

4 DSP & 8 DSP Module



The extension modules 4 DSP and 8 DSP convert the VoIP-VPN Gateway module into a complete switched network-to-IP gateway. This permits the transition of IP voice data into the traditional voice network and vice versa.

To provide optimum voice quality with minimum bandwidths, the standard voice codecs G.711, G.723.1, G.726, and G.729a/b are supported. The combination of the elmeg ICT unit, VoIP-VPN gateway and one or two DSP modems enables any conventional end device, be it analogue or ISDN, as well as any IP phone to use IP voice telephony.

Up to 16 connections can be set up simultaneously between the various technologies, using two 8 DSP modules.

Features of DSP modules with VoIP-VPN Gateway

- SIP standard according to RFC 3261
- RTP / RTCP according to RFC 1881
- Up to 10 SIP accounts configurable
- Support of 40 (ICT46) or 80 (ICT88/880) IP end devices
- Telephony functions, such as: call waiting, call back, alternation between lines, 3-party conferences, call transfer with and without announcement, call forwarding, suffix dialling
- Voice compression (codecs) according to G.711, G.723.1, G.726, and G.729a/b. This permits the transition of IP voice data into the traditional voice network and vice versa.
- IP phones or IP systems telephones of the PBX can be integrated into the traditional voice network (ISDN or POTS).
- Traditional end devices (analogue, ISDN) of the PBX are able to use Internet telephony (VoIP).
- Quality of Service: measures for quality assurance for VoIP
- Prioritisation of RTP packets: RTP packets coming from the logged on IP end devices are treated with higher priority by the gateway.
- Bandwidth management: reservation of bandwidth for VoIP connections
- Echo compensation: local echo compensation to improve the voice quality (max. 16 ms)

Features IP Access

- Network protocols: PPP over Ethernet (can be deactivated), ARP, IP, ICMP, TCP, DHCP, DNS, PPTP
- DHCP server: automatic configuration of the connected PCs with DHCP (IP address, DNS server, gateway)

- Automatic Internet access: simple configuration by means of listing of established providers
- Short hold: automatic termination of an Internet connection after a configured time interval if no data is exchanged with the Internet
- Stateful Inspection Firewall: set-up of preconfigured filters for different client (http, smtp, ftp) and server applications (web server, mail server)
- VPN / IPSec: secure Internet connections between sites for voice and data transmission, up to 5 connections simultaneously
- IP Masquerading / NAT: IP address mapping over an IP address; static/dynamic assignment of the IP address at the WAN port, masquerading of TCP, UDP, ICMP, FTP; DNS forwarding
- DynDNS: supports dynamic DNS with various providers
- DNS Proxy / DNS Server: creation of a proxy of the LAN in another network and name resolution of IP addresses
- Configuration of the ICT telecommunications unit from a PC in the LAN
- LAN-TAPI / LAN-CAPI: offers Computer Telephony Integration (CTI) and CAPI services (e.g. PC fax, PC call answering machine) at the workplaces in the LAN
- RAS Server: ISDN dialin into the LAN with up to 4 simultaneous connections and call number identification
- RAS Callback: automatic callback to a RAS client via the Microsoft Callback Protocol