

BIG 10 ROUTER – BROADBAND INTELLIGENT GATEWAY ELCONNECT®

SHDSL highly available symmetrical data transfer
via deployed copper cable network

EFM-BONDING high-speed data transfer at up to
22 Mbps over large distances

NETWORK TERMINATION OR BUSINESS ROUTER
allowing flexible use in
multiple application scenarios



THE PRODUCT

Business customers today need a modern and efficient communication infrastructure, so they require extremely flexible, high-performance transmission systems and terminal equipment. Special attention is hereby paid to meet the demand for highly available, symmetrical broadband services with conventional SLA, as well as the requirements with respect to bandwidth management, separation of the individual voice and data services, and the guaranteed availability of certain services (e.g. VoIP) using efficient prioritization algorithms.

The products from the Broadband Intelligent Gateway (BIG 10) series are specially designed for business customers.

The BIG 10 Router is optimized for data applications, such as the transmission of internet data, the connection of external locations to a central office by setting up virtual local area networks (VLAN), or the transmission of voice and video information in real time for VoIP and video conferences. It provides a variety of functions for efficient bandwidth management and the prioritization of services and interfaces. The unit can also be used to feed Mini-DSLAM's in remote outdoor locations that are not linked over an optical fiber connection.

The BIG 10 offers a managed switch and router, thus providing an ideally suited device to meet different customer requirements.

Data transmission to the IP backbone runs over max. four SHDSL lines, which can provide data rates of up to 5.7 Mbps per each line pair, using the SHDSL transmission method. The special EFM-bonding allows increasing the total capacity of the business customer access to even 22 Mbps. Bandwidth expansions can be very easily realized by adding further SHDSL lines to the bonding group, so that the customer's demand for higher bandwidths will be met without delay.

The device works smoothly together with ATM-based SHDSL DSLAMs.

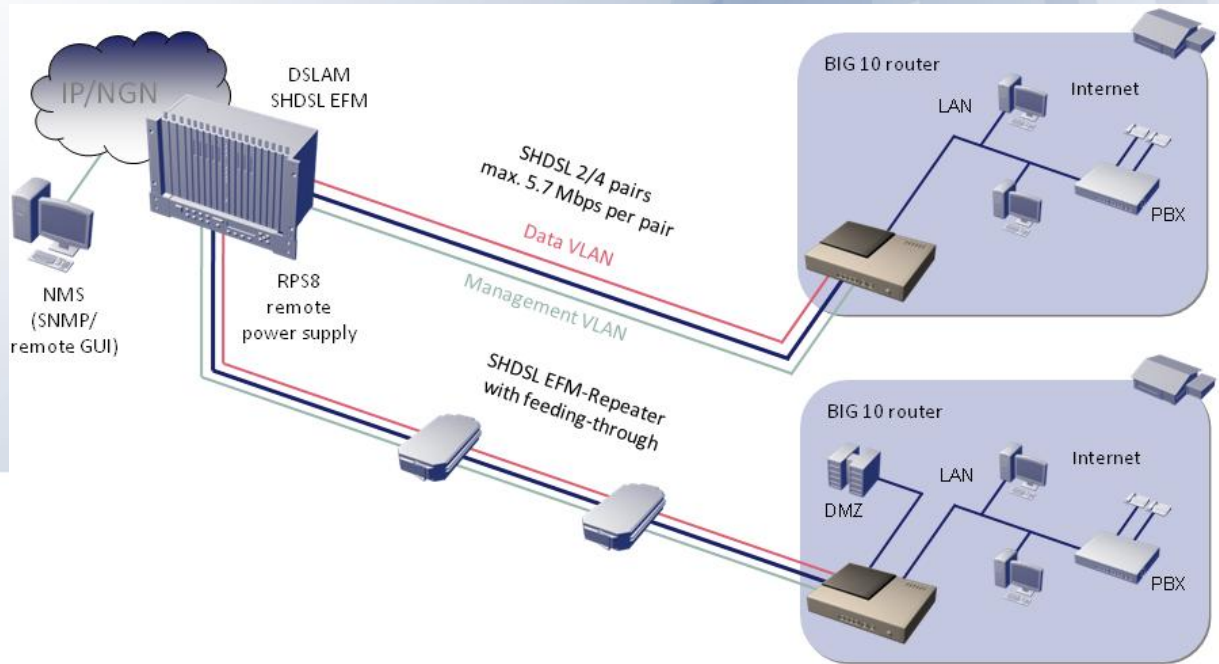
The high availability of the business customer access and the individual services provided along can be guaranteed.

