

# DATAVOICE Communications

## Business Telecommunications Solutions

### Definitions

Voice Over IP (VOIP). The transmission of voice communications over Internet Protocol. This technology has taken center stage in the development of modern business telecom solutions.

### Modern Telephone Systems Overview

DATAVOICE currently offers three basic concepts in modern business telecommunications.

- Ericsson-LG IPECS VOIP Platform On-Site System, employing Digital or VOIP telephones
- MCX Managed Cloud, VOIP Hosted System, employing VOIP telephones
- MCX Managed Cloud, Personal Cell Phone Integrated Cloud Hosted System

Other systems types are available for special applications, such as call centers, recorded call lines, schools, public service, etc.

We will discuss these concepts from the customer perspective, in terms of operational features, benefits and carrier requirements, with an explanation of relative cost.

### 1 – Ericsson-LG IPECS: IP-Electronic-Communications-System VOIP Platform On-Site System

DATAVOICE is a certified dealer for Ericsson-LG, one of the world's largest telephone system manufacturers. The current IPECS series cover 1 to 1200 telephone stations. The IPECS-eMG80 is a lower cost system for 24 telephone stations and under.

A smart choice. The platform controller unit sits onsite at your location, utilizing the new VOIP technology, but all IPECS systems have the distinction of being able to support *VOIP or the lower-cost Digital telephones*. This is important, as many of the competition's phones are VOIP only. With the use of new digital phones, the customer has the choice to use the previous digital voice cables, keeping the voice network separated without re-cabling.

VOIP telephones can be installed as stations of the IPECS system via the internet, where they are truly needed, at remote locations, other branch offices or home office locations; the maximum capacity of which is dependent on well peered, available internet bandwidth. Both Digital and VOIP phones can be used on the station side of the IPECS system.

On the Public trunk side, the IPECS series can use traditional Copper Analog trunks (POTS – Plain Old Telephone Service), Internet SIP trunks with Analog Delivery or direct Internet SIP trunks. For larger systems, SIP trunks, T1 or Fiber digital trunks or PRI are also compatible.

Keep your existing local telephone numbers and toll-free numbers at your existing location or anywhere in the world using Internet SIP trunks.

With IPECS, Automated Attendant and Voicemail with E-mail delivery are standard.

Stay in communication with Mobile Extension, as your calls ring to your cell phone.

IPECS directly connects to overhead public-address systems and door alarm or door intercom entry control.

An on-site IPECS system of this type can be purchased or leased. As an example, the purchase price for a typical eMG80, 4-Digital phone system, using existing station cables with 4 public POTS trunk ports is approx. \$2,000. *5-Year Limited Warranty.*

Check with your current Telephone Line Provider for the monthly costs for phone lines and usage (per call) rates.

Contact **Steve Gregory at DATAVOICE, 440-527-0170**, for competitive rates on Internet and trunk carrier services. *We are agents for many of these carriers and present their options to you at no additional charge.*

Fax over the internet can be installed as an option.

Note: Credit terminals and alarm systems may require special line connections.

## 2 – MCX Managed Cloud - VOIP Hosted System

For the ultimate in flexibility, DATAVOICE hosts Polycom (and other) VOIP telephones, which can be installed anywhere there is adequate Internet facilities. Our technicians can do a preliminary VOIP suitability test on your Internet service to see if it can support VOIP communications (recommended). We can recommend affordable Internet connectivity via a variety of preferred carriers.

There is no on-site platform controller unit with Cloud hosted VOIP system. DATAVOICE hosts your IP-PBX in Cloud facilities, or Telecom Data Centers, which are well connected to major national public fiber and wireline Internet and voice carriers. We automatically handle cloud security and configuration backup.

Automated Attendant and Voicemail with E-mail delivery is standard.

Well suited for companies with multiple geographic locations, all telephone stations at all locations are actually on one system. Calls can be transferred to any telephone end-point, including cell phones. Smart phones can run a VOIP app and be an actual extension of the system. Similarly, PC's and laptops can become an end-point by running a 'Soft-Phone' app.

If you are moving to an area outside your current calling area or want to use telephone numbers outside of your local calling area, it is possible to do so at any service address with hosted VOIP service.

You do not receive a Telephone Line Provider bill for voice calls on your hosted VOIP service. Public trunk connections are included in the monthly charge from DATAVOICE.

Telephones, other on-site equipment and installation are sold on a One-Time purchase basis. Cloud hosting service is a Month-to-Month agreement with a monthly recurring charge per telephone station and per public line connection or per simultaneous outside call.

