# Product Catalog: USAC

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**Astound**
Business Solutions

# We are
# Astound Business Solutions

## A top-tier, national network solutions provider

We are a national telecommunications company that delivers advanced solutions over a diverse, carrier-grade network that provides high-speed, reliable, and secure connectivity for mission-critical business applications.

## We are the 6th largest cable provider in the U.S.

In 2021, Astound was purchased for $8.1 Billion dollars by Stonepeak, an investment firm specializing in infrastructure assets.

## Astound
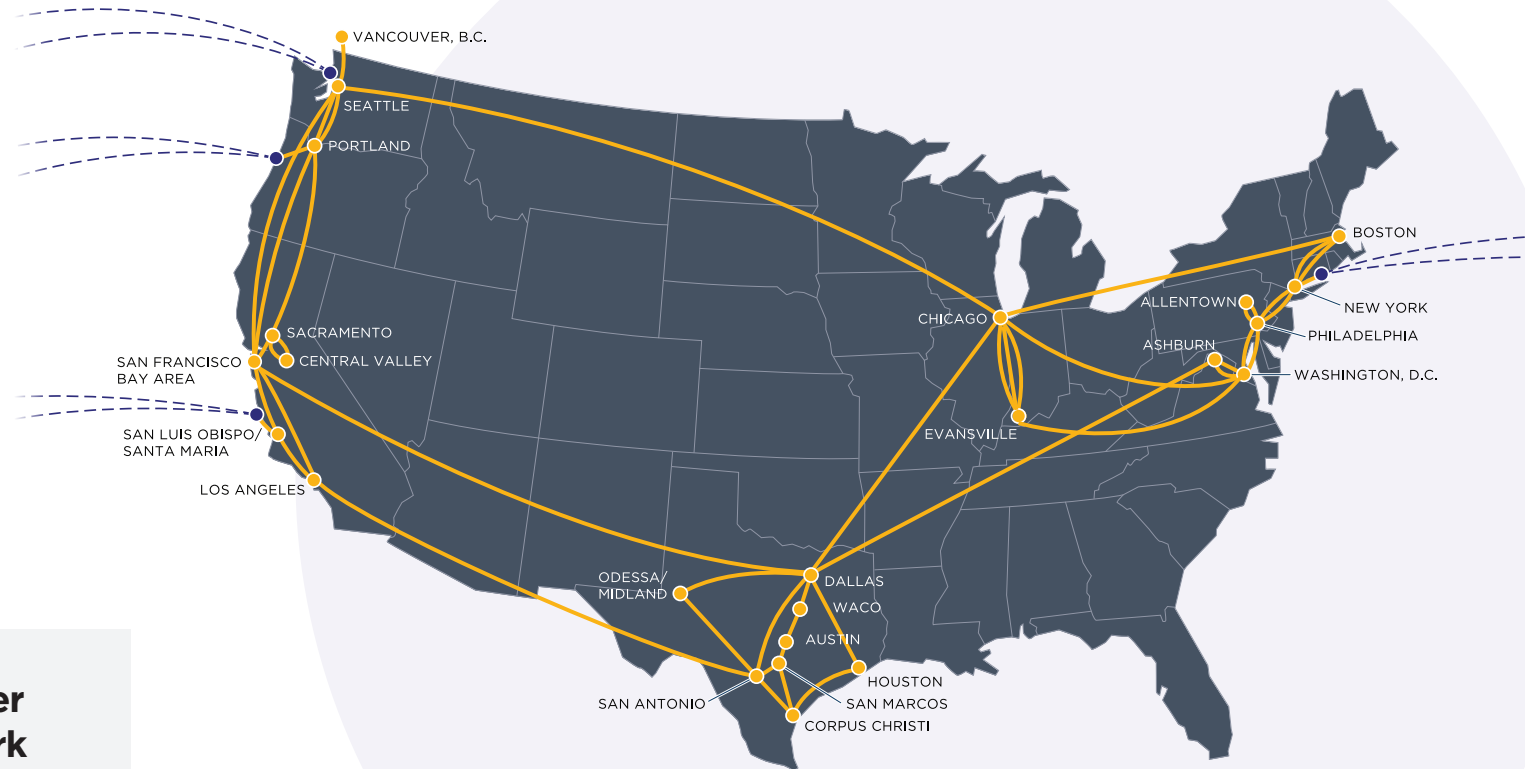### Business Solutions

# The Astound Fiber Network
## Powering networks across the U.S.

While we provide coast-to-coast connectivity to over 1 million customers, we maintain a local, customer-centric approach, with dedicated industry experts on-hand, around-the-clock, to help stay on top of today's evolving technology.

