DGW100 Digital VoIP Gateway

DGW100

T1/E1 ports: 1/2/4

Max. concurrent calls: 120

BHCC: 40K

Features

- Supports SIP and IMS protocols
- Up to 500 routing and call number transformation rules
- Dual-redundant Ethernet ports
- Dual AC/DC power supplies (optional)
- Up to 512 SIP trunks
- TLS/SRTP
- Voice VLAN
- Remote access via the Redstone Cloud*
- Management with the Redstone or third-party Remote Device Management Systems (TR-069, SNMP)
- Interoperability with popular SIP servers, such as Cisco Unified CallManager/CUCM, Broadsoft, Microsoft Skype for Business (Lync), and Asterisk/Elastix
- Class I lightning protection

* The Redstone Cloud is based on Amazon.

The DGW100 Digital Trunk Gateway enables conversion between IMS/SIP and ISDN PRI (30B+D), R2 (CAS:MFC), D4, E&M, and other calling protocols. It connects next-generation IP voice service networks with traditional enterprise PBX systems or links modern enterprise IP voice switches (IP-PBX) to the traditional PSTN network.

The DGW100 supports 1/2/4 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 TI 'C5509 DSPs provide powerful voice processing capabilities. The DSP daughter card's 6000 MIPS processing capability enables the DGW100 to provide voice signal processing (G.711, G.729A, and G.723.1), echo cancellation, and T.38 fax relay under full load conditions (120 calls).

High Security

To ensure security, the DGW100 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, access whitelist, and system log backup.

High Reliability

The DGW100 provides high availability features including 1+1 redundancy of Ethernet ports and AC/DC power supplies (optional), and SIP registration failover.

Remote Management and Maintainability

The Redstone Cloud client inside the DGW100 allows the DGW100 located behind an enterprise NAT or firewall to be accessed across Internet securely. Real-time monitoring, alarm notification, remote packet capture and software upgrades can be performed with the Redstone or third-party Remote Device Management Systems with TR-069 or SNMP protocol.

Comprehensive Feature Set

As an intelligent gateway running on an embedded Linux operating system, the DGW100 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.

DGW100 Digital VoIP Gateway

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	
Codecs	G.711 (a/μ), G.729a, G.723.1, GSM, iLBC
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
Other Signaling	R2(CAS:MFC)、D4、E&M Wink、E&M Immediate、Feature Group D
DTMF	In-band audio, RFC2833, SIP-INFO
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	Access 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 and Maintenance	
Device management	Redstone Remote Device Management System, TR-069 management (TR-069, TR-104 and TR-106)
Remote access over TCP	Redstone Cloud
Auto provisioning	Download configuration file via TFTP/FTP/HTTP/HTTPS, Obtaining ACS address via DHCP option 66 or redirection
Log management	8-level logs, Syslog
Data capture	Port capture, Packet capture
Status and statistic	Call status and history, Device status monitoring and ISND status monitoring
ISDN maintenance	BERT, Near and loop back, ISDN-D & ISDN-B channel
Upgrade	Firmware upgrade via Web GUI or Auto provisioning

Hardware

Ethernet port	RJ-45, 4×10/100/1000 Base-T, self-adaptive
T1/E1 ports	1, 2, or 4 ISDN trunks, supporting up to 120 simultaneous VoIP calls
SD card interface	1
CON interface	1, RJ45
RAM	256 MB
Flash	32 MB
CPU	TI AM3352
DSP	TI C5509
Size (H×W×D)	44×440×300 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, Humidity: 10% to 90% RH (non-condensing)
Storage	Temperature: -40 to 70°C, Humidity: 5% to 90% RH (non-condensing)