



IPC

Data Product Offerings

worldwide connectivity you can count
on throughout the trade lifecycle



Connecting opportunities

Data Connectivity Services

IPC's portfolio of Data Network Services

Take a look at our specialized offerings below. Then contact an IPC representative for all the details on having our network services professionals design the best solution for your voice and data connectivity needs.



Today's trading – global, faster, more complex. Emerging markets and new regulations. Now your firm needs strategic service providers who are focused on the same business challenges as you. For trading communications, you must have a provider with a **high-performance network** that can keep pace with your goals. Dependable **data connectivity** for the critical exchange of trade information is not enough in the demanding financial services industry. What's required is a singular focus on financial trading communications so your focus can be on profitability. Who has both an expansive network and the industry expertise that helps you compete? **The proven strength in financial network services is IPC.**

Using the IPC Financial Markets Network means your firm gets what matters most:

Global network reach – access to virtually every trading destination around the globe

Service excellence – for fast activation of new service and resolution to any service issues

Trading community – reliable connectivity to the firms and counter-parties you need to succeed

Improved efficiencies – for lower overall TCO

Reliability – secure, compliant communications

Our network services experience is second to none. And IPC's rapidly-growing data network delivers high-speed, predictable connectivity to the global capital markets.



Our portfolio of products – Connexus® Extranet, Connexus Ethernet, Connexus WAN, Connexus Chrono and Connexus Colocation – helps you connect and compete more successfully in electronic as well as voice trading throughout the world.

Connexus[®] Extranet

Connexus Extranet leverages IPC's rapidly growing network to provide you secure trading connectivity to established, emerging and frontier markets. Our community consists of buy-side firm, inter-dealer brokers, ISV's, Exchanges and market data providers as well as clearing and settlement firms.

With Connexus Extranet, you can – through a single connection – reach members of the IPC trading ecosystem to seamlessly communicate, receive and distribute information and transact business. It all adds up to deliver the secure, reliable and flexible financial extranet you want for greater speed-to-market so you can deliver greater profitability for your firm.

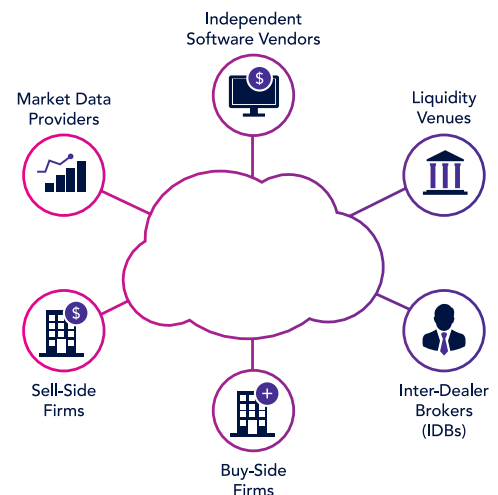
Performance engineered for electronic trading

Built on an IP/MPLS backbone, the highly scalable and secure Connexus Extranet supports a number of industry standard and trading protocols. Connexus Extranet is engineered to be fully resilient to provide customers 100 percent service availability.

- Supports several access options – 64kbps to 1GB, with bandwidth managed as demand grows
- Industry standard protocols supported include TCP, IP, UDP & Multicast
- Trading protocols supported include FIX

Service options available include:

- Single POP resiliency
- Dual POP resiliency
- Split site resiliency



Connexus Extranet for application providers, market data vendors and liquidity venues

Opportunities abound for application providers, market data vendors and liquidity venues – exchanges, ATSS, MTFs, ECNs, OMSs/EMS vendors, order routing specialists, FX platforms and clearing firms – when using Connexus Extranet.

