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Product Catalog: Government



WE ARE

Astound Business Solutions



A top-tier, national network solutions provider

We provide companies with high-capacity and secure connectivity, Internet, voice, cloud networking, and other solutions for their mission-critical applications. Covering cities from coast-to-coast, we maintain a local, customer-centric approach, with dedicated industry experts on-hand 24/7 - as we partner with businesses and help them grow and remain competitive

The Astound Fiber Network

Powering municipalities across the U.S.



2,000+ CELL TOWERS

Connectivity

Cloud Networking

Internet

- Custom Solutions/Advanced Services
- Voice/Unified Communications

Connectivity

With our connectivity solutions, we provide reliable, state-of-the-art transport technologies over our 100% fiber optic network. And with guaranteed performance and responsive, local service, we help businesses be ready for anything.

Why do you need connectivity?

- Growing bandwidth demands
- Connectivity is the infrastructure of networks; foundational to online presence
- Scalability



Connectivity Solutions at a Glance

Ethernet

Dedicated point-to-point or multi-point connectivity backed by carrier-grade fiber to meet the demands of high-bandwidth applications.

Wavelength

Secure end-to-end connectivity up to 400 Gbps.

Dark Fiber

Secure, scalable bandwidth on your own private network. Manage control and security with no equipment or protocol restrictions.



Astound was able to provide us the services that no one else was able to.

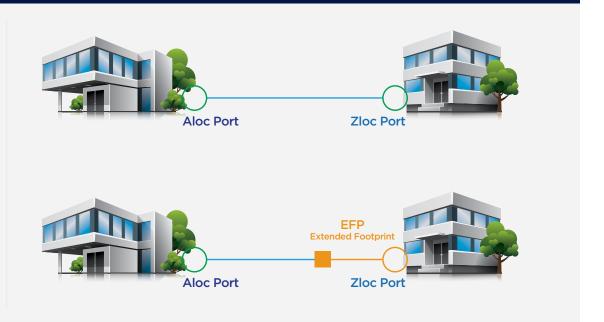
- Alden Gleason, Assistant Director of IT, City of Celina, TX

Ethernet Private Line (EPL)

Get the most flexible point-to-point configurations backed by reliable, carrier-class fiber. Our EPL service meets the demands of high-bandwidth applications over Ethernet, so you can expand to new locations, connect new offices and data centers, and run bandwidth-intensive applications with confidence. We stand behind our solutions with an end-to-end, industry-leading Service Level Agreement (SLA) that extends across our backbone, metro core, and last-mile network for fiber-based services.

Ethernet Private Line — Point-to-Point Ethernet Connectivity

- Powers high-bandwidth applications, so you can expand to new locations, connect new offices and data centers, and run any application with confidence
- Dedicated connectivity between two locations across our Ethernet network
- Ideal for municipalities that need a secure, private connection between two locations; transparent plug and play



Ethernet Virtual Private Line (EVPL)

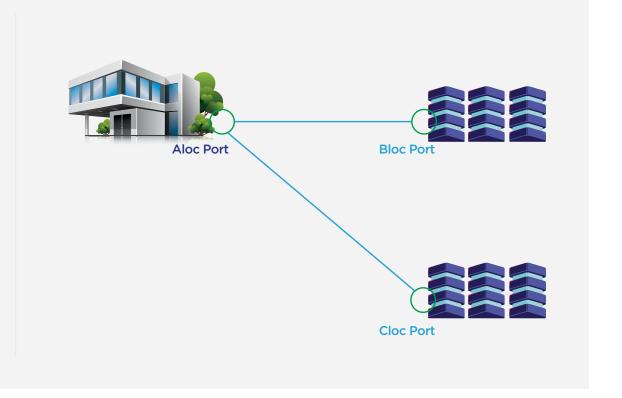
Connect multiple sites to a single hub with a dedicated high-speed private network for transferring data, voice, and video communications.

EVPL streamlines your network management across multiple locations, with configuration options to support your offices anywhere.

Ethernet Virtual Private Line

Point-to-Multipoint Connectivity:

- Dedicated connectivity between more than two locations, with a "hub-and-spoke" topology
- Ideal for multi-location government facilities that want to maximize network control at one primary location, or that have a designated HQ and branch office structure; reduces number of network ports required



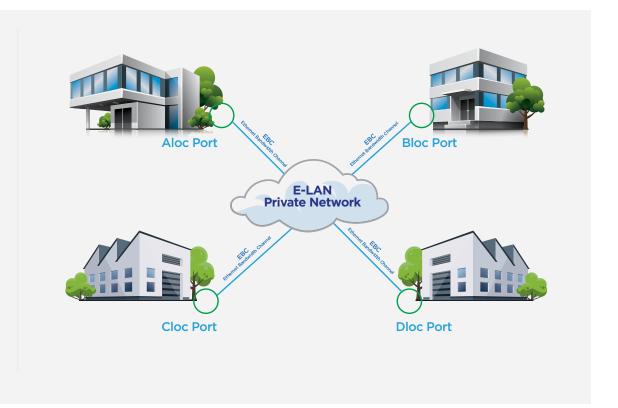
Ethernet Local Area Network (E-LAN)

Use E-LAN service to allow multiple locations to communicate directly with each other across your private network through a seamless extension of each site's LAN environment. Our self-healing fiber ring protects your critical data and provides superior network availability and resiliency.

