iPECS

IP Telephony Solutions for SMB

Your small to mid-size business communication system shouldn't complicate your business. It should be simple to install, use and grow with your business. Your communications systems should configure and install easily to meet your needs. Use of the system should be clear and intuitive so users easily understand how to access a feature. It should grow seamlessly as your business grows without regard to geography. It should give your business the productivity tools and communication applications you need to succeed in a competitive environment.

iPECS

IP Telephony Solutions for SMB

LG-ERICSSON

aria TECHNOLOGIES

Contents

CAPACITY

DESCRIPTION	MFIM50A	MFIM50B	MFIM100	MFIM300	MFIM600	MFIM1200
Max Channel No.	50	50	100	300	600	1200
Max Trunk Channel	42	42	42	200	400	600
Max Station Channel	50	50	70	300	600	1200
Built in Trunk	4 CO	2BRI + 2BRI*	-	-	-	-
Built in SLT	2	2	-	-	-	-
Built in VoIP ch.	4(8**)	4(8**)	6	6	-	-
Built in VM ch.	6	6	6	6	-	-
VM recording time	270min.	270min.	200min.	240min.	-	-
PTFU	1 port		4 ports	4 ports	4 ports	4ports
BGM	1 Int. + 1 ext.	1 Int. + 1 ext.	1 Int. + 2 ext.	1 Int. + 2 ext.	1 Int. + 2 ext.	1 Int. + 2 Ext
Local Survivability	Yes	Yes	Yes	Yes	Yes	Yes
System Redundancy	No	No	Yes	Yes	Yes	Yes
System Gateways	PRIM, BRIM2/4,LGCM4/8,VOIM8/24,SLTM4/8/32,DTIM8,WTIM4/8,POE8,MCIM,VMIM,RSGM					
System Housing	MCKTE, 1URMB, PSU, WBRKTE, WHLD, DHLD & DHE					
System Terminals	LIP-8000 & 7000, LDP-7000 & LKD, GDC-400B/600B, GDC-400H/450H, WIT-400H					
Applications	Phontage, UCS, NMS, ez-Attendant, IP Networking, 3rd party interfaces (TAPI,SMDR, SMDI, ACD, AIM)					
IP Security & QoS	IPSec, SRTP,802.1p/Q, IP TOS, Diffserv pre-tagging, TLS 1.0,SSL 3.0					
VoIP	H.323v4,SIP(Trunk/Extension), RTP/RTCP,STUN,G.711/G.723/G.729,T.38					
Application Protocol	HTTP, FTP, TFTP, DHCP,PPPoE,SNMP					

*License code required for channel activation
**No of available channels using G.711

ITEM	HEIGHT (mm/in)	WIDTH (mm/in)	DEPTH (mm/in)	WEIGHT (kg/lbs)
Gateway Module	230/9.1.	38.8/1.5.	194.5/7.7	1.5/3.3
Main Cabinet, Enhanced	265.6/10.5	440/17.3	318.2/12.5	7.78/17.2
PSU	230/9.1	38.3/1.5	179.4/7.1	1.4/3.1
1U RMB	38.3/1.5	482.6/19	183.27.2	2/4.4
DHLD *1	146/5.7	111.5/4.4*1	128/5	0.4/0.9
WHLD	280/11.0	60/2.4	188.3/7.4	0.2/0.4
LIP-Phones	235/9.3	206/8.1	129/5.1	1.0/2.23
LIP-DSS	97/3.8	206/8.1	127/5	0.35/0.77

ITEM	VSF	VMIM
Description	MFIM50/100/300 built in	Optional G/W
No. Channel	6 channels	8 channels
Codec type	G.711	G.711 / G.723.1 / G.729a
Memory size	96MB(MFIM50/100) 112MB(MFIM300)	256MB

