



Clarent® CPG™ 1102

VoIP over Broadband 2 Port Gateway

The Clarent CPG 1102 provides a compact, flexible, cost-effective 2 port gateway for VoIP over broadband.

Convergence to the network edge

For years, carrier networks have enjoyed the substantial benefits of converged voice and data. Now with Clarent, the end customer has access to this powerful enabling technology. Clarent, the leader in carrier-class voice over IP (VoIP) solutions, is offering service providers the tools needed to extend powerful voice services and value-added applications to the residential and small office/home office (SOHO) market segments over any broadband technology – leveraging the existing broadband access equipment at the customer premises. Clarent makes this possible with the introduction of the Clarent customer premises media gateways – Clarent CPG 1102 – an access-independent customer premises component of the Clarent Local Access solution.

Users can manually switch between IP and PSTN modes by dialing a pre-configured number to access the PSTN line. The Clarent CPG 1102 also has PSTN backup functionality that allows subscribers to place and receive calls over the PSTN during power loss. An analog FXO port provides connection to the PSTN. The PSTN access feature provides flexibility as well as lifeline phone access to subscribers.

The Clarent CPG 1102 gateway is designed for easy deployment – its compact size and browser-based end-user self-provisioning of services and features without intervention from the service provider make it easy for customers to set up and start enjoying their services quickly. This also decreases deployment complexity and associated costs for the service provider.

Small Office/Home Office – Residential

The Clarent CPG 1102 provides access to voice services from the customer's premises over IP over any broadband access technology, including xDSL, Cable, Wireless Local Loop (WLL), fiber or powerline with 10/100 Base T Ethernet support. It has two RJ-11 ports that can be used to connect analog phones, fax machines or PC to the service provider network through the broadband modem or router at the customer premises. The Clarent CPG 1102 gateway allows connectivity to the LAN or WAN through two RJ-45 10/100 Base T Ethernet interfaces.

The Clarent Local Access Solution

The Clarent Local Access solution shown in the network diagram below is based on the 3-tiered Clarent network architecture, which distributes the transport layer, call control layer and the intelligent network layer in separate servers and gateways thus eliminating a single point of failure while retaining scalability and ease of management.

The Clarent Command Center™ provides the rating, routing and subscriber management services; the Clarent Class 5 Call Manager provides true Class 5 switch (central or public exchange switch) features and call control; the Clarent Element Management System provides network management and control for all the softswitch elements; Clarent gateways interface with the public switched telephone network (PSTN) while Clarent Connect servers enable connectivity among Clarent-powered networks by providing traffic sharing, real-time account settlement and least cost routing. Clarent's customer premises gateways and IP phones complete this end-to-end VoIP solution by supporting advanced features and services in the network core and extending these to the end-user. The Clarent Local Access Solution delivers the promise of the telecommunications revolution to the residential and business market by facilitating end-to-end access to advanced Internet-based communication services.

The Clarent CPG 1102 plays two key roles in the distributed Clarent Local Access solution: it serves as the primary end terminal interface for the telephone, fax machine, and as the voice processing engine. It compresses and packetizes voice calls using G.711, G.723 or G.729a codecs. The Clarent CPG 1102 is a DHCP client on the WAN side while acting as a DHCP server to PCs connected on the LAN side. In addition, the LAN port supports NAT functionality. Both G.711 and T.38 protocols are supported for fax-over-IP. This gateway interoperates with other gateways and the Clarent softswitch deployed in the service provider network to provide a complete end-to-end solution.



- Flexibility.** Access independent – works with any broadband technology.
- Connectivity.** Two RJ-11 analog ports. Two RJ-45 10/100 Base T Ethernet LAN/WAN ports.
- Excellent voice quality.** Superior lost packet handling. Adaptive jitter buffering.
- Easy to deploy.** Compact. Simple configuration process.
- Simple upgrades.** Remote software upgrade facility.





Specifications

Interfaces

- Two (2) FXS (subscriber loop interface) RJ-11 analog interfaces for analog phones
- One (1) RJ-45 10/100 Base T WAN Port
- One (1) RJ-45 10/100 Base T Ethernet LAN Port
- One (1) RS 232C, DB-9 Console port
- One (1) RJ-11 FXO/analog port for PSTN access

Features

- MGCP-based call control
- Caller ID per Bellcore specifications
 - TR-NWT-001188
 - TR-NWT-000031
 - GR30-CORE
- DHCP server on the LAN side
- DHCP client on the WAN side
- PSTN backup during power loss
- NAT functionality supported on the LAN port
- Echo cancellation using G.165/G.168
- Comfort noise generation
- DTMF tone generation/detection
- Fax/modem support via G.711
- Supports T.38 fax protocol
- Supports per port codec selection
- Country-configurable tones and ring cadences
- Remote software upgrade using TFTP server

Provisioning

- BootP, DHCP, TFTP and through Web browser

Standards Compliance

- Supports Internet protocols: TCP/IP, UDP, ARP, TFTP, ICMP, Telnet, IEEE 802.3 10/100 Base T Ethernet
- Supports voice codecs: G.711, G.723, G.729a

Power

- AC/DC universal, external power adapter provided
- 100/240 VAC, 50/60 Hz, 12W, Auto-sensing
- DC Input: 12VDC/1A

Environmental Requirements

- Operating temp: 0-40 °C
- Storage temp: -20-70 °C
- Humidity: Up to 90% non-condensing

