

# ZYXEL



## VMG3312-T20A

### Wireless N VDSL2 Combo WAN Gateway with USB

The Zyxel VMG3312-T20A is an advanced VDSL2 gateway that provides autosensing between VDSL2 and ADSL2+ for high-speed Internet access. In addition, with supports to G.vectoring, it increases speed and coverage to compete with other broadband technologies without infrastructural change.

The Zyxel VMG3312-T20A integrates an IEEE 802.11 b/g/n access point and a 10/100 Ethernet switch for Local Area Network (LAN) access. It can act as a concentrator or power hub to distribute contents between different devices connected inside the LAN wired and wirelessly. We've also enhanced the WiFi ability to ensure a quality user experience.

Additionally, it comes with the multiple-WAN function suitable for future FTTH deployments with optimized CAPEX.

Users could also leverage the USB interface on the Zyxel VMG3312-T20A for file sharing or pair with a 3G USB dongle for mobile connectivity.

### Benefits

#### VDSL2 Vectoring for maximized service coverage

The Zyxel VMG3312-T20A Wireless N VDSL2 Combo WAN Gateway comes with USB supports to the Vectoring technology that eliminates crosstalk or interference among different VDSL lines. With the mechanism, Vectoring significantly increases bit rates to compete with cable/fiber technologies as well as to enlarge service coverage without changing the current infrastructure — a way to significantly save cost comparing to fiber-to-the-home (FTTH) deployments, and the CAPEX can be optimized by the improved data rates and coverage without upgrading equipment.



VDSL2 G.vectoring for maximized service coverage



Combo WAN-in-a-box for optimized CAPEX in FTTH/VDSL2 deployments



2.4 GHz 11n (2x2) for superior performance and coverage



Advanced QoS to ensure quality of triple-play services



Remote provisioning and management through TR-069/TR-181 issue-2



ROM-D feature for easy distributor/operator customization



Easy upgrade to 3G USB support through configuration files

## 2.4 GHz 11n (2x2) for superior performance and coverage

The Zyxel VMG3312-T20A features 802.11n technology to provide the ultimate solution for both speed and coverage. With 802.11n wireless data rates of up to 300 Mbps, the VMG3312-T20A provides stable, reliable wireless connections for high-speed data and multimedia applications. The 802.11n technology empowered the device to eliminate dead zones and extend coverage while retaining backward compatibility with any certified device.

## TR-069/TR-181 issue-2 remote management

With the TR-069/TR-181 standard management specifications, the Zyxel VMG3312-T20A allows service providers to manage and configure client devices remotely without interfering end users. This unique feature not only offers true “plug-and-play” experience but also reduces deployment complexity, and it also saves operating as well as maintenance costs for service providers.

