OPERA *240*

SME VoIP Switch

THE FLEXIBLE COMMUNICATIONS
SOLUTION FOR SMALL AND MEDIUM BUSINESS


mds
gateways

OPERA *240*

SME VoIP Switch

Operafone IP Professional

THE COMPLETE BUSINESS SOLUTION FOR INTERNET TELEPHONY

Opera 240 integrates all the voice communications needs of a small to medium business on a modular IP platform which can be configured for SIP trunks and ISDN lines, with integrated voicemail, automated attendant, FMC and CTI.

Operafone IP Executive with DSS Module

Operafone Soft for Windows PC
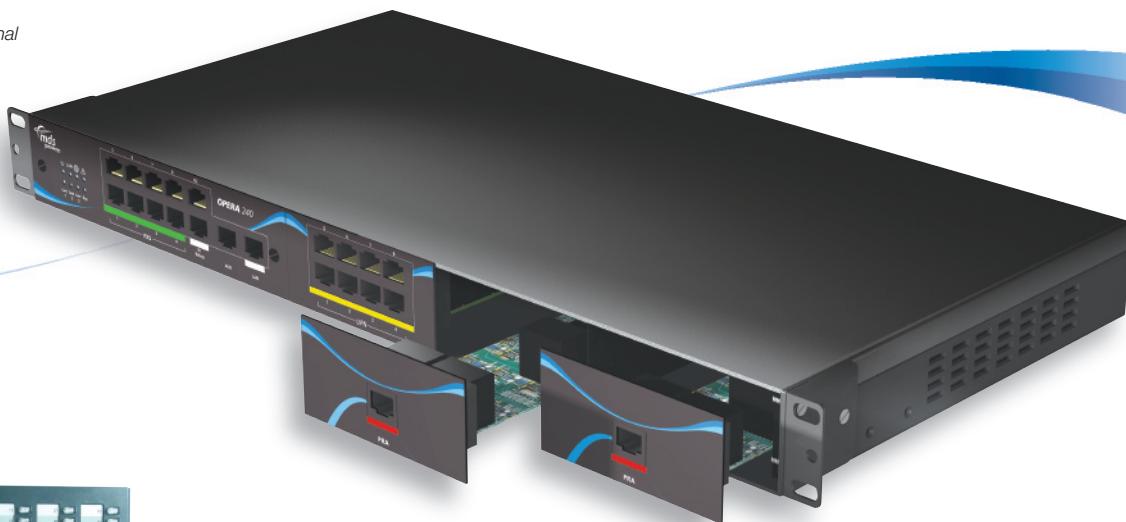
Configuration example showing an Opera 240 rack with plug-in cards. The rack has 8 FXS analogue POTs as standard. This rack has a plug-in card for 8 Upn digital system phones and two PRI cards.

Modular system

The basic 19" rack accommodates up to 240 IP users. 8 FXS analogue a/b interfaces are standard. Up to 60 SIP trunks may be provisioned.

Plug-in cards

The basic unit has three universal plug-in slots into which any three of the following cards may be inserted.
  ISDN PRI card (max 2 cards), each with 1 PRI
  ISDN BRA card, with 4 x T0 basic accesses.
  FXS Analogue POTs extensions' card, with 8 a/b.
  Upn Digital extension card, with 8 system phone interfaces.

Expansion racks

Additional expansion racks, each with three slots for plug-in cards, may be connected to the LAN, to increase the hardware capacity, as per following examples, per expansion rack added.
  32 FXS analogue a/b POTs users
  24 Upn digital system phones and 8 FXS
Up to 240 TDM extensions, between FXS and digital, can be connected using expansion racks as Slaves off the Master rack.
The Slaves are tightly coupled with the Master, giving presence information across all registered users. Access to outside lines, either ISDN or SIP trunks, is exclusively via the Master.

