Digital VoIP Gateways
DW-GTW-AC-E1030

The DW-GTW-AC-E1030 Enterprise Session Border Controller (E-SBC) is a compact, high performance VoIP connectivity solution for small enterprises and branch office locations.

The DW-GTW-AC-E1030 connects IP-PBXs and unified communications platforms to any SIP trunking service provider, scaling up to 250 concurrent SBC sessions. It offers superior performance in connecting any SIP to SIP environment, legacy TDM-based PBX systems to IP networks and IP-PBXs to the PSTN, supporting a single E1/T1 interface with 30 voice channels in a 1U platform. It also ensures secure and reliable communications for branch offices in distributed enterprise communications deployments.

Vast mediation capabilities and proven interoperability
The DW-GTW-AC-E1030 includes comprehensive media security and SIP normalization capabilities. It offers full interoperability with an extensive list of IP-PBXs, unified communications solutions and SIP trunking provider networks.

Security
The DW-GTW-AC-E1030 provides robust protection for the IP communications infrastructure, preventing Denial of Service, fraud and service theft and guarding against cyber-attacks and other service-impacting events.

Reliability
DW-GTW-AC-E1030 offers active/standby high availability and maintains high voice quality to deliver reliable enterprise VoIP communications. Advanced call routing mechanisms, network voice quality monitoring and branch survivability capabilities result in minimum communications downtime.

MAIN FEATURES
- A highly integrated device for secured SIP Trunking and PSTN access, forming a single and managed point of demarcation for VoIP networks.
- Compact, high performance VoIP connectivity device for small enterprises and branch offices.
- Extensive interoperability and partnerships that extend across multiple vendor devices and protocol implementations.
- Offers comprehensive security and reliability.
- Delivers high service performance and voice quality.
- Branch office survivability in the event of a WAN outage.
# System Specification

<table>
<thead>
<tr>
<th>Capacities *</th>
<th>Regular / Max.</th>
<th>Regular / Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBC Sessions</td>
<td>0 / 250</td>
<td>SRTP/RTP Sessions</td>
</tr>
<tr>
<td>Transcoding Sessions</td>
<td>0 / 15</td>
<td>Registered Users</td>
</tr>
</tbody>
</table>

**Telephony Interfaces**

- Digital: Single E1/T1 interface
- Clock Source: 5 ppm High Precision
- Digital PSTN Protocols: Supporting various ISDN PRI protocols such as EuroISDN, North American N-1, Lucent™ 4/5ESS, Nortel™ DMS-100 and others. It also supports different variants of CAS protocols, including MFC R2, E&M immediate start, E&M delay dial / start and others.

**Network Interfaces**

- Ethernet: 4 GE interfaces configured in 1+1 redundancy or as individual ports

**Security**

- Access Control: DoS/DDoS line rate protection, bandwidth throttling, dynamic blacklisting
- VoIP Firewall: RTP pinhole management, rogue RTP detection and prevention, SIP message policy, advanced RTP latching
- Encryption/Authentication: TLS, SRTP, HTTPS, SSH, client/server SIP Digest authentication, RADIUS Digest
- Privacy: Topology hiding, user privacy
- Traffic Separation: VLAN/physical interface separation for multiple media, control and OAMP interfaces
- Intrusion Detection System: Detection and prevention of VoIP attacks, theft of service and unauthorized access

**Interoperability**

- SIP B2BUA: Full SIP transparency, mature and broadly deployed SIP stack, stateful proxy mode
- SIP Interworking: 3xx redirect, REFER, PRACK, session timer, early media, call hold, delayed offer
- Registration and Authentication: User registration restriction control, registration and authentication on behalf of users. SIP authentication server for SBC users
- Transport Mediation: SIP over UDP/TCP/TLS, IPv4 / IPv6, RTP / SRTP (SDES)
- Message Manipulation: Ability to add/modify/delete SIP headers and message body using advanced regular expressions (regex)
- URI and Number Manipulations: URI user and host name manipulations, ingress and egress digit manipulation
- Voicoders: Coder normalization including coder enforcement and re-prioritization, extensive vocoder support: G.711, G.723, G.729, G.729, G.3183, G.726, AMR-NB, AMR-WB, Opus-NB/WB, Opus-WB
- Signal Conversion: DTMF/RFC 2833/SIP T.38 fax, T.38, T.38 V.3, V.3a, packet-time conversion
- NAT: Local and far-end NAT traversal for support of remote workers

**Voice Quality and SLA**

- Call Admission Control: Based on bandwidth, session establishment rate, number of connections/registrations
- Packet marking: 802.1p/Q VLAN tagging. DiffServ. TOS
- Standalone Survivability: Maintains local calls in the event of WAN failure. Outbound calls can use PSTN fallback for external connectivity (including E911)
- Voice Enhancement: Transrating, RTCP-XR, Acoustic echo cancellation, replacing voice profile due to impairment detection. Fixed & dynamic voice gain control
- Direct Media: Hair-pinning of local calls to avoid unnecessary media delays and bandwidth consumption
- Voice Quality Monitoring: RTCP-XR, Denwa Session Experience Manager (D-SEM)
- High Availability (Redundancy): SBC high availability with two-box redundancy, active calls preserved
- Quality of Experience: Access control and media quality enhancements based on QoE and bandwidth utilization
- Test agent: Ability to remotely verify connectivity, voice quality and SIP message flow between SIP UAs

**SIP Routing**

- Routing Methods Request: URL, IP address, FQDN, ENUM, advanced LDAP, third-party routing control through REST API
- Advanced Routing: Criteria QoE, bandwidth, SIP message (SIP request, codec type, etc.). Layer-3 parameters
- Routing Features: Least-cost routing, call forking, load balancing, E911 gateway support, emergency call detection and prioritization
- SIPRecc: IETF standard SIP recording interface

**Management**

- OAM&P: Browser-based GUI, CLI, SNMP, INI Configuration file, REST API, EMS

**Physical / Environmental**

- Dimensions: 43.7 (l) x 310 x 210 mm (HxWxD)
- Weight: 4.4 lb (2.0kg)
- Mounting: Desktop or 19" rack mount
- Power: 100-240V, 50-60 Hz, 0.8A
- Environmental: Operational: 0 to 40°C (41 to 104°F), Storage: -25 to 70°C (-13 to 185°F), Relative Humidity: 10 to 90% non-condensing

**Regulatory Compliance**

- Safety and EMC: IEC60950-1, UL60950-1, FCC Part15 Class A, EN55022 Class A, EN55024, EN300 386
- Environmental Storage: ETS300019-2-1 class T2
- Transportation: ETS300019-2-2 class T2.3
- Operating: ETS300019-2-3

**Optional Licenses**

- Enterprise Session Border Controller (E-SBC): 5 sessions: MDE-SBC-005P

*See combinations table*