Local and remote configuration as well as management are realized by the implemented Web-based graphical user interface (Web-GUI) resp. the implemented SNMP-protocol which guarantee that the efforts for OAM are kept to a minimum.



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APPLICATION SCENARIO



FEATURES OF THE ELCON SYSTEM

- symmetrical data transfer at up to 22 Mbps via legacy copper wire pairs
- 2/4 × SHDSL-EFM with SHDSL and EFM/ATM bonding support
- ATM support
- range extension through the use of max. 4 cascaded repeaters per SHDSL or flexible adjustment of the SHDSL bit rate
- line test of twin-wire copper cable and predefined target noise margin through line probing (PMMS)
- client-side interfaces
 - 4 × Ethernet LAN
- switch and router support
- operation as NT with third-party DSLAM's
- support of VLAN tagging for the separation of voice and data services
- traffic shaping and prioritization support for guaranteed high QoS
- local and remote management; integration in third-party NMS via SNMP
- local power supply for the BIG 10



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ELCONNECT®

TECHNICAL DATA

SHDSL

- ITU-T G.991.2 G.SHDSL.bis
- 2/4 SHDSL pairs
- high symmetrical bandwidth (up to 22 Mbps) due to
 - EFM-bonding support (IEEE 802.3-2004)
 - ATM-bonding support (support of M-pair mode)
- 1 × RJ45

ATM

- ATM-Layer acc. to I.361
- AAL5 acc. to I.363.5
- VPI/VCI range configurable
- support of OAM F4/F5, AIS, RDI and loopback

Ethernet LAN

- standard Ethernet protocol IEEE 802.3
- IEEE 802.1q, 802.1d, native Multicast
- VLAN support for management and user data
- VLAN double tagging as per 802.3ac
- DSCP remarking
- 4 × RJ45 Ethernet 10/100 Base-T, MDI/MDIX-autosensing

Router Functionality

- TCP/IP v4
- NAT
 - virtual Server
 - port mapping
 - virtual DMZ
- DHCP-client/server
- PPPoE
- static IP
- firewall
- DynDNS

Quality of Service

- strict priority (SPQ) & weighted fair queuing (WFQ)
- class of service (CoS)
 - port-based
 - 802-1p
 - DSCP
 - application based (TCP port)
 - Ethertype
- traffic shaping and limiting

OAM

- dying gasp support
- NTP
- MAC-address filter
- statistical transmission data und history

Management and Configuration

- local configuration via integrated Web-GUI
- DHCP/TFTP remote configuration using configuration file
- remote configuration and management
- SNMP v2 / v3 support
- firmware update
- password protection

Physical Parameters

power supply of plug-in power supply module (Euro plug)

- operating voltage range: 100 V ... 240 V AC
- frequency range: 50 Hz ... 60 Hz
- current consumption: ≤ 0.5 A

power supply of BIG 10

- nominal voltage: 12 V DC
- current consumption: < 1.2 A

dimensions and weight

- dimensions (W × D × H): 240 mm × 160 mm × 48 mm
- weight: 0.6 kg

ambient temperature

- during operation: 0°C ... 45°C
- during storage: -40°C ... 70°C

EMC & Safety

- CE-marking
- EMC: EN 55022, ETSI EN 300 386, ETSI ES 201 468, ITU-T K.21 „Enhanced Test Level“
- safety: EN 60950-1

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PURCHASE ORDER INFORMATION

Product Designation	Order Number
BIG 1022 (2-port SHDSL)	900216
BIG 1024 (4-port SHDSL)	900217

