



viprinet®

Never be offline again.

Multichannel VPN Router™

Multichannel VPN Hub™

- Suited for Internet connectivity and Site-to-Site VPN
- Real bonding of up to six WAN connections
- Modular design provides flexibility
- Hot-plug modems for various access media
- Outage risk distribution to multiple media and ISPs
- Data encryption with highest security standards



The Network Revolution

Company connectivity newly defined

With a unique VPN tunnel technique, Viprinet allows for a novel mode of company connectivity – highly available, quick and cost effective. The ingenious Viprinet Principle provides reliability and high transfer rates.

Viprinet is following the idea of Green IT. All products are optimized in terms of energy consumption and recycling. Almost all components in use are fabricated in the surrounding area, this helps reduce greenhouse gas emissions through small shipping distances.

Real bonding of up to 6 WAN links

The Multichannel VPN Router is the core of the Viprinet technology. With this device, several broadband lines can be combined into a single, highly available joint line. Unlike load-balancing that is capable of load distribution to several WAN-links only, real bonding of all lines available is realized here. Viprinet can combine all different types of access media, be it ADSL, SDSL, UMTS/3G, or ISDN. The LAN sees these connections as one single line providing the accumulated up- and downstream of the different lines even for single downloads.

The remote station principle

Viprinet uses an exceptional VPN tunnel technique with a star topology to establish secure and fast company networks.

For this purpose, the integration of two different devices is needed: In each site being part of the VPN, a Multichannel VPN Router establishes an encrypted VPN tunnel to a single central remote station, the Multichannel VPN Hub, via each Internet line attached. These VPN tunnels are then bundled into one tunnel through which the data is then transferred.

The Multichannel VPN Hub is usually located in a highly reliable data center and acts as an exchange: Data targeted at another company site will be forwarded through the respective VPN tunnel, data targeted at the public Internet will be decrypted and forwarded to its destination. The VPN Hub provides secure and quick communication between different sites. It also serves as pivotal exchange point between the encrypted VPN and the public Internet.

User-defined combination of access media & ISPs

This principle provides a previously unequalled flexibility in the network access choice. IT Managers are no longer bound to a specific carrier, but they can freely compose a network design that fits their companies' needs.

Instead of costly dedicated lines hosted by a single provider, they now can utilize cost effective consumer offers like ADSL. This also means security of investment: the Multichannel VPN Router's modular setup allows the smooth integration of future access technologies.



Distributing outage risk

Downtime is a crucial problem for company connectivity. A line outage often means company deadlock and financial loss. Internet Service Providers systematically reduce their range of highly reliable business solutions; high availability most often comes at an absurdly high price.

The Multichannel VPN Router's novel bonding technique significantly minimizes the risks of network outages. By combining several different lines, single line outages do not cause a connection loss in the bond. Only the total bandwidth is reduced by the fraction of the broken line. As soon as the line is up again, the total bandwidth will increase automatically. Combining different access ISPs or media creates a highly reliable connection – the outage risk is distributed and hence considerably diminished.

