

ZA-5000-WS10
AP Controller
Product Specification

2 Specification

2.1 Product Appearance

ZC-5140 appearance is shown below:

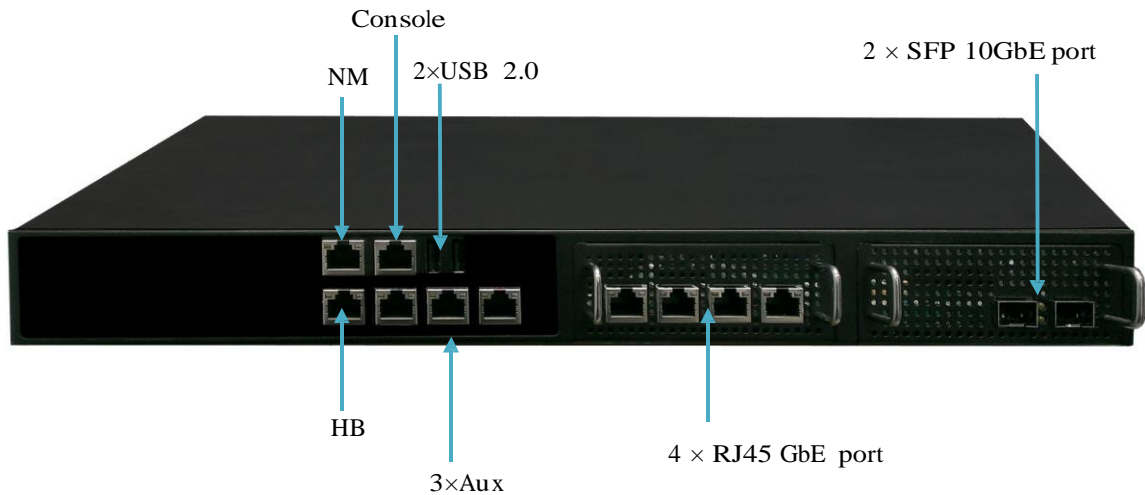


Figure 1 Front View



Figure 2 Rear View

2.2 Hardware Specification

The Hardware specifications of the product are as below:

Table 1.1 Hardware specification

Features	Additional Information	
Form Factor	Standard 19-inch rack mount	
Platform	Processor	1 x Intel® Xeon® E3-1225 Processor 3.10GHz(95W), 011WSC310LI01
	Chipset	Intel C206
BIOS	AMI BIOS 64Mbit SPI Flash ROM	
System Memory	Technology	DDR3 1066/1333/1600MHz,

		Un-buffered, ECC or non-ECC
	Max Capacity	16GB
	Socket	4 x 240P DIMM
OS Support	Windows 2000, 2003, XP, 7. Linux kernel 2.4 and up, Linux, FreeBSD	
Storage	HDD Bays	2 x 2.5" or 1 x 3.5"
	Compact Flash	1 x Type II Compact Flash
Networking	Ethernet Ports	4 x GbE RJ45 default (20 GbE ports maximum)
	Bypass	2 pairs G3
	Controllers	4 x Intel 82574L or 2 x Intel I350
	Ethernet Modules	2
	Management Port	1xRealtek 8111 RJ45 GbE port
	Security Acceleration	N/A
I/O Interface	Reset Button	1 x reset button Software reset by default
	Console	1 x RJ45
	USB	2 x USB 2.0
	IPMI via OPMA slot	Optional
Expansion	PCIe	1 x PCIe*4 expansion
	PCI	1 x Mini-PCI
Cooling	Processor	CPU heat sink with fan duct
	System	4 x cooling fans with smart fan control
Environmental Parameters	Temperature, ambient operating / storage	0 ~ 40° C / -20~70° C
	Humidity (RH), ambient operating / ambient non-operating	5~95%, non-condensing
Miscellaneous	LCD Module	2 x 20 characters
	Watchdog	Yes
	Internal RTC w/ Li Battery	Yes
Physical Dimensions	Dimensions (WxHxD)	431 x 44 x 550 mm
	Weight	12 kg
Power	AC: Type / Watts	1U ATX SPS / 270W or 1U ATX redundant 275W each
	AC: Input	AC 100~240V @50~60 Hz
	DC: Type / Watts	1U 250W Redundant
	DC: Input	-40V~-72VDC, 10-5A
Approvals & Compliance	CE emission, FCC Class A, RoHS	

