# SANG✳MA

# Sangoma Carrier SBC
## The Ideal SBC for Large Businesses

Sangoma's Sangoma Carrier SBC is designed for large enterprises, call centers, carriers and service providers that: want deliver scalable SIP trunking and PSTN services to clients, need to support SIP network peering arrangements, require comprehensive management and reporting functionality or integration with existing OSS and BSS environments. A complete solution, the Sangoma Carrier SBC is easy to deploy and manage and delivers carrier-class security and reliability.
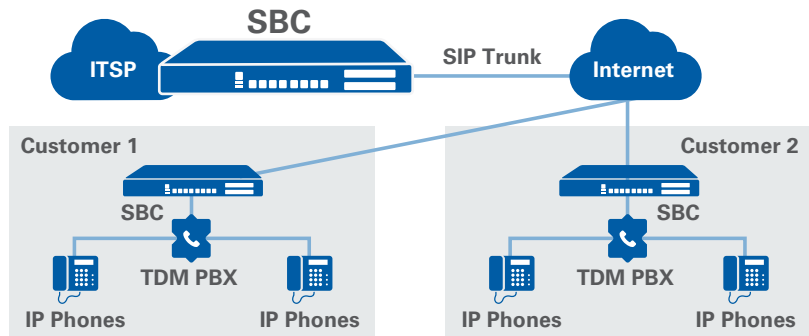
## High Availability
Ensure business continuity with our High availability (HA) feature, allowing mirroring of your main SBC with a standby SBC ready to automatically take over calls in case of failure. This feature is included free of charge!

## Protection from Enterprise Security Threats
- **Denial of Services** - Call / registration overload  |  Malformed messages (fuzzing)
- **Configuration Errors** - Mis-configured devices  |  Operator and application errors
- **Theft of Service / Fraud** - Unauthorized users  |  Unauthorized media types
- **BYOD** - Smartphones running unauthorized apps  |  Viruses and malware attacking your VoIP network

## Use Cases
- **Service Provider Applications** -
  - -- SIP trunking
  - -- Remote worker
  - -- Hosted PBX

**SBC**

ITSP — SIP Trunk — Internet

Customer 1 | SBC | TDM PBX | IP Phones | IP Phones

Customer 2 | SBC | TDM PBX | IP Phones | IP Phones

✓ **Supports 250 - 4,000 Simultaneous Calls**

✓ **Field Upgradeable Session Expansion**

✓ **Browser-based GUI for Easy Configuration**

✓ **Cost-effective Session-based Licensing**

✓ **Session-based Licensing – No Hidden Fees**

✓ **PSTN Equivalency for SIP Trunking Deployments**

✓ **RAID-1 Solid State Drives**

✓ **Hardware-based Transcoding & Media Handling**

✓ **Optional Annual Support & Software Maintenance Plans**

# Technical Specifications

## Capacities
- Max. 4,000 calls / sessions
- Full transcoding capability
- Full security (SRTP / TLS) capability
- Unlimited SIP trunks

## Media Capabilities
- Voice, Video, FAX, IM and Presence support
- Full RTP transcoding (G.711, G.722, G.729, G.726, G.723.1, iLBC, AMR, G.722.1)
  *Only with hardware transcoding option*
- T.38 Fax Relay *Only with hardware transcoding option*

## Networking
- 6x 10/100/1000 BaseT Ethernet ports
- IPV4, IPV6
- VLAN support
- 1x console port
- 1x VGA port

## Licensing
- Only max. number of calls are licensed
- Field upgradeable in 250/500/1000/2000 call increments

## Security
- DDoS / DoS attack protection
- Call security with TLS / SRTP
- Media security with SRTP
- IPSec encryption
- IP firewall with port forwarding
- Two-stage authentication

## High Availability / Redundancy
- 1:1 active / standby two-box redundancy for business continuity

## Call Control
- Advanced XML routing engine
- Least cost routing
- Rate limiting: Call and registration
- Endpoint authentication
- Media bandwidth policy
- Intelligent media anchoring / release

## VoIP
- SIP 2.0 compliant
- SIP trunking and remote working
- SIP intrusion prevention
- SIP registration scan attack detection
- SIP request rate limiting
- SIP registration pass-thru
- SIP header normalization
- SIP malformed packet protection
- Advanced NAT traversal capabilities
- Topology hiding
- ENUM routing

## Session and Monitoring
- Multiple session routing options
- RTCP statistics reports
- QoS (ToS or DSCP)
- RADIUS CDR and authentication
- QoS monitoring and reporting

## Debugging
- Dedicated Browser interface for capturing full RTP media and signaling information
- Onboard browser-based PCAP tracing, signaling and media – wireshark compatible
- Large onboard storage capacity for long term tracing

## Management
- Easy to use web interface
- HTTP XML-based CDR
- Real-time monitoring and debugging
- TR-069 for remote provisioning
- REST based interface to remotely configure SBCs

## Telephony Interface
- Up to 4 E1/T1s (with A101DE/A102DE/A104DE card)
- Echo cancellation up to 128ms tail
- Primary rate ISDN, configurable NT/TE
- T1: Q.931, NI2, 4ESS, 5ESS, DMS-100
- E1: Q.931, ETSI

## Hardware Specifications
- Power: Dual internal 100~240V power supply
- Dimensions: 430mm (W) x 520mm (D) x 44.5mm (H)
- Weight: 6.35kgs (14lbs)
- 19 inch rackmount brackets included