IP System phones

IP keysets may be connected locally on the LAN or remotely over Internet. Remote IP extensions have full keyset functionality. A PC may be plugged into an Ethernet mini-hub on the back of the IP system phone, allowing a single cable to the desk.

There are two desktop IP system phones to choose from, Executive and Professional, each with a 4 line backlit display, with context sensitive navigation keys. A 48 key Direct Station Select (DSS) module may be used in conjunction with the Executive key set.

The Executive set is also available as a PC softphone application, offering keyset functionality on any PC running Microsoft Windows. It's also available as an iPhone app. An Android app is in development.

Digital System phones

2-wire digital Executive keysets may be connected at the Upn digital plug-in card

Email forwarding of voice mails and recorded calls

Individual and group voice mails or recorded calls may be forwarded automatically to your email address as a WAV attachment. You can alter your voicemail greeting remotely and change your call forward destination from your mobile phone.

Operafone Soft for iPhone

Automated Attendant

One hundred separate interactive messages and menus can be played to callers depending on the number they dialed, the time of day, the language preference and the other options selected by the caller.

VoIP Networking of multiple systems

Up to one hundred Opera systems can be networked over Internet using two or more IP channels per system. A single numbering plan covers all of the networked systems. A common operator may be programmed to ring for incoming calls, across any systems.

Browser-based user portal

Download your system phone book from Gmail or Outlook. Set Call Forward and manage voice mails and general user parameters.
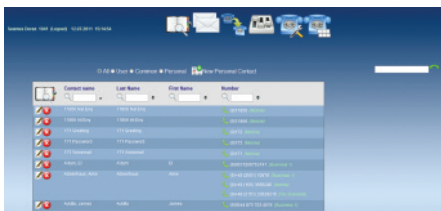
Dial from your PC using CTI

The desktop PC can dial calls from Outlook. Incoming calls can pop a screen on the PC, providing access to the relevant customer database information.

Fixed Mobile Convergence (FMC)

A user may have single number reachability and a single, centralised mailbox for the desk phone, home system phone, mobile and soft phone.

Any WiFi/3G and SIP compatible mobile may be registered to a user as an extension device on the wireless LAN or roaming on the 3G public network. The incoming caller ID of the originating caller is presented to such handsets.

The user presents one CLI, irrespective of the device used to make the call.

For a user with several registered devices (home, office, mobile, soft), the last device used is the active device, to which all incoming calls are directed. The user can change active devices by either going off line, for example in the case of a soft phone, or by pressing a key to push activity to another device or by pulling activity to another device by using it to make a call.

Feature/expansion cards & licences

SIP or ISDN trunks (to max 60 trunks in total)
IP system phone users on the LAN (max 240).
Digital or analogue a/b extensions (to max 240 users in total)
Multi-layer Automated Attendant
Voicemail boxes (users/groups: max 300 boxes)
Call Recording
Email forwarding of voice mails and recorded calls
Secure (AES) remote IP extensions over Internet
Music-on-Hold, downloadable 3 min wav/MP3
CTI
PC Soft phone
iPhone system phone app
Networking of multiple Opera systems
Meet-me conference rooms
SIP extensions on the LAN
3G SIP mobile handset extensions

Automated Management Server

Zero Touch provisioning and configuration management.
Order entry.
Remote download of feature licences.
SIP trunk provisioning.
Firmware upgrades.
Reboot.
Backup/restore full system configuration.
View system status, connected etc.
Automated remote diagnostics.
Service delivery without site visits.

