




## Product at a Glance

Model Name	Wireless Service Gateway Series		
	VSG-1200v2	G-4100 v2	N4100
<b>Main Design</b>			
Wireless Technology	-	802.11g	802.11n
Number of 10/100M LAN/Switch	1	4	4
WAN	1	1	1
PoE	-	Yes	-
PoE Power Draw	-	6 W	-
<b>WLAN Features (G-4100 v2 and N4100 only)</b>			
Number of Antenna	-	2	3
Maximum Throughput	-	22 ~ 24 Mbps	150 Mbps
WEP	-	Yes	Yes
WPA (Wi-Fi Certified)	-	Yes	Yes
WPA2 (Wi-Fi Certified)	-	Yes	Yes
<b>Others Features</b>			
Built-in Authentication	Yes	Yes	Yes
RADIUS Authentication Support	Yes	Yes	Yes
IP Plug-and-play	Yes	Yes	Yes
Layer-2 Isolation	Yes	Yes	Yes
Customization Log-in Page	Yes	Yes	Yes
Max. Concurrent User	250	100	100
PMS Integration	Yes	-	-
Ticket Printer—SP300E	 <ul style="list-style-type: none"> <li>- Button x 3</li> <li>- Input: 5 V DC, 2.5 A</li> <li>- Paper Width: 58 (+0/-1) mm</li> <li>- Paper length (max.): 50 meters</li> <li>- Support 802.3af Power over Ethernet</li> </ul>		

## Glossary

### CAPWAP

Control And Provisioning of Wireless Access Points (CAPWAP) is an Internet Engineering Task Force (IETF) protocol allowing multiple wireless access points to be managed by a single controller access point.

### Hybrid AP

Hybrid Wireless Access Point is a wireless access point technology capable of making wireless AP to switch between different roles within Autonomous Architecture and Centralized Architecture. With Hybrid AP technology, one single wireless access point can act as a Stand Alone AP (Fat AP), a Thin AP (Managed AP) or even an Access Controller (AC)

### WMM

Wi-Fi MultiMedia (WMM) is a part of the IEEE 802.11e QoS enhancement to the Wi-Fi standard that ensures quality of service for multimedia applications in wireless networks.

### WEP

WEP (Wired Equivalent Privacy) encrypts data transmitted between wired and wireless networks to keep the transmission private.

### WPA

WPA (Wi-Fi Protected Access) encrypts data transmitted between wired and wireless networks to keep the transmission private.

### WPA2

WPA2 (IEEE 802.11i) is a wireless security standard that defines stronger encryption, authentication and key management than WPA.



## Accessories

### Antenna

Model	EXT-106	EXT-108	EXT-109	EXT-114	EXT-118	ANT2206	ANT3108	ANT3218
Product Picture								
Space	Indoor	Outdoor	Outdoor	Outdoor	Outdoor	Indoor	Outdoor	Outdoor
Frequency Band (MHz)	2400 ~ 2500	2400 ~ 2500	2400 ~ 2500	2400 ~ 2500	2400 ~ 2500	2400 ~ 2500	4900 ~ 5875	2400 ~ 2500
Gain	6 dBi	8 dBi	9 dBi (peak)	14 dBi	18 dBi	6 dBi	8 dBi	8 dBi
VSWR	1.5:1 Max	2.0:1 Max	1.5:1 Max	1.5:1 Max	1.5:1 Max	2.0:1 Max	2.0:1 Max	2.0:1 Max
Polarisation	Linear, vertical	Linear, vertical	Linear, vertical	Linear, vertical	Linear, vertical	Linear, vertical	Linear, vertical	Linear, vertical
HPBW/Horizontal	70°	360°	65°	30°	15°	65°	50°	360°
HPBW/Vertical	70°	15°	60°	30°	15°	175°	50°	20°
Connector	SMA reverse	N type jack	N type jack	N type female	N type female	RP SMA plug	N type female	N type jack
Temperature	0°C to 40°C	-40°C to 80°C	-40°C to 80°C	-40°C to 80°C	-40°C to 80°C	-10°C to 55°C	-40°C to 80°C	-40°C to 80°C
Weight	110 g	337 g	107 g	407 g	1.6 kg	110 g	206 g	640 g
Dimensions (mm)	118 x 86 x 76	f 19 x 250	114 x 114 x 40	200 x 200 x 50	360 x 360 x 16	76 x 86 x 118	f 20 x 260	210 x 210 x 73

### Cable

Product	LMR 200	LMR 400	Cable Kit for Outdoor AP	EXT-300
Product Picture				
Specifications	RP-SMA plug to N-plug	N-plug to N-plug	RJ-45 CAT 5e STB Cable w/Water-Proof cover 15 m	Jumper Cable & Surge Arrestor

### Others

Product	Ceiling Mounting Kit	NWA3550 Mounting Kit	PSE Kits
Product Picture			
Specifications	For NWA-3160, NWA-3163, NWA-3166 & NWA-8500	For NWA3550	- Input: AC 100 V to AC 240 V - Output: 48 Vdc/350 mA (IEEE 802.3af compliant) 48 Vdc/500 mA 24 Vdc/800 mA 18 Vdc/1 A - Operation temperature: -40°C to 85°C - Storage temperature: -10°C to 70°C - Operation humidity: 5% to 90%

## Wireless LAN License

### Feature

#### Concurrent User Scalability

The N4100 User Scalability License is a service that increases the number concurrent users to as many as 200.