- In 12 states and 8 of the top 10 metro areas in the U.S.
- More than 42,000 route miles
- More than 19,600 on-net buildings
- More than 75,000 business customers
- Connected to more than 100 data centers and over 2,000 cell sites

**We Deliver Solutions Over the Most Reliable Network**

## NATIONWIDE COVERAGE
### —— U.S.-BASED SUPPORT ——

VANCOUVER, B.C.
SEATTLE
PORTLAND
SACRAMENTO
SAN FRANCISCO BAY AREA
CENTRAL VALLEY
SAN LUIS OBISPO/ SANTA MARIA
LOS ANGELES
ODESSA/ MIDLAND
SAN ANTONIO
DALLAS
WACO
AUSTIN
SAN MARCOS
CORPUS CHRISTI
HOUSTON
EVANSVILLE
CHICAGO
ASHBURN
ALLENTOWN
BOSTON
NEW YORK
PHILADELPHIA
WASHINGTON, D.C.

### LEGEND

- Robust metro fiber footprint and/or data center presence
- High-capacity backbone links
- Coastal submarine cable access— transpacific and transatlantic routes

# E-Rate Program

## Why Educational Institutions Choose Astound

As a qualified USAC vendor, we have the extensive experience needed to help you navigate the rules and regulations of the E-Rate program — as well as the California Teleconnect Fund (CTF) program.

We're a leading provider to all segments of education coast to coast — from public libraries to primary and secondary schools to colleges and universities.

**We know what it takes to deliver the solutions you need to overcome today's education technology challenges:**

- Secure connections across multiple schools and districtwide offices

- High-bandwidth access with no limits for data-rich learning environments

- 24/7 support from local, dedicated account representatives who understand your unique needs

- Rapid installation, enhanced cybersecurity, fast upgrades and scalable solutions that grow with you

**Find out how you can save 20%-90%**
Contact your Astound representative for a free consultation today

## We Support:

276 School Districts

15 Library Systems

3,380 School Sites

91 Libraries

1,877,668 Students

## CUSTOM TAILOR YOUR SERVICES

**Get the right mix of technology and support for your institution:**

- **Custom fiber networks**

- **High-capacity Internet access**

- **Data transport**

- **Dark Fiber**

- **Hosted Voice phone services**

# Rural Healthcare Program

## Supporting healthcare facilities in bringing world class medical care to rural areas through increased connectivity

The Rural Healthcare Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of healthcare. It is currently made up of two programs: the Healthcare Connect Fund Program and the Telecommunications Program.

**Eligible healthcare providers include:**

• Post-secondary educational institutions offering healthcare instruction, teaching hospitals, and medical schools

• Community health centers or health centers providing healthcare to migrants

• Local health departments or agencies

• Community mental health centers

• Not-for-profit hospitals

• Rural health clinics

• Skilled nursing facilities

• Consortium of healthcare providers consisting of one or more entities falling into the first seven categories

**We know what it takes to deliver the fast and reliable Internet and phone services you need to overcome today's connectivity and voice challenges in rural areas.**

# California Teleconnect Fund (CTF)

The California Teleconnect Fund (CTF) program provides qualifed 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 colleges**
- **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 | Ethernet Virtual Private Line (EVPL) |
| Dedicated Internet Access (DIA) | IP Transit |
| Ethernet Local Area Network (E-LAN) | Wavelength |
| Ethernet Private Line (EPL) | |

# 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

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

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

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

# Dark Fiber

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

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.

## 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 and 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

### DARK FIBER

## 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 business maintains complete control over your network infrastructure.