Auto discovery by IP system phones

Set-up programming is not required for IP system phones. Just plug into the LAN, which has a DHCP server, and the phones auto discover the system and are automatically assigned extension numbers.
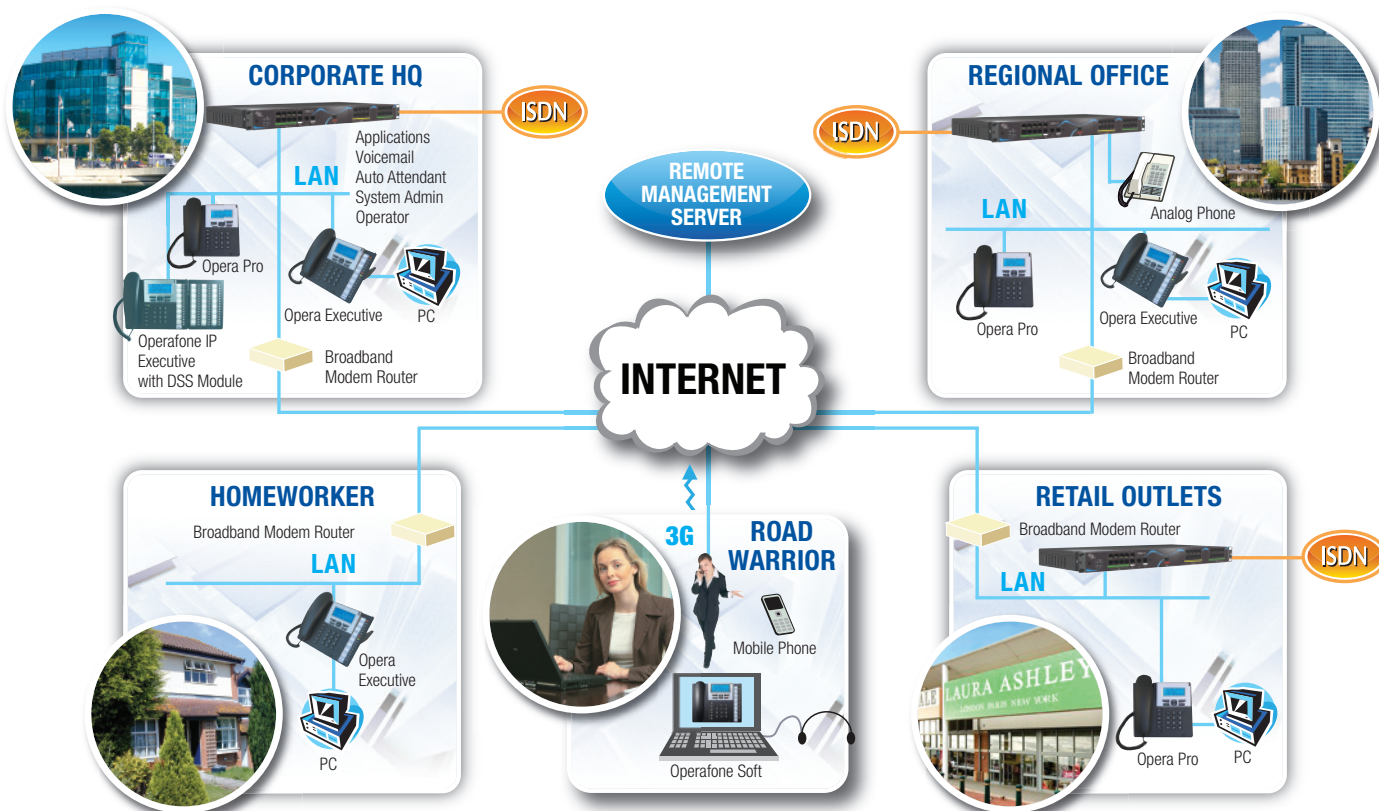
For home workers, a system phone that has auto discovered on a company LAN where the broadband modem/router supports Universal Plug n Play, can be plugged into any LAN with Internet access and it will automatically go on line and connect to its system as a remote extension.

Call Recording

Calls can be recorded and forwarded by email, as wav attachments.

Meet Me Conference Rooms

Two seven-party dial-in audio conferences may be held at the same time and can be recorded and emailed to participants.