## Always-online, always-compatible alternative 3G connection

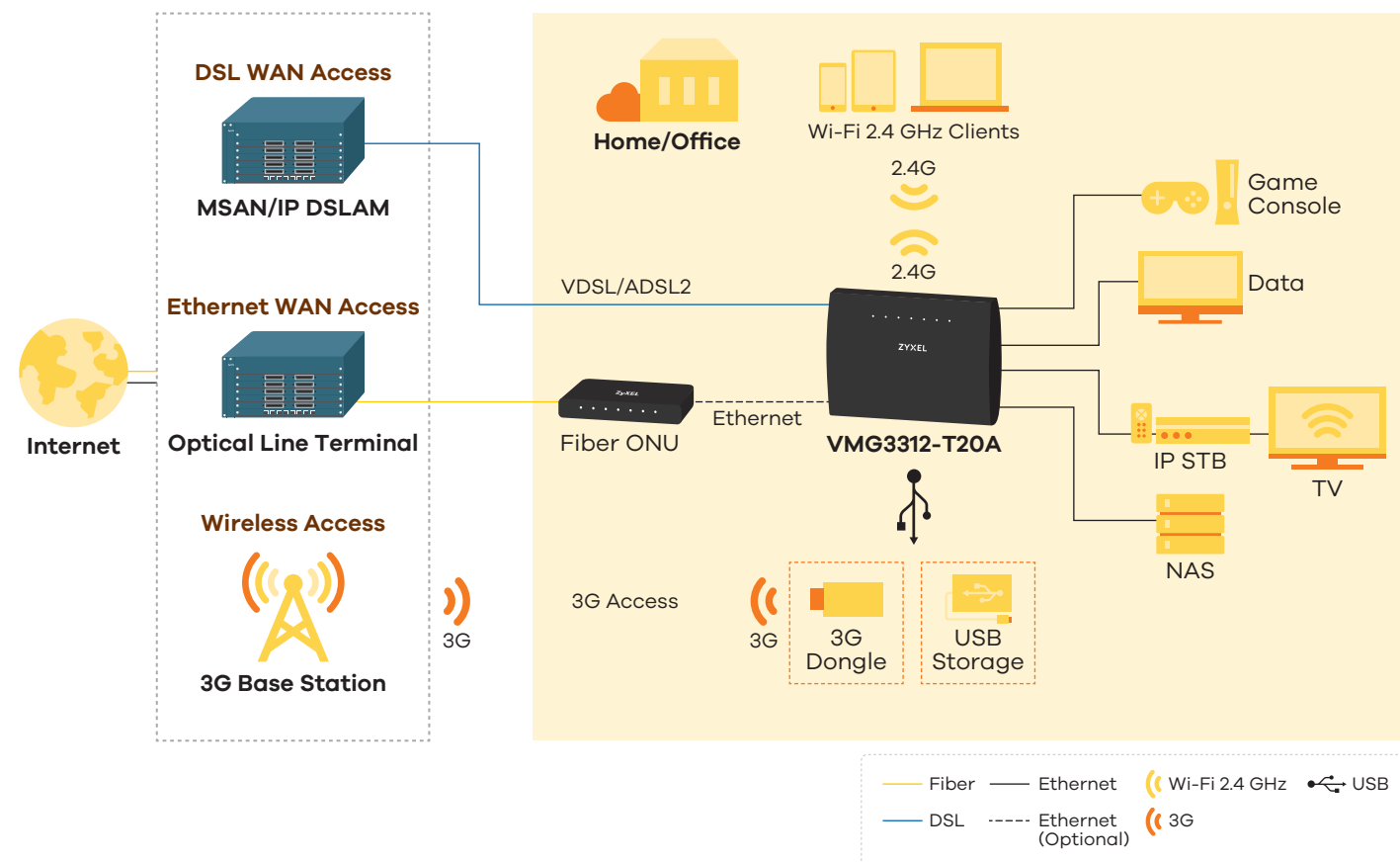
The Zyxel VMG3312-T20A features optional 3G connectivity as a failover (or alternative) connection to mobile broadband networks in case of DSL outage. Internet traffics will be temporarily routed through the user’s 3G dongle plugged into the USB port.

All traffics will be switched back as soon as the regular broadband service becomes available again. It is also efficient to have instant Internet access in remote offices, in activities outside the offices or for occasions where DSL service is temporarily unavailable. For complete dongle compatibility information, users can simply check and download a patch file to enable mobile broadband services immediately without upgrading the entire firmware of the gateway.

## Combo WAN for simplified ISP logistics and optimized CAPEX

When customers migrate from ADSL2+ or VDSL2 to PON or LTE, the service providers is not required to invest on new CPE and deploy them on customer sites. All they have to do is keeping the Zyxel VMG3312-T20A by unplugging the DSL line and plug the Ethernet cable to Ethernet WAN port as the existing VMG3312-T20A terminates IP connections via the WAN interface. In most cases, end users can still enjoy the same, or even better, experience from the original configuration without replacing it — thanks to the difference of physical connections.

## Application Diagram



# Specifications

## System Specifications

### Wireless Standard

- 802.11 b/g/n 2.4 GHz

### VDSL Compliance

- ITU-T G.993.2 VDSL2, band plan 997, 998
- VDSL profiles (8a/b/c/d, 12a/b, 17a)
- ITU-T G.993.5 (G.vector)
- ITU-T G.998.4 (G.inp): up to 16 symbols
- SRA (Seamless Rate Adaptation)
- UPBO (Upstream Power Back-off)
- PhyR (Physical Layer Retransmission)
- TR-114

### ADSL Compliance

- ITU-T G.992.1 (G.dmt) Annex A
- ITU-T G.992.2 (G.lite) Annex A
- ANSI T1.413
- ITU-T G.992.3 ADSL2
- ITU-T G.992.5 ADSL2+
- ITU-T G.998.4 (G.inp)
- Reach-Extended ADSL (RE ADSL)
- SRA (Seamless Rate Adaption)
- PhyR (Physical Layer Retransmission)
- TR-067/100

### WLAN

- IEEE 802.11 b/g/n compliance
- Frequency: 2.4 GHz
- Data rate: 300 Mbps
- WPA/WPA2
- WPA2-PSK with AES
- WPA/WPA2-PSK with AES/TKIP+AES
- WEP data encryption 64/128 bit
- Wireless Protected Setup (WPS)
- Multi SSID (up to 4) and hidden SSID support

