

The logo for SIP:WISE, featuring the word "SIP" in white, a colon with a green dot, and "WISE" in white. The background is a black and white image of Earth from space, with several white orbital lines and stars.

SIP:WISE

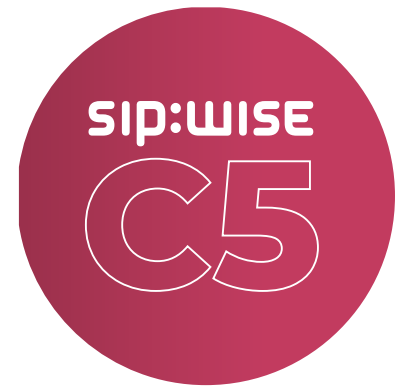
FACT SHEET

SIP:WISE
C5

C5
for Voice over IP
Services

C5 SOFTSWITCH

for Voice over IP Services



Product Positioning

Sipwise C5 is a turnkey Class 5 switch, targeting global markets, from small to large size deployments. The solution is fully compliant to fixed, converged and wireless service providers, supporting a variety of access technologies such as cable, xDSL, fiber or Wifi/WiMAX.

C5 PRODUCT OVERVIEW



Architecture

The open architecture allows the swift integration of Voice/ Video Telephony services and emerging technologies like Unified Communication Services (UCS) into existing environments. The available Application Programming Interfaces (APIs) allow the integration of innovative push-services and find-me/follow-me solutions.



Platform Design

The design of the system is focused on easy manageability while still offering cutting edge next generation communication features. The Sipwise C5 platform is designed to provide an all-in-one system for a fast and cost-effective deployment of various IP Telephony and Rich Communication Services (RCS). All components of the C5 are compliant with a large number of SIP RFC standards.

C5

C5 PRODUCT OVERVIEW



Deployment

The C5 is a feature-rich Next Generation Network (NGN) platform, which can be deployed in either active-standby or active-active mode. It delivers a comprehensive suite of voice and multimedia services to address residential and business markets and is provided either on commodity hardware or implemented as a software-only solution.



High Availability

Sipwise C5 is a carrier-grade system, providing call continuation and Call Detail Record (CDR) consistency in the event of node failure. Synchronization of the nodes happens via a dedicated network link.

C5

C5 MODULES



Out of the box, the class 5 delivers a comprehensive feature set for call routing and traffic management. The platform integrates call routing services, Back-to-Back User Agent functionality, monitoring and reporting systems. Further enhancements can be done by the activation of dedicated software modules. The following modules are available as part of the NGCP software bundle and can be activated based on request.



Cloud PBX

The Sipwise C5 comes with a commercial Cloud PBX module in order to provide B2B features for small and medium sized enterprises. A dedicated datasheet is available which describes the Cloud PBX in more detail.



Lawful Interception

The Sipwise C5, as a communications platform, has to provide an interface to the Law Enforcement Agencies (LEAs) in order to intercept specific customer traffic based on legal requirements. This LI interface is based on ETSI, 3GPP standards and ensures the required data exchange between the C5 and a respective 3rd party LI mediation system.



CSTA/3PCC

The Sipwise specific implementation of CSTA (Computer Supported Telecommunications Applications) with the respective Third-Party Call Control (3PCC) models based on ECMA-269 and ECMA TR/82 standards provides you with a set of APIs via which you can control and monitor calls and devices in your voice network via your application. A few examples for the usage of CSTA are:

- User/agent statistics/reporting
- Call logging, accounting, billing
- CTI
- Apps as UI for phones (press button, displays, etc)
- And many more...



Sipwise sip:phone App

With the sip:phone App, Sipwise provides a commercial Unified Communication Client for full end-to-end integration of voice, video, and presence features. The App is available for iOS and Android devices and can be fully integrated with the Sipwise C5. The App is fully brandable to the customer's corporate identity.



Security

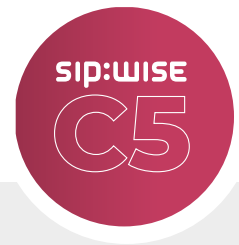
In recent days the security is a key factor of a voice and network element, this why the Sipwise C5 provides by default many important security systems. Just to name some of them: DoS and DDoS mitigation, SIP loop detection, full support to TLS and SRTP protocols, topology hiding, bruteforcing SIP credentials protection, access control for SIP calls, support for STIR/ SHAKEN verification, and many more...