CORPORATE HQ
ISDN
Applications
Voicemail
Auto Attendant
System Admin
Operator
LAN
Opera Pro
Opera Executive
PC
Operafone IP Executive with DSS Module
Broadband Modem Router

REGIONAL OFFICE
ISDN
LAN
Analog Phone
Opera Pro
Opera Executive
PC
Broadband Modem Router

REMOTE MANAGEMENT SERVER

INTERNET

HOMEWORKER
Broadband Modem Router
LAN
Opera Executive
PC

3G ROAD WARRIOR
Mobile Phone
Operafone Soft

RETAIL OUTLETS
Broadband Modem Router
ISDN
LAN
Opera Pro
PC

OPERA 240
SME VoIP Switch

TECHNICAL OVERVIEW

Switch capacity

Up to 60 SIP trunks, RFC3261
1/2 PRI, 4/8/12 BRA trunks
Up to 240 IP users
8 analogue a/b extensions (FXS),
expandable to 240
Up to 240 digital system phones
Ethernet port
External relays x 2

IP system phones

Four-line backlit display
Two Ethernet ports (mini-hub)
DC jack for 12 Volt plug-top adaptor or PoE
Headset socket (Executive version only)
DSS module (Executive version only)

Digital system phones

2 - wire Executive keyset
Four-line backlit display
Headset socket
DSS module

Voice over IP

Voice compression codecs: G.711, G.729
Quality of Service (QoS): 802.1p/q
Echo and silence suppression
Echo cancellation G.165/G.168

Security

Remote IP keysets: AES encryption

System management

Browser based local or remote programming
LEDs for power and status
Local or remote configuration backup
Local or remote software upgrade
Remote diagnostics

Automatic configuration server

Automated Zero Touch provisioning with:
   Installation of optional licences
   Firmware upgrades
   Reboot
   Backup/restore of full system configuration
   View system status, firmware revision,
   Reset to factory default
   Automated remote diagnostics

Physical interfaces

Trunks: ISDN PRI, T0 RJ45
Ethernet RJ45
a/b extensions (FXS) RJ45
Digital keysets RJ45
External relays (x 2) RJ45
Optional audio adaptor for public address, at an
FXS port, RJ45

Power

110V / 220V / 240V ac (market dependent)
Switch consumption: typical 24VA
Plug-top adaptors for IP keysets
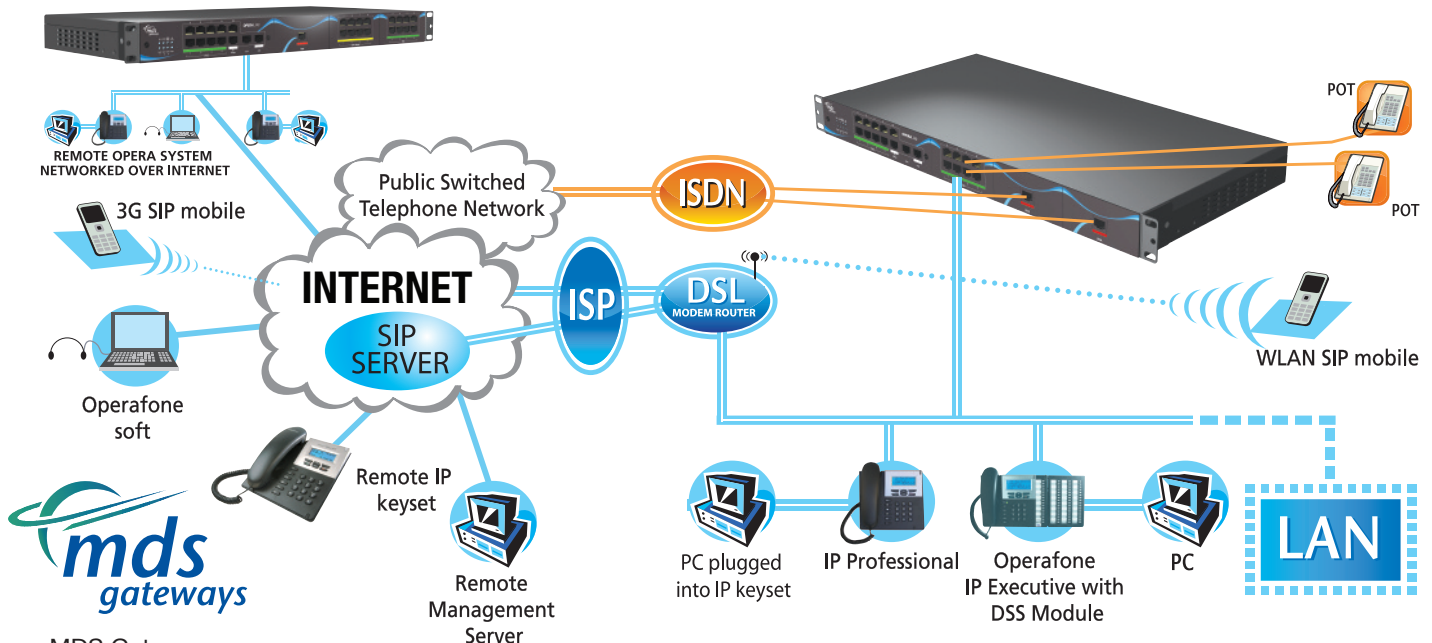PoE IEEE 802.3 af

