

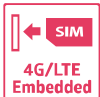


## BiPAC 4520VAOZ R3

4G LTE Dual-SIM Dual-Band Wireless  
VoIP VPN Router

## BiPAC 4500VAOZ R3

4G LTE Dual-Band Wireless  
VoIP VPN Router



### BiPAC 4520VAOZ R3/ BiPAC 4500VAOZ R3

The BiPAC 4520VAOZ R3/ 4500VAOZ R3 supports the state-of-the-art 4G LTE network which is reliable, scalable and flexible for indoor applications. Embedded with 4G LTE module and Gigabit EWAN interfaces, the BiPAC 4520VAOZ R3/ 4500VAOZ R3 enables high-speed and secured Internet connectivity for home, SOHO, and enterprise users. With an integrated dual-band wireless access point and 4-port Gigabit Ethernet LAN, the BiPAC 4520VAOZ R3/ 4500VAOZ R3 can run both 2.4GHz and 5GHz to maximum wireless speed 2.3Gbps (1733Mbps at 5GHz, 600Mbps at 2.4GHz) and 10 times faster LAN connection than the regular FAST Ethernet LAN. Meanwhile, the device integrates with two FXS ports allowing simultaneous VoIP calls, and users can choose the most economical rate of VoIP calls provided by different providers.



### 4G LTE Mobility

With 4G LTE-based Internet connection (embedded 4G LTE module), users can access the Internet while sitting on anywhere.



### Single Radio/ Dual SIMs (BiPAC 4520VAOZ R3 only)

The Dual-SIM provides failover feature to keep Internet connectivity if primary SIM loses connectivity.



### Automatic Failover/Failback between 4G LTE and Gigabit EWAN

Uniquely embedded with 4G LTE and Gigabit EWAN interfaces, BiPAC 4520VAOZ R3/ 4500VAOZ R3 ensures a seamless Internet connectivity by featuring superior Failover/Failback functionality between 4G LTE and EWAN. Either wired or wireless connection can be set up as primary or backup WAN port. When the main WAN interface fails, the secondary WAN interface will automatically back up the connection to ensure an always-on connectivity.



### Dual-Band Wireless Mobility and Security

With an integrated dual-band wireless access point, BiPAC 4520VAOZ R3/ 4500VAOZ R3 runs both 2.4GHz and 5GHz simultaneously that the combined throughput can reach 2.3Gbps (1733Mbps at 5GHz, 600Mbps at 2.4GHz). Multiple SSIDs with Client Isolation to enhance the level of transmission security and access control over the Wireless LAN. The network manager can assign different policies and functions for each SSID, increasing the flexibility and efficiency of the network infrastructure.



### Secured VPN connection

Supporting comprehensive and robust VPN (Virtual Private Network) protocols including IPSec, OpenVPN, GRE, PPTP, L2TP, BiPAC 4520VAOZ R3/ 4500VAOZ R3 allows users can establish private and encrypted data transmission tunnels over the public Internet between headquarter and branch offices. With a built-in DES/3DES VPN accelerator, BiPAC 4520VAOZ R3/ 4500VAOZ R3 dramatically enhances IPSec VPN performance.



### VoIP Supplemental Services

The BiPAC 4520VAOZ R3/ 4500VAOZ R3 complies with SIP protocol and the most popularly adopted VoIP standard to ensure interoperability with SIP devices and major VoIP Gateways, supporting a variety of telephony applications including Hot-line/Warm-line, Call Forwarding, Call Transfer, Call Waiting, 3-way Conference Call, Anonymous Call, Block Anonymous Call and Don't Disturb.

### High Performance

- High speed 4G LTE module<sup>\*1</sup>
- Gigabit Ethernet WAN and LAN
- Dual-Band wireless reaches 2.3Gbps

### High Availability

- Fully supports for multiple LTE frequency bands<sup>\*1</sup>
- Dual-WAN interfaces - 4G LTE and Gigabit EWAN
- Single Radio/ Dual SIMs(BiPAC 4520VAOZ R3)
- Single Radio/ Single SIM(BiPAC 4500VAOZ R3)
- Dual-Band wireless - 2.4GHz and 5GHz
- Multiple wireless SSIDs with wireless client isolation

### Secure VPN Connections

- Embedded IPSec, GRE, OpenVPN, PPTP, L2TP with powerful encryption

### VoIP Supplemental Services

- Hot-line/ Warm-line, Call Forwarding, Call Transfer, Call Waiting, 3-way Conference Call, etc.

