



Bandwidth Changes Everything™

# Corporate Profile

**Bandwidth Changes Everything!™**

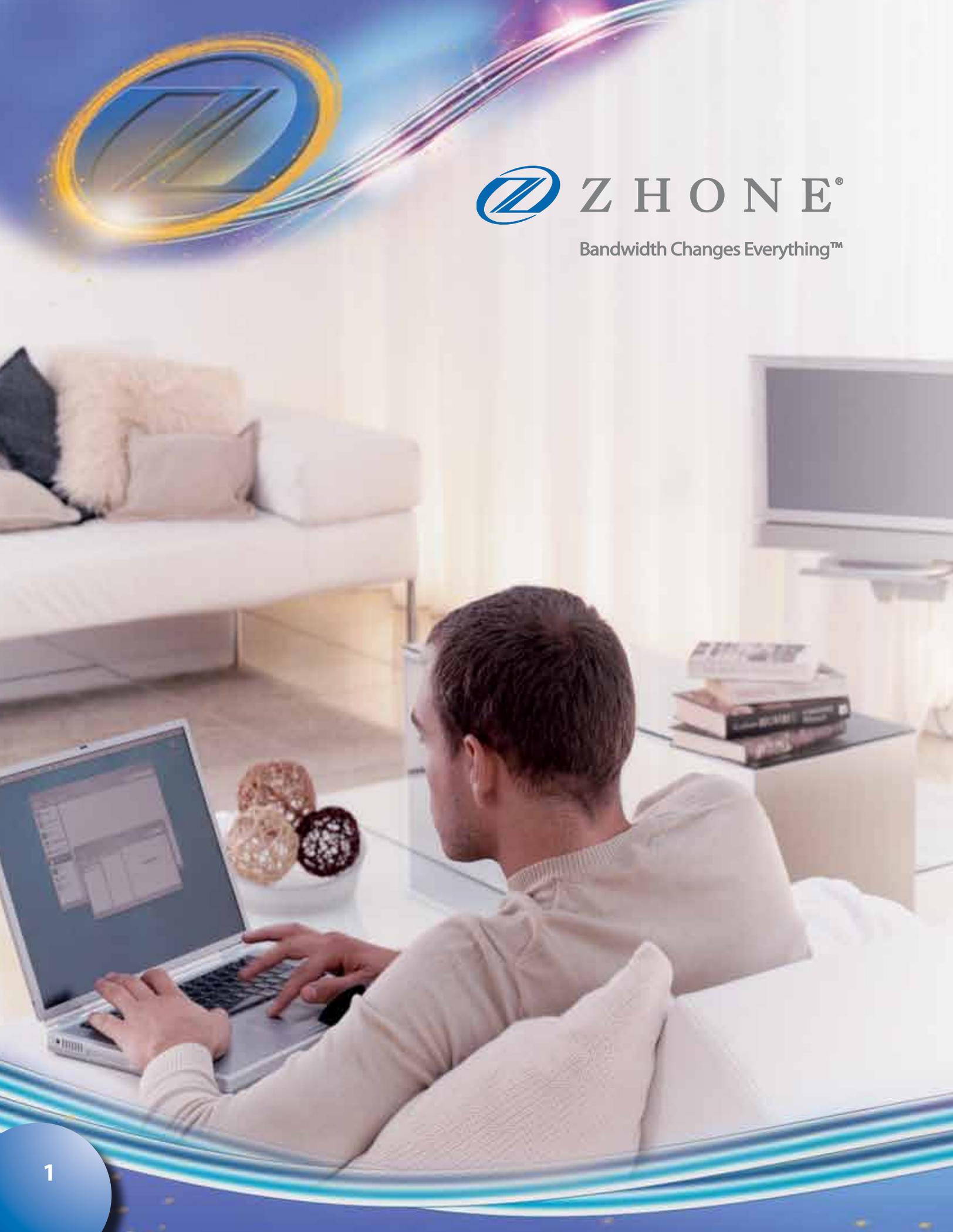


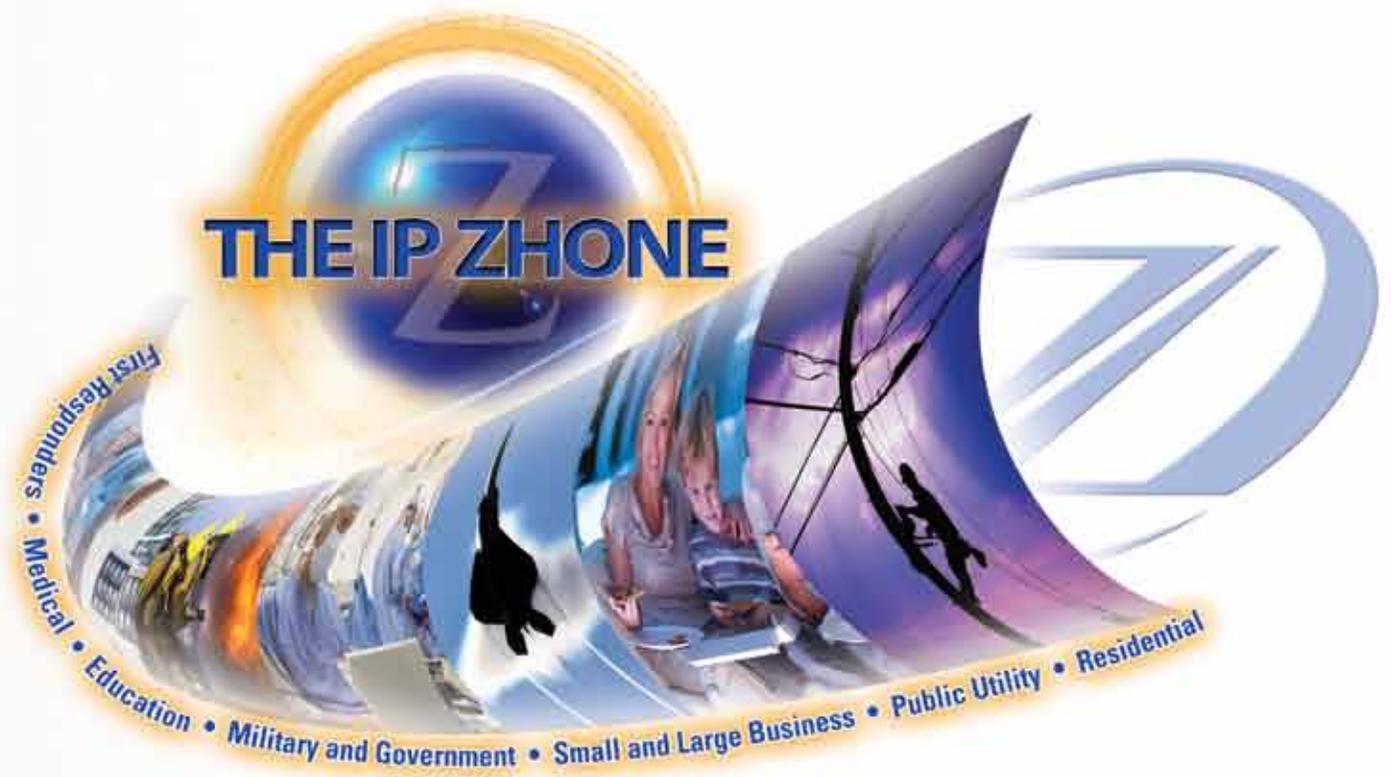
**LEARN MORE**  
Experience the Network  
of the Future... Today



Z H O N E<sup>®</sup>

Bandwidth Changes Everything™





## **Bandwidth Changes Everything!™**

Electricity reshaped the world...  
extending day into night, changing the world forever!

**Today the combination of Bandwidth, Wireless and High-speed Internet access is reshaping our economy and our lives more than any technology since electricity! Think about it...**

First Responders • Medical • Education • Military and Government  
Small and Large Business • Public Utility • Residential

# Introduction

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At Zhone, **Bandwidth Changes Everything™** is more than just a tag line. It is our focus, our fundamental belief and philosophy in developing carrier-grade broadband solutions for our customers ensuring bandwidth is never a constraint in the future! At Zhone, our holistic focus is on the transformation and enhancement of connectivity, providing the foundation for advanced communications and improving the overall communications experience for our customers and their subscribers.

