



TOPEX Bytton DS

All-in-one device for Enterprise applications



Dual SIM capability

3G+ Wireless Router

Full IPsec implementation

Fail-safe Internet back-up solution

Benefits

- Multiple back-up solutions: double 3G coverage, WAN, WiFi and USB connections
- Secure communications through embedded VPN tunnels: IPsec, PPTP, GRE
- Unrestricted mobility with high data rates - up to 7.2 Mbps for downlink and 1.44 Mbps for uplink
- Simultaneous voice and data on 3G network
- Several versions according to the mobile network covered:
 - GPRS
 - EDGE (GPRS faildown)
 - CDMA 1x / EVDO
 - HSDPA (UMTS/EDGE/GPRS faildown)
 - HSUPA (HSDPA/UMTS/EDGE/GPRS faildown)

Analog voice

TOPEX Bytton DS is a professional solution offering high speed and secure mobile access to Internet, back-up solution, M2M and mobile wireless broadband applications.

Through the dual SIM capability the equipment allows an additional back-up between two mobile networks according to the 3G signal level.

Enterprise solutions

● Back-up Internet solution

- Usage of the 3G network capabilities to offer broadband Internet connection in case of the main link failure
- Possibility to switch between two 3G networks when the main network is out of signal
- Secure back-up for WiMax, ADSL or any leased line, assuring a reliable always-on Internet connection

● Wireless Surveillance

- Transmission of video stream received from IP or USB cameras through the 3G network
- Assures the connection of cameras from a remote site to a central headquarter for monitoring and control of site activities
- Complete wireless solution in the case of using wireless cameras for supervision

● High secure data transmission

- Complete IP Sec, PPTP or GRE capabilities implemented
- Data collecting from several remote sites through secured VPN tunnels
- Possibility to terminate several IPsec tunnels in the same gateway providing connection of the remote sites to the main office

● Enterprise application for retail / POS and banking

- Connection of several devices (POS, bar-code scanner, receipt printers, credit card readers)
- Wireless solution for banking industry connecting the ATM through the 3G network assuring a fast and convenient network deployment
- Can be used also as a back-up solution for existing fixed connections, allowing service availability during wire link failure

● Secure transfer for lottery and betting games

- Collecting information from different branches regarding tickets and other commercial activities
- Secure transfer of data to a central location for centralization
- Branch offices added in the same VPN to communicate over the 3G data network

Tunneling features

● IPsec, PPTP and GRE tunneling

● IPsec Tunneling

- High security level at IP Layer offering confidentiality, data integrity, data origin authentication or anti-replay (examination and rejection of outdated and duplicated packets)

- **Host to Host IPsec** - securing a channel between two gateways

- **Network to network IPsec** - securing a channel between two remote networks

- **Road Warrior IPsec** - securing a channel for remote users

- **Termination of two or more IPsec tunnels** in the same gateway

- Data confidentiality through encapsulation into IP packets - ESP protocol

- DES, 3DES and AES encryption protocols supported

- IPsec tunnel bandwidth limitation assuring an easier access to system resources

- Identity authentication of peers through symmetrical Pre Shared Key (PSK) or non symmetrical Public RSA key

- Automatic key negotiation and services establishment through IKE mechanism

- IKE hashing functions used to implement authentication algorithms: MD5 and SHA1

- Diffie Hellman algorithm used to securely exchange the keys that encrypt data assuring protection against eavesdroppers

- IKE lifetime setting top establish the duration of keying channel of a connection before being renegotiated

