

## Single-Box Solution

The Convergence GW is a powerful Single-Box Solution for VoIP Branch Office Connectivity for Enterprise and Hosted Service Scenarios. The Convergence GW comes with integrated Session Border Controller, Branch Survivability functionalities combined with PSTN local break-out through integrated digital and / or analog Gateways.

### Versatile Multiservice-Router

Designed specifically for the Service Provider and Enterprise sectors, the Convergence GW is an all-in-one network appliance that includes:

- Multiservice Router
- Firewall with NAT Traversal support
- Session Border Controller with Voice Security Enhancements
- Applications for branch survivability
- call admission control
- QoS.

### Solution Differentiators

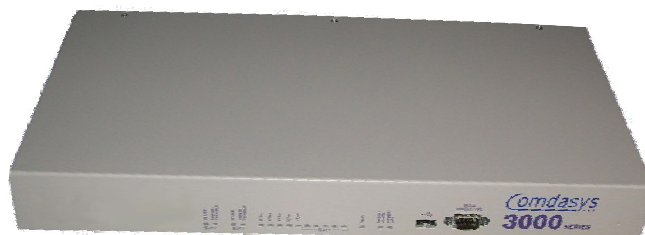
The Convergence GW differentiates itself from other branch office solutions because it can also act as a Session Border Controller for voice scenarios thus enabling the flexible deployment of Hosted Solutions. In addition, the most advanced Survivability Solution in the market can preserve up to 80% of the features if the connection to the PBX is lost. It can also act as an IP to IP gateway for the integration of SIP carriers accounts or SIP Trunks.

### High Performance and Great Flexibility

The Convergence GW is suitable as a universal network building block for small to medium size branch offices. It helps simplifying network management and network configuration and thus reducing cost of ownership. The performance of the Convergence GW allows connecting up to 150 users. Depending on the configuration of the Convergence GW and the user scenario, the Convergence GW provides up to 60 channels for local PSTN break-out. It also features a redundancy solution that permits using a second Convergence GW in Hot-Failover mode for high availability scenarios.

### Comprehensive and Interoperable

The Comdasys Convergence GW enables enterprises and service providers to securely consolidate branch/office communications services and applications into a single network appliance. Through its proven performance and interoperability, the Convergence GW can be deployed with third party network and client systems. With its comprehensive management tool it can be deployed, configured and serviced locally and remotely.



### VoIP Features

- SIP Proxy Server (RFC3261)
- SIP Registrar; SIP Redirect Server
- SIP over TLS and SRTP support
- B2BUA with Transcoding
- SIP Session aware RTP Proxy for VoIP NAT support

### Voice Gateway Features

- 2 card slots with the following card options. The cards can be freely combined:
  - 7 FXS + 1 Bypass port per analog card
  - 4+1 ISDN BRI ports software configurable as NT or TE per card
  - 1 ISDN PRI (E1/T1) port NT/TE software configurable port per card
- Configurable point-to-point, point-to-multipoint and connector pinout
- Cut-through relay for emergency operation (bypass connection) with BRI cards
- Local Switching; Interface Hunt Groups
- Routing based on Interface, Calling / Called Number, Time, ISDN bearer
- Advanced Number Manipulation

### Session Border Controller

- Enterprise grade SBC for decentralized sites with full Enterprise feature Support
- Transparent Proxy Mode, to Full Topology Hiding
- Near-end and Far-end NAT Traversal Functionalities
- Call Admission Control
- Lawful Interception

### Voice Processing / Fax Modem Support

- Vocoders: G.711 (A-law,  $\mu$ -law), G.723.1, G.726, G.729a/b
- Full Security through TLS and SRTP
- G.168 echo cancellation
- DTMF detection and generation
- Carrier tone detection and generation
- Silence detection / suppression and Comfort Noise Generation level software adjustable
- Configurable dejitter buffer
- Configurable transmit packet length
- RTP/RTCP - RFC 1889, RFC 1890, RFC 2833, RFC 3389
- Fax over IP; T.38 Fax relay (9.6 k, 14.4 k)
- G.711 Fax and Modem Bypass
- Clear channel (G.711) or T.38

### ISDN Signaling

- Euro ISDN EDSS-1 / ETSI PRI/NET5
- ETS 300 011 (ISDN PRI UNI)
- ETS 300 012-1 (ITU-T I.430)
- ETS 300 402-2 (ITU-T Q.921)
- ETS 300 403-1/2 (ITU-T Q.931)
- ETS 300 102-2 (ITU-T Q.931)
- ISDN NI-2 (US T1 PRI)
- ISDN DMS100 (US T1 PRI)
- ISDN 5ESS (US T1 PRI)
- ISDN speech, audio and data (Fax Gr 4, UDI 64, RDI 64)
- R2 CAS (ITU-T Q.400-Q.490)