### For

N4100

### Please Order

iCard 100 USER N4100/E-iCard 100 USER N4100



**Wireless LAN**  
Quick Sales Guide











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## Wireless LAN Quick Finder

<b>Medium Business</b>	<ul style="list-style-type: none"> <li>Web Managed</li> <li>SNMP Management</li> </ul>	<ul style="list-style-type: none"> <li>Extended Range</li> <li>2.4 GHz Support</li> </ul>	NWA1100	
		<ul style="list-style-type: none"> <li>CAPWAP Supported</li> <li>Centralised Management</li> </ul>	<ul style="list-style-type: none"> <li>Hybrid AP: Controller/Managed AP/ Stand-alone AP</li> <li>2.4/5.4 GHz Support</li> </ul>	NWA-3160
<ul style="list-style-type: none"> <li>Hybrid AP: Controller/Managed AP/ Stand-alone AP</li> <li>Extended Range</li> </ul>	NWA-3163			
<ul style="list-style-type: none"> <li>Hybrid AP: Controller/Managed AP/ Stand-alone AP</li> <li>802.11n Support</li> </ul>	NWA-3166			
<ul style="list-style-type: none"> <li>Hybrid AP: Controller/Managed AP/ Stand-alone AP</li> <li>Dual Radio Support</li> </ul>	NWA-3500			
<ul style="list-style-type: none"> <li>Hybrid AP: Controller/Managed AP/ Stand-alone AP</li> <li>Dual Radio Support</li> <li>Outdoor Extension</li> </ul>	NWA3550			
<ul style="list-style-type: none"> <li>Critical Roaming</li> <li>Centralised Management</li> </ul>	<ul style="list-style-type: none"> <li>WLAN Switch</li> </ul>		NXC-8160	
	<ul style="list-style-type: none"> <li>Managed AP</li> </ul>	NWA-8500		
<b>Hospitality</b>	Hot-Spot Service	G-4100 v2		
	Wireless N HotSpot Gateway	N4100		
	Hotel/Campus	VSG-1200v2		

