

## AIMAX4GW 4G LTE + WiFi Outdoor Gateway

# **Telecom** Applications

WHITE PAPER



**OvisLink Corp.** www.airlive.com





### **Designed for Telecom Operator**

The AirMax4GW is a standalone 4G LTE outdoor gateway designed for Telecom operators to diversify their 4G/3G business models. By bridging 4G/3G connections with WiFi and Ethernet, it provides telecom operators new business opportunities to sell their LTE and UMTS bandwidth beyond the usual smartphone and tablet markets. In addition, the built-in 4G LTE modem is completely backward compatible with 3G UMTS, HSDPA, HSUPA, Edge, and GPRS standards.



#### Bridge between WiFi, Ethernet, and 4G/3G Networks

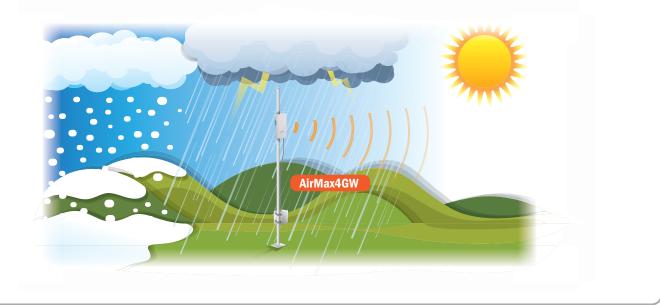
The AirMax4GW bridges the connections between WiFi, Ethernet, and the 4G/3G Mobile Network. It can connect any Wi-Fi or Ethernet equipped devices to the broadband Internet. Therefore, Telecom operators can extend their service to cover WiFi and Ethernet devices such as IP cameras, PC, notebooks, traffic controller, and much more.





#### Weatherproof Outdoor Deployment

The AirMax4GW is completely weather proof. That means it can be deployed in any location to provide Internet connectivity via 3G/4G network. In addition, the high gain LTE/UMTS antennas enable the AirMax4GW to receive weaker 4G/3G signal and distribute greater Wi-Fi signal than any mobile devices.













#### Dual High Gain Antennas

The AirMax4GW features high gain and high sensivity 4G LTE antennas. So it can receive 4G or 3G mobile signal where normal mobile phone can not. In addition, it also has a high gain WiFi antenna which can send out wireless signal over large area. There is also R-SMA antenna connectors for installing external 4G/3G antennas when you need better signal.





#### Dual Modem Model Available\*

The standard AirMax4GW is equipped with single 4G LTE modem with dual SIM slot for redundancy. A project based dual LTE modem model AirMax4GW-DM is available by request for Telecom operators that wish to double the available bandwidth to their customers. The AirMax4GW-DM can aggregate the bandwidth of 2 LTE connections through intelligent load balancing.



\*Minimum ordering quantity is required for the dual modem model, please contact AirLive sales for details.





### **Application Environments**



#### **Internet for Vacation Home and Cottages**

In many countries, people have vacation home or cottages in remote area where it is difficult to deploy wired Internet. The AirMax4GW is the best solution for Telecom operator to provide Internet service. AirMax4GW can be installed on the roof top where it can get the best 4G/3G signal reception, then bring the Internet signal through Ethernet cable to the home. Best of all, AirMax4GW's built-in 300Mbps MIMO Wi-Fi can provide wireless connectivity to the entire outdoor area for wireless IP cameras, notebook PC or tablets.





#### **Hotspot Deployment**

The AirMax4GW is the easiest way for Telecom provider to deploy Wi-Fi hotspot services. There is no limitation on wiring distance or location of Internet source. It is ready for deployment in any locations. Furthermore, it support 802.1X, UAM server, and URL redirection for easy integration with Telecom operator's authentication network.









#### **IP** Camera and Traffic Controller Installations

Whether it is on the remote site or in the city, IP camera and traffic controller installations can be made much simpler by using the AirMax4GW solution. AirMax4GW can bring any Ethernet or Wi-Fi equipped devices to the 4G/3G network, therefore, expanding the service and business model for the telecom operators.







#### Software Functions

The AirMax4GW has critical software features that are important for Telecom applications



#### **Captive Portal**

The captive Portal function will redirect wireless users to a specific remote landing web page where provider can show their service information and request users to enter their login information.



| Captive Portal Configuration |  |
|------------------------------|--|
| Item                         | Setting  |
| Captive Portal               | C Enable   |
| WAN Interface                | WAN-1 V  |
| LAN Subnet                   | DHCP-1 V   |
| Authentication Server        | External RADIUS Server V Hotspot system V                  |
| ▶ UAM Server                 | ✓ Enable Select from External Server List: hotspotsystem ▼ |

Save Refresh

#### **Remote Radius and UAM server**

Operator can enter the remote Radius server information so when users try to login into the Internet service, they will be required to enter user name and password.







