



2 Port T1/E1 Gateway

- » T1/E1 Ports: 1 or 2
- » Max. Concurrent Calls: 60
- » BHCC: 40K
- » Dimensions: 44 x 440 x 300 mm (1U)

FEATURES

- » Supports SIP and two 3GPP protocols
- » Up to 500 routing and call number transformation rules
- » Dual-redundant ethernet ports
- » Dual AC/DC power supplies (optional)
- » 512 SIP Trunks
- » TLS/SRTP
- » Voice VLAN
- » Remote Management via ComXchange Gateway Provisioning Module
- » Supports Config File for Configuration
- » Interoperability with popular SIP servers, such as Cisco Unified CallManager (CUCM), Broadsoft, Microsoft Skype for Business (Lync), Huawei IMS, Asterisk, FreePBX, and ComXchange

The ClearlyIP 2 Port T1/E1 Gateway provides signaling and media conversion between VoIP and ISDN networks. A typical application is to support enterprise PBX upgrades to IP when the telecom access is ISDN.

The ClearlyIP 2 Port T1/E1 Gateway supports 1 or 2 T1/E1 ports and up to 512 SIP trunks, to meet the requirement of large and medium-sized enterprises for VoIP services.

HIGH PERFORMANCE

The ClearlyIP 2 Port T1/E1 Gateway uses a special-purpose high-performance speech processing DSP chip. The DSP daughter card's 6000 MIPS processing capability enables the gateway to provide voice signal processing, echo cancellation, and T.38 fax relay.

HIGH SECURITY

To ensure security, the ClearlyIP 2 Port T1/E1 Gateway supports SSH and HTTPS for remote access, and provides functions including signaling and media stream encryption, automatic password strength test, brute-force password cracking prevention, cipher text data storage, network access whitelist, and system log backup.

HIGH RELIABILITY

The ClearlyIP 2 Port T1/E1 Gateway provides high availability features including 1+1 redundancy of Ethernet ports and AC/DC power supplies (optional), and SIP registration failover.

COMPREHENSIVE FEATURE SET

As an intelligent gateway running on an embedded Linux operating system, the ClearlyIP 2 Port T1/E1 Gateway supports an advanced feature set such as number transformation for calling/called party, automatic routing, RADIUS billing interface, 2nd-stage dialing tone and ring-back tone, auto dialing, DTMF detection, call-progress analysis, and RTP proxy for NAT/firewall traversal.



SPECIFICATIONS

PROTOCOLS

- » **Call Control:** SIP/UDP and SIP/TCP (RFC3261), IMS (3GPP)
- » **Network:** Telnet, SSH, HTTP, HTTPS, DHCP/PPPoE client, DNS (A/SRV record), STUN

MEDIA PROCESSING

- » **Codec:** G.711 (a/μ), G.729a, G.723.1, GSM, iLBC (If using 2 ports only G.711 codec is supported)
- » **Fax over IP:**
 - » T.38, G.711 pass-through
 - » T.38 compliant Group 3 Fax Relay
 - » Maximum fax rate of 33,600 bps (pass-through)
- » **Voice-quality Enhancement:** Echo cancellation (G.168-2004), Jitter buffer, Silence suppression (VAD, CNG), PLC
- » **Voice Processing:** RTP proxy, Firewall traversal, NAT traversal
- » **Auth. & Registration:** Up to 512 SIP trunks registration
- » **Others:** Number transformation, 500 routing rules, Digit map, RADIUS

QoS

- » **QoS:** DiffServ, TOS, 802.1P/Q VLAN tagging

SIGNALING

- » **PSTN Access:**
 - » E1 ISDN PRI (30 B+D): ETSI EDSS1
 - » T1 ISDN PRI (23 B+D): ANSI NI-2
 - » Switch type: 5ESS Series, DMS Series
 - » T1/E1 CAS

SECURITY

- » **Protocol:** HTTPS, SSH, TLS, SRTP
- » **User-defined Ports:** SIP port, RTP port, HTTP/HTTPS port
- » **Encryption:** Encryption on SIP signaling or/and media streams. Importing and exporting encrypted configuration file and password/PIN
- » **Intrusion Prevention:** Network access control whitelist, Blocking ping response, SIP-allowed IP addresses

HIGH AVAILABILITY

- » **Redundancy:** Dual Ethernet ports, Dual AC/DC power supplies (optional)
- » **PSTN Failover:** SIP registration failover from primary server to standby server

PROVISIONING, ADMINISTRATION & MAINTENANCE

- » **Device Management:** Management with the ComXchange Gateway Provisioning Module.
- » **Auto Provisioning:** Supports config file management
- » **Log Management:** 8-level logs, Syslog
- » **Data Capture:** Port capture, packet capture
- » **Status and Statistic:** Call status and history, device status monitoring and ISDN status monitoring
- » **Upgrade:** Firmware upgrade via the Web GUI or Config File

HARDWARE

- » **Ethernet Port:** RJ-45, 2x10/100/1000 Base-T, self-adaptive
- » **T1/E1 Ports:** 1 or 2 ISDN trunks, supporting up to 60 simultaneous VoIP calls.
- » **SD Card Interface:** 1
- » **CON Interface:** 1, RJ45
- » **RAM:** 512 MB
- » **Flash:** 64 MB
- » **Size (HxWxD):** 44x440x300 mm (1U)
- » **Net Weight:** 3kg maximum
- » **Single/Dual AC Power Supplies:** 100 - 240 VAC, 50/60 Hz, 1A maximum
- » **Single/Dual DC Power Supplies:** -36 to -72 VDC, 2.5A
- » **Power Consumption:** 18 W
- » **Mounting:** Rack
- » **Operating Temperature:** 0 to 40°C,
- » **Operating Humidity:** 10% to 90% RH (non-condensing)
- » **Storage Temperature:** -40 to 70°C,
- » **Storage Humidity:** 5% to 90% RH (non-condensing)



CE FC RoHS

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