PORTABELLA 4000i

3G 4G LTE Broadband Bonding^{TM}

4 Embedded 3G/4G/LTE Cellular Modems

The Portabella 4000i series Software Defined WAN Orchestration and Broadband Bonding Appliance, enables cost-effective and self-healing Internet access for mobile or remote setups. Aggregation and intelligent WAN orchestration of multiple 3G/4G cellular wireless lines boosts Internet performance and reliability. The Portabella 4000i aggregates and intelligently orchestrates up to four embedded 3G/4G/LTE cellular modems to increase performance and up-time of applications and services that run over the Internet. Several 3G/4G/LTE cellular modems from the same or different carriers can be aggregated to provide increased bandwidth. The Portabella is ideal to boost the performance and reliability of real-time and non-real-time applications running over IP networks for vehicle and rail-road scenarios.

PORTABELLA FEATURES

Downlink/uplink bonding in peered mode – Portabella bonds Internet access lines for all types of traffic (including encrypted traffic such as VPN) for aggregated downlink and uplink capacity when peered over the Internet with Truffle with VLL server license located at the headquarter office or data center. For single location setups optional Broadband Bonding Service subscription enables downlink/uplink bonding.

Elastic Static IP – A static IP in the cloud is provided as part of the optional Broadband Bonding Service and is mapped onto the Portabella. This means that static IP is available for services and inbound network access even during WAN outages, as long as at least one of the WAN links is up.

Aggregated downlink capacity in standalone mode - When not peered with another Truffle device, all HTTP downlink sessions can be configured to use the aggregated bandwidth of the combined Internet access links, even in the case of a single HTTP session. For non-HTTP downlink sessions and all uplink sessions, Portabella provides session-based intelligent load balancing across the access links if not peered with another Truffle.

Self-healing WAN & Application Armor^{TM} - In peered mode, in case of Internet access line failures, the Portabella keeps the ongoing sessions alive by making real-time per-packet routing decisions, even for the sessions in progress, without loss of data integrity. Additionally automatic failover protects against failures of one or more WAN link outages.

Software-Defined WAN Orchestration - Portabella's Software Defined Networking architecture enables quick and easy implementation of sophisticated WAN orchestration algorithms that are application specific.

Portabella provides real-time traffic & bandwidth management features based on traffic type and various network metrics, including latency, jitter, packet-loss and many other custom parameters.

Traffic Shaping, Monitoring & Alerts - Traffic can be monitored via performance graphs over seconds/minutes/hours/days/months. Various realtime and non-realtime traffic types can be filtered and shaped. SNMP or non-SNMP alerts provide in depth network visibility and intelligence.

Advanced QoS algorithms & VOIP Armor – All traffic routed through the Portabella is intelligently managed to prioritize real-time traffic. Additionally a unique set of proprietary algorithms are implemented to improve real-time traffic metrics such as optimizing end-user experience (i.e. MOS score) of VoIP applications.

Dynamic DNS load balancing – Portabella can be configured to provide Dynamic DNS load-balancing for inbound requests for internally hosted servers such as web-server, ftp-server, mail-server etc.

Website Blocking and DNS Redirection – Truffle can block unwanted websites or can redirect DNS requests to a user defined URL or IP adress.
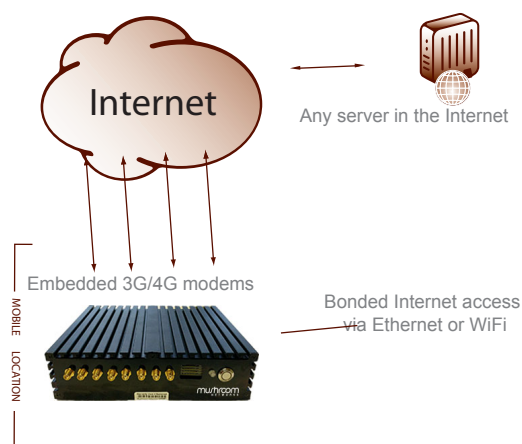
Transparent installation – Pass-through installation is quick and hassle-free and requires zero changes to the existing legacy firewall and zero changes to the existing LAN network.

Built-in Firewall & Router – Portabella can be configured either in pass-through to function inline with the existing legacy firewalls/routers or, if preferred, can be installed as the primary firewall/router.

Ruggedized Design – Portabella has an aluminum extrusion and heavy-duty steel design making it ideal for in vehicle use.

Bridging to the Future

Internet

Any server in the Internet

MOBILE   LOCATION

Embedded 3G/4G modems

Bonded Internet access via Ethernet or WiFi

PORTABELLA 4000i HARDWARE SPECIFICATIONS

Construction	Aluminum extrusion and heavy-duty steel
Mechanical Dimensions	185(W) x 165(D) x 48(H) mm
Weight	3.4 lbs (1.54 kg)
Input Power	60W AC-DC via adapter
Modems slots	4 embedded mPCIe modem ports + 1 WiFi
LAN ports (GbE, auto-sensed)	1 GbE Ethernet
WAN ports (GbE, auto-sensed)	1 GbE Ethernet
Certifications / Compliances	CE, FCC, ErP
Operating Temperature Range	0°C to +50°C
Storage Temperature Range	-20°C to +85°C
Cooling	Fanless passive cooling
3G / 4G / LTE Antenna Connectors	SMA-Female

PORTABELLA 4000i SOFTWARE SPECIFICATIONS

Max throughput	1 Gbps (load balancing), 100 Mbps (peered)
Max number of concurrent IP sessions	150,000
Device management	-Web based management -SNMP -Remote syslog -Email Alerts
DHCP and DNS servers	-DNS relay -Parallel DNS optimization -Support for DHCP server
DDNS	-Support dynamic DNS for multiple interfaces
WAN configurations	-Support for various configuration modes: static, PPPoE, DHCP, Passthrough. -Selectable "failover-only" or "aggregate" modes -User configurable WAN interface binding
Firewall / Routing	Firewall with NAT and IP forwarding