2.3 Firmware Specification

The Firmware specifications of the product are as below:

Table1.2 Software specification

Function Catalog	Detail Function		Default settings
About			
User Information	1. Username 2. User Authority		1. admin 2. Administrator
AP Controller Information	1. Device Name 2. Firm ware Version 3. Hardware Version		1. ZA-5000-WS10 2. 3.
Device MAC Address	1. ETH0~ETH9 MAC Address		1.
Basic Setup			
Device Name			ZA-5000-WS10
Enable NTP Server	1. Enable NTP Server 2. Time Zone 3. Daylight Saving Time 4. Time Setting 5. Current Time		1. Yes 2. GMT+8:00 3. 4. 5. Current Time
Enable NTP Client	1. Enable NTP Client 2. NTP Server 3. Synchronize Time Interval		1. Disable 2. 3. 86400
Network Settings			
Management Port	1.IP Address 2. Subnet Mask		1. 192.168.3.228 2. 255.255.255.0
AP Ports	1. Port VLAN ID 2. IP Address 3. Subnet Mask 4. Primary DNS server 5. Secondary DNS server		1. 2. 192.168.1.228 3. 255.255.255.0 4. 0.0.0.0 5. 0.0.0.0

VLAN Settings	<ol style="list-style-type: none"> 1. VLAN Identifier 2. VLAN ID(1-4094) 3. WAN1(PORT1) 4. WAN2(PORT2) 5. Per-user Uplink Bandwidth(1-1687) 6. Per-user Downlink Bandwidth(1-1687) 7. NAS_ID 8. Portal Server 		<ol style="list-style-type: none"> 1. 2. 3. Disable 4. Disable 5. 6. - 7. 8.
QinQ Settings	Turn QinQ On		Disable
	Enable QINQ		Disable
	Port1(WAN) QinQ Configure	<ol style="list-style-type: none"> 1. Enable Port QINQ 2. Port ETYPE(e.g. 0x8100) 3. Port Outer VLANID(1-4094) 	<ol style="list-style-type: none"> 1. Disable 2. 0x8100 3.
	Port2(WAN) QinQ Configure	<ol style="list-style-type: none"> 1. Enable Port QINQ 2. Port ETYPE(e.g. 0x8100) 3. Port Outer VLANID(1-4094) 	<ol style="list-style-type: none"> 1. Disable 2. 0x8100 3.
	QINQ Setting By VLANID	<ol style="list-style-type: none"> 1. Inner VLAN ID 2. Outer ETYPE(e.g. 0x8100) 3. Outer VLAN ID(1-4094) 	<ol style="list-style-type: none"> 1. 2. 3.
	QINQ List		
VLAN Virtual Interface	VLAN Virtual Interface List/Enable/Edit		

	<p>VLAN Virtual Interface 1</p>	<p>Basic Settings:</p> <ol style="list-style-type: none"> 1. Virtual Interface 2. VLAN ID 3. Master IP 4. Subnet Mask 5. Backup IP 6. Subnet Mask <p>Network Authentication</p> <p>Authentication Mode</p> <p>Network Address Translation</p> <p>Settings:</p> <ol style="list-style-type: none"> 1. Enable NAT 2. Primary IP Address 3. Starting Public IP Address 4. Ending Public IP Address <p>Add/Edit/NAT List/Back</p>	<ol style="list-style-type: none"> 1. VIF1 2. 3. 0.0.0.0 4. 255.255.255.0 5. 0.0.0.0 6. 255.255.255.0 <p>Disable</p> <ol style="list-style-type: none"> 1. Disable 2. 3. 4.
<p>DHCP Settings</p>	<ol style="list-style-type: none"> 1. Option60 2. Interface 3. DHCP Status 4. AP Port IP Address 1 5. AP Port IP Address 2 6. AP Port IP Address 3 7. AP Port IP Address 4 8. Starting IP Address 9. Ending IP Address 10. Subnet Mask 11. Default Gateway 12. Primary DNS Server 13. Secondary DNS Server 14. Primary WINS Server 15. Secondary WINS Server 16. Lease Time 17. Add/Edit/Delete 18. DHCP List 		<ol style="list-style-type: none"> 1. Disable 2. LAN 3. Enable 4. 192.168.1.228 5. 0.0.0.0 6. 0.0.0.0 7. 0.0.0.0 8. 0.0.0.0 9. 0.0.0.0 10. 255.255.255.0 11. 0.0.0.0 12. 0.0.0.0 13. 0.0.0.0 14. 0.0.0.0 15. 0.0.0.0 16. 3600 17. 18.

