

Solwise Ltd

**150Mbps 5GHz
AP/CPE**



ZYGMA7

Affordable Infrastructure

ZyGMA7 from Solwise

Fighter N5, 802.11 a/n 150Mbps High-power Outdoor Wireless AP/CPE, with 1T1R Built-in 14dBi Panel Antenna, External SMA Antenna Connector, Dual 10/100Mbps RJ45 interfaces(LAN Port & WAN Port), UK Band B and Band C legal

Product Overview

*Fighter N5, 150Mbps
High-throughput, 5GHz
Band, Long-distance,
External Antenna
Connector, Feature-rich,
UK legal for Band B or
Band C*

The WiFi technology for outdoor connectivity is very mature and is often now used for last mile internet delivery or for building network connections. Typical applications include deployment of internet services in various environments, like the hospitality sector, campus networking, WISP long-haul communications, etc.

Fighter N5 is a Client CPE or AP, using the 5GHz band, to give Wifi communications free from the interference and congestions present in the common 2.4GHz ISM band. The ZyGMA7 5GHz CPE products are legal for use in the UK on the 5GHz Band B unlicensed band (5470-5720MHz) and the Band C licensed frequency range (5725-5850MHz). Key features include DFS, TPC and also notching in the range 5795 to 5815MHz.

The unique high-gain and antenna design with 1T1R 11n gives good throughputs over short to medium distances. The Fighetr N5 is easy-to-install with outstanding performance and a cost-effective design that allows users to have the reliable outdoor equipment at the affordable price. The maximum wireless bandwidth can reach up to 150Mbps (theoretical physical rate - see table below for realistic throughputs) to provide the users good link throughput.

It can also be used as the outdoor CPE for a WISP last mile connection allowing WISPs to deliver internet service to the residential and

Key Features

- Support IEEE 802.11a/n 5GHz High-Speed Data Rate
- High output-power for long distance application
- Multiple SSID Support
- Extra Low Noise Amplifier(LNA) support
- Advanced Firewall security + Software WPS function
- Reset-buttons on PoE injector for easy reset to factory default
- Friendly Management tool
- Weather proof case against rugged environment

the business customer where wired broadband internet service can not be delivered.

The Fighter N5 also supports the WDS features and an external antenna connection to make the bridging easier. An AP+Repeater mode is also implemented to facilitate a larger scale of WISP deployment.

Z9050L-AN

Feature Descriptions

Support IEEE 802.11a/n 5GHz High-Speed Data Rate

- Delivers up to 54Mbps(11a)/150Mbps(11n) data rate wireless connection at wireless frequency 5GHz band.
- The Zygya7 CPE products from Solwise are legal for use in the 5GHz Band B unlicensed band (5470-5720MHz) and in the Band C licensed frequency range (5725-5850MHz). Key features include DFS, TPC and also notching in the range 5795 to 5815MHz.

High output-power for long distance application

- Embedded extra power amplifier brings user better and stable wireless signal for large-scale wireless network application environment, such as farm, building to building and school...etc..
- Maximizes the performance and ideal for media-centric applications like streaming video, gaming and Voice over IP technology.

Operation Mode

- Support various operation (Bridge/Gateway /Ethernet Converter) modes between wireless and wired Ethernet interfaces.

Network Support

- Support IEEE 802.3x full duplex flow control on 10/100M Ethernet interface.
- Support DHCP server to provide clients auto IP addresses assignment.
- Support DHCP client, static IP, PPPoE, L2TP and PPTP of WAN Interface.
- Support Dynamic DNS
- Support System Log & NTP

Security Support

- Supports WPS, 64-bit and 128-bit WEP, WPA, WPA2 encryption to protect the wireless data transmission.
- Support TKIP/AES/TKIPAES of WPA algorithms.
- Multiple SSID Support helps to set up an infrastructure for multiple operators(ISP or Internet Content Provider)
- Advanced Firewall security + Software WPS function: The user access control and WEP, WPA/WPA2/WPA2-Mixed & URL/IP/Port/MAC filtering function help secures your Wireless and Wired networking. Firewall security includes port filtering, IP filtering, MAC filtering, port forwarding, DMZ hosting and URL filtering functions. Software WPS(WiFi Protected Setup) function help you setup and activate a secured wireless network connection without hassle.

Extra Low Noise Amplifier(LNA) support

- Implement extra Low Noise Amplifier(LNA) to increase the sensitivity of wireless receiver. User can get better and stable wireless connection quality while transmitting and receiving large files

Reset-buttons on PoE injector for easy reset to factory default

- Reset-buttons is on the PoE injector. Simply push the reset-buttons to reset to factory default setting. It simplifies the reset operation for factory default after the device is installed on somewhere that is not easy to reach.

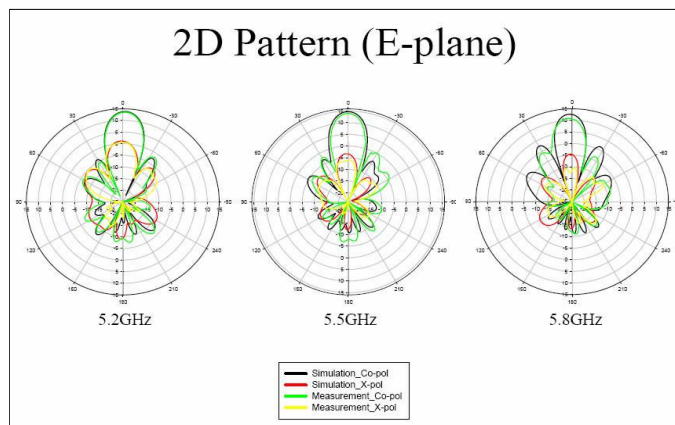
Friendly Management tool

- You can setup the AP/Router via web-based management tool quickly and easily. It also has Telnet function for advanced setting.