Status LEDs

Power
LAN
Internet, SIP server
Error warning
Expansion card 1
Expansion card 2
Expansion card 3
Expansion rack (Slave), Exp

Physical dimensions

19" rack full width, one height unit,
three quarter depth
Weight: 2Kg
Rack and wall mountable

Voice functionality

Alarm clock calls
Analogue CLI
Auto-discovery of IP stations
Automated attendant
Automated Management Server
Automatic Call Distributor
Browser based system programming
Browser based user programming
Call-back
Call Barring, up to 7 levels
Call Forward
   Forward all
   Forward no answer
   Forward on busy
   External or internal divert
   Reprogramme diversions
   remotely
Call Hold
Call Lists
   Missed
   Dialed
   Received
Callback
Call Logging
Call Park
Call Pick-up/ Call Pick-off
Call Record
Call Protection
Call Transfer
Call Waiting (internal and external)
CLIP, CLIR
Conference Call (Internal and External)
CSTA
CTI
Do not disturb
Doorphone (1 x a/b extn, 2 x relays)
Dynamic DNS
Email forwarding of voice mails
and recorded calls
Embedded web server
Enquiry Call
External line ringing assignment
Fixed Mobile Convergence (FMC)

Gmail contacts' synchronisation
Groups:
   Dedicated mailboxes
   Group diversion
   Group mailbox
   Missed call list per group
   Up to 30 groups
Headset ready
Hot desking
Hotline
Hunting groups
IP server (for IP extensions)
IP system phones
Outlook contacts' synchronisation
Least cost routing
Meet-me conference rooms
MSN ringing assignment
MSN restriction
Multiple user devices (desk, soft,
mobile)
Music on hold
Networking of multiple systems
Night service
Paging via system phones
Phone Book
   pool of 3,500 entries
   import / export of directories
   Internal extension list
Programmable keys 16
Re-dial (last 10 numbers)
Ringing Modes, 5
SIP client (up to 60 SIP trunks)
SIP extension users
Soft phone
Synchronisation with Outlook,
Gmail contacts
iPhone app
UPnP (Universal Plug and Play)
User PIN codes
User profiles (Office/Home/Roaming)
Voicemail
Voice recording
WLAN/3G SIP mobiles

REMOTE OPERA SYSTEM NETWORKED OVER INTERNET

3G SIP mobile
Operafone soft
Public Switched Telephone Network
INTERNET
SIP SERVER
ISP
DSL MODEM ROUTER
ISDN
POT
POT
WLAN SIP mobile
Remote IP keyset
Remote Management Server
PC plugged into IP keyset
IP Professional
Operafone IP Executive with DSS Module
PC
LAN

mds gateways

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