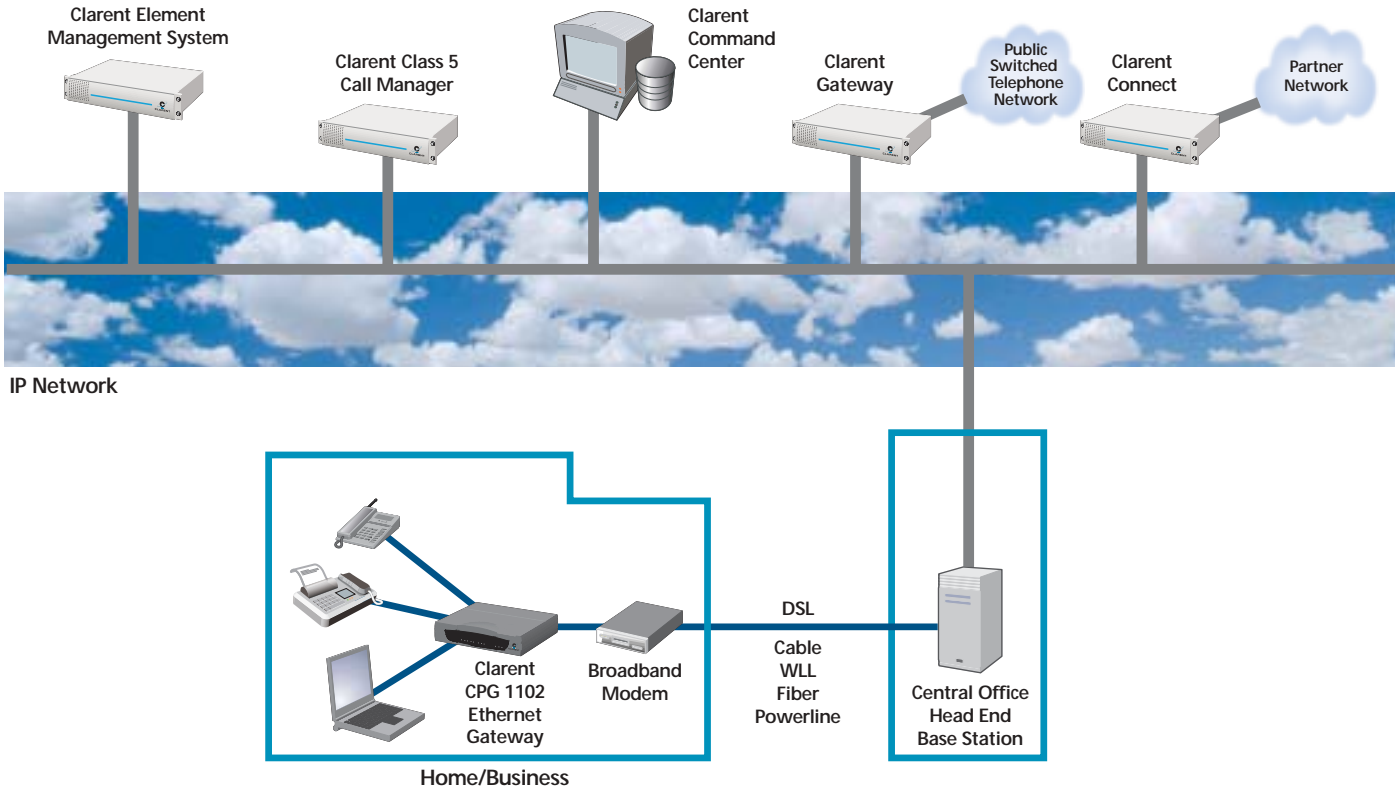
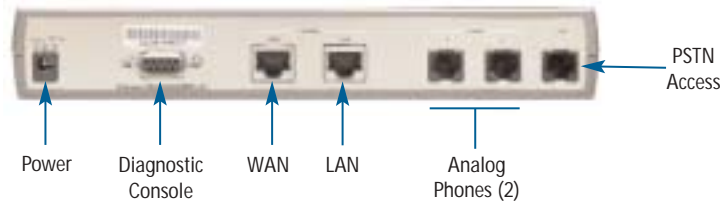
Dimensions

- W 8.6in (218 mm) x D 5in (127mm) x H1.25 in (32mm)

Regulatory Compliance and Agency Approval

This Clarent Equipment complies with or has obtained regulatory agency approval for at least the following standards.

EMC – Emission	FCC CFR 47 Part 15 Class B EN 55022 (1998) Class B
EMC – Immunity	EN 55024 (1998)
Safety	IEC 950/60950 (1991) + Amendments 1 to 4 EN 60950 (1992) + Amendments 1 to 4 UL 1950 3rd Edition CSA C22.2 N°950
Telecom	FCC Part 68 IC CS-03 Part 1 TBR 021



www.clarent.com



CORPORATE HEADQUARTERS
700 Chesapeake Drive
Redwood City, CA 94063 USA
Tel. 1 888 CLARENT, (1 888 252 7368)
1 650 306 7511
Fax 1 650 306 7512
Email: sales@clarent.com

ASIA PACIFIC
Hong Kong
Tel. 852 2587 8862
Fax 852 2157 0388
Email: sales.hk@clarent.com

EUROPE, MIDDLE EAST, AFRICA
Milton Keynes, UK
Tel. 44 1908 306 500
Fax 44 1908 306 501
Email: sales.eu@clarent.com

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