	UCS Client	Phontage
System requirements	Pentium IV 2.3 GHz	Pentium IV 1GHz
	512MB RAM	256MB RAM
	200MB Free HDD	200MB Free HDD
	Windows XP, Vista, Windows 7	Windows XP, Vista, Windows 7
	Full duplex sound card	Full duplex sound card
	Optimized for 1024 x 768	Optimized for 1024 x 768

*Specifications are subject to change without prior notice. Some features and applications are not available in all countries

LIK ▪ LIP ▪ UCS ▪ Phontage ▪ WIT ▪ DECT ▪ ez-ATD ▪ UMS ▪ NMS

iPECS

PSTN

UCS Server

UMS Server

Head Quarters

Phontage

LIP-8000

Mobile Extension

Mobile

Internet

WIT-400H

Road Warrior

Phontage PDA

LIP-8000

LIK G/W

Branch office

UCS Client

PSTN

LIK, iPECS Call Server and Gateway

At the heart of the iPECS Platform is the iPECS call server. This highly reliable purpose-built server controls and maintains communications between end-points and shared network resources. You can select the Call Server to best meet your needs based on the size of the business from 4 to 1000 users. Modular type iPECS Gateways, which easily connect to the call server over any IP network, interface to an array of resources including analog, digital and SIP connections both for trunk and extension side. The simple modular structure yields flexible configurations and installations to meet your business needs now and in the future.

The Call Server makes available an extensive set of telephony features. From basics (Hold, Transfer, etc.) to more advanced features (Least Cost Routing, Incoming Call Distribution, SIP trunking, etc.) you can easily access features and resources, often through a single button on your terminal. iPECS offers an array of terminals so each user has the right communications tool for the job. Select from any of the LIP-8000 series desk-top phones, DECT over IP, iPECS Wireless LAN phones, PC and PDA Virtual phones, SLT or standard SIP terminals as appropriate for each user. Even digital phones from your legacy LG-Ericsson system can be employed.

LG-Ericsson delivers a range of software applications designed to improve employee productivity and enhance the customer calling experience. Ez-Attendant improves Attendant call handling ; Unified Messaging speeds handling voice, FAX and e-mail messages; Unified Communication Solution (UCS) combines voice, video and messaging under a single user interface. In addition, iPECS Application Integration Message (AIM), OCS Intergration as well as Microsoft standard TAPI lets both LG-Ericsson and 3rd party applications combine to deliver a seamless overall communication solution for your small to mid-sized business.

LIP 8000 series IP Terminals

iPECS includes a wide variety of user desk-top terminals. The LIP 8000 series includes four handset models and four types of DSS Consoles to provide a solution tailored to the needs of each user. From the LIP-8004D basic lobby phone to the Executive LIP-8040L, the LIP-8000 terminals are simple to use yet feature rich. Users quickly learn to use the LIP phone thanks to one button operations and user friendly features such as the navigation and soft-menu keys. The full duplex HD quality speakerphone in most models let users converse handsfree, assured of the highest quality through advanced VoIP technology. The LIP-8000 terminals can connect anywhere there is a LAN connection and support the IEEE 802.11af Power-over-Ethernet standard so a separate power connection is not required.

LIP-8040L

- 240 x 144 LCD 9 lines
- 3 soft keys
- Navigation key
- Full duplex SPK
- 10 flexible buttons (LCD)
- 10 fixed buttons
- Wideband Codec
- Triple color LED
- Ring/MW indicator
- 2nd hub port(10/100T)
- 802.3af PoE
- Optional Bluetooth/DSS

LIP-8024D

- 240 x 56 LCD 4 lines
- 3 soft keys
- Navigation key
- Full duplex SPK
- 24 flexible buttons
- 10 fixed buttons
- Wideband Codec
- Triple color LED
- Ring/MW indicator
- 2nd hub port(10/100T)
- 802.3af PoE
- Optional Bluetooth/DSS

LIP-8012D

- 240 x 42 LCD 3 lines
- 3 soft keys
- Navigation key
- Full duplex SPK
- 12 flexible buttons
- 10 fixed buttons
- Wideband Codec
- Triple color LED
- 802.3af PoE
- 2nd hub port(10/100T)
- Ring/MW indicator
- Optional DSS