Proper solutions for any requirements

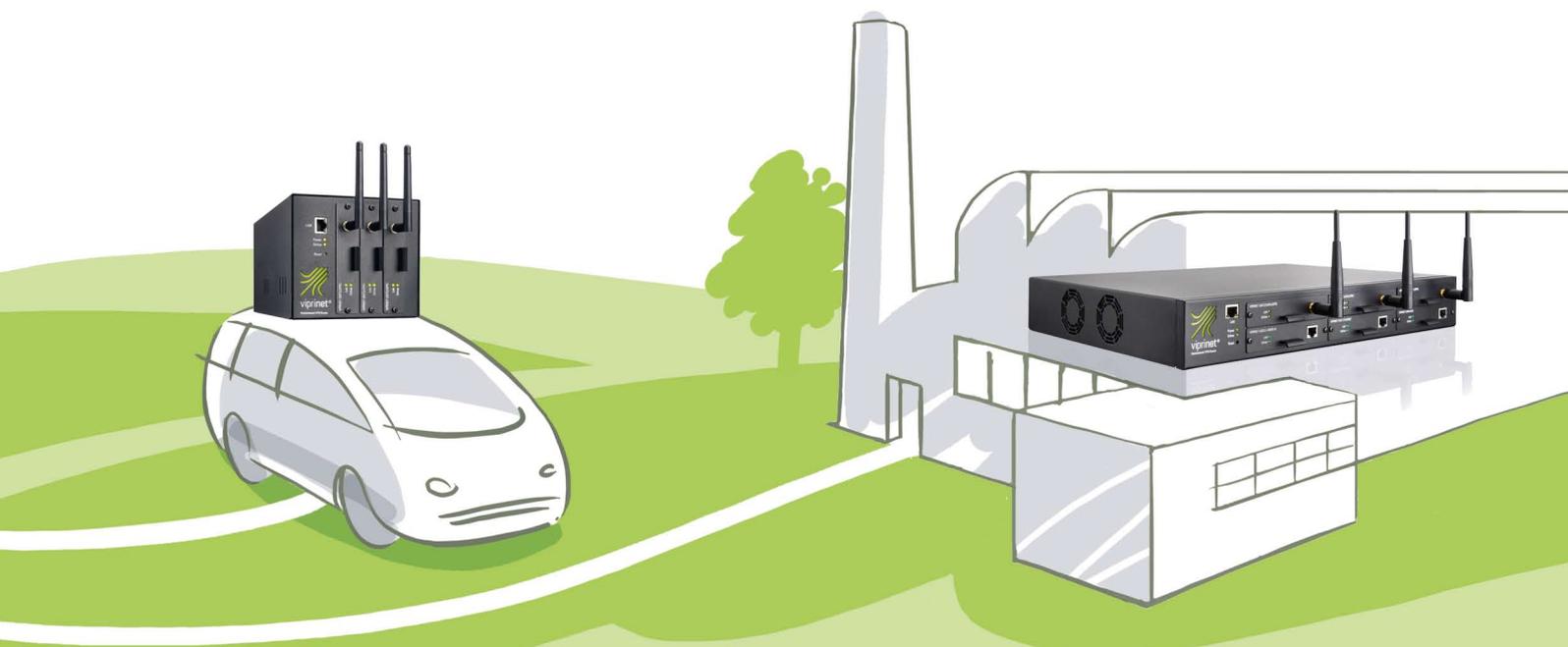
There are three variants of the Multichannel VPN Router: the standard device for bundling up to six connections (Model 1610), the enterprise version with higher performance and additional management-features (Model 2610), or the desktop version for bundling up to three lines for use in smaller businesses, in home offices, or in mobile applications (Model 300).

With their interchangeable module system, the VPN Routers are designed as "hot-plug", thus lines and modems can be added or substituted during operation, without loss of connectivity. By individually combining the different routers with one of the two VPN Hub models 1000 (standard performance) and 2000 (enterprise-version), a scalable solution for any kind of company connectivity can be set up.

Reduction of fixed expenses

The Viprinet technology permits the integration of competitively priced consumer offers into professional WAN-connections. This generates great savings potentials for companies. Unlike the private customer market, the suppliers of business network solutions are not in a state of intense price competition at all. Company connectivity primarily is maintained through expensive SDSL- or dedicated lines. Additional backup links and Service Level Agreements (SLAs) drive prices up even more.

Using Viprinet enables the use of the most favorable offers at every site - in combination they still cost far less than legacy business offers. At the same time, switching to Viprinet provides better reliability and higher bandwidths. Reduce expenses and increase performance – with Multichannel VPN Routers and Multichannel VPN Hubs.



Product Overview

Multichannel VPN Router

Higher bandwidth, more flexibility, more reliability, and less expense. The Multichannel VPN Router redefines company connectivity.

With the help of real channel bonding, up to six WAN connections of different providers can be combined into a highly reliable and fast Internet link. Interconnecting only three low-priced ADSL-lines by different providers already raises reliability to more than 99 per cent in the annual average. Running costs can hence be reduced considerably, with higher bandwidth and more resilience.

The routers have a modular setup that brings outstanding flexibility and security of investment. By adding or removing the several hot-plug modems, the network design can be altered individually and quickly to changing requirements. Modifications of the WAN-infrastructure will no longer result in any downtime.

Multichannel VPN Router 300



The Multichannel VPN Router 300 is the perfect solution to connect small branches and home offices to the Internet or a corporate VPN. By using up to three bundled Internet lines, this link becomes both reliable and speedy.

As the Multichannel VPN Router 300 has been designed for a highest possible degree of energy efficiency, the product is passively cooled without any moving parts or fans. Power is provided using an external AC adapter (IEC plug 100-240V, 50-60Hz) or an optional car power adapter that can enable it to easily operate on the road.

Thanks to its competitive pricing, Viprinet's innovative bundling technology is available even for smaller companies. Due to the quiet running fanless desktop design, the router also is well suited for usage in home offices.

Multichannel VPN Router 1610



This 19"-sized router allows the bonding of up to six different WAN lines into a single, high-performance virtual link. Whether it is used for site link even in remote areas at home or abroad, for integrating home offices or road warriors into the company VPN, or for establishing a reliable and fast Internet link in rural areas: The Multichannel VPN Router 1610 offers ideal bonding capacities for setting up company networks of different sizes. The router is particularly robust and persistent.