“Change is the only constant” is an old adage. For Zhone, this saying has new dimensions. Consumer behavior has evolved radically over the years. Broadband wire line and wireless technologies have enabled new consumer choice such that the demand for services requiring faster throughput, greater bandwidth and higher performance has grown exponentially and surpassed estimates. Today, the global use of smartphones and other mobile and portable devices have subscribers using new ways to satisfy their entertainment and communication needs, each needing unforeseen bandwidth levels and faster throughput.

Industry analysts project Internet and IP based traffic to more than double every year, with no slowdown on the horizon. This has left the service provider with many unanswered questions. How does the service provider satisfy the growing demands on the network today? How does the service provider design the network for the future? How does the service provider introduce revenue generating, profitable applications without clogging its network arteries? Quite simply, how does the service provider prepare itself for the approaching Bandwidth Tsunami?

Since its inception in 1999, Zhone has focused on building high performance, end-to-end, multi-service network solutions, which have constantly improved user experience. Zhone is focused on minimizing the investment risk for its customers and helping them secure a larger portion of the subscriber’s spend on telecommunication services.

Our commitment today, **The IP Zhone!** The IP Zhone is helping customers build their network of the future by delivering an All-IP high performance end-to-end Multi-Service solution optimized for their ever-growing bandwidth needs such that bandwidth will **never be a constraint!**

**The IP Zhone – building the network of the future... TODAY, embraces our fundamental belief and philosophy! The IP Zhone is our commitment to building the fastest and highest quality All IP Multi-service networks in the world!**

# Bandwidth Changes Everything!

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**Studies show that - even modest increases in bandwidth can create hundreds of thousands, if not millions, of new jobs and influence lives forever!**

**Imagine** a connected world where children in small towns or villages, can have access to education, and classrooms, access to the best teachers in the world made possible with distance learning with professors from the top schools globally teaching students from any part of the world, virtually, with no criteria or restriction on attendance. The last mile cannot be a barrier for anyone, in any part of the world. Bandwidth cannot be an issue for them. Service providers will need to guarantee unlimited bandwidth and ensure bandwidth is not a constraint.

**Imagine** a connected world where the elderly with illness can get medical counseling from their home computer, remote diagnosis and, if necessary, even surgery all made possible through bandwidth. Surgeons and experts from different parts of the world come together at the same time and perform the surgery remotely and save lives. Besides expertise and state-of-the-art technology, time-sensitive connectivity and guaranteed unlimited bandwidth is needed to perform the surgery successfully.

**Imagine** a connected world where law enforcement agencies and first responders across thousands of cities worldwide can work as one team on a single, integrated network, rather than struggling on a patchwork of incompatible infrastructure. Law enforcement agencies and first responders need to save lives, they need to bring hope and restore people's faith. Most importantly, they need to work seamlessly across agencies and, in many instances, national boundaries. They need guaranteed wire line and mobile broadband connectivity and bandwidth cannot be an excuse.

**Imagine** homes having 1 gigabit per second connectivity, with people streaming multiple unicast HD and 3D streams and communicating interactively with one another on their entertainment systems, smart phones and portable multimedia devices. Service providers need a scalable and cost-effective fiber-to-the-home multi-service solution for their high bandwidth needs to ensure on-demand bandwidth availability.

**Imagine** a connected world where entrepreneurs anywhere -- can collaborate, innovate, and create new small businesses and high-value jobs because they are connected! Bandwidth Changes Everything! Bandwidth and the applications made available to the subscriber changes, shapes and empowers the future!