Ethernet Local Area Network

Anywhere-to-Anywhere:

- Dedicated connectivity between more than two sites in an "any-to-any" topology
- A seamless extension of each connected site's LAN environment to other connected sites
- Ideal for distributed organizations: A virtual switch in the cloud. Lowest cost; outsources switching to the Astound network



Ethernet Solutions

Benefits of Astound Business Solutions Ethernet Products

Unlimited Scalability - Speeds that support any size application from regional to global scale, with the ability to grow your public domain

Flexibility - Increase bandwidth dynamically

Consistency - Supports features designed to guarantee predictable levels of network performance

Comprehensive SLA - You can run your municipality locations with confidence, knowing that your Internet service is monitored and assured

Strong Support - You have peace of mind with a local, responsive team, and we monitor our networks through our Commercial Network Operations Center to provide complete customer service 24/7/365

Resiliency - Most reliable infrastructure; drastically reduces downtime

Quality of Service - Full redundancy ensures improved reliability and disaster recovery ability

Cost-Effective - Networks are less complicated and easier to maintain than traditional networks

Symmetrical - Upload speeds match download speeds

| Standard Offerings | | | | |
|--------------------|------------|-------------|--|--|
| 50 Mbps, 100 Mbps | 2 Gbps | 20 Gbps | | |
| 200 Mbps, 300 Mbps | 3 Gbps | 30 Gbps | | |
| 500 Mbps | 5 Gbps | 50 Gbps | | |
| 1 Gbps | 10 Gbps | 100 Gbps | | |
| 1 GB Port | 10 GB Port | 100 GB Port | | |

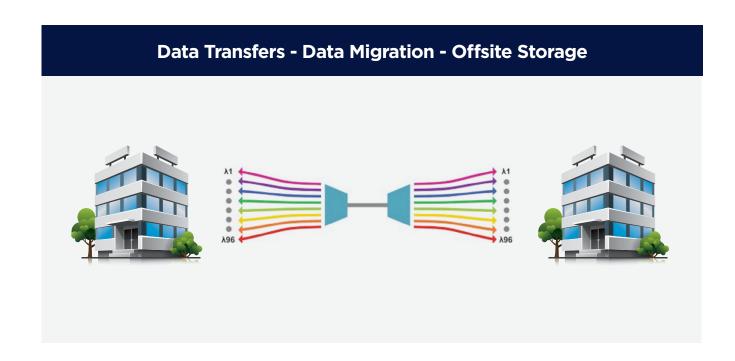
Wavelength

A partially meshed, intra-region, high-performance network that produces unsurpassed connectivity with elegant simplicity. The technology of choice for transporting large amounts of data between sites. Facilities-based network delivering proven optical performance that links high-traffic locations with key data centers and fiber-fed access points for seamless connections. Priced per endpoint (no standard price).

Standard Symmetrical Offerings 10 Gbps | 100 Gbps | 400 Gbps

Wavelengths have fewer points of failure and provide better security compared to switched/routed IP services

- Service level agreements
- Predictable performance
- · No variance in latency or jitter
- Dedicated capacity that assures application performance
- Protected routes are available
- DWDM Dense Wavelength Division Multiplexing
- Simple point-to-point pipe



Dark Fiber

Dark Fiber is a dedicated strand of fiber optic cable that connects your locations within the same metro area, and it allows you increase connectivity, network efficiency, and speed for your constituents.

You have end-to-end control, unlimited bandwidth, and the flexibility to run unique protocols and use your own equipment. A Dark Fiber network offers maximum security, since you are not running through someone else's network.

Typical bandwidth plans often do not address the increasing demand for bandwidth or account for secure Internet capabilities to transmit large files and sensitive data. They also do not consider the need for scalable, end-to-end network control that requires instant response times for point-to-point communications.

Workloads and operational demands continue to increase while budgets decline. This drives you to improve efficiencies and cut costs. However, leasing more line capacity on existing networks or purchasing more bandwidth presents economic challenges when faced with return on investment pressures.



DARK FIBER



Standard Offerings

STRAND

PAIR

Unlimited Bandwidth - Ensures the necessary bandwidth, with optimal connectivity

Secure - Your sites are directly connected and avoid any outside network traffic

Scalability & Flexibility - Increase bandwidth as you grow or reduce when necessary

Control - Create a network strategy and structure for your needs

Reliability - Full redundancy ensures improved reliability and disaster recovery

Why Choose Dark Fiber from Astound?

Our extensive fiber footprint, assets, routes, and secure rights-of-way provide your network infrastructure with the reliability, scalability, and flexibility to support mission-critical applications. It also enables you to support different configurations, services, and applications that standard bandwidth plans cannot handle. Dark Fiber is an affordable strategy to ensure your municipality maintains complete control over your network infrastructure.

Internet

Internet is the lifeblood of every government agency. Having sufficient bandwidth that delivers a consistent, positive employee/constituent experience is vital in order to meet your growing online needs.

We offer a range of Internet options, giving municipalities a breadth of choice and a variety of opportunities to ensure they have the right bandwidth at the right price.



Internet Product at a Glance

Dedicated Internet Access (DIA)

Secure, scalable bandwidth on your own private network. Manage control and security with no equipment or protocol restrictions.

"

Astound is a great company, doing a great job, and with excellent customer support. From our phone service to Wi-Fi to internet overall, I am 100% satisfied, and more than pleased.

- Art Armstrong, President of AME

Dedicated Internet Access (DIA)

Speed. Reliability. <u>Guaranteed.</u> Dedicated to your Success.

With DIA, you're guaranteed to receive the exact bandwidth you purchased, 100% of the time. It's a great fit for municipalities that:

- Use or host cloud-based applications
- Require dedicated bandwidth
- Need high-bandwidth upload and/or download capability

Fast, Secure Connections

Astound's DIA enables mission-critical business activities via:

- Dedicated, reserved, symmetrical high-bandwidth Internet speed
- Secure connections with guaranteed up-time and always-on connectivity
- Scalable solutions

Non-shared, direct connection to our fiber network

- Symmetrical upload and download
- Reliability backed by Astound's 99.99% Service Level Agreement
- Speeds up to 100 Gbps
- IPv4 blocks up to /24 w/ IPv6 support
- DDoS Mitigation
- 24/7/365 expert support

Standard Symmetrical Offerings

| 50 Mbps, 100 Mbps | 2 Gbps | 20 Gbps |
|--------------------|---------|----------|
| 200 Mbps, 300 Mbps | 3 Gbps | 30 Gbps |
| 500 Mbps | 5 Gbps | 50 Gbps |
| 1 Gbps | 10 Gbps | 100 Gbps |

Key Attributes:

- Redundancy
- Private Network
- Dedicated Symmetrical Connectivity
- Service Level Agreement

ADD-ONS

- SD-WAN
- Static IP & Subnets
- Business Router, Managed Router
- Business Wi-Fi
- Bursting
- Border Gateway Protocol (BGP)
- Wireless Internet Backup

Astound is the #1 Business Internet Service Provider



Astound has been recognized by PCMag's Business Choice readers as the top Business Internet Service Provider (ISP) in the nation,* ranking #1 in:

- Overall Satisfaction
- Speed
- Reliability
- Ease of Use
- · Likelihood to Recommend

We maintain a local, customer-centric approach, with dedicated industry experts on-hand 24/7, as we partner with businesses and help them grow and remain competitive.

