DC input, 16.8VDC~137.5VDC for (WV model)
Timer	Built-in Real Time Clock to keep track of time always(RTC)	Power consumption (Typ.)	20 Watts
Discovery	IEEE 802.1ab Link Layer Discovery Protocol (LLDP)	EMMC Storage**	8/16/32 GB
SNMP trap	Device cold / warm start Port link up / link down DI / DO high / low	Physical Characteristic	
Environmental Monitoring	System status for input voltage, current , ambient temperature to be shown in GUI and sent alerting if any abnormal status	Enclosure	IP 65/54 aluminum case
Graphic signal display	Graphic Wi-Fi signal strength	Dimension	178 (W) x 99 (D) x 103 (H) mm
Remote Web control	To reboot or get status of router by Web	Weight	1000g
Captive portal	Editable captive portal login page	Environmental	
Maintenance	Firmware upgradeable through TFTP/HTTP	Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
Configuration backup & restore	Supports text configuration file for quick system installation USB port to upload/download firmware by USB dongle Dual image firmware	Operating Temperature	-20°C ~ 70°C (-4°F ~ 158°F) -40°C ~ 70°C (-40°F ~ 158°F) –E model
Physical Ports & System		Operating Humidity	5% to 95% Non-condensing
Connectors	10/100/1000T: 6x ports M12 8-pole X-coded with Auto MDI/MDI-X function USB/Console connector: 1 x M12 8-pole A-coded DIDO : 1 x M12 5-pole A-coded Power Input connector : 1 x M12 4-pole A-coded Optional Serial connector : 2 DB9 RP-SMA/QMA** connector for Wi-Fi 2AC: 6 (female) RP-SMA/QMA** connector for Wi-Fi 1AC: 3 (female)	Regulatory approvals	
Serial Baud Rate**	1000Kbps high data rate,250kbps normal for RS232 ; 20Mbps high data rate,250kbps normal for RS422/RS485	EMC	FCC Part 15 Class A, EN55032 , EN55024
Serial Data Bits**	5, 6, 7, 8	EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-6-2
Serial Parity**	odd, even, none, mark, space	Radio Frequency	EN 301 489-1, EN 301 489-17, EN 301 489-19, EN 301 489-52, EN 300 440, EN 301 893, EN 300 328, EN 62311
Serial Stop Bits**	1, 1.5, 2	Safety	EN60950 (LVD), AS60950 (LVD)
RS-232**	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND	Stability Testing	EN61373 (Shock & Vibration)
RS-422**	Tx+,Tx-, Rx+, Rx-,GND	Verifications & report	EN50155, EN50121-3-2, EN50121-4 verification EN45545-2 R13/R22/R23/R24/R25 (EN ISO 4589-2, EN ISO 5659-2, NF X70-100-1 & 2) Fire & Smoke verification
RS-485 (2-wire) **	Data+, Data-,GND	MTBF	495,724 Hrs (IEC62380 standards)
		Warranty	5 years

*Future Release

**Optional

RF Performance Table

	Data Rate	TX Power (per chain)	TX Power (3 chains)	Tolerance	RX Specifications Sensitivity	Tolerance
2.4GHz 802.11b	1Mbps	20dBm	25dBm	±2dB	-95dBm	±2dB
	2Mbps	20dBm	25dBm	±2dB	-94dBm	±2dB
	5.5Mbps	20dBm	25dBm	±2dB	-92dBm	±2dB
	11Mbps	20dBm	25dBm	±2dB	-90dBm	±2dB
2.4GHz 802.11g	6Mbps	21dBm	26dBm	±2dB	-94dBm	±2dB
	9Mbps	21dBm	26dBm	±2dB	-93dBm	±2dB
	12Mbps	21dBm	26dBm	±2dB	-93dBm	±2dB
	18Mbps	21dBm	26dBm	±2dB	-90dBm	±2dB
	24Mbps	21dBm	26dBm	±2dB	-90dBm	±2dB
	36Mbps	20dBm	25dBm	±2dB	-85dBm	±2dB
	48Mbps	19dBm	24dBm	±2dB	-82dBm	±2dB
	54Mbps	18dBm	23dBm	±2dB	-80dBm	±2dB
2.4GHz 802.11n HT20	MCS 0	21dBm	26dBm	±2dB	-94dBm	±2dB
	MCS 1	21dBm	26dBm	±2dB	-92dBm	±2dB
	MCS 2	21dBm	26dBm	±2dB	-89dBm	±2dB
	MCS 3	20dBm	25dBm	±2dB	-84dBm	±2dB
	MCS 4	20dBm	25dBm	±2dB	-83dBm	±2dB
	MCS 5	20dBm	25dBm	±2dB	-80dBm	±2dB
	MCS 6	18dBm	23dBm	±2dB	-79dBm	±2dB
	MCS 7	16dBm	21dBm	±2dB	-77dBm	±2dB
2.4GHz 802.11n HT40	MCS 0	20dBm	25dBm	±2dB	-93dBm	±2dB
	MCS 1	20dBm	25dBm	±2dB	-91dBm	±2dB
	MCS 2	20dBm	25dBm	±2dB	-89dBm	±2dB
	MCS 3	19dBm	24dBm	±2dB	-84dBm	±2dB
	MCS 4	19dBm	24dBm	±2dB	-82dBm	±2dB
	MCS 5	19dBm	24dBm	±2dB	-80dBm	±2dB
	MCS 6	18dBm	23dBm	±2dB	-79dBm	±2dB
	MCS 7	16dBm	21dBm	±2dB	-75dBm	±2dB

