



StraightCore GWA-627VE Universal 802.11a/h wireless outdoor unit

GWA-627 units are made specially for wireless service providers as a fast and cost-effective CPE solution for 5 Ghz ISM bands. This unit is produced in 2 modifications. GWA-627VE have integrated 14 dB directional flat panel antenna. GWA-627EX is equipped with N-Female connector for external antenna connectivity.

As well as the durable construction of the hardware with the impressive high-power (up to 27 dB) radio, even the firmware is developed for wireless internet service providing. Special features, as rate limiting, full support of all contemporary security standards, or redirection to a configurable webpage when internet connection fails, helps providers to keep high security of the network, and make its administration easier.

Unit is delivered with full set of accessories - complete installation kit, power-over-ethernet injector, power source and ethernet cable. Installation is fast and easy.



GWA-627VE/EX using industrial-grade LTW ethernet waterproof connector with IP68 specification. Functions of LEDs on bottom are configurable by firmware settings.



Complete installation kit is provided as standard part of the package. It makes installation fast, easy, and durable.



PSW-003 power injector (Standart accessory) is equipped with remote reset button, which can be used to restart the unit or reload default values.



Optional PSW-205 PoE injector improves the connectivity by integrated 5 port switch.

Specifications:

Wireless standard:	IEEE 802.11a/h, IEEE 802.3
Frequency range:	5150-5350 Mhz, 5470-5725 Mhz, 5750-5850 MHz
Modulation:	802.11a BPSK, SPSK, 16QAM, 64QAM
Radio chipset:	Atheros AR5413
TX power control:	8-39 dB / Step 1 dB, limited by SW for selected regions
Memory configuration:	4 MB Flash/32 MB RAM
Power supply:	Standard 18V/1A Capable 12-24V for PoE
Antenna connector:	N female for EX type
Dimensions:	74x119x25 mm !!!
Antenna gain:	14 dB for 627VE type
Transmission rates:	54/48/36/24/18/12/11/9/6/5.5/2/1 Mbps
Interfaces:	Wireless x 1 ethernet port RJ-45 x1 (4 ethernet ports on POE of + version)
Leds:	Power, Ethernet, Wireless with signal strength function, Net fail.. Firmware configurable
Temperature range:	-30-65°C operational
Humidity:	10-80° non-condensing
Certifications:	CE/FCC
Wireless modes	AP/Client/Bridge/Repeater/Wisp/WDS
Security standards	WEP, WPA, WPA2 AES/TKIP, Radius server support
Routing modes	Bridging, Layer 2 Bridging, Routing, NAT (Total 3 configurations)
Logical interfaces:	LAN/WAN
NAT-functions:	DMZ Setting, Port Forwarding, PORT filter, IP Filter, MAC Filter
Watchdogs:	Hardware Watchdog, IP Watchdog, planned restart scheduler
Rate control:	In Kbit/Mbit per sec, separately for upload/download
Other functions:	DHCP Server/Client, NTP Client, MASH Routing Daemon, Ping, Arping, TraceRoute, ECHO client, Access Scheduler, Hidden SSID, Client isolation, MAC Address cloning, Configuration BackUp

Special firmware features:

Full routing, NAT or bridging support

Traffic limiter

MAC Address
Transparent Bridge mode

Wireless client isolation

Redirection to configurable webpage (Service contact of the ISP in most cases) when connection to specified IP failed. (Page loaded in the unit)

Units status page can be made accessible without password

Access to the internet can be granted by password

Network test from the unit
Ping, Arping, TraceRoute, EchoServer, EtherWake

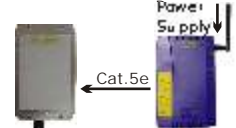
Connection to AP with hidden SSID granted



Durable die-cast aluminium enclosure provides 100% shielding against radio interferences and spurious signals from sides and back of the unit.



N-Female connector on GWA-627EX can be used for connection with high-gain directional antenna for long-range connection, or with omnidirectional antenna to setup cost effective durable access point



StraightCore WRT-314 advanced PoE access point can be used to power-up GWA-627 serie units. This is a good solution for a customer requesting wireless connection in the house as well.