Our NOC and U.S. call center, along with our local Sales Reps and Account Managers, provide excellent support to our customers.

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Voice and Unified Communications

Powerful, cost-effective communications for your business

Astound has multiple options for voice solutions, which are all delivered over our fiber-rich network and can be customized to fit your organization's specific needs.



UCaaS Options at a Glance

UCaaS/Hosted Voice

Cloud-Based Unified Communication Tools which include unlimited local, regional and long-distance calling.

Trunks

PRI/SIP high-capacity connectivity that supports legacy and IP PBXs with multiple interfaces.

Business Voice

Reliable telephone lines for voice, fax, and more.

Astound's Voice and Fiber single-handedly helped propel Yelm Community Schools light years ahead of where we were.

- Jonathan Maynard, Director of Technology, Yelm Community Schools

Unified Communications as a Service (UCaaS)

Astound has two great offers to meet your business communication needs - Astound Hosted Voice and Ascend Unified Communications. Plus, take your communication to the next level with Cloud Contact Center. Our Unified Communications (UC) streamlines communication among employees, partners, and customers, reducing costs and enhancing business efficiency. Built on VoIP calling, UC integrates various communication methods, including phone calls, video conferencing, instant messaging, and voicemail.

Highly scalable solution that delivers:

- A feature-rich product at a competitive price-point
- Desktop and Mobile App
- Team Chat and Presence
- SMS and MMS
- Meetings with transcripts and insights
- Voicemail, Visual Voicemail, and Voicemail Transcription
- Al Assistant
- Microsoft Teams integration
- Cloud Contact Center
- Advanced Multi-Line Hunt Group
- Call Recording
- CRM Integration
- Auto Attendant
- Two Way Webfax
- File Backup and Collaboration
- Call Reporting and Analytics
- Archiving

BENEFITS OF UCaaS

Increased Productivity: By integrating various communication tools into a single platform, employees can switch seamlessly between calls, messages, and meetings, reducing downtime and improving workflow efficiency.

Enhanced Collaboration: UC facilitates better teamwork through features like video conferencing, screen sharing, and instant messaging, enabling real-time collaboration regardless of location.

Cost Efficiency: Consolidating communication services reduces the need for multiple vendors and systems, leading to lower operational costs and simplified management.

Improved Customer Service: With integrated communication channels, businesses can respond to customer inquiries more quickly and effectively, enhancing customer satisfaction and loyalty.

Scalability: UC solutions can easily scale with the growth of the business, accommodating new users and additional features without significant infrastructure changes.

Mobility and Flexibility: UC supports remote work by allowing employees to access communication tools from any device, anywhere, ensuring they stay connected and productive.

Astound Hosted Voice and Ascend Unified Communications (UC)

Two great choices to meet your communication needs - Astound Hosted Voice and Ascend Unified Communications (UC). From simple phone-only deployments to large complex deployments that require integrations, we have you covered.

| Astound | Hosted Voice | Ascend Unified Communications | | | |
|-------------------------|--|---|--|---|---|
| Hosted | Hosted+ | Essential | Pro | Enterprise | For Teams Advanced |
| Phone only • Voice | Phone, Mobile App, Desktop App • Voice • Chat | Phone, Mobile App, Desktop App • Voice • Chat | Phone, Mobile App, Desktop App • Voice • MMS • Chat • Meeting (100) | Phone, Mobile App, Desktop App • Voice • MMS • Chat • Meeting (200) | Phone, Teams Apps • Voice and Business SMS integrated into |
| Flexible cloud-ba | • SMS ased solution tailored for businesses | Meeting (4) Comprehensive commultimate flexibility. | SMS • Integrations nunication system tailored for | • SMS • Integrations businesses requiring | Teams application Enhance your UC and Teams |
| Cost-effective poffices | phone-only solution for | Maximize effectiveness of hybrid and remote workers Receive greater insights through advanced reporting and archiving Maximized call flow efficiency through advanced call routing Extend communications platform through APIs for integration with 100+third-party apps (CRM, ERP, Ticketing Systems, etc.) Leverage the latest technology with Meetings, Company Messaging, File sharing, AI assistant, Analytics, and more | | experience by seamlessly combining advanced telephone and SMS with Ascend for Teams Advanced embedded app | |

Astound Hosted Voice Seat Types

Powerful, Cost-effective Communications for Your Business

Astound Hosted and Astound Hosted+ provide a straightforward and efficient communication solution tailored for your business.

Astound Hosted (Phone)

Astound Hosted+ (Phone, Chat, SMS)

Enhance the quality and dependability of your business communications with Astound Hosted. Astound Hosted offers a user-friendly web portal for effortless management, along with essential features such as voicemail, visual voicemail, call forwarding, call screening, and the 'find me follow me' function.

- Price-conscious businesses
- Front-line staff or supervisors
- Office or hybrid workers
- Handset Required (Add-On)

Effortlessly stay connected with customers and colleagues, no matter where you are. Astound Hosted+ encompasses all the features of Astound Hosted, along with additional capabilities such as chat, SMS, Softphone, mobile app, voicemail transcription, and meetings.

- Value-conscious businesses
- Office, mobile, or hybrid worker
- Supervisors, managers, executives
- Handset and/or desktop/mobile applications

In addition to the two seat choices, the Astound Analog Line is available exclusively for use with Hosted Voice services.

The Astound Analog Line is used specifically with Astound Hosted Voice service to support other devices requiring dial-tone only. Typically not a phone. For example: fax machines, postage machines, etc.