| Item           | Setting  |
|----------------|--|
| Server Name    | hotspotsystem  |
| Server IP/FQDN | hotspotsystem.com  |
| Server Port    | 80   |
| ▶ Server Type  | UAM Server     •       Login URL:     https://customer.hotspotsys       Shared Secret:     hotsys123       NAS/Gateway ID:     Airlive       Location ID:     1       Location Name:     airlive |



#### **Secured VPN Connection**

The AirMax4GW's VPN function provide secure video transmission over VPN encryption. Therefore, the operator's customers do not need to worry about leaking sensitive information and keep live video image from prying eyes. It provides opportunity for Telecom operators to offer secured video streaming service for enterprise customers.



| Air Live'         |                                 |                       | AirMax4GW 4 |        | English 🔹 🚺 Logo |
|-------------------|---------------------------------|-----------------------|-------------|--------|------------------|
| Wizard            | Configuration                   | PPTP L2TP GRE         |             |        |                  |
| Status            | Configuration                   |                       |             |        | [Help]           |
|                   | ltem                            |                       | Setting     |        |                  |
| Basic Network     | ▶ IPSec                         | 🔲 Enable              |             |        |                  |
| Advanced Network  | NetBIOS over IPSec              | Enable                |             |        |                  |
| Advanced Network  | NAT Traversal                   | Enable                |             |        |                  |
| Firewall          | Max. Concurrent IPSec Tunnels   | 32                    |             |        |                  |
| QoS & BWM         | Tunnel List & Status            | Add Delete Refresh    |             |        |                  |
| VPN<br>Redundancy | ID Interface Tunnel<br>Scenario | Tunnel Remote Address | Gateway     | Status | Enable Actions   |
| System Management |                                 | Save                  | 1           |        |                  |
| Certificate       |                                 |                       |             |        |                  |
| Applications      |                                 |                       |             |        |                  |
| System            |                                 |                       |             |        |                  |
| - oystem          |                                 |                       |             |        |                  |
|                   |                                 |                       |             |        |                  |





#### Policy Based Bandwidth QoS Firewall

AirMax4GW's enterprise class firewall can help Telecom provide to expand their service portfolio with their business and enterprise customers. It allows administrators control the user's access exactly as needed. You can define the bandwidth and QoS for each device and user to guarantee or limit the bandwidth.

| Air Live          |   | (www.airlive.com)<br>AirMax4GW 4G LTE Outdoor Gateway with WiFi<br>English • Logaut |
|-------------------|---|---|
| Wizard            | Configuration Rule-based OoS                  |   |
| Status            | System Resource Configuration                 | [Help]  |
|                   | ltem  | Setting   |
| Basic Network     | Total Priority Queues of All WANs             | 6   |
| Advanced Network  | WAN Interface                                 | WAN - 1 •   |
| Firewall          | WAN Interface Resource                        |   |
| QoS & BWM         | ltem  | Setting   |
| VPN               | Bandwidth of Upstream                         | 150 Mbps •  |
| Redundancy        | Bandwidth of Downstream                       | 150 Mbps •  |
| System Management | <ul> <li>Total Connection Sessions</li> </ul> | 30000   |
| Certificate       |   | Save Undo   |
| Applications      |   |   |
| System            |   |   |
|                   |   |   |
|                   |   |   |
|                   |   |   |
|                   |   |   |



#### **4GW Versatile Management**

The AirMax4GW can be managed via Web, TR069, SNMP, and CLI commands. The TR069 is especially designed for Telecom provider to centrally managed the AirMax4GW.