LIP-8004D

- 16 character 1 line
- OHD
- 4 flexible buttons
- 8 fixed buttons
- Triple color LED
- Ring/MW indicator
- 802.3af PoE

LIP-8050V

- Videophone
- 4.3 inch Color LCD - (480 x 272, WQVGA)
- CMOS camera (QCIF, CIF)
- Max. 15 FPS
- 5 flexible buttons
- 3 Soft keys
- Navigation key
- Triple Color LED
- Full Duplex SPK
- Ring/MW indicator
- Optional DSS

LIP-8048DSS

- 48 LED flexible buttons
- Paper underlay
- Triple color LED
- External power supply
- 12 pin connector
- Max. 4 cascading

LIP-8012DSS

- 12 LED flexible buttons
- Paper underlay
- Triple color LED
- Power feeding from IP Phone
- 12 pin connector
- Max. 2 cascading

LIP-8012LSS

- 12 LED flexible buttons
- LCD underlay
- Triple color LED
- Power feeding from IP Phone
- 12 pin connector
- Max. 2 cascading

LIP-8040LSS

- 40 LED flexible buttons
- LCD underlay
- Triple color LED
- PoE or External power supply
- LAN connection

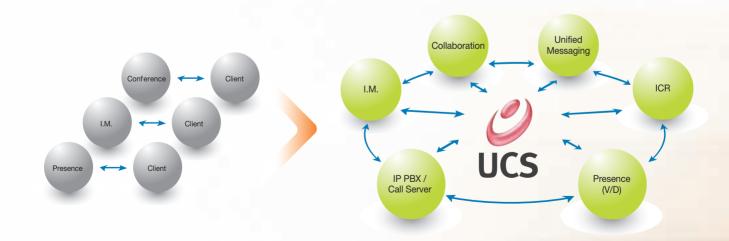# UCS, Unified communication for small and medium size business!

The iPECS UCS Client is a PC based application, which operates in conjunction with the iPECS UCS Server. UCS Server supports up to 600 simultaneous Clients, expanding and enhancing the communication services of iPECS to dramatically improve business productivity and customer responsiveness. In addition to the rich voice services available from the iPECS platform, users of iPECS UCS Client have access to a wide range of video, text and graphic collaborative and messaging services via the UCS Server.

Services available include Presence, Video Conferencing, Instant Messaging, Document Sharing, Web Co-browsing, ICR (Individual Call Routing), Group Call, Conference Room and more. Employing a simple intuitive graphical user interface, the UCS Client has access to both private and shared scheduling and directory database applications which are fully integrated with the various services available.

Further, the UCS Client database applications can operate and synchronize

with major personal information management applications and databases such as Outlook, ACT!, Goldmine and Excel. The UCS Client user interface is highly flexible and can be customized to address the needs of the individual user. As an IP (Internet Protocol) solution, the UCS Client overcomes geographical limitations, allowing access to services and databases of the UCS Server while in the office or on the road.
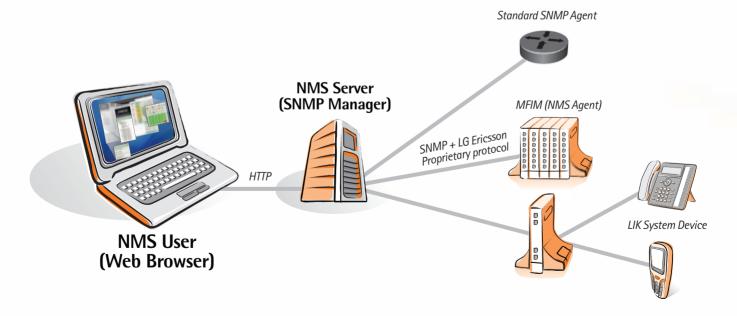
NMS, Multi site management tool for iPECS

iPECS Network Management Solution (NMS) is a powerful tool for managing fault information, monitoring real time status, maintaining call statistics and databases of multiple iPECS appliances. iPECS NMS is a Web based application so that communication managers can access NMS via Internet Explorer from any remote PC. Providing services for up to 1,000 iPECS Call Servers, iPECS NMS employs standard SNMP (Simple Network Management Protocol) to identify and "trap" events should a problem occur.

