

# ARGUS SIP-ISDN Trunking Gateway

## 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 web page
- Management with third-party Equipment Management Systems (TR-069)
- Interoperability with popular SIP servers, such as Cisco Unified CallManager (CUCM), Broadsoft, Microsoft Skype for Business (Lync), Huawei IMS, and Asterisk/Elastix
- Class I lightning protection

## 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)

The SIP-ISDN trunking gateway provides signaling and media conversion between VoIP and ISDN networks.

A typical application is to support enterprise PBX upgrades to IP when the WAN access is ISDN.

The ARGUS series 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 SIP-ISDN gateway 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 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, access whitelist, and system log backup.

## High Reliability

The Gateway 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

Real-time monitoring, alarm notification, remote packet capture and software upgrades can be performed with the third-party Equipment Management Systems with TR-069.

## Comprehensive Feature Set

As an intelligent gateway running on an embedded Linux operating system, the SIP-ISDN 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.

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## Specifications

### Protocols

<b>Call control</b>	SIP/UDP and SIP/TCP (RFC3261), IMS (3GPP),
<b>Network</b>	Telnet, SSH, HTTP, HTTPS, DHCP/PPPoE client, DNS (A/SRV record), STUN

### Media Processing

<b>Codecs</b>	G.711 (a/μ), G.729a, G.723.1, GSM, iLBC
<b>Fax over IP</b>	T.38, G.711 pass-through T.38 compliant Group 3 Fax Relay Maximum fax rate of 33,600 bps (pass-through)
<b>Voice-quality enhancement</b>	Echo cancellation (G.168-2004), Jitter buffer, Silence suppression (VAD, CNG), PLC
<b>Voice processing</b>	RTP proxy, Firewall traversal, NAT traversal
<b>Auth. &amp; Registration</b>	Up to 512 SIP trunks registration
<b>Others</b>	Number transformation, 500 routing rules, Digit map, RADIUS

### QoS

<b>QoS</b>	DiffServ, TOS, 802.1P/Q VLAN tagging
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### Signaling

<b>PSTN access</b>	E1 ISDN PRI (30 B+D): ETSI EDSS1 T1 ISDN PRI (23 B+D): ANSI NI-2 Switch type: 5ESS Series, DMS Series
<b>DTMF</b>	In-band audio, RFC2833, SIP-INFO

### Security

<b>Protocol</b>	HTTPS, SSH, TLS, SRTP
<b>User-defined ports</b>	SIP port, RTP port, HTTP/HTTPS port
<b>Encryption</b>	Encryption on SIP signaling or/and media streams. Importing and exporting encrypted configuration file and password/PIN
<b>Intrusion prevention</b>	Access whitelist, Blocking ping response, SIP-allowed IP addresses

### High Availability

<b>Redundancy</b>	Dual Ethernet ports, Dual AC/DC power supplies (optional)
<b>PSTN failover</b>	SIP registration failover from primary server to standby server

### Provisioning, Administration and Maintenance

<b>Device management</b>	New Rock EMS, TR-069 management (TR-069, TR-104 and TR-106)
<b>Remote access over TCP</b>	New Rock Cloud
<b>Auto provisioning</b>	Download configuration file via TFTP/FTP/HTTP/HTTPS, Obtaining ACS address via DHCP option 66 or redirection

<b>Log management</b>	8-level logs, Syslog
<b>Data capture</b>	Port capture, Packet capture
<b>Status and statistic</b>	Call status and history, Device status monitoring and ISDN status monitoring
<b>ISDN maintenance</b>	BERT, Near and loop back, ISDN-D & ISDN-B channel
<b>Upgrade</b>	Firmware upgrade via Web GUI or Auto provisioning
<b>Add-on Software</b>	
<b>Finder</b>	Obtains IP addresses of devices in a LAN environment