	Data Rate	TX Power (per chain)	TX Power (3 chains)	Tolerance	RX Specifications Sensitivity	Tolerance
5GHz 802.11a	6Mbps	20dBm	25dBm	±2dB	-94dBm	±2dB
	9Mbps	20dBm	25dBm	±2dB	-94dBm	±2dB
	12Mbps	20dBm	25dBm	±2dB	-92dBm	±2dB
	18Mbps	20dBm	25dBm	±2dB	-91dBm	±2dB
	24Mbps	20dBm	25dBm	±2dB	-90dBm	±2dB
	36Mbps	18dBm	23dBm	±2dB	-86dBm	±2dB
	48Mbps	16dBm	21dBm	±2dB	-83dBm	±2dB
	54Mbps	15dBm	20dBm	±2dB	-80dBm	±2dB
5GHz 802.11n/ac VHT20	MCS 0	19dBm	24dBm	±2dB	-93dBm	±2dB
	MCS 1	19dBm	24dBm	±2dB	-90dBm	±2dB
	MCS 2	19dBm	24dBm	±2dB	-87dBm	±2dB
	MCS 3	18dBm	23dBm	±2dB	-83dBm	±2dB
	MCS 4	18dBm	23dBm	±2dB	-80dBm	±2dB
	MCS 5	17dBm	22dBm	±2dB	-77dBm	±2dB
	MCS 6	16dBm	21dBm	±2dB	-74dBm	±2dB
	MCS 7	14dBm	19dBm	±2dB	-73dBm	±2dB
5GHz 802.11n/ac VHT40	MCS 8	13dBm	18dBm	±2dB	-71dBm	±2dB
	MCS 0	18dBm	23dBm	±2dB	-90dBm	±2dB
	MCS 1	18dBm	23dBm	±2dB	-88dBm	±2dB
	MCS 2	18dBm	23dBm	±2dB	-85dBm	±2dB
	MCS 3	17dBm	22dBm	±2dB	-82dBm	±2dB
	MCS 4	17dBm	22dBm	±2dB	-80dBm	±2dB
	MCS 5	16dBm	21dBm	±2dB	-75dBm	±2dB
	MCS 6	15dBm	20dBm	±2dB	-73dBm	±2dB
	MCS 7	14dBm	19dBm	±2dB	-73dBm	±2dB
	MCS 8	13dBm	18dBm	±2dB	-70dBm	±2dB
5GHz 802.11ac VHT80	MCS 9	13dBm	18dBm	±2dB	-68dBm	±2dB
	MCS 0	18dBm	23dBm	±2dB	-89dBm	±2dB
	MCS 1	18dBm	23dBm	±2dB	-87dBm	±2dB
	MCS 2	18dBm	23dBm	±2dB	-85dBm	±2dB
	MCS 3	17dBm	22dBm	±2dB	-83dBm	±2dB
	MCS 4	17dBm	22dBm	±2dB	-80dBm	±2dB
	MCS 5	16dBm	21dBm	±2dB	-78dBm	±2dB
	MCS 6	15dBm	20dBm	±2dB	-75dBm	±2dB
	MCS 7	14dBm	19dBm	±2dB	-72dBm	±2dB
	MCS 8	13dBm	18dBm	±2dB	-70dBm	±2dB

ORDERING INFORMATION

All standard models are non-conformal coating, optional conformal coating are with -C model name; Optional bypass models are available with -BT model name; QMA connector models are with -Q model name; -40~70C operational models are with -E model name.