E-mail fault notification assures the network manager is informed of predefined events and faults on a real-time basis so unusual conditions can be addressed before they become service affecting.

With iPECS NMS, communication managers can review real-time status of all devices and channels associated with a Call Server, with fault events highlighted for quick identification. NMS maintains a database of all Call Servers and permits direct access to each server's Web Admin function for remote adds, moves and changes. Instead of accessing

the Web admin of each Call Server and dealing with multiple site IDs and passwords, the manager can download or upload multiple system databases or upgrades to software through NMS with a few mouse clicks.

iPECS NMS monitors and stores call traffic and SMDR statistics from each registered server. Analysis of call (SMDR) and traffic statistics are presented in both graphical and tabular formats and may be used for resource planning of the corporation. Select stations, lines, time interval, etc. to isolate the reporting you need.

Standard SNMP Agent

NMS Server
(SNMP Manager)

MFIM (NMS Agent)

SNMP + LG Ericsson
Proprietary protocol

HTTP

NMS User
(Web Browser)

LIK System Device

WIT-400H, Wireless IP Terminal

LG-Ericsson's Wireless LAN terminal, WIT-400H, implements an IEEE standard 802.11b wireless interface with full access to iPECS features and resources. Set-up a network of WiFi Access Points (APs) for an in-house wireless solution. Users that need to be mobile in the building or campus can roam freely. During a call, the WIT-400H locates and uses the closest AP, even changing APs while you roam for seamless wireless communications. The mobile phone-like operation means users quickly learn operation of the WIT-400H without needing to read lengthy user manuals. Users benefit from mobile access to all iPECS features and resources as well as WIT-400H specific features like Push-to-Talk, calculator, Phone Book, etc. all with the full color screen.

IP-DECT

If a DECT (Digitally Enhanced Cordless Telephony) wireless solution best suits your business environment, the iPECS provides an integrated IP-DECT solution allowing your staff to retain all feature functionality available on their desktop phone, whilst on the move. The GDC400H DECT and GDC-450H Ruggedised DECT handsets have a mobile phone design/layout making them intuitive and easy to use. Your staff can make and receive calls while they move freely around the office or campus as the integrated IP-DECT seamlessly hands-over calls across your network of base stations.

Customers will appreciate being able to talk to available staff members immediately, as they carry their DECT extension with them. No more telephone tag, improved response times, quicker decision making are all benefits of making your staff mobile.

UMS, Unified Messaging Solution

The iPECS UMS (Unified Messaging Solution) employs the latest Microsoft Telephony application development environment to combine advanced Automated Attendent and Voice Mail functions with UMS and Desktop Call Control to enhance voice messaging services. Voice Mails and faxes can be delivered to your outlook inbox as attachments. Listen to voice messages from Outlook, or if you are out of the office call the UMS and have emails read over the telephone using the Text-to-Speech option. The Desktop Call Control lets users define notification preferences as well as manage and access their voicemail box from their PC.

iPECS UMS supports up to 16 simultaneous voice paths and 4 Fax channels, and is compatible with a range of e-mail protocols including POP3, SMTP and IMAP4 assuring the widest possible inter-operability. If your email supports IMAP4 protocol, messages are automatically synchronized between the UMS and e-mail servers. Like all iPECS components, UMS is simple to administer and maintain through a Web based connection and user friendly GUI.