### IPv6 Support

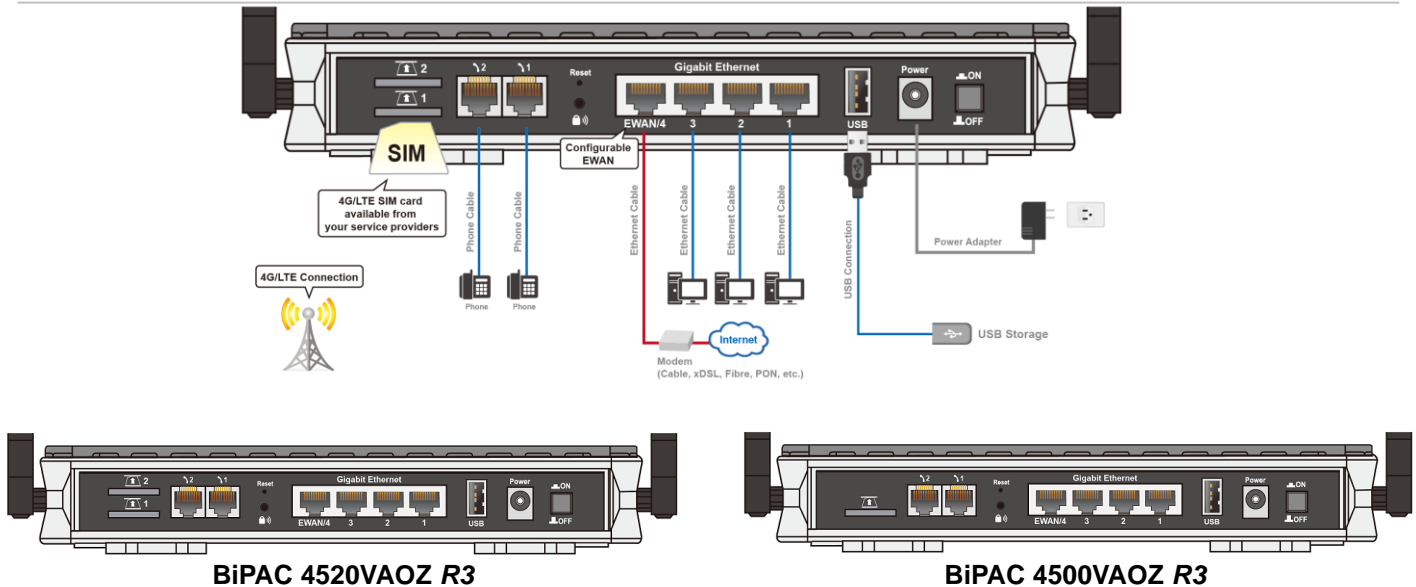
- IPv4, IPv6, IPv4/ IPv6 dual stack<sup>\*2</sup>

### USB Storage/ NAS

- Embedded SAMBA server, FTP server

### Ideal for SOHO, office, and home users

## Application Diagram



BiPAC 4520VAOZ R3

BiPAC 4500VAOZ R3

## Features & Specifications

### High-speed Mobile Wireless Communication

- Embedded high performance 4G LTE module<sup>\*1</sup>
- High performance external antenna

### Embedded 4G LTE<sup>\*1</sup>

- Supported frequency bands: (4G LTE)  
LTE-FDD: B1, B3, B5, B7, B8, B20, B28  
LTE-TDD: B38, B40, B41
- Supported data rate: (4G LTE)  
LTE-FDD: Max 1.175Gbps (DL), 150Mbps (UL)  
LTE-TDD: Max 545Mbps (DL), 90.6Mbps (UL)
- Carrier Aggregation  
DL 5xCA, UL 2xCA
- Downlink 4x4 MIMO support