# 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



**DATA TRANSFERS – DATA MIGRATION – OFFSITE STORAGE**

# 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 companies that need a secure, private connection between two locations; transparent plug and play
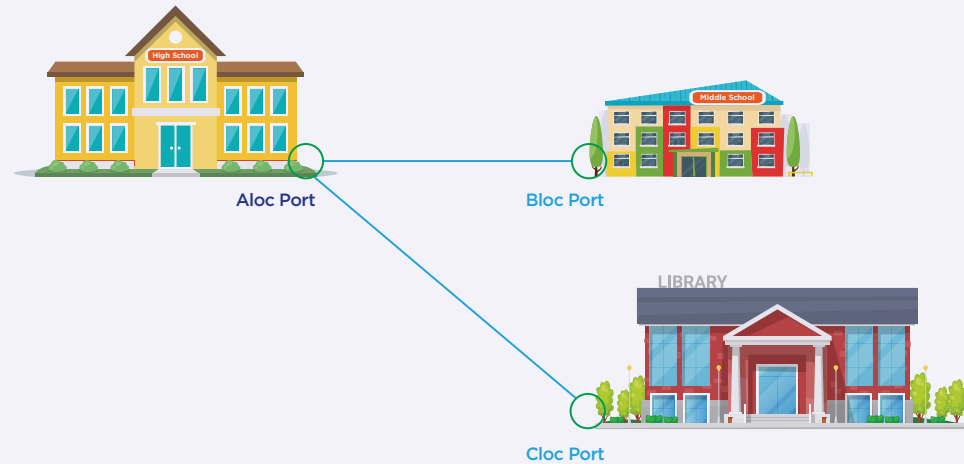
# Ethernet Virtual Private Line (EVPL)

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 companies 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 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 business 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 | | |
|---|---|---|
| 10 Mbps, 100 Mbps, 200 Mbps, 500 Mbps, 600 Mbps, 900 Mbps, 1 Gbps | 2 Gbps, 3 Gbps, 5 Gbps, 10 Gbps | 20 Gbps, 40 Gbps, 50 Gbps, 70 Gbps, 80 Gbps, 90 Gbps, 100 Gbps |
| **1 GB Port** | **10 GB Port** | **100 GB Port** |

# Astound is the Business Choice

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** and 10 other categories, including:

- Installation / Setup
- Speed
- Reliability
- Ease of Use
- Value
- Management
- Customer Service
- Tech Support
- Repairs
- Likelihood to Recommend

**PC MAG BUSINESS CHOICE | 2024**

# Dedicated Internet Access (DIA)

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

## 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 businesses 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

| | | |
|---|---|---|
| 10 Mbps - 100 Mbps | 2 Gbps | 20 Gbps - 40 Gbps |
| 200 Mbps - 500 Mbps | 3 Gbps | 50 Gbps - 70 Gbps |
| 600 Mbps - 900 Mbps | 5 Gbps | 80 Gbps - 90 Gbps |
| 1 Gbps | 10 Gbps | 100 Gbps |

**Key Attributes:**

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

### ADD-ONS

- Static IP & Subnets
- Bursting
- Border Gateway Protocol (BGP)

# Unified Communications as a Service (UCaaS)

Unified Communications (UC) consolidates the ways employees, partners, and customers communicate to reduce costs and make businesses much more efficient. UC services are built on the foundation of VoIP calling to integrate multiple communication methods, including telephone calls, video conferencing, instant messaging, voicemail, and email.

## Highly scalable solution that delivers:

- A feature-rich product at a competitive price-point

- Video conferencing and collaboration

- Astound phone app for desktop and mobile

- Management portals

- Flexible and scalable

# UCaaS/Hosted Voice Seat Types

## Powerful, Cost-effective Communications for Your Business

UCaaS/Hosted Voice seats can easily be managed from anywhere.

