



OpenScape 4000 is a converged IP communication platform, ideal for medium and large converged (IP and TDM) enterprises, scaling from 300 to 12,000 users on a system.

4000 V7 provides cost-effective choices to optimise and secure enterprise communications and increase workplace productivity and effectiveness.

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OpenScape 4000 is the No. 1 converged voice solution in Europe and India, and is highly-placed in Gartner's 2013 Unified Communications Leaders 'magic quadrant'.

It supports the full range of OpenScape UC applications, so you can look forward with confidence to increased workforce productivity.

OpenScape 4000 enables you to offer the best of both worlds – VoIP and UC – to drive productivity, and protect your investments by integrating into existing network wiring, devices, features, and software.

And you can trust it: OpenScape 4000 is deployed in more than 25,000 customer installations across 80 countries with more than 25 million licenses in service.

OpenScape 4000 runs on standard server hardware, allowing for data center deployment, or as a traditional PBX chassis.

The future-proof architecture supports IP-distributed branch concepts and complex corporate networks as well as stand-alone systems.

FlexLicensing means your user licenses can move to a SIP-based OpenScape Voice solution. And you can take advantage of the security provided by OpenScape Session Border Controller, along with the savings of SIP trunking.

As a powerful and highly available communications solution, it offers a rich set of endpoints, mobility choices, edge solutions, unified communications and standards-based integration and interoperability with business-critical applications and systems.

It supports this capability with a built-in assistant and powerful, easy-to-use set of system management apps.

#### **DOWNLOAD OPENSCAPE 4000 DATASHEET**

#### **IT architecture**

Modular, stackable, reliable and seamlessly expandable, OpenScape 4000 V7 offers an ideal solution for an enterprise communications infrastructure – regardless of size and location requirements.

With its modularity, the availability of scalable access points, software-based branches, plus powerful networking support – analog, TDM, or IP – it provides a perfect solution for seamless expansion and can be integrated with any IP infrastructure.

The OpenScape 4000 communication server is the highly available central control unit with redundant power supplies and redundant LAN interfaces. The OpenScape 4000 V7 duplex architecture enables complete redundancy for call control, CSTA application connectivity and administration, even in geo-separated locations.

The AP 3700 access points and the new HiPath Access modules fit in a standard 19-inch shelf and are integrated directly in the IT infrastructure.

The OpenScape 4000 SoftGate application offers software-based and cost-effective OpenScape 4000 VoIP functionalities running on standard x86 server platforms.

The OpenScape 4000 communication server can be flexibly implemented in configurations to support smallest to the largest enterprise. It supports up to 15 directly-connected access points, plus 83 IP-distributed access points, HiPath Access or SoftGate branches.

A maximum of 12,000 subscribers can be supported in these configurations per OpenScape 4000 communication server.

Configurations with up to 100,000 users can be implemented without difficulty in networked systems.

The modular structure of OpenScape 4000 also enables cost-effective resilience solutions to be realized in small and mid-sized configurations.

#### **OpenScape 4000 Server Deployments**

The new architecture of the converged IP system OpenScape 4000 allows a pure software installation at a standard server that is

equipped with a Linux operating system.

With this software version, existing customer solutions can be migrated to a data center and IT-based solution in which traditional TDM and analog devices as well as CO trunks are still supported.

OpenScape 4000 V7 now offers two different deployment options:

1. Compact PCI (cPCI) OpenScape 4000 communication server
2. Industry standard servers with Linux

Both deployment options support up to 12,000 users per Linux server or duplex cPCI deployment. Up to 100,000 users can be managed by the OpenScape 4000 Manager system administration software.

#### Compact PCI Server

The compact PCI server option (cPCI) supports converged IP requirements involving applications with a big number of analog and TDM devices, DECT applications, or specialised industry-sector applications.

The new cPCI hardware offers new redundancy opportunities and can be deployed in a highly scalable and secure way in data centers.

#### Linux Servers

Deploying the OpenScape 4000 on industry-standard Linux servers is suited for converged-IP telephony requirements and is well suited for highly-distributed deployments.

It provides a low total cost of ownership for both hardware and maintenance and, like the cPCI option, is scalable and secure.

#### OpenScape 4000 SoftGate application

The OpenScape 4000 SoftGate application provides cost-effective VoIP functionalities with reliable branch survivability options and an easy IT integration in the OpenScape 4000 solution and management suite.

This new software application offers full HiPath feature access for IP endpoints and SIP connectivity for trunking and subscriber, based upon a standard server with Linux SLES 11 SP1.

