

# Quality is all about flow – data flow



## Residential Gateway RGW208EN+

Upgrade your Internet connection to get the best speed out of it. Avoid delays, interruptions and noise, and save space by having only one device instead of many devices ... and wires. This product only needs an ADSL modem, cable modem or similar to give you all these functions. This kind of product is also available with ADSL2+ built in.

Some people consider any Internet connection device as a "box" and don't pay attention to the abilities of such "box". However, the difference is huge but rarely noticed until online TV/Video is used, IP telephony is activated or until computer games are carried out. Then the difference becomes both clear and vital.

Technically our products are based on the best components available, in addition to two new technologies called StreamEngine™ and NetEQ™.

StreamEngine™ ensures that the outgoing Voice/ datastream is being prioritized so there will be no interruptions in the sound or data.

Global IP Solutions (GIPS) VoiceEngine uses advanced, patented algorithms to ensure that, even in the most challenging network conditions, you get the highest quality conversations and data stream.

Thereby you get not only a superior hardware quality but also two technologies giving the best out- and ingoing data & voice stream, so you will probably have the best sound experience ever on a phone line, in addition not having to lose a computer game due to delays and interrupts.

### Advantages:

- All in one box.
- Connects to your existing cable modem/ ADSL modem/ LAN line.
- Built-in 8 port Gigabit switch gives you the fastest transfer to other computers, printers, scanners etc.
- No need to manually set it up. If supported by your operator this can be handled automatically using the auto configuration utility.
- Uses the internet to give you cheaper and flexible telephony.
- Protects you against hackers by an efficient firewall.
- No phone line subscription needed as this uses your Internet connection.
- High Quality Sound by using the Uicom StreamEngine™ and Global IP Solutions (GIPS) VoiceEngine technology, probably even better than your traditional telephone. Cheaper rates from your own VoIP Service Provider, compared to a fixed landline.
- Built-in wireless long distance connection using the 802.11N Draft 2.0 (up to 2-300 meters coverage).
- Option to keep your current phone number.



Internet



Switch / LAN



IP Telephony



Router



Gaming



Wireless

## Technical Specifications

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### Background:

People are usually being overloaded with different devices, to take care of the different functions available in their home network. This can be an ADSL modem, a router with firewall, IP phone adapter and finally a wireless access point to have an Internet connection available all over the house.

Such a line up of different devices not only creates a mess themselves, but also the amount of different power supplies, wires etc., is a mess to look at, and it takes up space too. In addition this is normally not the best technical solution either, as it's not given that these different devices works well together.

Therefore its becoming more and more common to have all these devices gathered into one single box, connecting it all with only a few wires and one power supply.

Fortunately this not only saves the hazzle and space, but also gives an optimised solution on data handling for both gaming, surfing, using the IP-Phone, or Skype, in addition to the increased security for all attached devices.

It also eliminates the bottleneck of the Internet connection so there will be less delays and interrupts, which in general gives a much better experience than normally known, when working/gaming/calling from home.

Actually, through this device, IP-telephony reaches the same level, if not better, than your old analog or ISDN phone. You should try this.

### IP Telephony:

The Pingcom products use StreamEngine™, which will automatically detect VoIP traffic and ensure safe delivery to the Internet. The Pingcom NetPhone adapter also includes GIPS NetEQ™, an advanced jitter buffer and packet loss concealment that results in dramatic improvements in sound quality for the incoming VoIP stream.

NetEQ™ maintains very high voice quality even under high packet loss conditions. Priorities of these voice applications may be assigned automatically or may be strictly provisioned by the service provider.

### Ease of use:

The Pingcom products can all be remotely managed by the service provider (operator dependant). It supports the TR-069 standard from DSL Forum, working together with any standard TR-069 ACS device configuration system. It include provisioning of the gateway and the VoIP clients as well as supporting TR-111 for proxying other TR-069 compliant devices through the router.

The Pingcom products are designed for performance and QoS handling, and they are prepared for remote monitoring in real-time. It also supports the Overa OPP protocol, a protocol providing real-time bi-directional connectivity to the Pingcom NetPhone adapter's system and QoS engine.