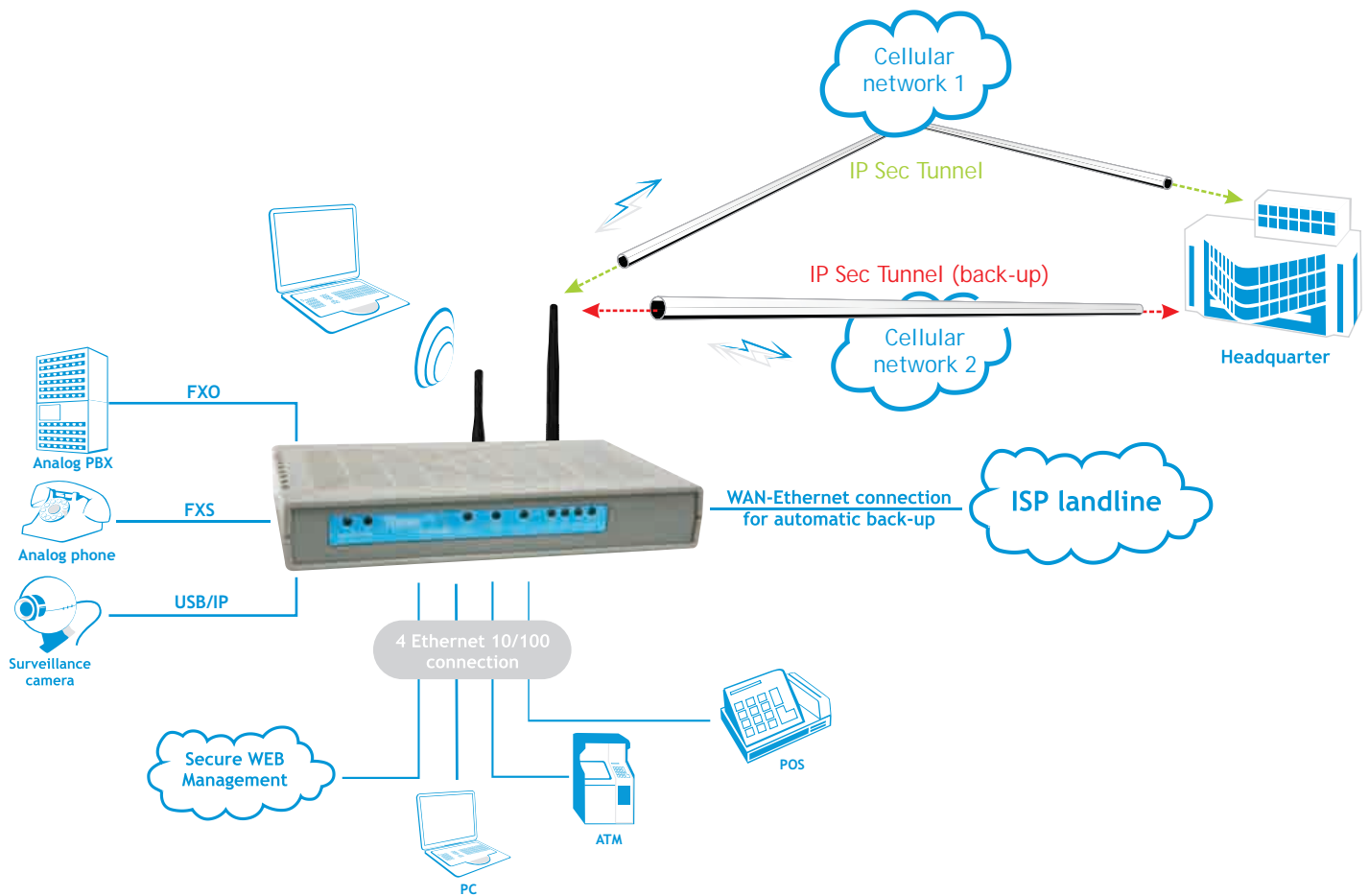
- Perfect Forward Secrecy (PFS) - the decryption of a key has no impact on the security of other keys

ALLOY

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➤ Main features

- Transfer data rates:
 - HSUPA: up to 7.2 Mbps
 - HSDPA: up to 3.6 Mbps
 - UMTS: up to 384 Kbps
 - EDGE: up to 236.8 Kbps
 - GPRS: up to 80 Kbps
- Internal WiFi modem - 802.11 b/g compliant
- 4 ports integrated switch with management and Layer 2 QoS according with 802.1p, 802.1q
- LAN DHCP Client / Server and WAN DHCP client
- WEP, WPA and WPA 2 encryption
- PAP, CHAP authentication
- MAC filtering and Access List
- AT commands for 3G module
- Secured web based (https) administration and configuration interface
- FXS and FXO analog interfaces - one simultaneous active
- Send and receive SMS messages through the web based interface
- Routing protocols RIPv.1, RIPv.2, OSPF, Unix based Quagga software
- NTP protocol used for the local time synchronization