Astound Hosted Voice Applications

Success in today's fast-paced business world relies on effective communications. Connect with customers or co-workers from anywhere with a network that offers **scalability**, **reliability**, and allows you to easily **manage features**.



Astound Hosted+ (Desktop)

Access and control of your Hosted Voice services from your computer



Astound Hosted+ (Mobile)

Access and control of your Hosted Voice services from your mobile device

Application Features

Web-based management is at your fingertips. Easy to use and administrate online.



Web Portal Management for Users

Easily manage individual feature options:

- Web-based access from anywhere
- Review call history
- Manage voicemail
- Configure call handling
- Manage contacts

Web Portal Management for AdministratorsUsed for management of the



- Used for management of the business group
- Auto attendant
- Multi-Line Hunt Groups (MLHG)
- Manage all user lines & phones
- · Music on hold
- Extension Management
- Call Reporting

Astound Hosted Voice Phone Models

Multiple devices from HP/Poly available to support simple deployments across any organization, and ensure the end-user has the functionality required to meet job needs.



- User-Friendly Management
 Intuitive web interface allows for easy management of phones
- No IT Staff Required
 Phones are pre-configured before installation
- Phones are plug-and-play so if you need to move a phone, no call to IT is needed
- Maintenance Free
 We provide all maintenance and updates, reducing the burden on your IT team
- Every phone is covered as long as your service is active

^{*}See your account representative for a full list of available phone models and features

Ascend Unified Communications Seat Types

Ascend UC is our world-class UCaaS Solution

Ascend UC is a fully-integrated unified communications and collaboration platform that combines a Cloud-PBX phone system, video conferencing, chat, screen sharing, file management, and more into a seamless experience.

| Essential For the Standard Business User | Pro For the Collaborative Business User | Enterprise For the Power User |
|---|--|--|
| | | |
| Voice Calling Internal and External | Voice Calling Internal and External | Voice Calling Internal and External |
| Mobile and Desktop App | Mobile and Desktop App | Mobile and Desktop App |
| Available Desk Phone (1) | Available Desk Phone (5) | Available Desk Phone (5) |
| Chat Functionality | Chat Functionality | Chat Functionality |
| • SMS | • SMS/MMS | • SMS/MMS |
| Video Meeting (4 participants) | Video Meeting (100 participants) | Video Meeting (200 participants) |
| • File Sharing (5GB/User) | • File Sharing (50GB/User) | • File Sharing (200GB/User) |
| • Integrations - Chrome, Office365 | Integrations - Essentials Plus - SugarCRM, | • Integrations - Pro Plus - Salesforce, |
| | Zoho, Zendesk | Service Now, Netsuite, MS Dynamics |
| | Call Center Solutions | and more |
| | | Call Center Solutions |

^{*}Express Seat is available for voice-only calling

^{**}Resource Line is available for faxing

Ascend UC Seat Types - Microsoft Teams

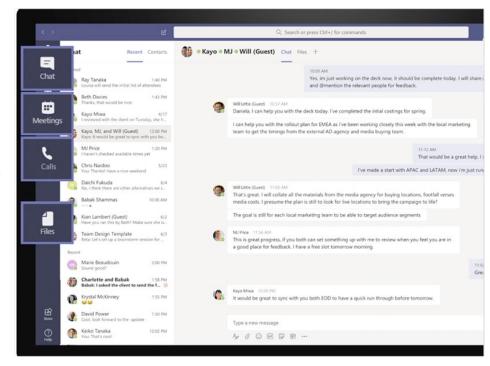
Designed to boost the power and functionality of Microsoft Teams through the enterprise-grade Cloud PBX of Ascend.

For Teams Advanced

Designed for businesses who want Microsoft Teams for collaboration but need business texting and the advanced telephone features of an Enterprise PBX

- Desktop Phone & App
- SMS/MMS
- Integrated AI Functionality
- 13+ Full Third-Party Integrations
- Call Center Solutions





Microsoft Teams for Collaboration - Use Teams collaboration tools to manage chat, file sharing and video conferencing.

Ascend for Communications - Enhance your business communication with our enterprise-grade phone system, featuring integrated SMS and advanced call routing capabilities.

Ascend UC Applications

Ascend UC's world-class communications platform is packed full of hundreds of essential features for businesses of all sizes..

Ascend Features

Ascend Enhanced Features

Phone System and Hardware

Cloud-based phone service offering 100+ enterprise-grade calling features and excellent network quality and uptime.

System configuration and call reporting managed from a single web-based portal with built-in Spam Call Protection. Variety of plug-and-play devices available, preconfigured to cater to your business needs.

Mobile + Desktop Apps

The UC App transforms smartphones and computers into essential collaboration tools with calls, chats, video messages, advanced voice mail features, texting and presence awareness.

Messaging

Real-time communication with direct, private, and public channels for unlimited conversations, file sharing and more.

For Teams Advanced

For Teams user, enhance your communication with our UC for Teams Advanced integration, seamlessly combining UC's advanced cloud-based phone systems with Teams' collaboration features for a unifed, single-app experience.

AI Assistant

Increase productivity using Generative AI to access information more easily and help with daily tasks right within the mobile and desktop app.

Meetings

Meet face-to-face in HD video and share your screen for more interactive and productive meetings with colleagues and customers. Access to advanced features - like automatic meeting lock, virtual backgrounds, meeting transcriptions and more.

Call Center Features

Extended capability with supervisor monitoring, scheduled reports, extended storage, real-time dashboard, smart greetings, customizable call distribution and agent wrap time.

Archiving

Automatically capture and retain calls, chats, meetings and SMS to help ensure your communications are preserved and archived in one place.

Have continual historical access to your company's last 30 days of UC calls, video meetings, chats and SMS, Free 30-day archiving retains communication data for 30 days. For longer retention periods, upgrade to one of our 1-year to 10-year plans.

Contact Center

Voice, chat, and email queues combine into a single omini-channel experience. Customizable call flows provide exceptional customer interactions.