**Zhone's All IP Multi-Service solution is the foundation for the  
NETWORK OF THE FUTURE... TODAY!**

**CO**

**CAB/RT**

**Zhone  
FiberHome**



MXK  
319  
819  
823



**Zhone  
FiberCell**



MXK  
319  
819  
823

**CAB/OPX**



**Zhone  
MultiService  
MSAN**



MALC  
319  
719  
723

**CAB/OPX**



**CAB/OPX**



## NODE/CURB/BLDG

## PREMISES



XP/MX/MXP



zNID ONT  
AE/GPON



zNID ONT  
AE/GPON



MX 194/198



zNID ONT  
MDU  
AE/GPON



ETHX EAD

CPE



XP/MX/MXP



ADSL2+  
VDSL2,  
EFM/EoC, POTS  
T1/E1, ISDN



ZMS

ZHONE

EZ

TOUCH

# Products

Zhone has long been a pioneer in the industry with its broadband and multiservice access solution offerings. Zhone is at the forefront of technology innovation today, with large-scale global deployments of its high capacity FTTx multi-service systems including the MXK, MALC, MXP, MX, XP and zNID ONTs which are designed to provide high performance and cost-effective solutions for the operator's bandwidth requirements.

At the core of all Zhone solutions is its Single line, Multi Service (SLMS) system architecture that is extendable to any access network including fiber, copper and wireless. Zhone has deployed SLMS-based solutions for over 10 years and the solutions are entrenched in over 750 customer networks and interoperating seamlessly. Service providers using SLMS are benefited by increased flexibility for new service enablement while reducing overall CAPEX, OPEX, network complexity and the Total Cost of Ownership (TCO). Utilizing the proven SLMS enables Zhone to reduce the time-to-market and overall development costs for new features and applications.

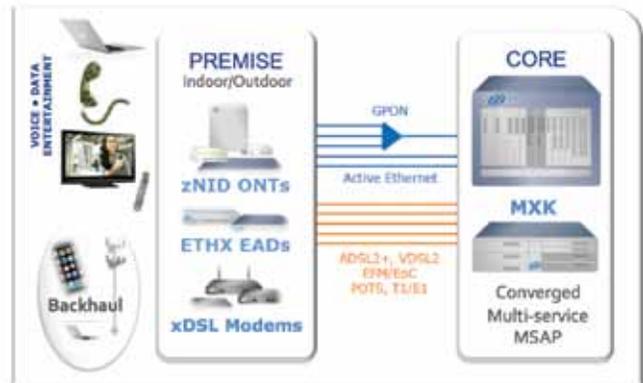
In 2009, Zhone introduced its flagship MXK platform providing the industry's leading density, throughput and switching capacity. MXK is the industry's 1st Terabit Access Concentrator and is already being used by hundreds of customers globally today. A single MXK system can support end-to-end Voice, Data, Entertainment, Social Media, Business, Mobile Backhaul and Mobility service to satisfy the operator's connectivity and bandwidth requirements and build the **NETWORK OF THE FUTURE... TODAY!**

**Zhone's MXK™** is a fully redundant, carrier-grade All IP platform enabling Multi-Service Terabit access solutions from the Edge to the Core of the service provider's network, with seamless and integrated support for multiple technologies including GPON, Active Ethernet, VDSL2, ADSL2+, EFM, PWE and POTS. Additionally the MXK supports a comprehensive range of voice protocols including SIP, MGCP and H.248. The system is designed for high scalability, flexibility, and performance. The MXK portfolio is available in varied form factors including chassis and 1U fixed.

Built on 480 Gbps pure IP core switching and 4.6 Terabit total system switching capacity, the MXK system can cost-effectively scale from as few as 24 subscribers for small, remote or in-building deployments to over 9,200 subscribers in a single MXK system chassis and over 46,000 subscribers in a single MXK system rack. The MXK platform, with its standard-based interfaces, has been designed to provide a fully converged multi-service solution to help maximize the ROI for the service provider. Furthermore, the MXK was proven as a leading performer at both FSAN and Plugfest testing and interoperability events.

In fact, Zhone leads the industry in GPON density per rack, chassis and blade! When combined with our ZMS™ network management platform, the solution provides the fastest and highest quality All IP Multi-Service solution in the industry.

## THE IP ZHONE Residential & Business Triple Play Broadband, Voice & IPTV





**Zhone's 1U SLMS (MXP, MX and XP)** portfolio is designed to help service providers provide cost-effective communication, extend reach and provide access to even remote parts of their coverage areas with high speed broadband and multi-service offerings. The compact and hardened 1U form factor allows cabinet deployment in proximity to subscribers for optimal rate/reach. Service providers are increasingly provisioning high-speed broadband services using ADSL2+, POTS, SHDSL EFM, VDSL2, Active Ethernet or GPON technologies, or some combination of all of the above. To cater to the needs of the service providers and help increase their revenue and customer base in a highly cost-effective manner, Zhone has introduced a portfolio of 1U form factor IP-DSLAM, MSAN, OLT and ONU solutions as part of the Zhone FiberHome product family that can address varied deployment requirements.