### Branch Telephony

- Auto-attendant functionalities

- Multi Line Hunt Group as well as Call Queuing Functions
- Music on hold
- Meet-me Conferencing functionality for both normal and Survivable operation
- Branch Survivability with local break-out
- Most used IP-PBX functionalities in Survivability mode
- Call Admission Control based on available Bandwidth
- Emergency Call Prioritization

### Firewall

- Stateful inspection Firewall NAT/PAT
- Configurable port forwarding (DNAT)
- Intrusion detection
- All standard protocols supported: DNS, FTP, SSH, TELNET, POP3, SMTP, HTTPS, HTTP, NTP, Ping, SNMP
- Including application-aware inspection engines securing protocols such as H.323, FTP
- Application aware rule definitions for more than 50 protocols as for example HTTP,FTP, eDonkey, AIM, IRC, SMTP, RDP, ...
- Strict TCP Validation ensures TCP session state enforcement, validation of sequence and acknowledgement numbers, rejection of bad TCP flag combinations
- Protection against ping of death, land attack, tear drop, Syn Flood, ICMP flood, UDP flood, IP spoofing, IP address sweep attack, Win Nuke
- TCP reassembly for fragmented packet protection
- Malformed packet protections and protocol anomaly protection
- Stateful protocol signatures

### Routing

- OSPF/BGP dynamic routing
- RIPv2
- Static routes
- Source-based routing
- GRE Tunneling
- Multicast Routing
- VRRP Support

### VPN

- IPSec, OpenVPN (TLS based VPN)
- Unlimited number of VPN-tunnels
- L2TP over IPSec
- Point-to-Point VPN or Roadwarrior configurations
- VPN connections from 2nd LAN interface supported (e.g. Access Point connected to second LAN)
- Encryption: AES (up to 256 Bits), 3DES (168 Bit), IDEA (128 Bit), Blowfish, variable key length
- Authentication: X.509 digital Certificates (RSA), Shared Secrets, HMAC-MD5, HMAC-SHA-1
- Perfect forward secrecy
- Secure Ethernet bridging, real-time adaptive link compression
- NAT for VPN subnets

### Network Interfaces

- WAN Port 1 x 10/100 BaseT Ethernet RJ-45 connector
- LAN Switch with 4 x 10/100 BaseT Ethernet RJ-45 connector

### Management

- Web Interface
- SSH
- SNMP
- Local Serial Console.

### QoS / Traffic Control

- Classification by Physical Port, Virtual Firewall Rule, Session, L7 protocol
- Bandwidth Guarantees and Bandwidth Limits
- Queuing disciplines such as Token Bucket, Stochastic Fairness Queuing, CBQ, IMQ, CSZ, Diffserv mark, RED, WRR and others

### Miscellaneous

- DHCP Server/Relay
- DNS Server

### Differentiating Features

- Number of users not restricted; Scripting Support
- Scheduled Scripting Support (e.g. timed hang-ups / re-connects on DSL lines)
- NTP Client / Server for accurate time (e.g. logging)
- Failsafe Update (Dual Firmware Flash)

### Operating Environment

- Operating temperature: 0 degrees C to 40 degrees C
- Storage temperature: -20 degrees C to +70 degrees C
- Humidity: up to 85 %, non-condensing

### Hardware

- Internal 100-240 VAC power supply
- Rack mount, Desk mount, Wall mount
- 2 interface card slots
- Stackable units to increase port count

### Dimensions

- Height: 4.4 cm (1.73 in.) approx.
- Width: 44.5 cm (17.5 in.) approx.
- Width (mounting brackets): 48.5 cm (19 in.) approx.
- Depth: 20.5 cm (8 in.) approx.

### Certifications

- EN 55022
- EN 55024
- EN 61000-3-2
- EN 61000-3-3
- EN 61000-4-2/-3/-4/-5/-6/-11
- FCC Rules Part 15 / Subpart B
- IEC / EN 60950-1
- UL 60950-1
- Marks: CE, FCC, UL

### comdasys AG

Rüdesheimer Str. 7  
D-80686 München

Fon +49 (0) 89/54 84 333-0  
Fax +49 (0) 89/54 84 333-29

info@comdasys.com  
www.comdasys.com