Company Messaging

Enable SMS (text) communication on your main or toll-free business number, giving your customers another way to engage with your business.

Ascend UC Phone Models

Plug-and-Play phones available from a variety of vendors and price points to ensure the needs of the end-user are met.



- User-Friendly Management
- Intuitive web interface allows for easy management of phones
- No IT Staff Required
 Phones are pre-configured before installation
- Phones are plug-and-play so if you need to move a phone, no call to IT is needed
- Maintenance Free
 We provide all maintenance and updates, reducing the burden on your IT team
- Every phone is covered as long as your service is active

^{*}See your account representative for a full list of available phone models and features

Ascend UC Integrations

Ascend UC Extend Integrations Platform connects powerful voice, chat, video meetings, and contact center functionality into everyday business applications. Driving higher productivity and increasing customer retention at no heavy cost.

Increase Productivity

Improve employee and customer experience by enabling communication capabilities in everyday business apps

Better Customer Experience

Access relevant customer data at the right time to deliver a more personalized experience

Access Critical Data

Add employee calling and communication data to your business reporting tool(s)







VOICE



MEETING



ANALYTICS



CONTACT CENTER



ADDRESS BOOK



Developers use assets to build custom solutions to meet business needs





End-users use solution in apps and websites

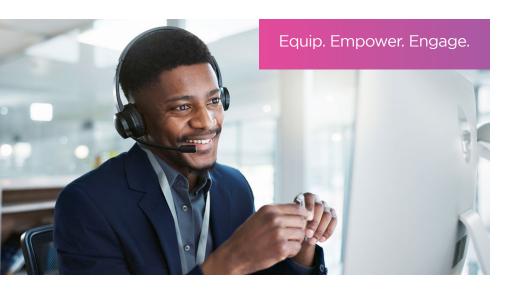
Cloud Contact Center

Empower Agents with Cloud-Based Omnichannel Capability — Anytime, Anywhere

Cloud Contact Center from Astound delivers a flexible, seamless, all-access Customer Experience (CX) for today's multi-site contact centers. Through the convenience of full-featured, built-in omnichannel availability — around the world and around the clock — let customers decide when, where, and how to conduct business with your team.

The Value of Versatility

Through versatile tools that optimize your workforce and more flexible inbound and outbound channels, engage with customers wherever and whenever they happen to be ready — at home, work, or play.



Boost efficiency, agent productivity, and contact center performance across sales, service, and support. With Cloud Contact Center from Astound.

| Omnichannel | Enhanced | Standard |
|---------------------------------------|---|-------------------------------|
| Communication | Experiences | Offerings |
| Voice Web-Chat Email SMS Social Media | Advanced Interactive Voice Recognition (IVR) Skills-Based Routing Quality Assurance Call Monitoring AI-Driven Interaction Analytics | Gold Gold Plus Platinum |

Key Benefits and Results

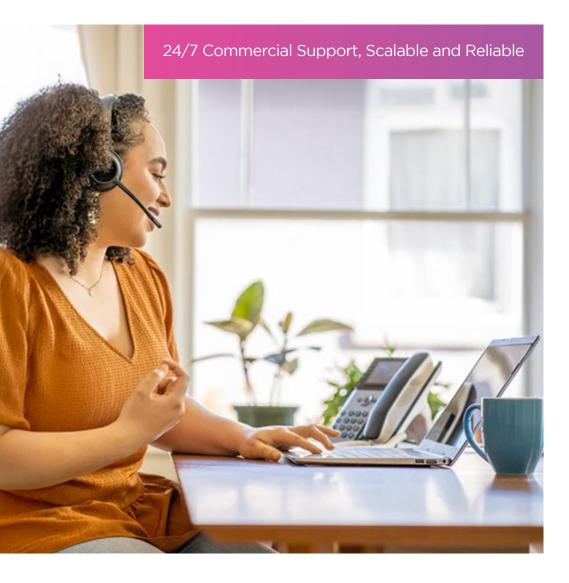
Dynamic Notifications - Curate more effective campaigns, from simple-scheduled touches to sophisticated multi-touch marketing.

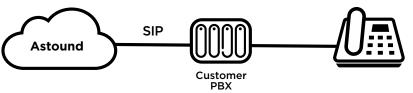
Custom Integrations - Seamlessly merge contact center functions with CRM, workforce management, and on-demand data dips.

Schedule Manager & Evaluator Dashboard - Maximize resources for appropriate coverage, while monitoring interactions with a real-time dashboard.

PRI and SIP Trunking

Connect your phone system with unlimited Local Calling. Regional, Toll-Free, and Long-Distance Minutes of Use Plans (MOU) available.

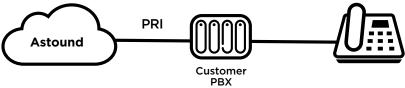




Session Initiation Protocol (SIP)

Enables scalability and unlimited business growth, supporting:

- Networking multiple IP-PBXs to expand voice to different sites
- Remote capabilities
- IP phone capable
- IP-PBX can provide call flow automation



Primary Rate Interface (PRI)

Offers T1-based voice channels, supports:

- Better utilization of each trunk
- Networking of multiple PBXs to centralize voice communications
- Older and new phone systems
- System functionality
- Basic calling features

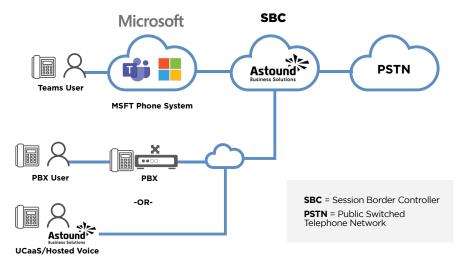
Direct Routing for Microsoft Teams

Direct Routing for Microsoft Teams allows customers to use Astound as their telephone provider to deliver voice calling capabilities for Teams users. It is a more reliable and less expensive alternative for Teams clients compared to Microsoft Calling Plans. Direct Routing is sold in a similar manner as SIP is today. The initial Direct Routing Service includes 10 sessions and requires a bucket of minutes (MOU). Additional sessions may be added.