| ESSENTIAL (Phones Only) | EXPRESS (Phone, Messaging) | PREMIUM (Phone, Messaging) |
|---|---|---|
| Essential seats are for front-line staff or common areas typically not associated with a person but do require a handset. | Express seats offer a core set of unified communications tools empowering knowledge workers to stay connected. Includes Voicemail, Astound Phone, SMS, Portal Access. | Premium seats allow users to expand on UCaaS features. Includes Voicemail, Astound Phone, SMS, Portal Access, Voicemail Transcription. |
| • **Common Areas, Conference Rooms, Warehouses, Lobbies**<br>• **Standard Handset Required (Add-On)** | • **Price-conscious businesses**<br>• **Office, Mobile, or Hybrid Workers**<br>• **Use handset or mobile application**<br>• **Standard Handset (Add-On)**<br>• **Standard Handset Required (Add-On)** | • **Supervisors, Managers, Executives**<br>• **Office, Mobile or Hybrid Worker**<br>• **No Handset Required with Seat**<br>• **Standard or Premium Handset (Add-On)** |

In addition to the three seat choices, a Basic Business Line is available exclusively for use with UC services.

A Basic Business Line (analog line) is used specifically with a UC sale to support other devices requiring dial-tone only. Typically not a handset. *For example: fax machines, postage machines, etc.*

# UCaaS/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 Phone (for Desktop)

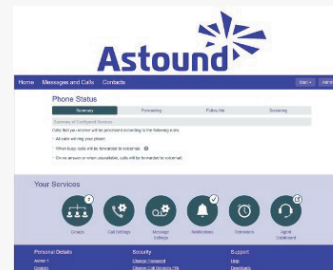Access and control of your UC services from your computer

### Astound Phone (for Mobile)

Access and control of your UC services from your cell phone
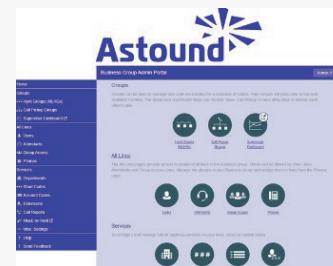
## APPLICATION FEATURES

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

### Astound Phone Manager for Users

Easily manage individual feature options:

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

### Astound Phone Manager for Admins

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

# Available Phone Models

## Next Gen IP Desk Phones

### Poly Edge E100

- Standard 2-line phone | 8 lines paginated
- Power over Ethernet
- 2-port 10/100 Mbps Ethernet switch
- 2.8" color LCD display
- Wall mount included

### Poly Edge E220

- Standard 4-line phone | 16 lines paginated
- Power over Ethernet
- 2-port gigabit Ethernet switch
- 2.8" color LCD display
- Bluetooth 5
- 1 USB C
- Microban protection

### Poly Edge E350

- Standard 8-line phone | 32 lines paginated
- Power over Ethernet
- 2-port gigabit Ethernet switch
- 3.5" color LCD display
- Integrated Wi-Fi (AC)
- Bluetooth 5
- 1 USB C
- Microban protection

### Poly Edge E450

- Standard 8-line phone | 32 + 12 lines paginated
- Power over Ethernet
- 2-port gigabit Ethernet switch
- 3.5" and 2.4" color LCD display
- Integrated Wi-Fi (AC)
- Bluetooth 5
- 1 USB C
- Microban protection

### Poly CCX 505

- Premium 24-line gigabit phone with HD Voice
- 5" 9:16 color LCD
- 2-port gigabit Ethernet switch
- Touchscreen
- Integrated Bluetooth 4.2
- One USB Type-A port 2.0 | One USB Type-C port 2.0

### Poly CCX 600

- Premium 54-line gigabit Phone with HD Voice
- 7" 16:9 color LCD
- 2-port gigabit Ethernet switch
- Touchscreen
- Integrated Bluetooth 4.2
- One USB Type-A port 2.0 | One USB Type-C port 2.0

# Available Phone Models & Accessories

## Additional Phone Options and Phone Accessories

### Poly C60

- Standard large conference room phone
- Room coverage 20 ft
- 2-port 10/100/1000
- 5" color LCD touchscreen

### Poly Rove 30 Handset & Rove B2 Base

- Standard wireless phone solution
- Microban antimicrobial technology
- B2 Base range up to 165 ft (depending on environment)
- Ruggedized IP65 rated handset
- Up to 18 hrs talk time / 300 hrs standby time
- Handset and base are sold as individual units