**Zhone's MALC™** is a full-featured multi-service access platform optimized to deliver voice, data, and video services over a pure packet access network. Service providers have the flexibility to provision services over their existing network and later migrate to a pure packet network without disrupting subscriber service. Deployed in the Central Office, Remote Terminal, outdoor cabinets or basements, the MALC offers a range of chassis options supporting densities from 24 to 960 ports per shelf. MALC enables service providers to deploy a wide variety of business and residential services in a single platform with support for technologies like GPON, Active Ethernet, ADSL2+, ReachDSL, SHDSL, POTS, ISDN, T1/E1, SIP, MGCP and H.248.



**Zhone's zNID™** GPON and Active Ethernet high performance ONTs are designed for both basic and advanced residential and business services. Ideal for both indoor and outdoor deployments, the zNID ONTs deliver wire-speed 1 Gbps throughput and have small form factors. The zNIDs provide a rich array of interfaces including POTS, GPON and Active Ethernet uplink, GE/FE LAN ports, RF video support and MGCP, H.248 and SIP to enable a fully converged voice, data and video service besides enabling a host of other value-add application suite.



**Zhone's CPE and EAD** portfolio provides a vast variety of options for xDSL connectivity including ADSL2+, VDSL2, SHDSL and other protocols. Zhone's endpoint solutions include a full range of residential and business class CPEs supporting Wi-Fi, VoIP and video, as well as a full range of QOS capabilities to allow service providers the ability to easily serve multiple subscriber types with multiple service options. Zhone's CPE portfolio includes ADSL2+ modems, VDSL2 modems and SHDSL modems designed for today's advanced copper connectivity with optional WiFi capability.



**Zhone's SkyZhone™** is the industry's first metro Wi-Fi system designed to cost effectively deliver high capacity and high-reliability multi-service networks. The SkyZhone features 802.11n, all-MIMO antenna architecture, integrated DSL backhaul and line power and is fully integrated with the IP Zhone all IP multi-service solution.



**Zhone Management System (ZMS™)** is a highly scalable platform that offers full configuration and management capabilities with an open northbound interface for automated service provisioning from the customer's OSS/BSS system. The platform can be configured for high availability with an additional remote server for disaster recovery. The ZMS application utilizes Oracle's WebLogic and Oracle database to provide state-of-the-art software infrastructure for advanced management capabilities.



# Solutions

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Zhone's advanced All IP Multi-service product portfolio is ideally suited for any combination of broadband, voice and entertainment. At the core of any solution for Residential or Business is the broadband access network. Zhone products deliver a diverse range of fiber and copper capabilities in a single converged solution. The MXK Multi-Service Terabit Access solution helps set the foundation for enhanced service delivery by providing the optimal solution from the Edge-to-the-Core of the operator's network.

To begin with, the operator can seamlessly provision **High Speed Data** over any access medium, including wireless, copper or fiber, while delivering high performance All-IP access designed for today's traffic. MXK, in combination with the zNID ONTs, provide solutions for the core and edge points of the network while providing High Speed Data solutions for FTTH, FTTC and FTTB deployments supporting multiple well-defined standards including GPON and Active Ethernet for fiber and ADSL2, VDSL2, PWE and EFM for copper deployments. Ultimately, MXK is the cornerstone for FTTx, a singular platform supporting Fiber to the Home, Fiber to the Curb and Fiber to the Building solutions.

When it comes to **Voice Transmission and Interoperability**, the operator can subsequently overlay IP voice service as Zhone's MXK will interoperate with any softswitch that the operator chooses to provide converged voice and data service over any access medium. Services like Class 5 Local, Class 4 Long Distance, PSTN Emulation, NGN and VoBB can all be enabled seamlessly over the same network. The MXK provides industry leading softswitch interoperability, supporting the widest range of VoIP interconnectivity, with vendors like Cisco, Thomson, Broadsoft, Nortel, Huawei, Cedar Point, Metaswitch, Genband, Sonus Networks, Taqua and UTStarcom.