Static Routing Settings	<ol style="list-style-type: none"> Destination IP Address Subnet Mask Next Hop Add/Edit/Delete Static Routing List 		<ol style="list-style-type: none"> 0.0.0.0 255.255.255.0 0.0.0.0 	
N+1 Backup Settings	Enable N+1		OFF	
	Heartbeat Interface Settings	<ol style="list-style-type: none"> IP Address Subnet Mask 	<ol style="list-style-type: none"> 192.168.2.228 255.255.255.0 	
	N+1 Parameter Settings	<ol style="list-style-type: none"> Mode Virtual Routing ID Virtual Routing IP Password HB IP Timeout Value for Switching among ACs 	<ol style="list-style-type: none"> Master 	
	Virtual Routing List			
Port Monitor Config	ETH0~9		Disable	
RF Configure				
AP Template	TAP Template Search	<ol style="list-style-type: none"> Display Message According To Template Name Display Message According To Wireless Mode Display Message According To Channel 	<ol style="list-style-type: none"> Auto (802.11g and 802.11b) 	
	AP Template Auto Create		Disable	
	LightAP Template Wireless Settings	Configuration Template		Default
		Radio Enable		Enable
		Region/Country		By country dependent
		Wireless Mode		Auto

		1. Auto-Channel	1. Disable
		2. Auto-Channel Adjustment Mode	2. Start
		3. Auto-Channel Interval(60-86400)	3. 3600s
		4. Minimum Signal Level(-90-10)	4. (-70dBm)
		Channel/Frequency	1/2.412GHz
		Data Rate	48Mbps
		Multi-cast Rate	6Mbps
		Power Adjustment	0
		RTS Threshold	2346
		Fragment Length	2346
		Beacon Interval	100
		DTIM Interval	1
		Preamble Type	Long
		Support WMM	Yes
		Enable Auto-Power Adjustment	Disable
		Minimum Signal for Forced Roaming	(-92dBm)
		User Control Mode	
		1. User Control Mode	1. Disable
		2. Maximum Throughput	2. 30Mbps
		Maximum Retry Number when frame length is shorter than RTS Threshold	0
		Maximum Retry Number when frame length is longer than RTS Threshold	0
		Enable Console Port Capture	Disable
		QoS: Enable QoS Mapping	Disable
		Best Effort	
		1. AIFS	1. 0
		2. CW Min	2. 0
		3. CW Max	3. 0
		4. TXOP Limit	4. 0

		Background	
		1. AIFS	1. 0
		2. CW Min	2. 0
		3. CW Max	3. 0
		4. TXOP Limit	4. 0
		Video	
		1. AIFS	1. 0
		2. CW Min	2. 0
		3. CW Max	3. 0
		4. TXOP Limit	4. 0
	Voice		
	1. AIFS	1. 0	
	2. CW Min	2. 0	
	3. CW Max	3. 0	
	4. TXOP Limit	4. 0	
	Security Configuration Profile	Security Configuration Profile List	
		Enable	Disable

		Profile Definition 1. Security Profile Name 2. Wireless Network Name (SSID) 3. Broadcast Wireless Network Name (SSID) 4. Maximum User Number 5. VLAN ID 6. Local Forwarding 7. Network Authentication 8. Data Encryption 9. Passphrase 10. WPA Passphrase(Network Key) 11. Wireless Client Security Separation 12. Wireless Client Bandwidth Control Enable 13. Per-user Uplink Bandwidth(1-1687) 14. Per-user Downlink Bandwidth(1-1687) 15. Re-authentication after idle 16. Re-authentication after idle time(1-1440)min 17. Re-authentication after idle flow(0-10240)KB 18. Enable Fast Authen 19. Portal Server 20. RADIUS Server(Web Authen)	1. Profile1 2. Wireless 3. Enable 4. 25 5. 0 6. Disable 7. Disable 8. Open System 9. None/TKIP/AE S 10. 11. 12. Disable 13. - 13. Disable 14. - 14. 100 * 64Kbps 15. - 15. 100 * 64Kbps 16. User default 17. - 17. 0 18. 0 19. Disable 20. Please Select
TAP Configuration Template Application	TAP Configuration Template		
	AP Mac Addr		
	List of TAP Configuration Templates Applied		
Access Control			
Trusted AP	Turn Trust AP Control On		Disable