Multichannel VPN Router 2610

The Multichannel VPN Router 1610's big brother has higher performance and enhanced management features. The device bundles up to six different WAN lines into a single, high-performance virtual link. Extended bonding capacity of up to 200 MBit/s provides long-term security of investment for companies.

The router is especially suited for setting up large company networks or company connect in industrial frameworks.

The Multichannel VPN Router 2610 is equipped with additional management features facilitating large network maintenance.

Hot-Plug Modules

Viprinet's hot plug principle provides flexible insertion of modules into the Multichannel VPN Routers. Hot plugging means modules may be added or replaced during operation, without any interruption to running data transfers from clients inside the LAN. For all current access technologies a distinct module is available.

The range of modules offered by Viprinet is expanded continuously. This way the investment in the routers is secured. Should new forms of broadband access become available in the rapidly changing access market, correspondent modules will be developed so that the routers will always be able to employ latest technologies. Currently, the following hot plug modules are available:



- ADSL 2+ Annex A
- ADSL 2+ Annex B
- UMTS/3G/EDGE/HSPA
- Euro ISDN
- Fast Ethernet

The Fast Ethernet module serves as a bridge to various forms of Internet access types. External modems may be connected to it to become part of the Multichannel VPN Router's channel bundling system. Among others, SDSL modems, fixed line access routers, cable modems and WiFi routers are supported.

Technical Specifications

Model	300	1610	2610
Enclosure Format	Desktop	19" 1,5 HU	19" 1,5 HU
Dimensions (WxHxD)	147 x 130 x 177 mm	435 x 66 x 320 mm	435 x 66 x 320 mm
Weight (ca.)	1 kg	5,1 kg	5,1 kg
Power rating	12 VDC, 4 A max	100-240 VAC, 50-60 Hz	100-240 VAC, 50-60 Hz
Power Supply	External AC/DC adapter 100-240 VAC, 50-60Hz	Integrated IEC socket	Integrated IEC socket
Coolers: Number / Regulation / Control	0 / - / -	2 / ✓ / -	2 / ✓ / -
LAN-Interface	Fast Ethernet	Gbit Ethernet	Gbit Ethernet
WAN module slots	3	6	6
Maximum power consumption	35 Watt	70 Watt	75 Watt
Typical power consumption	20 Watt	40 Watt	45 Watt
SNMP Status / Accounting	✓ / ★	✓ / ★	✓ / ✓
Bonding capacity MBit/s	50	125	200

★ optional

Supported Routing Features (excerpt):

- Real bonding of all connection bandwidths with / without TCP-optimizing
- Quality of Service / traffic shaping (per WAN module / VPN-tunnel)
- NAT and port forwarding
- Monitoring (graphical and remote-syslog)
- Unlimited number of VPN tunnels (SSL / AES)
- Rule-based routing
- Traffic accounting via external server
- Web administration system front end supporting multiple organizations

Product Overview

Multichannel VPN Hub

In addition to the Multichannel VPN Router, a remote device is needed for establishing a Viprinet network, the Multichannel VPN Hub. Here, the data sent through the VPN tunnel by the local router is being reassembled and decrypted, before it will be forwarded to its original destination on the Internet. With only one height unit and a typical power consumption of less than 40 Watts, the device is specially designed for cost-effective operation in data centers. The use of high-quality parts and the integrated smart redundancy system make the Multichannel VPN Hub a particularly durable low maintenance device.



The Multichannel VPN Hub is available in two different types that can be combined with all other Viprinet products. This provides more flexibility and ideal configuration for company networks.

Multichannel VPN Hub 1000

Its bonding capacity of up to 150 MBit/s makes this Hub fit for smaller or medium-sized company networks. Depending on the bandwidth available at each site, company networks of 10 to 15 sites can be covered.

Multichannel VPN Hub 2000

This Hub model was designed for large bonding capacities in the enterprise sector. Particularly ISPs who carry their own network will find the Multichannel VPN Hub 2000 with its bonding capacity of up to 250 MBit/s the ideal option. It allows for termination of a great number of end customer VPNs on one single Hub.

The novel redundancy system is especially noteworthy. It guarantees highest reliability in maintaining the remote station. In addition to those Hubs in productive use, one or more backup (hot spare) Hubs can be operated that – in case of a Hub malfunction – will take over all functions of the defective device with the least possible delay.