Transcoding/Transrating

- Especially in the B2B, wholesale and interconnect business, transcoding capabilities are essential in order to maintain and deliver cutting edge speech quality to the customers.
- In order to cope with that requirement, Sipwise is providing a powerful transcoding engine, which provides either software (CPU) or hardware (GPU) based transcoding depending on the needs and used codec.
- The most commonly used narrow and wideband codecs like G.711 (a-Law and μ -Law), G.722, G.729, G.723.1, Opus, AMR narrow/wideband, GSM, Speex, DTMF event messages, DTMF INFO messages, comfort noise as well as fax transcoding of T.38/T.30 (G.711) are supported. Further to that, the enforcement of specific codecs, based on the selective codec filtering method, is possible.

C5 FEATURES



● Call features

- Voice and Video Telephony
- Fax t.38 and g711 support
- Instant Messaging (IM)
- Voice/IM conferencing
- Presence and Location Based Service
- Call forking
- Inbound and Outbound UPN configurations
- Multiple Subscriber Number (MSN)
- Vertical Service Code (VSC) Interface
- Selective Incoming and Outgoing Call Blocking
- Call Forwarding
- CLIP/CLIR/COLP
- Pre-call announcements
- Call Recording
- Malicious Call Identification (MCID)
- Voicemail with E-Mail notification and MWI support
- Emergency Number Routing
- Billing and rating engine
- Number of call limitation per subscriber/customer/reseller
- Heather Manipulation
- and many more...

● Interfaces and Provisioning

The C5 exposes various Web Interfaces which can be used by the administrative units of an organization to manage the system and customer base. To ensure a minimum time to market, standardized interfaces based on HTTPS and JSON-HAL allow for customization and easy integration into existing IT infrastructures and third-party applications. All requests to the provisioning system are encrypted and authenticated, to be compliant with the latest security standards.

Furthermore it is possible to encrypt sensitive password data like sip password, web password and voicebox pin via RSA over the REST API.

A large, stylized outline of the letters "C5" in a dark red color, positioned over a background image of a person's hands shaking.



C5 FEATURES



● CDR, Billing and Rating

The NGCP offers a flexible way to define the structure and export destination for CDRs.

Further it is also possible to stream CDRs in almost real time to an external, customer managed DB. With that, CDRs for various purposes like billing, quality management, etc can be defined and generated. By utilizing the real-time rating engine, the subscriber can be provided with a current balance for prepaid and postpaid billing models.

● Monitoring and Maintenance

Efficient system monitoring and alerting is critical when providing highly available performances to customers. The Sipwise C5 Platform exposes a SNMP interface via which all the relevant services and system parameters can be polled, resp. in case of failure an external NMS can be notified via SNMP traps of a dedicated Alarm_MIB.

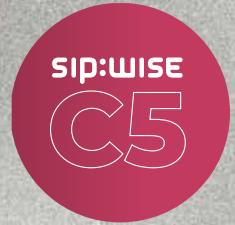
With the introduction of a second partition for system upgrades, a significant reduction of the upgrade duration can be achieved. This also results in less preparation efforts for the upgrade.

Additionally with the help of a debug proxy single customer or peering traffic can be isolated and thus troubleshooting can be done without impacting the stability of the system.



C5

PERFORMANCE AND SCALING



Hardware Platforms:

The C5, C4 and cPBX solutions are certified by Sipwise for the Lenovo and DELL servers, contact our Sales to have more information about it.

Performance limits are pretty much defined by the traffic-mix and feature usage of the customer, thus it is recommended to determine hardware type and scaling figures based on the real customer demand.

Software Only (Virtualized) deployments:

The C5, C4 and cPBX solutions can also be deployed as software only (Virtualized) Sipwise is recommending using VMs from VMware or Proxmox.

The scaling and performance implications of the virtual environments have to be discussed and confirmed on a per case basis as this depends on the traffic-mix and feature usage of the customer.

SIPWISE COMPANY

SPEAK WITH THE FUTURE, TODAY.

Empowering Telecom Operator and ISP
businesses with advanced communications
products.



EFFICIENT



SIMPLE



INNOVATIVE



PROFITABLE

SIP:WISE

**Need help?
Contact us now:**

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