### USB

- File sharing
- 3G dongle

### Bridge/Router

- PPPoE (RFC2516)
- PPPoA (RFC2364)
- DHCP client/server/relay
- DHCP option 60/61/125
- DNS Proxy/Static DNS/DNS from ISP
- NAT (Enable/Disable)
- Fullcone NAT (Enable/Disable)
- IGMP Proxy (Enable/Disable)
- IGMP v1, v2, v3
- IEEE 802.1d transparent bridge
- NAT server (Port forwarding)
- Static route/policy routing
- IP protocol (IPv4/IPv6)

### VLAN/QoS

- VLAN Active (Enable/Disable)/802.1p (0-7)/802.1q (1-4094)
- Support flexible traffic classification
- TCP/UDP port range
- Ether type (NA/IP/ARP/PPPoE Discovery/PPPoE Session/802.1Q/IPv6)
- Source & Destination address/subnet mask/port range/MAC/MAC mask
- Predefine service
- IP protocol (TCP/UDP/ICMP/IGMP/User defined)
- DHCP OPT (60/61/77/125)
- Packet length
- 6-bit DiffServ code point (DSCP, RFC 2474)
- TCP ACK

### Firewall & Security

- MAC filter
- Scheduler rule
- IPv4/IPv6 Firewall (Stateful packet inspection)
- Parental control
- ACL rule support: (32 ACL rules)
- DoS protection

### Management

- Web/HTTP: 3 level log-in
- Login privilege
- Command Line Interpreter (CLI) via SSH or Telnet
- Firmware upgrade via Web/TFTP/FTP/TR069 RPC method
- Text based configuration (XML based)
- Configuration backup/update/restore default via Web
- Configurable access control for remote management (Interface and/port number)
- Trust domain
- DSL forum TR-069, TR-098, TR-181 issue-2, TR-064, TR-111
- SNMP v1, v2
- Rom-D support
- TR-069 serial number parameter MUST be device serial number in back label

## Hardware Specifications

- WAN:
  - One RJ-11 interface for VDSL/ADSL2 (over POTS)
  - One RJ-45 connector for Giga-Ethernet WAN port
- LAN: 4 auto-sensing 10/100Mbps Ethernet LAN ports
- Wireless: Two internal antennas
- 1 USB 2.0 host
- Status LED indicator: Power, Ethernet, WLAN, WPS, DSL, WAN, Internet, USB
- Power On/Off button
- WLAN/WPS button
  - One button for WLAN on/off
  - One button for WPS configuration
- Reset/Restore button
  - One real button for restore factory default settings
- Power consumption: 10.96 Watt max

## Physical Specifications

- Item dimensions (WxDxH): 158 x 118 x 26 mm (6.22" x 4.64" x 1.02")
- Item weight: 220 g (0.48 lb.)
- Packing dimensions (WxDxH): 260 x 145 x 37 mm (10.23" x 5.7" x 1.45")
- Packing weight: 440 g (0.97 lb.)

## Environmental Specifications

### Operating Environment

- Temperature: 0°C to 40°C (32°F to 104°F)
- Humidity: 10% to 90% (Non-condensing)

### Storage Environment

- Temperature: -30°C to 70°C (-22°F to 158°F)
- Humidity: 10% to 95% (Non-condensing)

## Certification

- CE

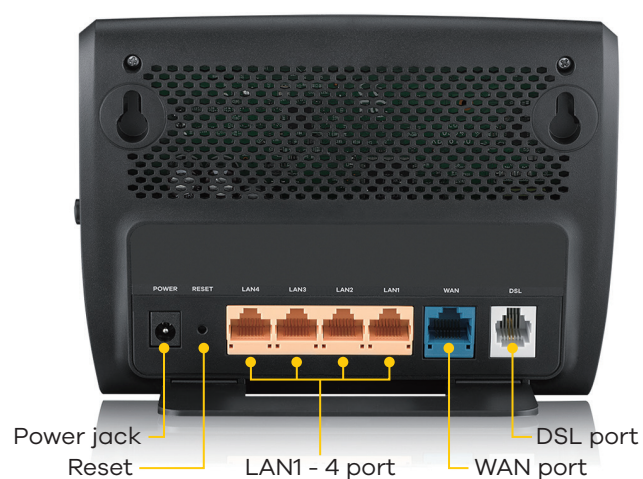
## Package Contents

- Wireless router
- Power adapter
- Ethernet cable
- RJ-11 cable
- Quick start guide
- Safety warning card

## Front Panel



## Rear Panel



For more product information, visit us on the web at [www.zyxel.com](http://www.zyxel.com)

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