### Poly C60 Expansion Microphones

- Works with Poly C60

### Poly Edge E Expansion Module (EM)

- 22 lines | 66 paginated
- For use with the Edge E450
- Maximum of 2 expansion modules per phone
- 5" 480x800 color LCD display

# Cloud Networking

## Secure, reliable connections to enable your business operations

Experience advanced connectivity solutions with our Cloud Networking services. Gain access to a global network of over 100 data centers, and leverage premier connectivity options 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

### Interconnection

Our Data Center Interconnect (DCI) service lets you leverage predetermined fiber routes between very high-capacity fiber paths, interconnecting critically-acclaimed data centers in our network footprint.
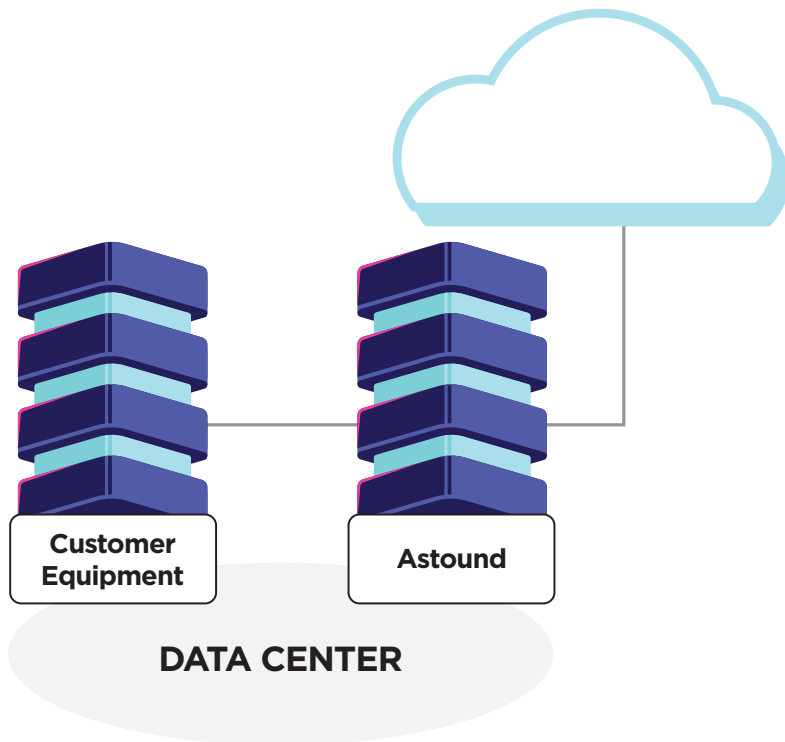
### IP Transit

Maximize connectivity with our IP Transit, linking data centers to the Internet via shortest routes with stable round-trip times.

# Data Center Interconnect (DCI)

We provide interconnectivity between the data centers in our network footprint when you need private, dedicated high bandwidth between data centers.

**For customers that have a need to rapidly deploy circuits, paths, or wavelengths without the need for construction.**

Customer Equipment

Astound

**DATA CENTER**



## Standard Dark Fiber Per Pair Pricing
### with Data Center Cross Connect Fees Apply

# IP Transit

## Built for performance with the lowest latencies and shortest routes.

Astound provides a highly diverse, densely peered Internet transit product that connects with scalable capacity. To ensure the fastest and most direct route possible, Astound has engineered private and direct connections with destination networks for over 70% of our traffic. Astound peers with seven of the world's biggest Tier 1 providers for global backbone Internet connectivity.

## Benefits

Guaranteed performance levels for:

- Throughput
- Packet Loss
- Latency
- Availability

Multiple connectivity options, including:

- Static route connection with IPv4 or IPv6
- Full routing participation using BGP
- Direct traffic to specific BGP partners for direct access to optimize routing

### STANDARD SYMMETRICAL OFFERINGS

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

**With IP Transit 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 Astound's 99.99% Service Level Agreement

# Why Astound for USAC Services?

Astound Business Solutions provides school districts, libraries and rural healthcare systems 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. With over 42,000 route miles servicing more than 19,600 on-net buildings, we cover 12 states and more than 20 metro areas to help give you the connectivity solutions you need.

## Let's talk about your needs.

Astound
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