Model Names	Description	Typical Application	Key Features
NWA1100	Web-Managed AP	Secure and reliable WLAN connectivity for small to medium businesses	<ul style="list-style-type: none"> <li>Extended range (802.11b/g)</li> <li>High-power design to extend Wi-Fi coverage</li> <li>WEP/WPA/WPA2 support to ensure complete network protection</li> <li>Various management interfaces are provided to merge the device into existing business networks</li> </ul>
NWA-3160	Hybrid AP	World's No.1 multi-role AP for reliable, secure and flexible deployment	<ul style="list-style-type: none"> <li>Single radio (802.11a/b/g)</li> <li>Secured tunnel for communication between controller and managed AP</li> <li>Auto channel assessment</li> <li>Enterprise-class access point functionalities</li> <li>Plenum rating</li> </ul>
NWA-3163	Hybrid AP	Optimised design for reaching out the Wi-Fi service field	<ul style="list-style-type: none"> <li>Extended range (802.11b/g)</li> <li>Wi-Fi Multimedia (WMM) + Auto Traffic Classifier (ATC)</li> <li>Wi-Fi WPA2 certified</li> <li>Multiple SSID with pre-defined VoIP, guest SSID</li> <li>Powerful and secure management</li> </ul>
NWA-3166	Hybrid AP	Advanced bandwidth and converge with flexible scalability	<ul style="list-style-type: none"> <li>Single radio (802.11a/g/n)</li> <li>Draft IEEE 802.11n (2.0) support and Wi-Fi a/g/n certification</li> <li>Centralized configuration manage up to 24 WLAN access points</li> <li>Wi-Fi WPA2-certified and secured tunnel for communication between controller and managed AP</li> <li>Multiple SSID with pre-defined VoIP, guest SSID</li> <li>Plenum rating enclosure and flexible installation</li> </ul>
NWA-3500	Hybrid AP	Concurrent 2.4 & 5 GHz Wi-Fi convergence for enterprise applications	<ul style="list-style-type: none"> <li>Dual radio support</li> <li>Wi-Fi Multimedia (WMM) + Auto Traffic Classifier (ATC)</li> <li>Wi-Fi WPA2 certified</li> <li>Multiple SSID with pre-defined VoIP, guest SSID</li> <li>Powerful and secure management</li> </ul>
NWA3550	Hybrid AP	Outdoor AP to extend the Wi-Fi coverage	<ul style="list-style-type: none"> <li>Dual radio (802.11a&amp;g)</li> <li>Configurable dual-radio with a variety external antenna solutions</li> <li>Featured with WDS function for bridging separate LAN areas together</li> <li>IP-66 compliant casing and able to protect from UV exposure</li> <li>802.3af support along with packaged PSE for easy installation to administrators</li> <li>WEP/WPA/WPA2 supported to ensure complete network protection</li> </ul>
NXC-8160 (WLAN Switch) & NWA-8500 (Managed AP)	WLAN Switch	Unique interference-free architecture for high-density deployment	<ul style="list-style-type: none"> <li>802.11a/b/g (NWA-8500)</li> <li>No cell planning needed</li> <li>Same band operation</li> <li>Resilience zero-delay, secure seamless mobility</li> <li>Wire quality VoWLAN</li> <li>Wi-Fi collaboration uplink diversity</li> </ul>
G-4100 v2	Service Gateway	Wi-Fi enabled HotSpot gateway	<ul style="list-style-type: none"> <li>802.11g</li> <li>Integrated HotSpot services</li> <li>Scalable user authentication and accounting</li> <li>Rich networking features</li> <li>Customized login page, advertisement URL links and "walled garden" features</li> </ul>
N4100	Service Gateway	New generation of Hotspot gateway with 802.11n standard support	<ul style="list-style-type: none"> <li>1st 802.11n hotspot AAA gateway in market</li> <li>Unique ticket printer integration for user's easy connection</li> <li>IP Plug &amp; Play for zero configuration</li> <li>Various authentication bases including RADIUS server, local user, and pop3</li> </ul>
VSG-1200v2	Service Gateway	AAA and PMS integrate-able Internet service gateway	<ul style="list-style-type: none"> <li>PMS integration</li> <li>RADIUS authentication/accounting</li> <li>Time-based billing (billing by minute, hour, day, week, etc)</li> <li>SSL secure user login process</li> <li>VPN pass through (IPSec/PPTP/L2TP)</li> </ul>

Product shown here are subject to availability depending on the region.

## Wireless LAN Feature Matrix

Model Name	Wireless LAN Access Points 1000 Series	Wireless LAN Access Points 3000 Series					Wireless LAN Controller Series & Wireless LAN Access Points 8000 Series
	NWA1100	NWA-3160	NWA-3163	NWA-3166	NWA-3500	NWA3550	NXC-8160 (WLAN Switch) & NWA-8500 (Managed AP)
<b>Main Design</b>							
Wireless Technology	802.11b/g	802.11a/b/g	802.11b/g	802.11n Draft 2.0	802.11a&g	802.11a&g	802.11a/b/g (NWA-8500)
Radio	1	1	1	1	2	2	2
High Power	Yes	-	Yes	-	-	-	-
Number of Antenna	2	2	2	3	2	2 N-type Connectors*	4
<b>LAN &amp; WAN</b>							
Number of 10/100M LAN	1	1	1	1	1	1	8 (Support up to 8 NWA-8500)
PoE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PoE Power Draw	7.2 W	6.5 W	6.9 W	7.4 W	7.3 W	16.2 W	7.5 W
<b>WLAN Features</b>							
Maximum Net Throughput	Up to 25 Mbps	Up to 33 Mbps	Up to 33 Mbps	100 ~ 110 Mbps	Up to 33 Mbps	Up to 33 Mbps	22 ~ 44 Mbps
WMM (Wi-Fi Certified)	Yes	Yes	Yes	Yes	Yes	Yes	Compatible
WEP	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WPA (Wi-Fi Certified)	Yes	Yes	Yes	Yes	Yes	Yes	Compatible
WPA2 (Wi-Fi Certified)	Yes	Yes	Yes	Yes	Yes	Yes	Compatible
Rogue AP Detection	-	Yes	Yes	Yes	Yes	Yes	Yes
Draft n (Wi-Fi Certified)	-	-	-	Yes	-	-	-
Multiple SSID	-	Yes	Yes	Yes	Yes	Yes	Yes
<b>WLAN Management</b>							
Controller	-	Yes	Yes	Yes	Yes	Yes	Yes
Managed AP	-	Yes	Yes	Yes	Yes	Yes	-
<b>Others</b>							
Plenum Rating	-	Yes	Yes	Yes	-	-	-

\* Antenna is not embedded and various external antennas are separately sold.