STANDALONE



HYBRID



Direct Routing Service

Direct Routing Service

Sessions

(Minutes of Use)

MOU

(10 Sessions Included)

(Additional Sessions)

Direct Routing

Standalone

Direct Routing for Teams Only

Hybrid

- Direct Routing Service and Astound SIP or PRI
- Direct Routing Service and Astound Hosted Voice

Note:

Calling Features for Teams clients are provided via Microsoft.

Customer is responsible for configuring their MSFT 365 and Teams service. This includes having all required licensing for their users.

Astound Business Voice

Keeping Your Organization Connected

Reliable phone services are critical to ensuring that your employees, facilities, and vendors can stay in touch. Our local and long-distance services can provide you the means for customer care and technical support straight through to vendor management and sales enablement.



Cloud Networking

Secure, reliable connections to enable your government operations

Experience our Cloud Networking solutions to gain access to a global network of over 120 data centers, and leverage premier services that are optimized to support cloud-based applications. Our high-performance routes are engineered to accommodate any configuration, ensuring that your network runs smoothly and efficiently.



Cloud Networking at a Glance

Data Center Access

Bypass the public Internet by using our network to create a private, dedicated connection with one of our Cloud technology partners.

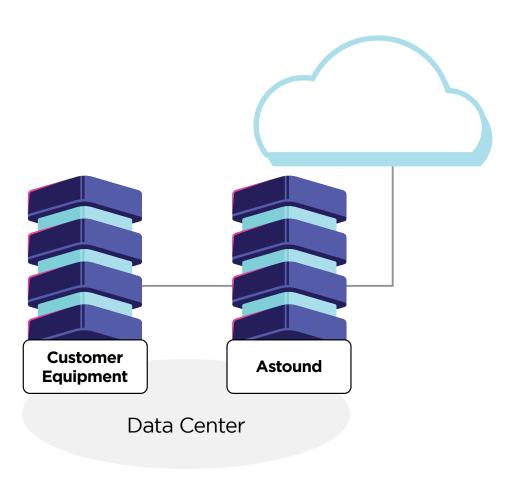


We don't even talk about downtime at team meetings. It never comes up, because outages don't happen.

- Eric Matthews, CIO, City of Allen, TX

Data Center Internet Access (DC-IA)

For government entities that have a presence in a data center location and require Internet service to a cage, cabinet, or suite.



Standard Symmetrical Offerings 500 Mbps 1 Gbps 5 Gbps 10 Gbps

Key Differentiators vs DIA:

- Powerful Internet access without a remote access tail
- Must be co-located in the same data center

| Data Center | City | |
|------------------------------|-----------------------------|--|
| Equinix-DC2 CoreSite-NY1 | Ashburn, VA New York, NY | |
| Markley-1 Summer Equinix-CH2 | Boston, MA Chicago, IL | |
| Equinix-DA2 | Dallas, TX | |
| Equinix-SEA10 Equinix-SV5 | Seattle, WA San Jose, CA | |
| EdgeConneX | Hillsboro, OR | |

Azure ExpressRoute

Your private fast lane to Azure, for quick, reliable uploads and downloads with increased agility.



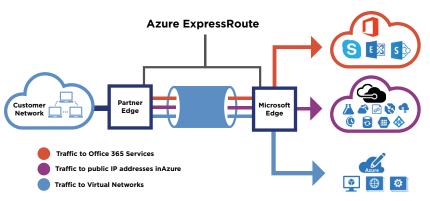
Astound enables your government office locations and data centers to connect directly to Microsoft Azure ExpressRoute and other public and private cloud platforms. With bandwidth options up to 100 Gbps over dedicated fiber, our data center access

solutions bypass the public Internet, ensuring data privacy and guaranteeing enhanced scalable throughput speeds through optimized connectivity.

Benefits

Get a more consistent network experience than Internet-based connections.

- Lower Cost of Ownership Experience cost savings when compared to standard Internet access charges into Microsoft Azure ExpressRoute.
- Better Resiliency Our fiber ring topology helps protect critical data to superior network availability.
- Enhanced Security Data is routed across the Astound network and isolated from the public Internet.



EPL or EVPL directly connected to Azure

Standard Symmetrical Offerings

| ExpressRoute | ExpressRoute Direct |
|---|---------------------|
| Mbps: 100, 200, 300, 500 Gbps: 1, 2, 5 | Gbps: 10, 40, 100 |

With Microsoft Azure ExpressRoute from Astound, you'll benefit from:

- Increased security
- Predictive network latency
- Low jitter/packet loss
- A more consistent connection experience than over the public Internet
- Symmetrical bandwidth options up to 100 Gbps
- · Backed by our SLA

| City | Site Name |
|--------------|----------------------|
| Ashburn, VA | Equinix - DC2 & DC11 |
| Dallas, TX | Equinix - DA2 |
| San Jose, CA | Equinix - SV5 |
| Seattle, WA | Equinix - SEA10 |

AWS Direct Connect

Pair our powerful Cloud Networking with AWS Direct Connect and hosted connections to maintain network resiliency



Through AWS Direct Connect, we can establish a dedicated private network between your government office, data center, or co-location environment to AWS and its more than 175 services.

AWS recommends connecting via multiple locations to help you maintain network resiliency. You can set up multiple diverse circuits by connecting to any AWS node, routing anywhere on the AWS backbone.

We offer two types of connections:

Dedicated (EPL) - High bandwidth with a direct connect

Hosted (EVPL) - Virtually connect to AWS

| City | Site Name | Dedicated | Hosted | Region |
|--------------|------------------|-----------|--------|-----------|
| Ashburn, VA | Equinix DC2/DC11 | ✓ | ✓ | US-East 1 |
| Boston, MA | Markley 1 Summer | ✓ | | US-East 1 |
| Chicago, IL | Equinix SH2 | ✓ | ✓ | US-East 2 |
| Dallas, TX | Equinix DA2 | 1 | | US-East 1 |
| New York, NY | CoreSite NY1 | ✓ | ✓ | US-East 1 |
| San Jose, CA | Equinix SV5 | 1 | ✓ | US-West 1 |
| Seattle, WA | Equinix SEA10 | 1 | ✓ | US-West 2 |

Standard Symmetrical Offerings

| Hosted | Dedicated |
|-----------------------------------|------------------|
| Mbps: 50, 100, 200, 300, 400, 500 | Gbps: 1, 10, 100 |

With AWS Connect from Astound Business Solutions you get:

- Increased security
- Predictive network latency
- Low jitter/packet loss
- A more consistent connection experience than over the public Internet
- Symmetrical bandwidth options up to 100 Gbps
- Backed by our SLA and customized support

Cloud Services

Let us manage your infrastructure-as-a-service, so you can stay focused on your business.