**Multimedia, Entertainment and IPTV** has evolved to be one of the more exciting and challenging services to deploy. Zhone enables the operator to effectively build the foundation for the next-generation Interactive Communication network. The operator can now overlay IPTV and Entertainment service to provide a converged voice, data and entertainment service over any access medium. Zhone's products and solutions have been tested for interoperability with a diverse range of video systems such as Head-end, Middleware, VOD and STBs. MXK is interoperable with video systems from vendors like Kasenna, Cisco, Thomson, Minerva Networks, Nokia Siemens Network, Pace and Amino.

**Zhone FiberHome™**, an extension of Zhone's market-leading FTTx solutions, helps service providers enable high-speed broadband connectivity in places where broadband was not being extended. With this portfolio, Zhone is providing new FTTN, FTTC, FTTB and FTTP solutions to extend operators' last-mile reach with high-speed Copper to the Premise (CTTP) and wire-speed Ethernet to the Premise (ETTP) connectivity and enable advanced broadband and multi-play service delivery. The solutions available in the current Zhone FiberHome portfolio provide VDSL2 and Active Ethernet connectivity in the last mile in a 1U compact form factor to extend network reach and deliver cost-efficiency benefits that exceed those of competitive solutions.

With the convergence of Internet, wireless and broadband services redefining network requirements, operators need high-performance bandwidth resources to help manage higher traffic loads on their existing network infrastructure. Zhone offers **Mobile Backhaul solutions** called **Zhone FiberCell™** to enable next generation 3G and 4G network traffic backhaul cost-effectively. Specifically, the Zhone FiberCell portfolio features alternative backhaul options that give operators the flexibility to choose between copper and fiber, including Ethernet in the First Mile (EFM), Gigabit Passive Optical Network (GPON) and Active Ethernet (AE).

**Zhone FiberLAN™** is a next generation Optical LAN Solution (OLS) built entirely on industry leading standards. This fully converged solution is scalable for a single or multilevel buildings, or large campus environments where customers are installing new facilities or upgrading their current LAN infrastructures

Designed as a layer 2 transport medium, Zhone FiberLAN delivers converged voice, video, and data services, at Gigabit levels to the end user, over a single strand of fiber; thus reducing your LAN infrastructure cabling and electronics to a fraction of what is required compared to a conventional Ethernet LAN solution.

As technology advances, so do ways to conserve energy and reduce operating costs. FiberLAN Optical technology replaces conventional copper and multimode cables used with traditional network infrastructures to a single mode fiber optic cable allowing you to eliminate the traditional workgroup switches, patch panels, and racks in the riser closets.

Zhone offers leading **Ethernet in the First Mile (EFM)** solutions based on IEEE 802.3ah industry standards. Zhone's EFM solution provides service providers with a tremendous ROI due to the utilization of existing copper infrastructure, simplicity in installation and provisioning, high reliability with minimal downtime, easy to manage and overall CAPEX savings.

## Market Leadership

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Zhone is today regarded as the fastest growing GPON vendor worldwide. Zhone's momentum continues with consecutive calendar quarters **since Q1 2010** as a **Top 5 leader** in each of our served **GPON markets**.

In the past couple years, Zhone has received many accolades from leading market research firms in the industry for its FTTx multi-service solution portfolio.

*"Since announcing the MXK, Zhone has made impressive gains in GPON and Multi-service access solutions," said **Jeff Heynen Directing Analyst Broadband and Video for Infonetics Research**. "Subscriber density, expanded throughput performance of the MXK, and a broad range of zNID ONT's differentiate Zhone's FTTx offering."*

*"Zhone continues to gain momentum with the MXK and the newly expanded zNID line," said **Teresa Mastrangelo, Principal Analyst for Broadband Trends**. "Zhone has made impressive gains in FTTx globally, particularly in EMEA and CALA where it now ranks among the top three GPON vendors. Besides the inherent product strengths of the MXK and zNID line, Zhone benefits greatly from its ability to address global markets."*

# Customers

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Zhone has over 750 global service provider customers today who are looking for carrier-class solutions for their advanced connectivity and ultra bandwidth needs from Zhone. They are impressed by Zhone's ability to stay a step ahead of the industry. Zhone's customers attest to the high quality and performance of Zhone products, solutions and support today. Our customers are closely involved with the product design and development process, ensuring that products and solutions address the critical needs of the service providers. Zhone products are designed, developed and manufactured in the United States keeping in mind the quality and performance requirements of our global customer base.