Technical Specifications

Model	1000	2000
Enclosure Format	19" 1 HU	19" 1 HU
Dimensions (WxHxD)	435 x 44 x 235 mm	435 x 44 x 235 mm
Weight (ca.)	3,3 kg	3,3 kg
Power rating	100-240 VAC, 50-60 Hz	100-240 VAC, 50-60 Hz
Power Supply	Integrated IEC socket	Integrated IEC socket
Coolers: Number / Regulation / Control	2 / ✓ / ✓	2 / ✓ / ✓
LAN-Interface	Gbit Ethernet	Gbit Ethernet
WAN module slots	Gbit Ethernet	Gbit Ethernet
Maximum power consumption	40 Watt	45 Watt
Typical power consumption	35 Watt	40 Watt
SNMP Status / Accounting	✓ / ★	✓ / ✓
Redundancy system	★	✓
Bonding capacity MBit/s	150	250

Supported Routing Features (excerpt):
• Real bonding of all connection bandwidths with / without TCP-optimizing
• Quality of Service / traffic shaping
• NAT and port forwarding
• Monitoring (graphical and remote-syslog)
• Unlimited number of VPN tunnels and VPN client connections (SSL / AES)
• Rule-based routing
• Traffic accounting via external server
• Web administration system frontend supporting multiple organisations
• Redundancy System / Failover

★ optional

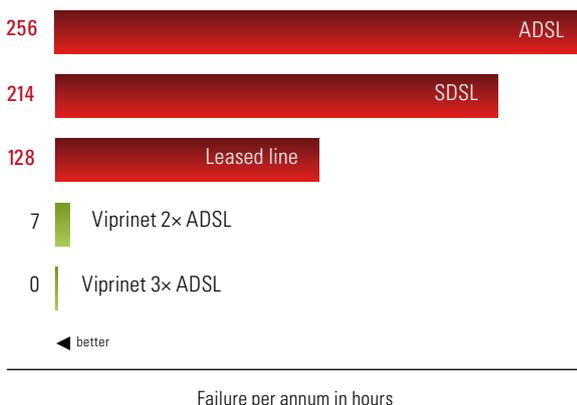
Fields of Use

Manifold applications

Due to its flexibility, the Viprinet technology can be employed in a great number of application scenarios. In contrast to competing solutions, Viprinet offers three main benefits: high bandwidths, extraordinary availability, and access from any location. Thus, competitive consumer offers can be upgraded to professional business connections. Whether for administrations, building companies, architect's offices, booth constructors, event agencies, sound studios, TV broadcaster, or others, in short: everyone dependent on a fast and secure Internet connection will find Viprinet the perfect solution.

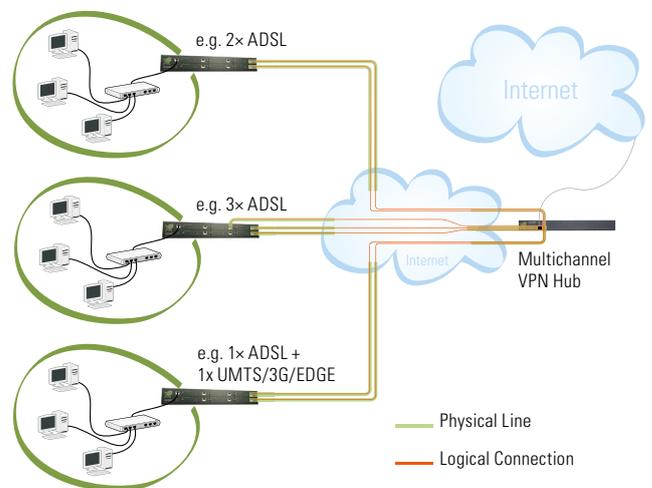
Application: Availability

Viprinet's remarkable capabilities in terms of reliability are of special relevance for almost all businesses, but especially for virtualization (Citrix, SaaS, etc.) users. Many IT executives reckon instable lines one of the greatest obstacles for switching to virtualized applications. Thus, every line breakdown will mean a complete business standstill and hence massive loss of productivity. By combining different access media and ISPs, the Viprinet technology diminishes the outage risk, availabilities of more than 99 per cent can be easily and inexpensively accomplished; more than any other solution on the market.



Application: Flexible site link

Compared to competing technologies such as MPLS, Viprinet offers great benefits for site links at home and abroad as well as the integration of road warriors, home offices or remote sites, especially in terms of expenses and flexibility. All Viprinet devices are fully compatible to another. So, companies can customize their network structure. The router's modular setup allows quick and simple modifications in the IT-infrastructure.



Application: Internet everywhere

Even in regions that do not offer coverage of fast DSL links, Viprinet can help build up a stable and reliable Internet connection by bonding available access media (UMTS/3G, DSL light, and others). This way, even sites in rural areas at home or abroad will no longer be isolated from corporate VPNs. Mobile users can access the Internet from any place by bonding various different UMTS/3G connections. Whether for road warriors, photo or TV journalists, roadshows or other events: Viprinet upgrades mobile data networks and makes them ready for business applications.



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