With optional PoE adapter PSW-205

Specifications:

Wireless standard:	IEEE 802.11a/h, IEEE 802.3
Frequency range:	5150-5350 Mhz, 5470-5725 Mhz, 5750-5850 MHz
Modulation:	802.11a BPSK,SPSK,16QAM,64QAM
Radio chipset:	Atheros AR5413
TX power control:	14-45 dB / Step 1 dB, limited by SW for selected regions
Memory configuration:	4 MB Flash/32 MB RAM
Power supply:	Standard 12V/2A Capable 12-24V for PoE
Dimensions:	305x305x70mm
Weight:	1.6 Kg
Antenna specs:	19 dB in 5.470-5.725 Mhz, 18°H / 20°V Beamwidth, VSWR < 1.6, Front to back Ration > 27 dB
Transmission rates:	54/48/36/24/18/12/11/9/6/5.5/2/1 Mbps

Interfaces:	Wireless x 1 ethernet port RJ-45 x1 (4 ethernet ports on POE of + version) Power,Ethernet,Wireless with signal strength function,Net fail..
Leds:	Firmware configurable -35-70°C operational
Temperature range:	10-80° non-condensing
Humidity:	
Certifications:	CE/FCC
Wireless modes	AP/Client/Bridge/Repeater/Wisp/WDS
Security standards	WEP,WPA,WPA2 AES/TKIP, Radius server support
Routing modes	Bridging, Layer 2 Bridging, Routing, NAT (Total 3 configurations)
Logical interfaces:	LAN/WAN
NAT-functions:	DMZ Setting, Port Forwarding, PORT filter, IP Filter, MAC Filter
Watchdogs:	Hardware Watchdog, IP Watchdog, planned restart scheduler
Rate control:	In Kbit/Mbit per sec, separately for upload/download
Other functions:	DHCP Server/Client, NTP Client, MASH Routing Daemon, Ping, Arping, TraceRoute, ECHO client, Access Scheduler, Hidden SSID, Client isolation, MAC Adress clonning, Configuration BackUp

StraightCore GWA-627HP Universal 802.11a/h wireless outdoor unit - long range version

GWA-627HP is based on similar hardware as GWA-627 VE/EX units, but it is equipped with high-gain 23 dB flat panel antenna. It can be used as a CPE as well, but the typical usage is Point-To-Point transparent bridge between access points in large wireless network. Great sensitivity of antenna and radio of this type offers high-speed (up to 37 Mbit/sec HD) and long range connection. Each antenna of this type is respectively tested and measured to offer the best solution in 5.470-5.725 MHz band. Maximum E.I.R.P. power level of the unit is impressive 48 dBmW (limited according selected region by the firmware) and sensitivity starts on -113 dB (@6Mbps, -96 dB@54 Mbps).



Specifications:

Wireless standard:	IEEE 802.11a/h, IEEE 802.3
Frequency range:	5150-5350 Mhz, 5470-5725 Mhz, 5750-5850 MHz
Modulation:	802.11a BPSK,SPSK,16QAM,64QAM
Radio chipset:	Atheros AR5413
TX Power control:	18-49 dB / Step 1 dB, limited by SW for selected regions
Memory configuration:	4 MB Flash/32 MB RAM
Power supply:	Standard 18V/1A Capable 12-24V for PoE
Dimensions:	305x305x70mm
Weight:	1.6 Kg
Antenna specs:	23 dB in 5.470-5.725 Mhz, 12°H / 12°V Beamwidth, VSWR < 1.5, Front to back rRation > 28 dB
Transmission rates:	54/48/36/24/18/12/11/9/6/5.5/2/1 Mbps

Interfaces:	Wireless x 1 ethernet port RJ-45 x1 (4 ethernet ports on POE of + version) Power,Ethernet,Wireless with signal strength function,Net fail..
Leds:	Firmware configurable -35-70°C operational
Temperature range:	10-80° non-condensing
Humidity:	
Certifications:	CE/FCC
Wireless modes	AP/Client/Bridge/Repeater/Wisp/WDS
Security standards	WEP,WPA,WPA2 AES/TKIP, Radius server support
Routing modes	Bridging, Layer 2 Bridging, Routing, NAT (Total 3 configurations)
Logical interfaces:	LAN/WAN
NAT-functions:	DMZ Setting, Port Forwarding, PORT filter, IP Filter, MAC Filter
Watchdogs:	Hardware Watchdog, IP Watchdog, planned restart scheduler
Rate control:	In Kbit/Mbit per sec, separately for upload/download
Other functions:	DHCP Server/Client, NTP Client, MASH Routing Daemon, Ping, Arping, TraceRoute, ECHO client, Access Scheduler, Hidden SSID, Client isolation, MAC Adress clonning, Configuration BackUp

Selection of the right type

In order to help you to select the right type of the unit for your application we have prepared following tables. Please note, that the distances in those tables do not show the maximum distance of the connection, as this parameter is really very hard to be measured accurately. Values in the tables are the recommended safe distance for the selected environment, the type of usage and the unit type. GWA-627EX is not included, as the reachable distance for this type is mainly determined by type of the attached antenna.