	Trusted AP List	Trusted TAP List		
		Edit/Delete		
	Add Trusted AP	MAC Double Card		Disable
		MAC Address		
		Serial Number		
		Project Status Information 1~3		
		Add/Apply/Cancel		
Backup/Browse/Resume				
WEB Authentication		<ol style="list-style-type: none"> 1. Enable User And Host Binding 2. Enable SSID Binding 3. Enable ACIP Binding 4. WEB Authentication Mode 5. Accounting Interval 6. Re-authentication after Idle time(1-1440)min 7. Re-authentication after idle flow(0-10240)KB 8. Enable User Accurate Online Time 9. Click here to go to User Management settings 	<ol style="list-style-type: none"> 1. Disable 2. Disable 3. Disable 4. Internal portal + Internal Database 5. 900 6. 15 7. Disable 8. Disable 	
	Information Settings	<ol style="list-style-type: none"> 1. Information Server Name 2. Information Server IP 3. Flow Detection threshold(1-20)KB 4. Time Detection threshold(60-600)sec 	<ol style="list-style-type: none"> 1. 2. 0.0.0.0 3. 10 4. 300 	
	Portal Server Settings	<ol style="list-style-type: none"> 1. Find Portal Address 2. Portal Name 3. URL 4. AC Name(CAN.CTY.PRO.OPE) 5. Portal Server List 6. Add/Edit/Delete 	<ol style="list-style-type: none"> 1. Default 2. 3. http:// 4. 0.0.0.0 5. 6. 	

PPPOE server		<ol style="list-style-type: none"> 1. Authentication 2. Authentication Location 3. The Max. User Number 4. The Local IP Address 5. Remote First Remote IP Address 6. Remote Last Remote IP Address 7. Subnet Mask 8. Primary DNS Server 9. Secondary DNS Server 	<ol style="list-style-type: none"> 1. enable/enable 2. Local 3. 65 4. 10.0.0.1 5. 10.67.15.1 6. 10.67.15.64 7. 8. 255.255.255.0 9. 10. 0.0.0.0 11. 0.0.0.0 12. 0.0.0.0
RADIUS Settings		<ol style="list-style-type: none"> 1. RADIUS Mode 2. Extensible Authentication 3. Search Area Method 4. Default NAS Id 5. Apply/Cancel 	<ol style="list-style-type: none"> 1. Disable 2. Disable 3. Default 4. NAS Identifier 5.
Access Control	Turn Access Control On		Disable
	Wireless STA List		
	Add/Delete/Search STA	MAC Address	
		Select All/Add/Delete/Search	
	Apply/Cancel/Browse/Resume		
White List (Before Authentication)		Enable While List	Disable
	Access Control Settings	<ol style="list-style-type: none"> 1. Access Control Rule 2. Dest Start IP Address 3. Dest End IP Address 4. Port 5. VLAN ID 6. SSID 7. Allow List 8. Add/Edit/Delete 	<ol style="list-style-type: none"> 1. Based on IP Control 2. 0.0.0.0 3. 0.0.0.0 4. 5. 6. 7. 8.
Black-White List		Access Control Mode	Disable