The Overa OPP protocol will automatically traverse additional routers ahead and establish the desired connection. The OPP client is a highly efficient Remote Procedure Call (RPC) engine that can run monitoring algorithms for VoIP quality, online gaming conditions, or simply log the results from the StreamEngine™ QoS engine to the service provider's management system. The OPP client can also be used for network diagnostics to help troubleshoot undesired situations.

## Data

### General

- Easy setup menu
- Ambient temperature: < 45 Celsius
- Power Consumption < 6W
- Boot time (from power ON to SIP registered): <5 sek



### Router features

- 8 port 10/100/1000 LAN Switch
- 1 WAN port 10/100/1000
- USB port
- NAT
- Stateful Packet Inspection (SPI)
- VPN Pass Through – PPTP/IPSEC/L2TP
- DHCP Server
- DHCP Client
- 270 MHz Uicom 5100 CPU
- 8 Mb DDR RAM
- 2 Mb Flash
- DNS Relay Static or WAN Assigned DNS Servers
- Policy Based Parental Controls
- Time Based Internet Access
- Port Range / Service Filtering
- Internet Domain Restriction
- Dynamic URL Filtering (subscription service)
- Named Schedules
- WAN IP Address– DHCP, PPPoE, PPTP, L2TP\*, BigPond
- MTU Setting
- MAC Address Filtering
- Event Logging
- Severities; 1K Entries
- Dynamic DNS
- Data Networking—MAC address (IEEE 802.3), IPv4, ARP,
- DHCP Client, ICMP, TCP, UDP, RTP, RTCP, PPPoE, TOS, DiffServ
- Security—Password protected administration, Admin and User Access Authority, HTTP/HTTPS-support
- LED's (power, LAN, WAN, 2FXS, Status)
- QoS (Quality of Service), WISH, GIPS
- StreamEngine™, ToS/CoS, DiffServ, 802.1p\*
- Current Time & Daylight Savings Time Adjustment, Network Time Protocol



### Router features - Wireless

- IEEE 802.11n (Draft 2.0), 802.11g, 802.11b, 802.3, 802.3u
- 2 external/1 internal Antenna
- WPA & WPA2 security



### VOIP features

- SIPv2 – Session Initiation Protocol ver.2 (RFC3261)
- Re-register/Re-invite, Digest authentication with MD5, Redundant proxy, SIP Option, Alert-Info header
- SIP/SDP RFC compliancy
- Hosted PBX control & DTMF
- In-band/Out-of-band, SIP Info, SIP Subscribe-Notify
- NAT traversal with STUN (RFC3489) or Symmetric response Routing (RFC3581)
- Voice Algorithms—G.711 (A/u-law), G.729AB (optional: G.723.1, G.726 (16/24/32/48 kbps)
- Dynamic Payload, Full Duplex Audio, Adjustable Audio
- Ring Tones—progress, dial, busy, network busy, call wait, ring back, call hold,flash, power ring tone (SLIC)
- Global IP Solutions (GIPS) VoiceEngine featuring NetEQ - advanced jitter buffer and packet loss concealment module, VAD - Voice Activity Detection, CNG - Comfort Noise Generation, LEC-Line Echo Cancellation G.168), Attenuation / Gain Adjustments, Dynamic volume control Phone user services—T.38 fax, G.711 fax pass through, Dial Plan, Redial, CLIP/CLIP2. generation, 2 separate lines, conferencing, 3 way call (CO mixed), Call waiting support
- Local or central call handling
- Emergency call handling
- Calling/called party control
- Audible message feedback SIP
- ALG enable/disable
- 2 x POTS (FXS) for analog phone or fax

### Provisioning

- Supporting the optimized OPP protocol for enhanced control
- Manageable (User Groups, Monitoring, Reporting)
- Easy configuration web wizard, Web based interface—HTTP v1.1
- Failsafe Upgrade, Compressed Firmware
- Scalable (Load Balanced & Back-off for millions of devices)
- WAN, LAN & WLAN Interface Statistics MANAGEMENT
- Provisioning via TFTP, TR-069, OPP or customized
- Configuring via web interface, adaptable look and feel
- Automatic (Install, Upgrade & NAT traversal)
- Secure (Authenticated & Encrypted)
- Configuration and reporting integrates to xAPS provisioning system

