

# The TRUFFLE BBNA6401

## Broadband Bonding™ Network Appliance

with cellular data card failover/aggregation capability



The TRUFFLE Broadband Bonding Network Appliance, BBNA6401, enables cost-effective Internet access solutions for small and medium size businesses, enterprise branch offices, apartments, hotels & other multi-tenant buildings via aggregating multiple Internet access services for increased performance and reliability. The BBNA6401 aggregates the capacity of as many as five T-1, DSL, cable or fiber with optional cellular data card failover.

### BBNA6411 FEATURES

#### **Downlink/uplink bonding in peered mode**

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 another BBNA device located at the headquarter office or data center. For single office setups optional Broadband Bonding Service subscription enables downlink/uplink bonding.

#### **Aggregated downlink capacity in standalone mode**

When not peered with another BBNA device, all HTTP downlink sessions 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, BBNA6401 provides session-based intelligent load balancing across the access links in standalone mode.

**Link failure recovery & link failover** - In case of Internet access line failures, the BBNA6401 keeps

the ongoing sessions alive by retransmitting the lost packets over the available access lines, even for the sessions in progress, without loss of data integrity. Additionally automatic failover protects against failures of one or more access link outages. 2G/3G cellular cards can be added as standby WAN access links for additional reliability.

**Cellular data WAN connection** - Through the PCMCIA bay, one of the cellular data cards can be plugged in as an additional WAN connection. The cellular data card can be configured for failover-only or always-on. In fail-over mode, in case of all the wired Internet access lines failing, the cellular data card will take over in less than 30 seconds.

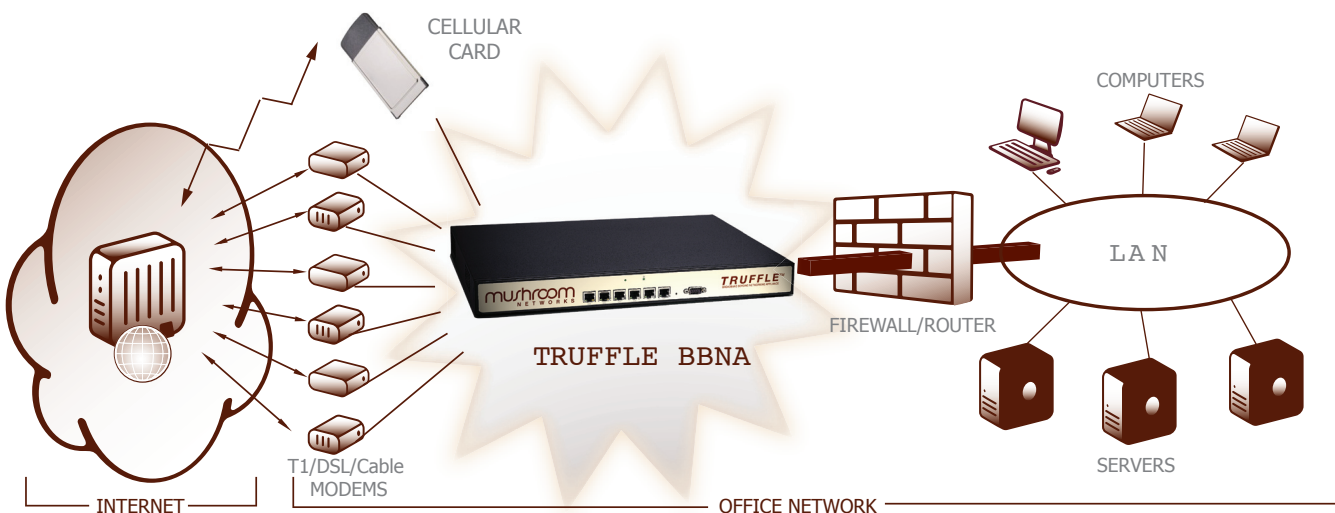
**Transparent installation** - The existing Local Area Network does not require any changes. All the installation and configuration is handled through the BBNA6401 user interface.

**No coordination with ISP** - No new equipment or software is necessary from the Internet Service Provider(s). A user-friendly web-based management interface is provided for quick and easy configuration and system monitoring.

**Advanced QoS algorithms** - All traffic routed through the BBNA6401 is intelligently managed to prioritize real-time traffic. Additionally a unique set of proprietary algorithms are implemented to improve inbound real-time traffic latency metrics specifically for VoIP applications.

**Dynamic DNS load balancing** - BBNA6401 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.

**Bonding  
the world**





BBNA6401 Front Panel



BBNA6401 Rear Panel

## BBNA6401 HARDWARE SPECIFICATIONS

Mechanical Dimensions	16.87"(W)x14.17"(D)x1.73"(H), 19-inch rack-mountable
Weight	15 lbs.
Input Power Requirement	220W @ 120VAC or 240VAC, 50/60Hz (auto-sensed)
USB ports	2 USB cellular data card slot
LAN ports (10/100baseT, auto-sensed)	4 (RJ-45 Eth connector)
WAN ports (10/100baseT, auto-sensed)	6 (RJ-45 Eth connector), optional PCMCIA cellular data card slot
Certifications	FCC, CE, ICES-03, UL, cUL
Operating Temperature Range	40-105 F, 5-40 C
Operating Humidity Range	20-90%, non-condensing
Storage Temperature Range	32-158 F, 0-70 C
Storage Humidity Range	5-95%, non-condensing
Cooling	Rear-panel fans

## BBNA6401 SOFTWARE SPECIFICATIONS

Max throughput	65Mbits/sec
Max number of concurrent IP sessions	25,000 (customizable for higher number of concurrent IP sessions)
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 for cellular data card and other WAN ports -User configurable WAN interface binding
Routing	NAT and IP Forwarding, QoS and inbound/outbound VoIP quality management
UPnP	Support for peer-to-peer applications