| State       State <td< th=""><th><b>Air Live</b></th><th></th><th>AirMax4GW 4G LTE Outdoor Gateway with V</th></td<>   | <b>Air Live</b>                                       |   | AirMax4GW 4G LTE Outdoor Gateway with V   |
|--|---|---|---|
| Image: Control of Contro  | Wizard  | TR-069 SNMP Telnet  |   |
| Status       Imm       Status         Immedia       Immedia       Immedia         Imm       Immedia <td< td=""><td></td><td>Configuration</td><td>[Hole</td></td<>   |   | Configuration   | [Hole   |
| Image: Control of the second secon  | Status  |   | 1   |
| Image: Answer  | Basic Network   | 12655.01133   |   |
| Image: Advanced Mathematic       Image: Advanced Mathematic         Image: Advanced Mathematic       Image: AdvancedM  |   |   |   |
| Image: Second Second Present       Image: Second Second Present         Image: Second Present       Image:   | Advanced Network                                      |   |   |
| Image: Second  | 9 Firewall  | ▶ ACS UserName  |   |
| Conscience Request Parameter  |   | ACS Password  |   |
| A concentral displayed by the administrators to send basic commands and get status verses and e to do simple managements and check status with the AirMax4GW.  |   |   | 8099  |
| AirMax4GW allow the administrators to send basic commands and get status v<br>sage. Therefore, the operators do not need to know the device's IP address and<br>to do simple managements and check status with the AirMax4GW.  |   |   |   |
| Applications<br>where the administrators to send basic commands and get status vissage. Therefore, the operators do not need to know the device's IP address and<br>to do simple managements and check status with the AirMax4GW.  |   |   | The Fred to the set of the set  |
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| AirMax4GW allow the administrators to send basic commands and get status visage. Therefore, the operators do not need to know the device's IP address and to do simple managements and check status with the AirMax4GW.  |   |   | Save Undo   |
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| AS Short Message<br>e AirMax4GW allow the administrators to send basic commands and get status v<br>essage. Therefore, the operators do not need to know the device's IP address and<br>le to do simple managements and check status with the AirMax4GW.   |   |   |   |
| e AirMax4GW allow the administrators to send basic commands and get status vessage. Therefore, the operators do not need to know the device's IP address an le to do simple managements and check status with the AirMax4GW.   | System  |   |   |
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| he AirMax4GW allow the administrators to send basic commands and get status views and be to do simple managements and check status with the AirMax4GW.   |   |   |   |
| he AirMax4GW allow the administrators to send basic commands and get status views and be to do simple managements and check status with the AirMax4GW.   |   |   |   |
| The AirMax4GW allow the administrators to send basic commands and get status v<br>message. Therefore, the operators do not need to know the device's IP address and<br>able to do simple managements and check status with the AirMax4GW.  |   |   |   |
| AG/3G<br>))) ((( AG/3G<br>Network ))) ((( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (  | SMS Short N   | lessage   |   |
|  | The AirMax4GW<br>message. Theref                      | allow the administ<br>ore, the operators                    | rators to send basic commands and get status<br>do not need to know the device's IP address a<br>d check status with the AirMax4GW. |
|  | The AirMax4GW<br>message. Theref<br>able to do simple | allow the administ<br>ore, the operators<br>managements and | d check status with the AirMax4GW.  |
|  | ne AirMax4GW<br>essage. Theref<br>le to do simple     | allow the administ<br>ore, the operators<br>managements and | d check status with the AirMax4GW.  |





| Air Live            |                      |                        | AirMax4      | <b>GW</b> 4G LT | (www.airliv<br>E Outdoor Gateway with |
|---------------------|----------------------|------------------------|--------------|-----------------|---------------------------------------|
| Wizard              | SMS USSD Netwo       | rk Scan 🕨 Remote Manag | ement        |                 | English 💌                             |
| Status              | Configuration        |                        |              |                 |                                       |
|                     | ltem                 |                        | Setting      | 1               |                                       |
| Basic Network       | Physical Interface   | 3G/4G-1 🔻              |              |                 |                                       |
| Advapaged Nativark  | > SMS                | SIM Status: SIM_A      |              |                 |                                       |
| X Advanced Network  | SMS Storage          | SIM Card Only 🔻        |              |                 |                                       |
| M Applications      | Alert Rule List      | Add Delete             |              |                 |                                       |
| Mobile Applications | ID From Phone Number | Alert Approach         | Destination  | Enable          | Actions                               |
| Captive Portal      | SMS Summary          | New SMS SMS Inbox      |              |                 |                                       |
| System              | Item                 |                        | Setting      | 1               |                                       |
|                     | Unread SMS           | 0                      |              |                 |                                       |
|                     | Received SMS         | 13                     |              |                 |                                       |
|                     | Remaining SMS        | 17                     |              |                 |                                       |
|                     |                      |                        | Save Refresh |                 |                                       |

You can limit to accept SMS message commands only from specific phone numbers for security.

| Management Settings             |                             |
|---------------------------------|-----------------------------|
| Item                            | Setting                     |
| twork Remote Management via SMS | Enable      Disable         |
|                                 | Enable Disable              |
| A Network     Security Key      |                             |
| Command Sattings                |                             |
| s litem                         | Setting                     |
| tions                           | Enable  Disable             |
| Status     Connect              | Enable Disable              |
| Connect      Disconnect         | Enable Disable              |
| Reconnect                       | Enable Disable              |
| Reboot                          | Enable      Disable         |
| Notification Settings           |                             |
| Item                            | Setting                     |
| WAN Link Up                     | Enable  Disable             |
| WAN Link Down                   | Enable  Disable             |
| Access Control List             |                             |
| Item                            | Setting                     |
| ► Access Control                | Enable Disable              |
| Phone 1                         | Management Notification     |
| Phone 2                         | Management Notification     |
| > Phone 3                       | 💿 Management 💿 Notification |
| > Phone 4                       | 🔲 Management 📃 Notification |
| > Phone 5                       | 🔲 Management 📄 Notification |
|                                 | Save Undo Reboot            |