Any OpenScape 4000 SoftGate site integrates seamlessly in the communication system and network like any IPDA access point (AP 3700 IP with HG 3500) – in terms of features and administration.

The open architecture of the OpenScape 4000 SoftGate application enables integration in a VMware virtualisation environment. In addition, the OpenScape 4000 SoftGate application supports IPV7 SIP trunking and enables Peer-to-Peer video integrations with HD video systems or softclients. Using SoftGate media server capabilities, it can also be used for software-based music-on-hold and announcements deployments.

With this application, customers can reduce capital cost (CAPEX) plus operational cost (OPEX) and deploy centralised applications with uniform user experience.

#### HiPath Access

HiPath Access is a cost effective and 19-inch modular solution that can be deployed in survivable branch solutions and into your IT infrastructure.

It consists of flexible, stackable and highly-scalable 1U modules which provide all required analog, digital and DECT interfaces of a branch solution with HiPath Access 500 and OpenScape 4000 SoftGate.

#### Access Point Emergency concept for branches

OpenScape 4000 AP-Emergency completes the survivability functionality for access points (AP), HiPath Access 500, and OpenScape 4000 SoftGate branches.

With APE, a continued operation is also possible in the event of a failure of the central call control or WAN Link failure to central call control. In cases of host system failure, the survivability function can assume control of one or several different access points (AP 3700, HiPath Access 500, and/or OpenScape 4000 SoftGate); thus ensures sustained communication capabilities within the enterprise. A prerequisite is that the APs controlled by a survivability unit still have a functional IP infrastructure.

This gives you optimal security for all access points and IP branches connected to the OpenScape 4000 communication server.

#### Signaling and Payload Survivability for IP branches

This function performs that voice is routed via PSTN and signaling is routed via IP or PSTN survivability connections for IP branches.

This expanded survivability functionality can be used as an alternative dynamic path if the IP network fails, all available VoIP

resources are occupied, or IP quality is found to be poor. Also, static configuration of payload routing over PSTN can be used for smooth transformations of existing branch offices from PSTN to IP networking.

This flexible mix between IP and TDM networking for payload and best possible signaling capabilities allows the migration to homogeneous branch networks and the implementation of centralised applications as required. Signaling and Payload survivability allows highest flexibility in optimisation operational expenses (OPEX) – in any market or communication environment.

### Software and features

The OpenScape 4000 software installed on the Linux SLES 11 SP1 operating system offers a full set of converged enterprise-class communication features.

### Easy and flexible licensing

OpenScape 4000 V7 Flex License is the new brand name for the flexible licensing concept that is used for the enterprise-class functionalities that are supported for the different subscriber and trunking interfaces.

Every analog, TDM, IP, cordless (DECT), and WLAN subscriber interface is part of the Flex License. The same is valid for every analog, TDM, and IP trunking interface.

In addition to the already known OpenScape 4000 functionalities, voicemail and basic CTI functionality are part of OpenScape 4000 V7 Flex License.

Flex License offers the highest possible flexibility for license investments.

### System features:

- Integrated connectivity for analog, TDM, and VoIP subscribers
- Cost-saving Least Cost Routing for analog, TDM, and IP trunks
- Integrated attendant functions
- Different time zones
- Multilingual user interfaces
- Virtual numbering plan
- Multitenant functionality
- Integrated FlexRouting for Contact Center
- Flexible configuration of local tones and announcements per branch office
- Branch survivability
- Gatekeeper redundancy for HFA subscribers
- Bandwidth resource manager for IP endpoints and branches
- Signaling (TLS) and Payload (SRTP) encryption for VoIP (Voice over IP) connections
- PKI integration for Signaling and Payload encryption
- CTI integration of business applications via CSTA III ASN1, CSTA XML
- XML Phones Services interface for easy and cost-effective workflow integration
- Call detail recording
- Integration of SIP-based video endpoints
- Emergency dialing
- Multi-Level Precedence and Preemption (MLPP)

### User features

- Redial
- Speed dialing system/individual
- Name key

- Call journal
- Toggling
- Call transfer
- Call deflection
- Callback
- Message waiting indication
- Call waiting
- Call park
- Directed call park
- Do-Not-Disturb
- Flexible and enhanced call forwarding
- Eight-party conference
- Direct station selection key function
- Override and prevention of override
- Hotline
- Mobile HFA (network-wide user mobility)
- Personal ID number (PIN)
- Executive/secretary functions
- Intercom features
- Integrated multiline key functionality
- Network-wide hunt groups
- Network-wide pickup groups
- One-Number service – parallel ringing
- Charge display
- Acoustic and visual status for Signaling and Payload encryption.