*"Our established wireless presence and our expansive fixed broadband plans necessitated a multi-service platform choice with high scalability, density, reliability and interoperability. We tested many platforms before choosing the MXK as one of our FTTx vendor partner. Zhone's success in the region with the MXK platform was a big reason for our choice of going with Zhone."* - **Mobily, Saudi Arabia**

*"Zhone's FTTx solution gives us unprecedented flexibility, scalability, robust network control and the ability to offer more bandwidth to customers with greater efficiency. Now, we are able to efficiently offload LTE services and provide efficient mobile backhaul utilizing our existing nationwide FTTH network. By utilizing our existing FTTH infrastructure for mobile backhaul, Zhone was able to help us quickly and cost-effectively launch LTE services at full bandwidth capacity and maximum Gigabit Ethernet line speed nationwide."* - **Etisalat, UAE**

*"Zhone has proven to be a valuable partner in our growth strategy over the years, providing the technology solutions and support needed to design flexible access networks for our multi-play service needs. Zhone's support of the Microsoft Mediaroom platform, their overall responsiveness during the trial phase and the ability of the MXK system to effectively support our unique mix of multicast and unicast network traffic needs will help improve our ability to deliver IPTV services effectively to our customers."* - **SRT, USA**

*"Given the significant business growth we've experienced since first partnering with Zhone in 2009, they were a natural fit to consider for the access needs of our new broadband stimulus project. After extensive evaluation, we realized that Zhone's MXK platform best met our requirements for a high capacity backplane and delivered the switching capacity necessary to meet the high bandwidth capabilities and service quality we have set for the Hardy FTTH network."* - **Hardy Telecommunications, USA**

*"Zhone's GPON solutions are giving us a high level of flexibility in both our service options and system configuration options that wasn't available with our existing BPON network. With our expanded bandwidth capacity, we are now able to more efficiently deliver the high-quality advanced services that will elevate our competitive position and accelerate our growth strategy in the coming months. Zhone's portfolio of zNID ONTs and the MXK help us extend our reach with our business customers."* - **Telecom TZ, Russia**

# Management Team

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Zhone prides itself in its company culture and people. Zhone is led by a highly competent and qualified management team, which comprises of executives who have spent many years in various management roles with some of the leading technology companies globally.