(After Authentication)	Access Control Settings	<ol style="list-style-type: none"> 1. Access Control Mode 2. Dest Start IP Address 3. Dest End IP Address 4. Port 5. VLAN ID 6. SSID 7. Allow List 8. Deny List 9. Allow/Deny/Edit/Delete 	<ol style="list-style-type: none"> 1. Disable 2. 0.0.0.0 3. 0.0.0.0 4. 5. 6. 7. 8. 9.
NASID Binding Settings		<ol style="list-style-type: none"> 1. NASID Binding Mode 2. TAP Mac Addr 3. Start IP Address 4. End IP Address 5. NASID 6. TAP MAC List of NASID Binding 7. Add/Edit/Delete 	<ol style="list-style-type: none"> 1. VLAN 2. 3. 0.0.0.0 4. 0.0.0.0 5. 6. 7. 8.
Bandwidth Control		Enable Bandwidth Control	Disable
	User Bandwidth Control Based on MAC	<ol style="list-style-type: none"> 1. Default User Bandwidth 2. MAC Address 3. Per-user Uplink Bandwidth 4. Per-user Downlink Bandwidth 5. Add/Edit/Delete 	<ol style="list-style-type: none"> 1. 8*64Kbps 2. 3. 0*64Kbps 4. 0*64Kbps 5.
Firewall Settings		ICMP Protocol	Disable
	IP Access Control	Authorized IP Access	Disable
		Interface: VIF1~8/TAP Port	
		Ports can be accessed by all IPs:	
		<ol style="list-style-type: none"> 1. TCP Port Number 2. UDP Port Number 	<ol style="list-style-type: none"> 1. 2.
IP Settings	<ol style="list-style-type: none"> 1. IP Address 2. Forbid Port Number 3. Authorized Local IP List 4. Add/Edit/Delete 	<ol style="list-style-type: none"> 1. 0.0.0.0/0 2. 3. 4. 	

Firewall	Enable IP filter		Disable
	IP filtering Settings	<ol style="list-style-type: none"> 1. Dest Start IP Address 2. Dest End IP Address 3. Add 4. IP Address List 5. Delete/Apply/Cancel 	<ol style="list-style-type: none"> 1. 0.0.0.0 2. 0.0.0.0 3. 4. 5.
Advanced Settings	WAN Broadcast Packet Separation	WAN Broadcast Isolation	Disable
		ARP Passing	Disable
	WAN Multicast Isolation		Disable
	WAN Unknown Unicast Isolation		Disable
	Wireless Separation		
	Enable Refuse DHCPFLOOD	Enable Refuse DHCPFLOOD	Disable
		The number of requests allowed	512
	Side of broadcast Filtering		Disable
	Flow Balance Mode	1. Flow Balance Mode	1. Disable
		2. Basic User Number(1-100)	2. 5
		3. Basic Flow Value(0-6553kbps)	3. 10240kbps
		4. Flow Balance Group	4. Default
		5. Max. Deny Times	5. 4
		6. User Number Difference	6. 1
		7. Data Traffic Difference	7. 2048kbps
	Enable IGMP Snooping		Disable
IGMP Proxy	1. Enable IGMP Proxy	1. Disable	
	2. Upstream	2. VIF1	
VoIP Control	1. Enable VoIP Control	1. Disable	
	2. Max. VoIP Number	2. 0	
DHCP Snooping		1. Disable	
DHCP Relay	1. Enable DHCP Relay	1. Disable	
	2. DHCP Server IP Addr	2. 0.0.0.0	
Link Check	Link Check	Disable	
	IP Address 1~2	0.0.0.0	
	Check Interval time(10-3600s)	20	
	Allow Check Failure Times(6-60)	6	

		Enable Serial Capture	Disable	
		TAP Offline Timeout Setting	60	
Time ACL Setting	Time ACL		Disable	
	Time ACL Message		Disable	
	VLAN ID(1-4094)			
	Time ACL Date	Starting Date		
		Ending Date		
	Time ACL Weekday	Monday ~ Sunday	Disable	
	Time ACL Period	Start Time1~Starting Time4		00:00:00
		Ending Time 1~Ending Time4		00:00:00
Add/Edit/Delete				
Management				
User Management	Add User	User ID		
		Username		
		Password		
		Repeat Password		
		Login Limit		
		Used Duration		
		Total Online Time		
		Allowed MAC		
		Interface		
	Add/Apply/Cancel			
User List	Edit/Delete			
System User Management	User Inactivity Time Threshold		3	
	Add User	User ID		
		Username		
		Strong Password		
		Password length limit		6
		Password		
		Repeat Password		
		Lock user		Disable
		End time Setting		
		Remote Access		Disable
Password Reuse Number		5		