### Network Protocols and Features

- Dual WAN Failover/ Failback
- IPv4, IPv6, IPv4/IPv6 dual stack<sup>\*2</sup>
- Dual APN<sup>\*2</sup>
- Keep Alive
- IP Pass-Through
- NAT, Virtual Server and DMZ
- Static Routing, Dynamic Routing (RIP v1/v2, OSPF, BGP)
- SNTP, DNS relay and DDNS
- Universal Plug and Play (UPnP) compliant
- Supports DHCP server/ client/ relay

### VoIP

- Compliant with SIP standard (RFC3261)
- Codec: G.729, G.726, G.711 A-Law, G.711 u-Law
- DTMF method: Inband, RFC 2833, SIP Info
- T.38 Fax relay
- Caller ID generation: DTMF, FSK
- Silence Suppression (VAD), Echo Cancellation
- Hot-line/ Warm-line
- Call Forwarding, Call Transfer
- Call Waiting, 3-way Conference Call
- Anonymous Call, Block Anonymous Call
- Speed Dial, Return Call, Redial
- Dial Plan
- Don't Disturb Function
- VoIP NAT Traversal

### Virtual Private Network

- IPsec
- PPTP
- L2TP
- GRE
- OpenVPN

### Firewall

- Built-in NAT Firewall
- Stateful Packet Inspection (SPI)
- Prevents DoS attacks including Land Attack, Ping of Death, etc.
- Access Control
- IP Filtering, MAC Filtering, URL Filtering
- VPN pass-through

### Wireless LAN

- IEEE 802.11a/b/g/n/ac compliant
- Concurrent dual-band 802.11a/n/ac(5GHz) and 802.11b/g/n(2.4GHz)
- Up to 1733Mbps wireless operation rate at 5GHz
- Up to 600Mbps wireless operation rate at 2.4GHz
- Wi-Fi security with WEP 64/128, WPA-PSK, WPA2-PSK, Mixed WPA/WPA2-PSK
- WPS (Wi-Fi Protected Setup) for easy setup
- Multiple SSIDs
- Supports WDS repeater function
- Wireless MAC Filtering
- Wi-Fi Client Isolation
- Wi-Fi Hotspot with Captive Portal
- Support RADIUS authentication
- Wi-Fi client rate-limiting

### USB Applications Server

- Storage/NAS: FTP server, SAMBA server

### Management

- Password protection for system management
- Quick installation wizard
- Web-based GUI for remote and local management
- Firmware upgrades and configuration data upload and download via Web-based GUI
- TR-069 (CWMP)<sup>\*2</sup>, SNMP
- 4G LTE Usage Allowance
- Syslog monitoring
- Physical layer/protocol diagnostic test tool
- Scheduling Auto-Reboot

### Hardware Specifications

#### Physical Interface

- Two (2) detachable high performance 4G LTE antennas
- Two (2) detachable 5GHz & 2.4GHz antennas
- Two (2) internal 5GHz & 2.4GHz antennas
- Four (4) Gigabit Ethernet auto-crossover (MDI/MDI-X) switch
- One (1) USB 2.0 host type A
- Two (2) FXS Telephone ports
- Two (2) 2FF mini-SIM slot (BiPAC 4520VAOZ R3)
- One (1) 2FF mini-SIM slot (BiPAC 4500VAOZ R3)
- Factory default reset button
- Wireless on/off and WPS push button
- Power jack for DC input

#### Physical Specifications

- Dimensions: 9.04" x 6.10" x 1.69"  
(229.5 mm x 155 mm x 43 mm)

#### Power Requirements

- DC power input: 15V DC, 2.0A

#### Operating Environment

- Operating temperature: 0°C ~ 40 °C
- Storage temperature: -20°C ~ 70 °C
- Humidity: 20% - 95% non-condensing

#### Notes:

1. The 4G LTE is dependent on your local service provider.
2. Only upon request for Telco/ ISP tender projects.
3. Specifications in this datasheet are subject to change without prior notice.