As an example, the one-time cost for the telephones, other on-site equipment and installation needed for a 4-VOIP telephone hosted phone system with 4-simutaneous outside call capacity is approx. \$1,150. The monthly recurring charge for the Cloud PBX and Public trunks is approx. \$213.00 plus long-distance call usage.

Toll Free service is optionally available.

Fax over the internet can be installed as an option.

Note: Credit terminals and alarm systems may require special line connections.

Adequate Internet bandwidth facilities are required at each service address.

### 3 – MCX Managed Cloud - Cloud Integrated Cell - Personal Cell Phone Integrated Hosted System

This is our lowest cost service. Your staff uses their cell phone as their business telephone. Their business calls follow where they travel.

Your main telephone number can optionally ring into an Automated Attendant, the caller presses the desired extension and the call is transferred to the cell phone. The user's private business number, if any, can ring directly on the user's cell phone. The user's cell voicemail handles the voice messages. This service does not use your internet connection.

You can optionally have 1 or more VOIP phones installed in the office or any other location, using an internet connection.

You do not receive a Telephone Line Provider bill for voice calls on your Cloud Integrated Cell service. Public trunk connections are included in the monthly charge from DATAVOICE.

The one-time cost for 4-Station Cloud Integrated Cell service with 4-simutaneous outside incoming call capacity is \$0. The monthly recurring charge is approx. \$119.00, plus any long-distance call usage incurred transferring calls to out-of-area cell phones.

Fax over the internet can be installed as an option.

Note: Credit terminals and alarm systems may require special line connections.

*MCX Cloud Integrated Cell service is upgradeable to the MCX VOIP Cloud Hosted System.*

### Background

*On-Site Digital PBX (Private Branch exchange)* - Most of the telephone systems sold in the 80's and 90's fell into this category. Since 1989, DATAVOICE was a dealer of Vodavi / Vertical digital equipment, manufactured by LG. This line of equipment served us well and was quite reliable. Digital technology was certainly a quantum leap in technology and feature availability compared to its predecessor; the analog, electro-mechanical telephone systems installed prior the 80's. There is a good chance that you are still using one of these digital models today.

*Digital PBX Wide Area Voice Networking* - Digital PBX's had a hard time communicating with geographically separated telephone extensions. These systems were mostly intended to have all its telephones in one building or one physical property. Wide area networking was possible but came with high costs.

*Digital PBX Telco Carrier Lines* – Telephone Company (Public Switched Telephone Network or PSTN) carrier services for Digital systems consisting of approx. 16 telephone stations, typically used Analog "Plain Old Telephone Service" (POTS), also referred to as Copper Dial-Tone lines, from carriers like AT&T and Windstream. For larger telephone station count systems, Digital trunks like ISDN-PRI using 24-Channel T1

circuits were used instead of POTS. POTS lines were affordable for smaller systems but the T1 trunk offered multiplexing in 24 talk channel blocks over one copper or fiber-optic line, lowering the effective per-line cost.

*Digital PBX - Changing Technology* – Carriers are substantially increasing the rates for POTS services and are trying to convert customers to VOIP, T1 or Fiber delivery. These would convert the digital lines back into analog to be compatible with the older digital system. If you are considering a new telephone system, you should first understand the new system's public line connection requirements. These services generally require a one-year commitment or longer.

### Digital PBX and VOIP Cabling to the Desktop

Generally, Early digital systems operated on Category 2 or Cat. 3 building cables. These cable types were only useable for Digital and Analog type telephones. With the proliferation of PC's on the desktop and the advent of Cat. 5 and Cat. 6 cables, capable of carrying Ethernet for computer networks, (and Internet) a second cable was typically installed to each desktop. This resulted in the commonly found configuration of separate voice and data cable systems. As new office construction commonly utilized two drops of cable (usually two Cat. 5 or Cat. 6 cables) to each desk, the division of voice and data wire networks was maintained. Although PC's and VOIP telephones can operate on one cable, it is still a good idea to stay with the two-cable per desk approach, for flexibility and unforeseen expansion. Since *business telecom systems are a specialty*, keeping voice and data on two different wire networks is the best approach and avoids many problems when two different vendors are employed for the telephone system and the data network; a common situation.

Our representative can do a cable survey to determine suitable reuse of existing cable or any required new cabling costs.

How do you tell a VOIP phone from a Digital phone?

- A Digital telephone has a 2-pin (or 4-pin) telephone cord plug (as used with home phones).
- A VOIP telephone has an 8-pin PC-type network cord plug.

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