IPC – focused on you and trading communications

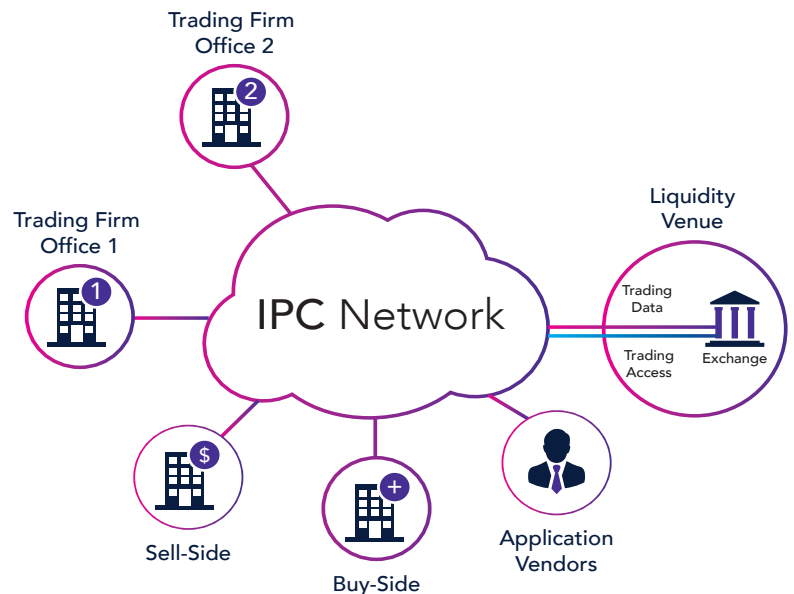
Our 100-percent focus on communications solutions for the trading community means you have specialized industry expertise with the technical and service delivery individuals engaged with your business.

And our follow-the-sun, 24x7x365 customer service will provide immediate and ongoing support whenever and wherever you need it.

Connexus® Ethernet

Connexus® Ethernet is a global service connecting financial market participants and engineered to ensure path resiliency and maximum efficiency. This service provides market participants access to liquidity venues through secure, flexible, transparent and native Ethernet connectivity over an enhanced delivery platform. Connexus Ethernet's point-to-point delivery model features multiple delivery options which makes it ideal for customer networks – WAN/LAN connectivity, high bandwidth inter-office connectivity, data center connectivity.

Our community includes all market participants that touch the trade lifecycle including buy-side, sell-side, exchanges and liquidity venues such as ECNs, ATs, MTFs, dark pools, swap execution facilities, inter-dealer brokers, market data and analytic providers, and clearing and settlement firms.



- **Guaranteed Bandwidth:** leverage uncontended, 100% dedicated bandwidth at all times
- **Low Total Cost of Ownership:** with a single connection, you can connect to all your trading partners
- **Fast Activation:** new services at On-Net sites usually turned up in hours
- **Broad Coverage:** connecting a community of thousands of trading firms, vendors and venues
- **Latency-Sensitive:** facilitates time sensitive trading activities
- **Resilient:** optimized network diversity provided by dozens of underlying carriers
- **Highly Secure:** provisioned over 100% dedicated, not shared bandwidth
- **Ubiquitous Availability:** connects regardless of the type of access available
- **"Follow-the-Sun" Support:** high-touch customer service teams in New York, London and Singapore available 24x7x365

Connexus[®] WAN

Benefits of IPC's Connexus WAN

- Fully-managed Connexus WAN service lowers operational costs and enables focus on your core business
- Extensive global presence cost-effectively connects your remote offices
- Resilient and highly available network minimizes possible business disruptions
- IPC's financial stability provides reliable, ongoing commitment, investment and support
- Single, global MSA from one supplier lowers cost of purchase, management and support.

Connecting Geographically Dispersed Office Locations

Business has its complexities; your network shouldn't be one of them. For firms looking to seamlessly connect multiple office locations, IPC's Connexus WAN service delivers an MPLS-based wide area network service that enables mission-critical enterprise connectivity for voice, video and data applications.

The Connexus WAN service provides firms with a private and secure intranet over IPC's global

and resilient MPLS backbone.

Flexible and customizable topology options include meshed any-to-any, hub-and-spoke and point-to-point. The service provides the ability to prioritize network traffic and bandwidth via 3 distinct Classes of Service (Premium, Enhanced and Basic) with bursting options. Through state-of-the-art monitoring tools, IPC proactively monitors performance (jitter, latency, packet loss), manages capacity and resolves faults.