Phontage

Phontage, Desktop or PDA & Webphone

iPECS Phontage is a multi-media communication tool using a PC or PDA based application to link the operation of an on-screen multi-button telephone with other communications related PC applications. All the features of the traditional iPECS multi-button phone are available to the user. In addition, a Phonebook database with links to the user's PIM (Personal Information Manager), provides pop-up windows for incoming caller identification. iPECS Phontage users can employ the Phonebook to place calls as well as manage contact records. The video interface in the desk-top Deluxe version

delivers video for a multi-party conference with up to 3 participants. Sharing allows multiple parties in a conference to view and manipulate files simultaneously. Other special functions available to iPECS Phontage user include appointment scheduling, SMS support, E-mail and call recording.

Unlike other software based applications, users can access iPECS Webphone from any location via Internet explorer. This simple Active X controlled voice application gives mobile staff another way of communicating while away from the office.
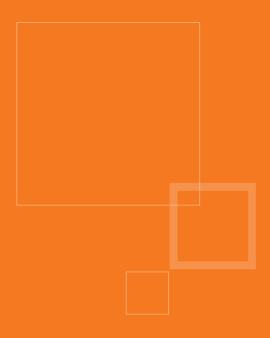
ez-ATD, PC based Attendant Console

iPECS ez-Attendant application simplifies call handling for your Attendant. The powerful ez-Attendant capabilities and superb GUI improve efficiency of the Attendant. Attendants manage incoming calls with a simple click of a mouse. ez-Attendant links to local and corporate databases (MS Outlook, Access, ACT, Goldmine) so the answering position is able to greet callers

knowing who's calling. From a glance at the ez-Attendant Station folder window, the receptionist views the status of users idle, busy, etc. iPECS supports up to 5 ez-Attendants for larger or high call-volume environments, and can be used as a Centralized attendant in networked environments.

iPECS

IP telephony solution for SMB

Transparent connectivity for the Branch Office, Home Office and Business Traveller

Businesses of all sizes are more geographically dispersed with small and home offices needing to communicate as a single business. The distributed intelligent architecture is highly scalable to 600 ports in a single system and iPECS modular appliances and IP Phones deploy anywhere an IP network is available.
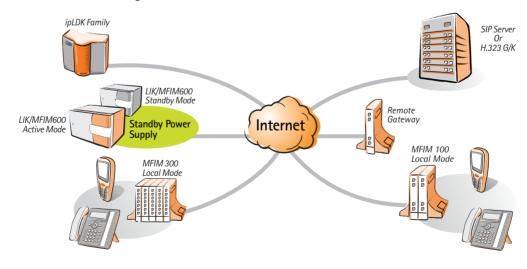
Interconnect multiple offices over the WAN in a transparent Network and achieve seamless communications under the control of a single central Call Server. All features of the central Call Server are available to all elements of the network while you optimize your communications costs, remote gateways and automatic LCR tables provide toll by-pass. In larger environments or with existing

LG-Ericsson communication systems, iPECS IP Networking brings together multiple branch office systems into a seamless telephony network.

Today's small and medium size business recognizes the advantages of Home office workers in terms of costs, performance and morale of the employees. However, without an appropriate business communication solution, remote workers end up on a communications island, unable to effectively communicate with business colleagues. With flexible iPECS Remote applications, users simply connect their IP Phone or soft client to a home network with internet access and the terminal is automatically registered for service with iPECS. The Remote Service

Gateway Module provides an even more complete solution for the home environment by including a local PSTN line and SLT interface for fax connection. Remote users are an integral part of the system and enjoy secure high quality communications with other users and resources of the office system.

Your travelling employees need not be out-of touch, wherever they have an IP connection with iPECS Phontage or UCS Client, they're connected to the office system to place and receive calls and messages. The iPECS Phontage and the UCS Client link business communications with other PC based scheduling and contact applications to improve productivity and responsiveness.

ipLDK Family

SIP Server Or H.323 G/K

LIK/MFIM600 Standby Mode

LIK/MFIM600 Active Mode

Standby Power Supply

Internet

Remote Gateway

MFIM 300 Local Mode

MFIM 100 Local Mode

One-look management of remote branch deployments with secure survivable networking

Managing corporate communication systems can be complex and managing multiple systems can easily become a communication manager's nightmare. iPECS Web Admin acts to control all assigned appliances and terminals through a single admin and maintenance interface in the Call Server. Without suffering from primitive command strings, managers access all management features of iPECS via an intuitive Web GUI. The same GUI is employed for the Station User Portal where users can quickly enter speed numbers, forward calls or activate, Individual Call Routing (ICR).

