

### SUMMARY

GL500V is the virtual version of a network gateway developed to implement the features of the Guglielmo Lumen platform and it is fully integrable into existing datacenter.

Based on VMware ESX 5.5, it relies on computing resources assigned by the hypervisor, implementing an extremely scalable approach to access management.

GL500V activates a secure connection with the Guglielmo Cloud performing several functions regarding users authentication authorization and accounting (AAA) as well as data management and IoT services. Leveraging the resources provided by the GL500V, Guglielmo Lumen platform is able to deploy innovative and advanced services enabling the "hotspot as a platform" paradigm for a new generation of nomadic applications.

### TECHNICAL SPECIFICATIONS

- VM machine in .ova format
- Based on VMware ESX 5.5

### MANAGEMENT

- Remote Management via VPN tunnel
- Management protocols: HTTPs, SSH
- NTP Synchronization: RFC 1305
- Syslog: Remote Activity Syslog
- Reset: Remote reset / Manual reset



### SERVICES

Three main software modules on the GL500V, working together and connected to the Guglielmo platform, provide advanced types of services.

**LUMEN™ module** provides extremely flexible services for the hotspot management, such as users authentication and policy enforcement.

**Caligoo™ module** provides services for Business Intelligence and Network Control, implementing a deep interaction with mobile App or external applications, for advanced services such as automated login procedures, notifications and QoS policy enforcement.

**IoT hub module** provides connectivity for sensors and actuators and local IoT resources discovery and service consumption.

**Fog Computing module** The GL500V can also locally provide and control resources such as memory, computing and networking, implementing also a virtualization infrastructure for Virtual Machines or Linux Containers, in order to host other machines or applications, such as Proxy, VPN terminators, Wireless Lan Controllers, etc..., with a local access to resources.

### MAIN FEATURES

- Virtually unlimited simultaneous connected users.
- Expandable in cluster with Load Balancing, Fault Tolerance or High Availability configuration
- VPN to Guglielmo Cloud
- Full Support of Layer 2 (switched) or Layer 3 (routed) connectivity to users devices
- Radius Client
- Complete management AAA (Authorization, Authentication and Accounting)
- DHCP Server, DHCP Client, DHCP relay
- NAT (PAT)
- Static routes support
- Support of VLAN and IEEE 802.1q trunk
- Redirection to customized login portal
- Management and Authentication traffic on https with valid SSL certificate (not self-generated)
- White list: list of URLs, IP addresses or subnets reachable before the authentication, dynamically updated
- Black list: list of unreachable URLs or IP addresses, dynamically updated
- Internal list of banned devices, not authorized to browse
- Redirection after authentication to the requested web site or to other web site with configurable URL
- Bandwidth limiting for user
- Configurable integrated firewall
- Content filtering applicable
- Configurable traffic shaping
- Centralized platform for Firmware Upgrade