Whether you provide staff with digital system phones or IP phones of the OpenStage family, the user interface to activate the features is identical on all phones.

### Networking features

OpenScape 4000 can be connected to public and private networks via different interfaces such as analog, TDM, and IP trunks, and standard protocols such as ISDN, QSIG, and native SIP.

OpenScape 4000 also enables the creation and operation of efficient, homogeneous and economical global communication networks. HiPath Networking can be performed via ISDN or IP – always with the full CorNet-NQ feature offering.

CorNet-NQ is a signaling protocol for private network solutions based on Unify – formerly Siemens Enterprise Communications – standards. It is aligned with the international QSIG private network protocol for private networks.

SIP-Q based networking provides full feature offering in any networking scenario between OpenScape 4000 and in combination with OpenScape Voice.

With OpenScape 4000 V7, the SIP-based IP networking is the preferred, secure, and future-oriented standard to connect OpenScape 4000 systems.

Advantages of these homogeneous networks include the following:

- Central administration with OpenScape 4000 Manager
- Deployment of central applications like OpenScape Xpressions and OpenScape UC
- Enhanced voice features such as call pick-up group, call park, directed call pick-up, call forwarding, callback on busy and callback no answer
- SIP trunking networkings via IPv4 and IPV7 networks
- Optimised use of the corporate network through cost-optimised routing (Least Cost Routing, LCR) – LCR ensures that the most economical route is selected. Time-based to different carriers – Central administration of all LCR data with OpenScape 4000 Manager, local and network-wide administration of all outgoing, incoming, and internal calls.

### IP gateway HG 3500

IP Gateway functionalities for seamless migration to VoIP infrastructure are available with HG 3500 peripheral cards in the OpenScape 4000 access points, or with virtual software-based HG 3500 in the OpenScape 4000 SoftGate application and HiPath Access 500.

HG 3500 offers:

- HiPath Feature Access (HFA) for IP Endpoints, such as OpenStage HFA or AC-WIN IP
- SIP-Q trunking for connections to OpenScape 4000 , OpenScape Voice and other HiPath platforms
- Native SIP subscriber interface for SIP applications, such as OpenScape Xpert
- Native SIP trunking which is the communication protocol to connect to SIP service providers or 3rd-party applications
- Flexible and economical SIP connectivity with service providers
- Signaling and Payload encryption based on TLS and SRTP
- Up to 120 simultaneous connections
- Simultaneous use of several functions e.g. subscribers and trunking
- A-law/ $\mu$ -law conversion capabilities
- Resilience for HG 3500 functions with HG 3500 standby board
- IP connectivity resilience with redundant LAN interfaces
- High voice quality via embedded G.168-compliant echo cancellation and end-to-end payload connections
- T.38 Fax transmissions for SIP subscribers, SIP trunking, and IP connectivity between IP branches (AP 3700 IP, SoftGate, or HiPath Access 500)
- G.729 voice compression
- Adaptive jitter buffer
- Voice activity detection
- Self-maintenance
- Comfort noise generation
- Packet loss concealment
- SNMP Network management support
- QoS in accordance with IEEE 802.1p/q (VLAN tagging) and DiffServ (IETF RFC 2474)
- Support of QoS Data Collection (QDC) for VoIP quality monitoring

In addition, virtual HG 3500 for OpenScape 4000 SoftGate and HiPath Access 500 offers:

- IPV7 networking links to OpenScape 4000 communication server
- IPV7 support for SIP-Q trunking and native SIP trunking
- TLS and SRTP encryption for native SIP trunking
- OpenScape 4000 SoftGate Loadbalancer for native SIP trunking large deployments (more than 120 channels) with OpenScape UC conferencing server and SIP service provider.

## Management

### OpenScape 4000 Assistant

OpenScape 4000 Assistant is an integrated management applications with web-based administration interface for local configuration, necessary service tools, and an integrated SNMP Proxy agent (for sending OpenScape 4000 error messages and alarms as SNMP trap).