Point-To-Point connection			
Unit type	Interference free environment	Medium noise environment	Noised environment
GWA-627VE	3500-4000 meters	1500-1800 meters	700-1000 meters
GWA-627ST	6500-7800 meters	2800-3400 meters	1500-1900 meters
GWA-627HP	18000-23000 meters	12000-15000 meters	9000-12000 meters

Point-To-Multipoint * connection			
Unit type	Interference free environment	Medium noise environment	Noised environment
GWA-627VE	2800-3300 meters	1200-1400 meters	550-800 meters
GWA-627ST	5200-6000 meters	2200-2800 meters	1200-1500 meters
GWA-627HP	11000-14000 meters	8000-11000 meters	5000-7500 meters

GLOSSARY:

Interference-free environment means that there are not other wireless networks or other interference sources on the same frequency. (Small villages etc.)

Medium noise environment - places with just a few other networks, or low-level sources of noise. (Typically small towns, suburbs etc.)

Noised environment - More wireless networks sharing the same band, industrial areas. (City centres, close to airport, military base, harbour...)

Point-To-Point connection means units of the same type on both ends, properly aligned.

Point-To-Multipoint connection - clients connected to central Access Point. *These values are based on central AP with E.I.R.P. 25 dBmW (17 dBmW radio output, 2 dB cable loss, 10 dB omnidirectional antenna) on 5500 Mhz.

Peak power and sensitivity test results

Sensitivity test - Frequency 5.560 MHz			
Unit type	GWP-627EX	GWP-627VE	GWP-627HP
Antenna type	None	14 dB Flat Panel	23 dB Flat panel
6 Mbit/sec	-90 dB	-104 dB	-113 dB
9Mbit/sec	-90 dB	-104 dB	-113 dB
12 Mbit/sec	-89 dB	-103 dB	-112 dB
18 Mbit/sec	-87 dB	-101 dB	-110 dB
24 Mbit/sec	-83 dB	-97 dB	-106 dB
36 Mbit/sec	-80 dB	-94 dB	-103 dB
48 Mbit/sec	-75 dB	-89 dB	-98 dB
54 Mbit/sec	-73 dB	-87 dB	-96 dB

Peak TX Power - EIRP on 5.500 MHz			
Unit type	GWP-627EX	GWP-627VE	GWP-627HP
Antenna type	None	14 dB Flat Panel	23 dB Flat panel
6 Mbit/sec	27 dBmW	40 dBmW	49 dBmW
9Mbit/sec	27 dBmW	40 dBmW	49 dBmW
12 Mbit/sec	27 dBmW	40 dBmW	49 dBmW
18 Mbit/sec	27 dBmW	40 dBmW	49 dBmW
24 Mbit/sec	27 dBmW	40 dBmW	49 dBmW
36 Mbit/sec	26 dBmW	39 dBmW	48 dBmW
48 Mbit/sec	24 dBmW	37 dBmW	46 dBmW
54 Mbit/sec	23 dBmW	36 dBmW	45 dBmW

Ordering information

GWP-627VE versions			
Unit type/Stock ID	Package	Power injector	Power Source
GWP-627VE/B	Bulk 20 pcs/ctn	PSW-003	18V/1,5A EU
GWP-627VE/R	Retail 20 pcs/ctn	PSW-003	18V/1,5A EU
GWP-627VE+/B	Bulk 20 pcs/ctn	PSW-205	18V/1,5A EU
GWP-627VE+/R	Retail 20 pcs/ctn	PSW-205	18V/1,5A EU

GWP-627EX versions			
Unit type/Stock ID	Package	Power injector	Power Source
GWP-627EX/B	Bulk 20 pcs/ctn	PSW-003	18V/1,5A EU
GWP-627EX/R	Retail 20 pcs/ctn	PSW-003	18V/1,5A EU
GWP-627EX+/B	Bulk 20 pcs/ctn	PSW-205	18V/1,5A EU
GWP-627EX+/R	Retail 20 pcs/ctn	PSW-205	18V/1,5A EU

GWP-627HP versions			
Unit type/Stock ID	Package	Power injector	Power Source
GWP-627HP/R	Retail 5 pcs/ctn	PSW-003	18V/1,5A EU
GWP-627HP+/R	Retail 5 pcs/ctn	PSW-205	18V/1,5A EU

<http://www.straightcore.net>