## EXECUTIVE OFFICERS

### **Mory Ejabat**

Chief Executive Officer, President  
and Chairman of the Board of Directors

### **Kirk Misaka**

Chief Financial Officer,  
Corporate Treasurer and Secretary

## SENIOR MANAGEMENT

### **Brian Caskey**

Chief Marketing Officer

### **David Misunas**

Vice President of Business Development

### **Eric Presworsky**

Chief Technology Officer

### **Ed Thompson**

Vice President of Manufacturing

### **Michael Fischer**

Vice President of US Sales

### **Bruce Roe**

Vice President of Engineering



# Z H O N E<sup>®</sup>

Bandwidth Changes Everything™

# Zhone Locations



## Corporate Headquarters

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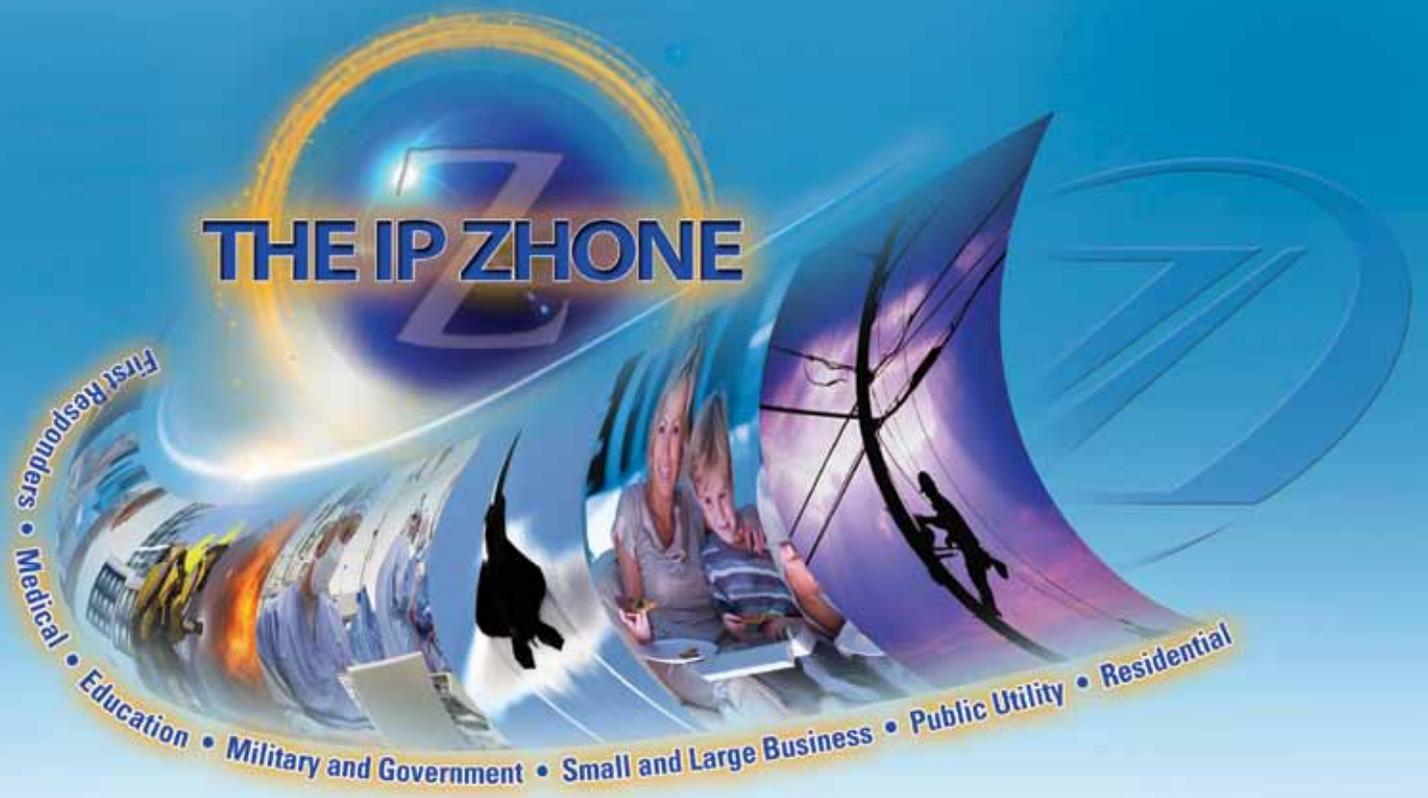
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## Sales Offices

Atlanta • Beijing • Bogotá • Cairo • Chicago • Dallas  
Dubai • Hong Kong • London • Miami • Milan  
Moscow • Oakland • San Juan, PR • São Paulo  
Singapore • Stockholm • Tampa • Toronto





## Conclusion

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At Zhone, **Bandwidth Changes Everything** is not just a tag line. It is our focus and our fundamental belief in developing carrier-grade broadband solutions for our customers that ensure bandwidth is never a constraint for them as they continue to provision enhanced value-add applications and services for users. As the world today is focused on the broadband infrastructure to ensure that the broadband network can become enablers and virtual backbone for the global economy, Zhone is helping make it all happen today.

At the heart of our product philosophy is the inherent understanding of our customer's needs. We will continue to work with our customers to solve their connectivity and bandwidth needs and provide them with the optimal solution to build the **NETWORK OF THE FUTURE... TODAY!**



**LEARN MORE**  
Experience the Network  
of the Future... Today



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The USA**

For more information about Zhone and its products, please visit the Zhone Web site at [www.zhone.com](http://www.zhone.com) or e-mail [info@zhone.com](mailto:info@zhone.com)

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