- **TWAP-5006-1AC-WV-65.....P/N:8652-021**
EN50155 Multifunction VPN Router w/1x Wi-Fi 11ac + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP65; -20~70C
- **TWAP-5006-2AC-WV-65.....P/N: 8652-022**
EN50155 Multifunction VPN Router w/2x Wi-Fi 11ac + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP65; -20~70C
- **TWAP-5006-1AC-2S-WV-65.....P/N: 8652-023**
EN50155 Multifunction VPN Router w/1x Wi-Fi 11ac + 2 serial RS232 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP65; -20~70C
- **TWAP-5006-1AC-2SA-WV-65.....P/N: 8652-024**
EN50155 Multifunction VPN Router w/1x Wi-Fi 11ac + 2 serial RS422 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP65; -20~70C
- **TWAP-5006-1AC-2SB-WV-65.....P/N: 8652-027**
EN50155 Multifunction VPN Router w/1x Wi-Fi 11ac + 2 serial RS485 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP65; -20~70C

- **TWAP-5006-2AC-2S-WV-65.....P/N: 8652-025**
EN50155 Multifunction VPN Router w/2x Wi-Fi 11ac + 2 serial RS232 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP65; -20~70C
- **TWAP-5006-2AC-2SA-WV-65.....P/N: 8652-026**
EN50155 Multifunction VPN Router w/2x Wi-Fi 11ac + 2 serial RS422 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP65; -20~70C
- **TWAP-5006-2AC-2SB-WV-65.....P/N: 8652-028**
EN50155 Multifunction VPN Router w/2x Wi-Fi 11ac + 2 serial RS485 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP65; -20~70C
- **TWAP-5006-1AC-WV-54.....P/N:8652-041**
EN50155 Multifunction VPN Router w/1x Wi-Fi 11ac + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP54; -20~70C
- **TWAP-5006-2AC-WV-54.....P/N: 8652-042**
EN50155 Multifunction VPN Router w/2x Wi-Fi 11ac + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP54; -20~70C
- **TWAP-5006-1AC-2S-WV-54.....P/N:8652-043**
EN50155 Multifunction VPN Router w/1x Wi-Fi 11ac + 2 serial RS232 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP54; -20~70C
- **TWAP-5006-1AC-2SA-WV-54.....P/N:8652-044**
EN50155 Multifunction VPN Router w/1x Wi-Fi 11ac + 2 serial RS422 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP54; -20~70C
- **TWAP-5006-1AC-2SB-WV-54.....P/N:8652-047**
EN50155 Multifunction VPN Router w/1x Wi-Fi 11ac + 2 serial RS485 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP54; -20~70C
- **TWAP-5006-2AC-2S-WV-54.....P/N: 8652-045**
EN50155 Multifunction VPN Router w/2x Wi-Fi 11ac + 2 serial RS232 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP54; -20~70C
- **TWAP-5006-2AC-2SA-WV-54.....P/N: 8652-046**
EN50155 Multifunction VPN Router w/2x Wi-Fi 11ac + 2 serial RS422 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP54; -20~70C
- **TWAP-5006-2AC-2SB-WV-54.....P/N: 8652-048**
EN50155 Multifunction VPN Router w/2x Wi-Fi 11ac + 2 serial RS485 ports + 6 Gigabit X-coded Ethernet managed switch for Load Balancing, VPN, dual 16.8V~137.5VDC; IP54; -20~70C

EMMC Flash Storage

- **8G.....P/N:8850-113**
- **16G.....P/N:8850-114**
- **32G.....P/N:8850-115**

OPTIONAL ACCESSORIES

Management System

- **InstaAir.....P/N: 9000-121**
Cloud Based Fleet Management System for Routers

Wi-Fi Antenna

- **ANT11000055** 2.4/5GHz SMA dipole Wi-Fi antenna, 6dBi (2.4GHz), 4dBi (5GHz)



- **ANT11000090** 2.4/5GHz omnidirectional Wi-Fi antenna, 802.11ac 3x3 MIMO, 5dBi, IP67, cable length: 3M



Antenna Base

- **ADA11000052** Magnetic antenna base for Wi-Fi, RP SMA Jack Base, Length : 1M



Lantech Communications Global Inc.

www.lantechcom.tw
info@lantechcom.tw

© 2020 Copyright Lantech Communications Global Inc. all rights reserved.
The revise authority rights of product specifications belong to Lantech Communications Global Inc.
In a continuing effort to improve and advance technology, product specifications are subject to change without notice.