NMS monitors each iPECS server using standard SNMP (Simple Network Management Protocol) to log and "trap" events, including fault history. When automatically notified, the communication manager simply logs-in as an NMS client using a web browser. The Web based NMS client displays real-time status screens highlighting alarm and fault events. The NMS client has access to the Web admin of each iPECS server for one-look management with call and traffic statistics screens for historical and billing use.

For those critical applications, iPECS provides full redundancy options for power supply, call server and remote site WAN connection failure. Include a back-up iPECS Call Server and power supply module; should the main server or power module fail, the back-up immediately takes control of the system without dropping any calls. You can even equip remote sites with a local iPECS server; should the WAN connection to the main office fail, the local server takes over operation for uninterrupted communications. Equip the remote site with an optional second power module for seamless power backup.

Security and Quality of Service (QoS) should be a major concern in any networked environment. iPECS implements IPSec and SRTP, a well known security standard for the internet, to encrypt data in the IP packets using advanced encryption techniques and tunnelling to hide the real packet destination. To assure the highest QoS, iPECS components support the standard DiffServ pre-tagging and 802.1 p/Q VLAN technology.

Improved business productivity and quicker decision making

Collaboration is more than a hot-button, enhanced productivity, faster decision making, and improved customer care mean improved performance for your small to mid-sized business. iPECS UCS (Unified Communication Solution) delivers the benefits of organizational collaboration at a price affordable to the SMB. Use iPECS UCS Client to share and review the latest budget analysis or sales brochure with all concerned parties at once. Everyone gets the same message and decision response time improves.

iPECS UCS Shared Schedules and Directories make it simple to schedule a conference call with up to 32 voice or 6 video users. In iPECS UCS Scheduler create a shared group schedule with

Outlook synchronization, create a conference room and password, iPECS UCS notifies participants automatically with e-mail. Or set-up a conference group identifying participants and establish your conference call with the click of your mouse.

Presence and telephony status of other iPECS UCS users eliminates communication latency. Know who's on the phone before you call. If another user is on the phone, send an Instant message instead. iPECS UCS Instant Messaging let's you chat securely with one or a group of colleagues. Or use SMS to send a quick note to other internal users or to external parties using fixed line PSTN SMS*.

iPECS UCS Client has an intuitive Graphical User Interface with easy access to the always available Call Assistance to place calls and receive notification of new calls through call popups with detailed caller information. UCS Client has access to all iPECS features and unique capabilities such as peer-to-peer and multi-party conference call recording and voice file management. Record that important client call and assure you can pass the message accurately to all concerned parties.
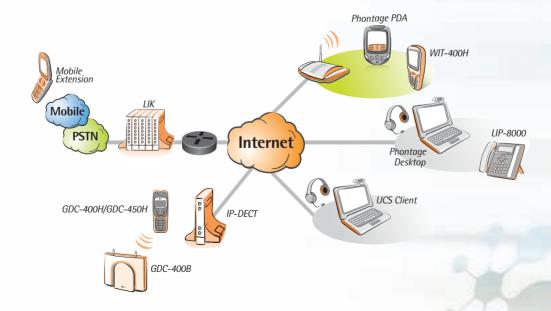
Mobility, a tool for the Competitive Edge

Mobility can be a critical need for the competitive business. iPECS offers an array of solutions to address your - mobility requirements. Customers only need to remember one number. No matter where you are, you will be contactable on one office number by your customers. iPECS provides mobile extension service so that the call server routes your incoming calls to your office extension and to another registered phone such as your mobile or home phone at the same time. Major PBX call features are supported by the mobile extension service such as Call Transfer, Recall, Hunt Group Calls etc. You can also make calls from your mobile or home phone via the mobile extension service and your office calling line identification (CLI) will appear to the receiver.