Cloud Services provides you the flexibility & scalability to tailor resources on an individual workload basis. We will shape and right-size your environment based on actual consumption - to drive down and optimize your cloud costs including Backup and Disaster Recovery services.

Key Benefits

We build, implement, and expertly maintain a vast array of tailored network resources, supporting public, private, and hybrid cloud environments.

- Affordability Avoid prohibitive upfront infrastructure costs
- Scalability Ability to scale your cloud computing resources dynamically
- Security Protect company, customer and employee data with built-in compliance
- **Reliability** Manage growth and expansion to keep your business from outgrowing its resources
- Flexibility Deploy customized environments and resource options best suited to your application

| On Premise | Infrastructure as a Service (laaS) | Platform as a Service (PaaS) | Software as a Service (SaaS) |
|----------------|---------------------------------------|---------------------------------|---------------------------------|
| Applications | Applications | Applications | Applications |
| Data | Data | Data | Data |
| Runtime | Runtime | Runtime | Runtime |
| Middleware | Middleware | Middleware | Middleware |
| OS | OS | OS | OS |
| Virtualization | Virtualization | Virtualization | Virtualization |
| Servers | Servers | Servers | Servers |
| Storage | Storage | Storage | Storage |
| Networking | Networking | Networking | Networking |

Standard Cloud Services

Reserved Compute Resources

- IP Block
- CPU in GHz
- RAM in GB
- · Cloud Storage in GB
- Monthly Backup in GB
 Optional Weekly Backup to offsite location
- Maintenance and support

ADD-ONS ADVANCED SERVICES

- Backup as a Service (BaaS)
- Disaster Recovery as a Service (DRaaS)
- Private Virtual Desktop Infrastructure (VDI)



Customer Managed

Vendor Managed

Advanced Solutions

We are ready to work with you to deliver innovative solutions tailored to your specific requirements. Whether it's securing your entities' data at the network level or providing your IT teams with a simple way to manage your network connections, we'll listen to your needs, goals, and challenges, then create a reliable, customized technology solution to propel your organization's growth and success.



Advanced Solutions at a Glance

Business TV

All you need is a power outlet and an Internet connection to get our Astound Business TV wireless streaming solution.

Video Transport

Dedicated point-to-point or multi-point connectivity backed by carrier-grade fiber to meet the demands of high-bandwidth video productions.

Advanced Services

Commercial Wireless & SD-WAN.

One of the beautiful things about Astound, is whenever I need anything, service- or question-wise, they're always there, ready with answers and able to help. You guys have outdone yourselves. You have a happy customer out here!

- Mark Dinubilo, Operations Manager for Circuit Solution

Business TV

Create a welcoming environment for visitors and constituents. Let employees keep up with current events.



Offices, Lobbies, and Break Rooms

Relax with a crystal-clear live TV experience.



Waiting Rooms

Enjoy great entertainment.

Standard Business TV

Public View

Private View

Key Benefits

- **Set the Mood** Provide a welcoming space for visitors and customers.
- Flexibility The right package to fit your property needs.
- **Enhanced Experience** Keep employees and guests entertained and informed.
- Create Regulars Simple, easy, and varied entertainment keeps constituents coming back.



The best combo. The cable box without a cable. Simplified lineup.

- Bluetooth®-enabled
- Google Assistant & TiVo Voice
- Quick-launch buttons
- Netflix, Disney+, Peacock and more*

^{*} Refer to our website for local channel lineups and available add-ons.

Video Transport

The evolution of HD and 4K video has driven the need for resilient transport options.

Using the latest technology, Astound offers Video Transport Service (VTS) as a reliable and flexible suite of services designed to deliver connectivity to stadiums, media centers, production studios, broadcast centers, Outside Broadcast (OB) Trucks, and more.

Top Features & Benefits

- **Unlimited Scalability** Supports a variety of media services including native uncompressed and compressed video and audio services
- **Flexibility** Service terms that meet the unique needs of the broadcast community, including temporary services for special events
- High Quality of Service Low latency and efficient use of bandwidth to support the higher demands and increasing requirements of today's video services
- **Comprehensive SLA** You can run your video production with confidence knowing that your services are managed and monitored
- Strong Support Peace of mind with a local Network Operations Center, providing complete customer service 24/7/365
- **Reliability** Full redundancy ensures improved reliability and disaster recovery capability
- **Seamless Integration -** Secure, open-source technologies eliminate the risk of being locked into a proprietary solution and allow for seamless integration with your existing publishing and delivery workflows

High-bandwidth Video Transport compressed or uncompressed using SMPTE industry standards.

ASI | SDI | HD-SDI | J2K | SRT | 1 Gbps | 10 Gbps



Commercial Wireless

Extends your broadband connection with professionally-installed hotspots for your office or workplace.







Astound Wi-Fi Pro Enterprise Business Wi-Fi Custom Wi-Fi · Unlimited number of Access Points **Business Wi-Fi Solutions for HSI and BCI Enterprise Wi-Fi Solutions for BCI and DIA** TrueMesh™ Wi-Fi network • Extend your broadband • High-density performance • Safe and secure • Indoor / outdoor support • Superb user experience • Fully-managed and supported Easy guest login • Zone-by-zone growth • Up to 4 SSIDs (networks) • Enterprise-grade service • Enterprise support 24/7 • Captive portal & branded guest experience • Custom landing & splash pages • Indoor / outdoor use • Control & analytics in your hands with · Portal management mobile app

Business Wi-Fi

Elevate your wireless performance and efficiency. Designed for next-generation deployments in offices, schools, hospitals, shops, and hotels, Business Wi-Fi offers high throughput, enterprise-grade security, and simple management.