Technical Specifications

Cellular networks:	Tri Band UMTS/HSDPA/HSUPA - 850/1900/2100 MHZ Quad Band GSM/GPRS/EDGE 850/900/1800/1900 MHZ CDMA 1x, EVDO 450/800 MHZ
Ports:	- 802.11b/g Wireless LAN Access Point, up to 256 wireless clients supported - 2 x USB 2.0 - 4 x Fast-Ethernet 10/100 Base-T for LAN connections (RJ-45 ports with auto-crossover) - 1 x Fast-Ethernet 10/100 Base-T port for WAN connection - 2 x Voice ports - FXS and FXO (POTS or PBX outbound line)
Software:	PPP Client/Server, transparent DNS proxy, IP PNP, DHCP Server, Dynamic DNS Client, call-back(Remote connection activation via SMS or ring), configuration via Web browser, fast start-up, Linux Operating System
100% Plug and Play:	- embedded server for dynamic IP configuration of the clients (DHCP) - embedded server for static IP configuration of the clients (IP-PnP) - embedded transparent HTTP/HTTPS proxy - automatic e-mail server redirection - web based interface
Hotspot Service:	- allows immediate creation of wireless Internet hotspots - dual mode login allows users to use either an account or a PIN from a prepaid card - automatic injection of e-mail with login instructions for new users - RADIUS based authentication and accounting
Video Surveillance Service:	- allows video monitoring using the either an USB web camera or an IP camera - web based viewer of the video stream - supports multiple cameras
Routing and remote management:	- RIPv1, RIPv2, OSPF - HTTPS web access - Secure, remote management using SSH - Automatic connection establishment on traffic detection - Automatic disconnection on lack of traffic - Full network address translation (NAT) support

Tunneling:	IPSec, PPTP, GRE DES, 3DES, AES encryption WEP, WPA, WPA2 PAP, CHAP, MD5, SHA1 authentication
SMS Service:	- call back function (voice, SMS) - send and receive SMS through the web page - SIM information display (signal level, network registration)
Max. transmitter power:	UMTS / HSPA - Power Class 3 +24dBm GSM/GPRS/EDGE 850/900 MHZ - Power Class 4 +33 dBm GSM/GPRS/EDGE 1800/1900 MHZ - Power Class 1 + 30dBm EDGE E2 Power Class
Voice coding:	AMR(12.2kbps / 10.2kbps / 7.95kbps / 7.4kbps / 6.7kbps / 5.9kbps / 5.15kbps / 4.75kbps)
Advanced call management features:	Can be set for CLIP(ETSI FSK or DTMF) and CLIR
Dial tone:	440 Hz +/- 10%
Line voltage:	48 V +/- 10%
Line current:	30 mA max.
Ring signal:	25 Hz, min. 60 Vef
Line impedance:	600 Ohm
Mobile network antenna:	SMA male interface External quad-band antenna with magnetic base and 2.5 m cable 2 dB gain
WiFi antenna:	External stick antenna for 2,4 GHz
Analogue FXS Voice Port:	RJ 11 connector
Analogue FXO Voice Port:	RJ 11 connector
Data Ports:	5 x RJ-45 ports for LAN and WAN
Power supply:	Adapter 230V ac, 50Hz, 0.3A to 10V ac @ 1.5A
Status indicators:	LEDs, for POWER, WiFi and network, plus one LED per each LAN or WAN port.
Temperature range:	Operating: 5 to 50 degrees C Storage: 0 to 60 degrees C
Dimension (L x W x H):	248 x 170 x 53 (mm)
Weight:	800 g
Humidity:	10-80 %, non-condensing