		Max Auth Fail Number	6
		User Authority	Select
	User List	Edit/Delete	
Change Password	Current Password		
	New Password		
	Repeat New Password		
	Restore to Default Password		Disable
	Click here to go TAP password Settings		
Upgrade Firmware	Browse		
	Upload		
Backup/Retrieve Settings	Backup current settings to a file	Backup	
	Retrieve settings from a backup file	Browse/Retrieve	
	Restore to Factory Default Settings	Restore	
License Management	Export device ID numbers to a file	Export	
	Import a Certificate File	Browse/Import	
	Certificate Information		
Legal AP Management	Legal AP Settings	Type	AP MAC
		Legal AP MAC Setting	
		Add/Confirm/Delete/Edit/Cancel	
		Legal AP manufacturer MAC	
		Legal AP manufacturer Name	
		Legal AP SSID Setting	
Save Configuration	Save Configuration		Disable
	Confirm/Cancel		
Remote Control Management	SNMP	Enable/Disable	Enable
		Trap Server 1	192.168.0.254
		Trap Server 2	0.0.0.0
		Read Community1	public
		Read Community2	

		Write Community3	private
		Write Community4	
		Listen IP	ListenAllIp
	Telnet		Disable
	SSH	SSH	Enable
		SSH Port	22
		SSH Refuse Time	5
Reboot	Reboot Wireless Switch		Disable
	Reboot Reboot Thin AP		Disable
	Shutdown Wireless Switch		Disable
Information			
Service Adapter List	Number		
	Reboot		
Routing List			
Port Statistic Information		1. WLAN Interface Statistic Information 2. WAN Interface Statistic Information	
AP List	AP Search	Display Messages According To IP	
		Display Messages According To Mac	
		Display Messages According To AP Name	
		Display Messages According To AP Project Information	
		Display Messages According To Netcard	
		Choose a template issued for a batch of tap	default
	TAP Status Statistics		
	Deliver template to group TAPs/Scan/Refresh/Select All/Reboot/Restore to factory settings/Delete		

Station List	Wireless Station Scan	<ol style="list-style-type: none"> 1. Display Messages According To ID 2. Display Messages According To IP 3. Display Messages According To MAC 4. Display Message According To AP MAC 5. Display Message According To AP NAME 6. Display Message According To Authentication Type 	1.0
DHCP IP List	Including interface, MAC address, IP address, assignment time and expiration time		
Rogue AP List	Scan AP settings and rogue APs	Scan AP Type	ONCE
		Scan AP MAC	
		Add/Edit/Delete/Confirm/Cancel	
		Scan AP List	
		Scan/Stop	
		Scan rogue AP and filter rogue AP based on SSID	
		Rogue AP list	
Activity Log	Enable Syslog		Disable
	Syslog Server IP Address1		0.0.0.0
	Syslog Server IP Address2		0.0.0.0
	Port		514
	Display Messages According To Keyword		
	Log Window	Refresh/Save as/Clear	
System Information	Device Serial Number		
	Memory Storage		2G
	Memory Utilization		

	CPU Utilization		
	System Up Time		
	System Temperature		
RT User Stats	Real-time user statistic	1. Scope of Statistics 2. Time Interval	1. Entire Network 2. 5s
RT Traffic Status	Real-time traffic statistic	1. Scope of Statistics 2. Time Interval	1. Entire Network 2. 5s
Hist User Status	Historical user statistic	Scope of Statistics	Entire Network
Hist Traffic Status	Historical traffic statistic	Scope of Statistics	Entire Network
Phase II Features			
Redirect Automatically at Fixed Time			
User-defined portal Web page			
Automatic Channel Assignment			
Automatic Power Adjustment			
Rogue AP Detection			
Statistics Feature			

2.4 Product Performance Specification

The performance specifications of the product are as below:

Table 2-3 Environment Specification

Items	Specification
Manageable AP (Number)	1024
Simultaneous Client Number	4096

DHCP Address Capability	4096 wireless users+1024 APs
MAC Address List Capability	32K
VLAN Number	4K

2.5 Environment specification

The environment specifications of the product are as below:

Table 2-4 Environment Specification

Items	Information
Temperature, Ambient operating	0℃~40℃
Temperature, Ambient storage	-40℃~70℃
Humidity, Ambient operating and non-operating	5~95%RH, non condensing
Watchdog	Yes
Internal RTC with Li Battery	Yes
Warranty	1 years