Weather proof case against rugged environment

- Good for outdoor application

Antenna Pattern



Related Products

PartNo	Stock Code	Model Name	WiFi Standard & Antenna	Operating Temperature	External Antenna	IP Protection
Z9024L-BGN-v2	ZY-FIGHTERN2	Fighter N2	802.11 b/g/n, 1T1R	-30°C ~ 55°C	Yes	IP65
Z9024-BGN	ZY-FEATURAN2	Featura N2	802.11 b/g/n, 1T1R	-20°C ~ 70°C	Yes	IP55
Z9050L-AN	ZY-FIGHTERN5	Fighter N5	802.11 a/n, 1T1R	-30°C ~ 60°C	Yes	IP65
Z9050-AN	ZY-FEATURAN5	Featura N5	802.11 a/n, 2T2R	-20°C ~ 70°C	Yes	IP55

Typical Distance Throughput

Model Name	Theoretical Max Throughput and Distance at UK legal Band B (30dBm EIRP)*		Theoretical Max Throughput and Distance at UK legal Band C (36dBm EIRP)*	
	MCS7	MCS0	MCS7	MCS0
Fighter N2	150Mbps/0.5Km	15Mbps/4Km	150Mbps/0.5Km	15Mbps/7Km
Featura N2	150Mbps/0.75Km	15Mbps/4Km	150Mbps/0.75Km	15Mbps/10Km
Fighter N5	150Mbps/1Km	15Mbps/6Km	150Mbps/1Km	15Mbps/9Km
Featura N5	300Mbps/500m (at MSC15/HT40)	15Mbps/3Km (at HT40)	300Mbps/750m (at MCS15/HT40)	15Mbps/6Km (at HT40)

*Notes:

Assumes like product at both ends of the link

Distance figures are based upon a System Operating Margin of approximately 10dBm

Actual throughput will depend upon the quality of the WiFi link and restrictions on the LAN connectivity

Distances quoted assume clear line-of-site between the points and correct Fresnel Zone Clearance

Distances are using the CPE built-in antenna

Specifications

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Interface	1 x 10/100 BASE-TX(Cat. 5, RJ-45) WAN port 1 x 10/100 BASE-TX(Cat. 5, RJ-45) LAN port
Memory	SDRAM 16MB FlashROM 4MB
RF Output Power(Typical)	Up to 22±1 dBm @ 11a mode 6Mbps Up to 18±1 dBm @ 11a mode 54Mbps Up to 21±1 dBm @ 11n mode MCS0 Up to 16±1 dBm @ 11n mode MCS7 * Output power adjustable
Receiver Sensitivity	802.11a -89dBm @ 6Mbps -87dBm @ 9Mbps -85dBm @ 12Mbps -83dBm @ 18Mbps -80dBm @ 24Mbps -77dBm @ 36Mbps -74dBm @ 48Mbps -73dBm @ 54Mbps 802.11n -88dBm @ MCS0 -87dBm @ MCS1 -85dBm @ MCS2 -83dBm @ MCS3 -80dBm @ MCS4 -77dBm @ MCS5 -73dBm @ MCS6 -72dBm @ MCS7
Antenna	Embedded 14dBi Panel antenna
External Antenna Connector	Software Selectable, SMA Connector to Connect the External Antenna for 5GHz Band

Vertical Port HPBW (Half-Power Beam Width)	YZ Plane /E-Plane Beamwidth: 16° XZ Plane /H-Plane Beamwidth: 65°
VSWR (Voltage Standing Wave Ratio)	1.2:1
Wireless Standard & Frequency Band	IEEE 802.11a/n, 5.18~5.805GHz, total 23 channels
Range	7~10 km(Open Free Space)
Access Protocol	OFDM/BPSK
System operation mode	Bridge, Gateway, Wireless ISP(Ethernet converter)
Wireless access mode	AP, Client, WDS, AP+WDS
Working Mode	Ad-Hoc or Infrastructure /AP/WDS/ AP +WDS
Security	64 / 128bit WEP, WPA/WPA2/WPA2-Mixed/WPS WPA/WPA2/WPS
PoE	Passive PoE, 12V through either LAN port or WAN port
Environmental Protection Rating	IP65
Button	Factory-Default-Reset button on PoE Injector
LED Indicators	Yes(back side)
Power Supply	DC 12V/1A(Passive PoE)
Mounting	Pole Mounting Wall Mounting
Humidity	10% ~ 90% (Non-condensing)
Operation & Storage Temp.	Operation: -30°C ~ 60°C Storage: -10°C ~ 70°C
Size & Weight	225(H) x 78(L) x 32(D) mm; 265g
Accessory	Passive PoE injector DC 12V/1A Power Adaptor Fixing accessory bag Manual CD
Regulation Compliance	
FCC	Part15 sub B (Lab tested) Part15 sub C (Lab tested)
CE	Radio Requirement: ETSI EN 301 893 V1.5.1 (2008-12) EMC Requirement: EN 301 489-1 V1.8.1 (2008-04), EN 301 489-17 V2.1.1 (2009-05) EN 60950-1:2006(2nd edition)+A11:2009+A1:2010

The product specifications are subject to change without prior notice.

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