Features of Business Wi-Fi Include:

- Enterprise grade solution with indoor and outdoor coverage
- Cloud-based web portal supports separate networks for your customers and business
- Minimal capital investment with a low monthly operating expense
- Easy to scale zone-by-zone coverage to grow with your business
- Future proof managed service protects against obsolescence

Security Highlights:

- Integrates with SD-WAN and security products; seamless firmware updates
- Additional radio dedicated to Security and RF management
- Prioritize productive traffic and applications while restricting recreational traffic

Custom Wi-Fi

A Wireless Internet Solution Built Just For You

Custom Wi-Fi from Astound delivers a turnkey Wi-Fi platform that is designed, developed, deployed, and supported precisely to suit your workplace needs, today and tomorrow. From the ground up, this tailor-made wireless connectivity solution is built to operate as uniquely as you do — because no two organizations are alike.

Powered by Astound's fiber-rich network, this enterprise-grade connectivity solution factors in every key characteristic — the specifications of your physical property, your indoor and outdoor bandwidth requirements, and your daily operational needs.



IDEAL CANDIDATES:

Commercial buildings, stadiums, outdoor public venues, campuses, retail centers, hotels and resorts.

Key Benefits & Results

- Tailored Fit and Function:
 - Extensive design customization options including unlimited Access Points (APs)
- Hands-off Management:
 Astound handles all network setup,
 maintenance, and management
- Lower Costs:

We free up time and internal resources so you can optimize your team while decreasing costs

Tailored to Perform

Higher speeds with fewer disruptions for delivering peak performance, all with expert technical support 24/7/365.

Custom Wi-Fi from Astound. It's as custom as custom gets.

Managed Router

Leave the management of your router to Astound. Managed Router provides a simple, no-hassle pairing for our DIA services.



Features

Enterprise-Grade Astound-Managed Router for DIA Service

- Robust, carrier-grade
- Dual-WAN support
- NAT/PAT & DHCP
- BGP

- RFC1918 space
- Static routing
- Equipment varies based on speed (1 Gbps, 5 Gbps, 20 Gbps)

SD-WAN

Software-Defined Wide Area Networking (SD-WAN) simplifies the management of network connections between sites by separating the network hardware from its control mechanisms.

SD-WAN puts you in control and allows you to respond to change. Advanced capabilities like cloud-based security, network visualization, analytics, and automation bring out the full potential of your network.

ADVANCED WAN

- Advanced-VPN
- Bring your own Internet
- High availability
- · Business continuity
- · Zero-touch provision

ADVANCED CLOUD SECURITY

- IPS/IDS
- Anti-virus/malware protection
- Global threat intelligence

ADVANCED FIREWALL

- NAT
- Deep packet inspection
- Application optimization
- Layer 7 application firewall

MANAGED SD-WAN

- Internal IGP routing
- · Network isolation & planning

Why SD-WAN from Astound Business Solutions?

- Simplified pricing with single price for SD-WAN and Security
- Simplified VPN experience
- SD-WAN and Security Firewall in single device to optimize and protect your network
- Real-time updates to cloud intrusion protection
- Application optimization
- Easy troubleshooting and equipment replacement
- Centralized cloud-based portal for all your Security and SD-WAN optimization needs

Wireless Internet Backup

Critical redundancy for today's online world

Keep your entity connected, so that your employees are productive and people are engaged. This cost-effective solution allows you to maintain the use of mission-critical devices. It ensures smooth and continuous operation of your point-of-sale systems, phone lines, and online connections.



Wireless Internet Backup*

Bronze Silver

Key Features and Benefits:

- Consistent Connection Automatic or "anytime" failover and failback, so you always have the fastest available connection.
- Business Continuity Dual SIM Cards provide redundancy and diversity to seamlessly keep your critical operations running.
- Professionally Managed Cloud-managed portal for centralized Astound management.
- Flexible Data Plans Choose a plan to fit your budget and needs. Only pay for what you use.

*Astound Internet service required

Why Astound?

Astound Business Solutions provides IT leaders with high-capacity, secure connectivity for their mission-critical applications, while increasing overall agility and responsiveness.

Custom, Robust Solutions

We take a consultative approach by first understanding your distinctive needs to deliver a unique solution designed especially for you.

Speed to Market

Unlike larger competitors, we focus on rapid installations and upgrades and do not rely on third parties to meet deadlines.

Award-Winning Customer Service

24/7/365 local dedicated support with industry experts on-hand around-the-clock to help businesses stay on top of today's evolving IT technology and remain competitive in their markets.

Fiber-Rich Network

We operate a sophisticated network with a network backbone featuring a smaller node size and robust fiber capacity. See our map and stats on page 2 to get the details of our coverage.

Astound is an Internet, Connectivity,
Unified Communications, Cloud Networking,
and Solutions company.

Let's talk about your needs.



California Teleconnect Fund (CTF)

The California Teleconnect Fund (CTF) program provides qualified organizations with up to a 50% discount off eligible telecommunications services* offered by Astound Business Solutions in California.

The program was established by the California Public Utilities Commission (CPUC) in 1996 to reaffirm the organization's commitment to universal service and provide these discounts to qualifying applicants in the following categories:

- K-12 public and non-profit private schools
- Libraries
- · Community colleges
- Government-owned and operated hospitals and health clinics
- Community-based organizations (CBOs)
- Healthcare CBOs
- 2-1-1 providers

The CTF program is funded through a surcharge on all customers that purchase intrastate telecommunications services.

*Eligible Products

- · Dark Fiber
- Dedicated Internet Access (DIA)
- Ethernet Local Access Network (ELAN)
- Ethernet Virtual Private Line (EVPL)
- IP Transit
- Wavelength
- Wireless Internet Backup





astoundbusiness.com

1-833-249-2786