Firm's Choose IPC's Connexus WAN Because it's the Only Solution That:

1. Is built exclusively for the capital markets and tailored to your operational needs
2. Lowers costs by leveraging IPC's shared network backbone and Class of Service flexibility while freeing up IT resources
3. Ensures optimal availability through proactive, state-of-the-art global network management and fault resolution.

MPLS Connexus WAN Network Architecture



Flexible and tailored MPLS solution from a provider with a capital-markets-only, global MPLS network.

Connexus® Chrono

The Need for Synchronized Time

The need for synchronized time has been well-documented within the industry. Anyone who trades in the United States or European Union needs reliable, synchronized clock feeds to connect to their trading applications and order management systems. Anyone participating in voice trading needs their T1's/E1's to be reliably clocked to avoid degraded service and needs their Voice Recording and Call Detail Reporting Systems to be synchronized.

What is Connexus Chrono?

IPC's Connexus Chrono is designed to deliver a reliable, synchronized and traceable time feed.

- Globally located, with Grandmaster clocks across three regions.
- Able to be expanded to nearly any data center globally.
- May assist in compliance
 - acceptable for MiFID II RTS-25, SEC Rule 613 and FINRA Rule 4590.
- Three different levels of precision, plus an option for T1/E1 clocking, using either Precision Time Protocol (PTP) or Network Time Protocol (NTP):
 - Connexus Chrono PTP Premium – 1 microsecond
 - Connexus Chrono PTP – 50 microseconds
 - Connexus Chrono NTP – 250 microseconds
 - Connexus Chrono TDM – T1/E1 clocking service
- Time feed can be delivered via cross connect, Connexus Ethernet
- All IPC Grandmaster clocks come equipped with a rubidium holdover oscillator, ensuring up to 5 days of continued running in the unlikely case of GPS signal acquisition issues.
- Additional ability to use IPC for colocation, ensuring the best possible granularity in proximity to a Grandmaster clock.



Why Connexus Chrono?

- Receive IPC's synchronized time feed to nearly any data center/colocation facility.
- Colocation is no longer a hard requirement to receive a compliance-suitable time feed, receive a compliance-friendly time feed via Connexus Ethernet (in certain cities).
- Roof access is limited at many of the most popular data centers. IPC offers you synchronized time at these centers.
- Dedicated ports – No conflicts between customers using shared ports off the clock servers.
- Reduction in CAPEX and TCO – No need to purchase and maintain your own costly clocking infrastructure.
- Ability to leverage IPC's vast financial community across our award-winning global network with industry-leading low latency measures, all backed by stringent SLA's.

Connexus® Colocation

Global Colocation combined with Connexus Community and Connectivity

Connexus Colocation provides global colocation services in premier financial data centers and strategic exchange locations underpinned by IPC®'s Connexus Cloud financial community. Flexible options, specifically designed for the financial community which enables access to all capital market participants including other venues and exchanges quickly and easily. Utilizing Connexus Extranet, Connexus WAN or Connexus Ethernet connectivity options offers an expanded reach by leveraging Connexus Cloud, our ready-made eco-system which interlocks leading worldwide financial centers consisting of 110+ POPs across 700+ cities.

Connexus Colocation can also be paired with Connexus Infrastructure Services (CIS) for a fully managed solution. Colocation with Connexus Cloud provides for integrated connectivity to additional IPC services including IPC FX Hub, Fixed Income Market Place, Global Exchange Reach, Connexus Chrono and Connexus Cloud Exchange, all through a single infrastructure.

When selecting IPC Connexus Colocation you partner with financial industry pioneers who are uniquely positioned to architect, deploy, manage and maintain your environment, allowing your organization to focus on its core competencies while IPC offers industry leading connectivity, presence and uptime.



CIS Colocation provides the network infrastructure, including connectivity to the IPC network, physical security controls, power management and facility space.



CIS Managed Server offers users the option to choose between our Dedicated Managed Server, Shared Virtual Managed Server or a hybrid.



CIS Managed Storage options range from local disk arrays to high-performance SAN storage systems running on Fibre Channel drives.



For more Information

Receive all the details on Connexus products as well as a demonstration of its many advantages from an **IPC Account Representative**.

Or visit our website: www.ipc.com

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