Existing OpenScape 4000 Assistant functionalities:

- Common platform for service and administration with single sign-on, and inherent part of each OpenScape 4000 system
- Automated synchronisation with system database
- Configuration management
- OpenScape 4000 CSTA configuration
- Inventory management
- Backup & Restore
- Switch diagnosis support
- Realtime Diagnosis System
- Error message interpreter
- Integrated fault management
- Integrated performance management
- Web client
- Integrated configurator for linear extensions

### OpenScape 4000 Manager

The OpenScape 4000 Manager is the central management platform for OpenScape 4000 networks. As Element Manager, it is an integral component of the HiPath Meta-Management architecture.

OpenScape 4000 Manager offers:

- Configuration Management (CM)
- Performance Management (PM)
- Collecting Agent (COL)
- Application Programming Interface (API)
- SNMP Proxy Agent

Additional HiPath MetaManagement applications:

- HiPath Fault Management (HiPath FM)
- HiPath Accounting Management
- (HiPath AM)

- HiPath User Management (HiPath UM)
- HiPath QoS Management
- The HiPath MetaManagement architecture enables the efficient and cost-effective management of the HiPath communication network within managed service solutions:
- Open and flexible for adaption to any operator model
- From self-maintenance to complete outsourcing models

### OpenScape Deployment Service

The Deployment Service (DLS) provides a solution for customers and service personnel to administer IP devices (IP phones and clients) in HiPath and OpenScape networks.

This includes HFA/H.323 and SIP-based networks also including OpenScape Voice.

DLS is the central system where device and QoS related parameters of HiPath IP devices are administered for the customer's entire network. Additionally, DLS takes over the distribution of certificates for deploying TLS (Transport Layer Security) and is also able to create certificates where there is no existing customer PKI (Public Key Infrastructure) framework.

### Desktop productivity

#### OpenStage and OpenScape Deskphones

The OpenStage product family enables innovative user solutions with its intuitively designed functionality and operability. The devices are open for access to different services and applications through interoperability with other devices.

OpenScape 4000 supports the various OpenStage families: OpenStage T (TDM) and OpenStage HFA (HiPath Feature Access) and the new OpenScape Deskphones.

OpenStage Key Modules and OpenStage Busy Lamp Field Module with 90 programmable keys are also supported.

The OpenStage family is designed to be extremely user friendly and simplifies feature implementation. Innovative operating elements based on advanced technologies were used in designing the user interface.

Touch/sensor buttons with integrated color LEDs, TouchSliders for volume control, TouchGuide navigation and large, swiveling graphic color TFT displays with backlighting go far to simplify user interaction.

Customised telephony functions, speed dial (by name) or line buttons are easy to operate using freely programmable touch/sensor buttons with the function appearing on the display.

Access to the most frequently used telephony functions such as separation, call forwarding, loudspeakers and to dedicated applications such as the phone book, caller list, and answering machine is simplified via fixed function buttons.

OpenStage works with the latest developments in the field of acoustics and therefore offers superb voice quality in the handheld unit and hands-free mode (through handset design, loudspeakers, housing volume, and wide-band codecs G.722).

#### OpenScape Personal Edition

OpenScape Personal Edition is the latest IPbased softphone software that can be used with OpenScape 4000 .

The Personal Edition is ideal for all mobile and stationary applications. It offers the option of integrating corporate directories and personal call lists via LDAP.

Powered by a highly sophisticated and intuitive user interface, OpenScape Personal Edition is a constant companion for customers who also need to receive and make calls outside their office environment.

#### HiPath Trading/OpenScape Xpert

For trading and financial markets, it is of vital importance that decisions can be made quickly. Efficient and reliable communication technology is crucial for success. HiPath Trading offers dealers and brokers a decisive competitive advantage with its innovative architecture, enhanced graphical user interface and its extensive feature set.

The OpenScape Xpert solution provides the known HiPath Trading functionalities as a SIP-based IP solution.

#### Attendant Console (AC-Win)

The attendant console AC-Win IP is a PC-based application for Microsoft Windows XP, Windows Vista, and Windows 7 that permits the convenient traffic management by live attendants, using a USB headset/handset.

AC-Win IP can be used with two (AC-Win 2Q IP) or twelve queues (AC-Win MQ). The PC-based attendant console is connected to the OpenScape 4000 via IP.

### Busy Lamp Field (BLF-Win)

The Busy Lamp Field BLF-Win is an application for the PC-based attendant console, AC-Win IP. The constant availability of information about the current status of the extensions enables more efficient and faster handling of incoming calls.