If you need to roam throughout your facility or campus and maintain communication, iPECS offers several options such as IP-DECT or WiFi terminals. The iPECS DECT solution gives staff all the features of their desktop phone whilst on the move around the office as the integrated IP-DECT seamlessly hands over calls across a network of base stations. Alternatively using a network of WiFi standard Access Points (APs), the iPECS wireless LAN phone, WIT-400H, has access to the full compliment of iPECS functionality while on the move. As you move, the WIT-400H automatically locates the most appropriate AP in the network to maintain a call. Because of the WIT-400H mobile phone-like operation and simple GUI, your users will quickly enjoy

the many benefits of this WiFi solution. Or use the Phontage PDA or Desk-top with a WiFi interface to achieve the same transparent iPECS access with the additional benefit of access to your contact database and other Phontage functions.

Your traveling employees tend to be out-of-touch with the office. Phontage and UCS Client let the road warrior transparently access iPECS anywhere there is an internet connection. Call others in the office, place and receive outside calls just like they are in the office. And, use the conference and collaboration capabilities of the UCS Client to enhance productivity while on the road.

Phontage PDA
WIT-400H
Mobile Extension
Mobile
LIK
PSTN
Internet
LIP-8000
Phontage Desktop
GDC-400H/GDC-450H
IP-DECT
UCS Client
GDC-400B

Improve Customer Care Using Flexible & Simple Call Handling

From basic direct call routing to advanced Caller ID based routing, iPECS handles your important customer calls quickly and efficiently. Programmable hunt groups let you define how best to handle customer calls. Ring multiple phones at one time in a Ring group or set-up a basic Call Center using ACD.

Assign a Supervisor to monitor the real-time status of the group from their iPECS phone display, act to oversee and assist group agents and activate alternative routing during high volume call periods. Agents are able to login to the group from any available phone. ACD statistics report basic group and agent performance on-demand or at regular intervals. Applying Caller Controlled Routing, callers can route through a multi-level menu of recorded announcements to refine the call routing. The advanced call routing algorithms even allow you to route incoming calls based on the Caller ID. Use Caller ID routing to further separate incoming calls. Calls from that large account can be sent to the account team or route calls based on regional origin, language or time-of-day.

Once the call is answered, users can easily process the call if needed. Place the call on hold, transfer the call or even set-up a conference call with a press of a button. Users no longer need to worry about losing the call with the simple call handling operation of iPECS terminals.

With advanced features such as Linked Station and Hotdesk, your call can be managed in a flexible way. Your soft client and desktop phone can work as a pair and this will provide more flexibility on your call handling. Hotdesk agent can log in any system station with its own station attributes such as station number, COS, voice mail etc.

Enhanced Business Suites through Open Telephony Interfaces

Your business system needs open interfaces to support applications designed for your business processes and communications. iPECS supports standard SMDR, traffic reports and iPECS

AIM (Application Integration Messaging). iPECS AIM includes support for the Microsoft standard telephony application interface , TAPI 2.1, and adds support for 3rd party applications to

control proprietary messaging. With proprietary messaging 3rd party developers can enhance functionality and interaction between their external application and iPECS.

Hospitality Solutions

Hospitality environments have unique requirements, that's why iPECS Hospitality systems have been designed specifically for the industry. An iPECS Hospitality solution will ensure maximum ease of use for guests, while recognizing that the rotational staffing requirements of the business demand

logical, simple operation of the telephone system.

IPECS Hospitality can be used as a stand-alone system, integrated with hotel management software or interfaced to a new or existing front of house PMS package

So whether you are operating a guesthouse, motel, hotel, retirement complex or nursing home, the ability to provide flexible and efficient solutions for your guests and staff will help ensure return business and assist in improving and maintaining a high level of customer service.