### Directory Service (DS-Win)

DS-Win increases the efficiency and the communication quality of the telephone switch by quickly forwarding incoming calls to the AC-Win attendant console or optiPoint/OpenStage phones. Through optional connection with the Outlook or Lotus Notes calendar, the operator can check whether the intended call recipient is currently present or absent. In combination with OpenScape 4000 Manager, DS-Win is integrated in the directory data as a single entry point concept.

### OpenScape 4000 Phone Services

In conjunction with a OpenScape 4000 system phone (e.g. OpenStage T) the integrated phone services provide new kinds of features to increase workplace productivity.

The functions can be set up on the end device to be called up either by separate keys or via a menu that is called up via a single application key. The connection between OpenScape 4000 and the corporate directory is generated by the OpenScape 4000 platform. Some uses include:

EasyLookup: Simple access to the corporate directory (LDAP) via search parameters, output of results on the display, and direct dialing of the displayed phone number

EasySee: Output of information from the corporate directory as PhoneCard on the PC

Easy UC: Setting OpenScape UC presence status and preferred device from your OpenStage HFA/TDM or cordless device.

### OpenScape Xpressions

The OpenScape 4000 V7 delivers cost-effective choices in unified messaging functionality.

It enables built-in voice messaging, unified messaging, voice conferencing, web conferencing, instant messaging, text messaging, presence, and fax. These unified communications options coupled with CTI services help embed powerful communications capability directly into business processes, creating an efficient and effective workplace.

### OpenScape Contact Center

OpenScape Contact Center solutions allow you to interact with customers at the highest level, improving satisfaction, increasing revenue and loyalty and enhancing productivity.

OpenScape Contact Center is a set of packaged software applications that improve the effectiveness and efficiency of a company's contact center operations through intelligent skills-based routing, universal queuing, routing and tracking across all your media channels, agent and management tools, and comprehensive reporting.

Integrated with your other customer relationship management systems, OpenScape Contact Center will deliver a world-class customer service experience. It is market-proven, fully scalable and can accommodate small 10-agent environments right up to very large multi-site enterprise installations.

### Alarming and Positioning

#### OpenScape Alarm Response Professional

OSCAR-Pro V3R2 is the successor of the well-known HiPath DAKS V3R1. It is a modular system that can operate with various applications and is scalable within a wide range. OSCAR-Pro offers the following applications on its server:

- Broadcast/alerting with serial interface
- Broadcast/alerting with ESPA-X interface
- Emergency and high-performance conferences
- Call profiles
- Info telephone
- Internet-Controlled Telephony Conference (ICTC).

#### OpenScape Alarm Response Economy

OSCAR-Eco is the ideal mini-server for alarms for low and customer needs, suitable for nursing homes, small branch offices and limited use in larger enterprises.

Initiators for alarms can include door contacts and sensors as well as external systems (e.g. nurse call systems in the hospital), phones, and single-button medallions.



OScAR-Eco raises alarms with information on the cause including positioning data, thus guaranteeing fastest mobilisation of support staff and service technicians.

- 4-channel connection to HiPath 3000, OpenScape 4000 , and OpenScape Voice via ISDN/TDM or via VoIP/LAN
- Variable activation of broadcasts by host systems (ESPA 4.4.4 or ESPA-X) via contact inputs, a console or phones, or by a GMD single-button emergency medallion
- Digital I/O and serial data interface
- Various LAN services
- Hassle-free administration via browser with leading-edge security concept
- Positioning of GMD Medallions in WiFi or DECT networks
- Flexible broadcast strategies with multitasking
- Detailed logging

### OpenScape 4000 Migrating and Upgrading/Conversion

All existing OpenScape 4000 cPCI systems can be migrated to OpenScape 4000 V7.

For investment protection, existing OpenScape 4000 licenses can be migrated with OpenScape Software Assurance or cost-effective upgrades to OpenScape 4000 V7 Flex Licenses.

### OpenScape Software Assurance

A customer who joins this OpenScape Software Assurance program benefits from all future software versions. These can be improved security features or innovative functionalities.

Continuous software upgrades guarantee long-term software stability, up-to-date security features, and improve the OpenScape Unified Communication interfaces towards other products and solutions.

OpenScape Software Assurance is based on a recurring payment scheme. All future investments for software releases are already integrated in this billing model.

Therefore the OpenScape Software Assurance program improves your budget planning reliability.

Compared to traditional version upgrades, customers can realize considerable cost savings with OpenScape Software Assurance.

**To arrange a demonstration of OpenScape 4000 , call Evotec on 1300 133 996.**

**Or for more information on all Unify products, click here:**