



Fact Sheet

International Services

IPL, ATM and Frame Relay

Business goes international with fast, scalable and secure data solutions

International Private Lines (IPL), International Asynchronous Transfer Mode (ATM) and International Frame Relay are Telstra Wholesale international connectivity and transmission solutions that facilitate international business communications.

Global Bandwidth Services (GBS) is for carriers, service providers, rebillers and ISPs developing protocol-independent networks for multinational corporations and global business operators. International ATM and Frame Relay deliver international network backbone requirements for carriers, service providers and ISPs who have large customers needing to connect their LANs to multiple sites around the world.

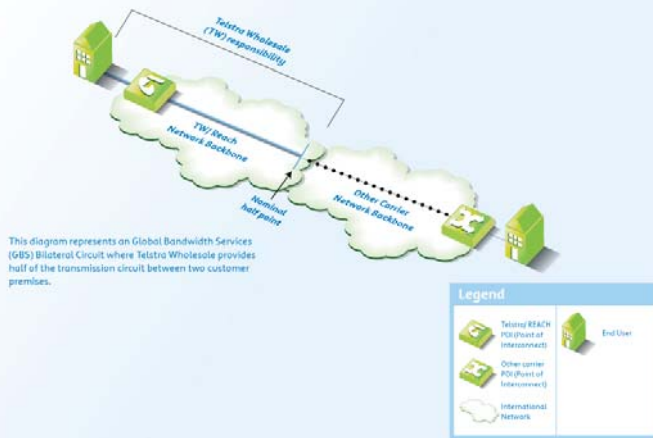
GBS is a reliable, protocol-independent, point-to-point network service for carriers and service providers developing private international networks for multinational corporations and international business operators who want to securely transmit or share data between offices. GBS solutions are available in whole circuit and bilateral circuit options.

Telstra Wholesale ATM and Frame Relay allow our customers and their customers to develop highly scalable, international networks for voice, video and data transmission, with point-to-multipoint connectivity and wide area transmission solutions that link to most Asian markets and other parts of the world.



Customer benefits	Product features
Reliability	Industry-leading network built on a highly resilient framework for secure connectivity.
Scalable	Pay for capacity required.
Flexible	Seamless connectivity over international fibre, cable and satellite networks lets customers build international connectivity, supported by our technical teams around the world.
Support	Centralised network management and international customer care support teams 24 a day, seven days a week.

Global Bandwidth Services (GBS) Bilateral Circuit



Global Bandwidth Services (GBS) Whole Circuit



Features

IPL

- Fully scalable – wide range of bandwidth from 64Kbps to 2.5Gbps.
- Availability of high-level network protection and redundancy.
- 24 hour a day, seven days a week international customer care, including in-country support in many destinations.
- Detailed performance management reporting.
- Permanently connected, point-to-point.
- Flexible leasing options – from months to years.
- Flexible payment options.

International ATM and Frame Relay

- Flexibility and scalability – interworking capabilities, with available speeds of up to 2Mbps for Frame Relay and from 2Mbps to 155Mbps for ATM, offer smooth, cost-effective migration from one service to the other when higher bandwidth is required.
- Reliability of a fully redundant, wholly-owned and managed network.
- Flexible pricing with options to best fit traffic patterns.
- Network monitoring and statistics provide performance visibility.
- Secure telecommunication networks, with 24-hour international management, seven days a week.
- Local language support available 24 hours a day, seven days a week.

Benefits

IPL

- Reliability of an industry-leading network built on a highly resilient framework for secure connectivity, ideal for critical voice or data transmission.
- Secure private network for confidentiality and reduced risk. Transmission of commercially sensitive information secure on the customer's dedicated network.
- Highly scalable to match our customers' needs. Pay for capacity required.

- With flexibility achieved through seamless connectivity over international fibre, cable and satellite networks, our customers can build individual international connections supported by our technical teams around the world.
- Telstra Wholesale is a single point of contact and will provide single billing, provisioning and fault reporting for the entire service even if, as in GBS Half Circuit, two network providers are involved.

International ATM and Frame Relay

- Our customers can provide their customers with networks to meet their voice, video and data transmission needs almost anywhere in the world.
- The highly scalable connectivity and internetworking capabilities mean that a customer can move to a higher bandwidth, if required, in a smooth, cost-effective manner.
- The facilities are backed by quality customer support and service, locally and internationally, including competitive service level guarantees on service availability, network round-trip delay and service activation lead time.
- Centralised network management and international customer care support teams are available 24 hours a day, seven days a week.

Coverage

Through our joint venture company Reach, Telstra has access to one of the most highly meshed IP backbones in the Asia-Pacific region. Our network provides connectivity throughout the Asia Pacific, including major cities in South East Asia, as well as direct connectivity to Western Europe and North America.

World-class services are available for our customers. Our highly resilient international network provides secure and seamless IPL, ATM and Frame Relay services which make it the ideal solution for all mission-critical voice or data service requirements.

This provides an extensive range of flexible and scalable connectivity solutions and over 39 Gbit/s of active international core network capacity on a single AS network (AS4637).

OUR NETWORK PROVIDES CONNECTIVITY THROUGHOUT THE ASIA PACIFIC AS WELL AS DIRECT CONNECTIVITY TO WESTERN EUROPE AND NORTH AMERICA.

Prerequisites

International ATM and Frame Relay customers with an Australian presence need Telstra's Australian domestic Frame Relay.

Customers need to have signed the appropriate contract with Telstra Wholesale before they can order these products and services.

Configuration

IPL

Telstra Wholesale's IPL provides point-to-point clear channel international data connectivity, enabling international voice and data communications with coverage spanning most markets in Asia with seamless links to other parts of the world.

IPL features bandwidth between 64Kbps and 2.5Gbps as well as clear channel routing with bandwidth delivery spans: Nx64K, E1, T1, DS3, STM -4, STM -4. Interfaces depend on local loop suppliers, but are usually X 21, V 35, G 703.

IPL Whole Circuit is an end-to-end managed solution for point-to-point international data connectivity between two customer premises almost anywhere in the world. It's a total solution managed by Telstra over an international network.

IPL Bilateral Circuit allows Telstra to provide one half of the circuit between two customer premises. Telstra provides a digital transmission circuit between the customer's location and the effective mid point of international network connections. We use another carrier to provide the other half circuit.

International ATM and Frame Relay

Reach offers constant bit rate (CBR), VBRnrt, VBRrt, and unspecified bit rate (UBR), providing a broad range and mix of applications over a homogeneously managed platform.

ATM

- Class of services - CBR, VBR-rt, VBR-nrt, UBR;
- Interface - Nx64k, T1, E1, DS3, STM-1;
- Connection type - both virtual channel connection (VCC) and virtual path connection (VPC);
- Direction – duplex;
- IPL solutions include whole circuit and bilateral circuit options managed by Telstra over an international network;
- Local access - leased line/local ATM/local Frame Relay;
- Integration - ATM-FR internetworking;
- Resilience - route diversity, permanent virtual circuit (PVC) re-routing, backup PVC .

Frame Relay

- Network interface - T1, E1;
- Network maximum number of DLCIs – 254;
- Range of DLCI values - 16 – 1007;
- Connection type - PVC;
- Direction – duplex;
- Over-subscription - 200% of the sum of CIR;
- Integration - ATM-FR internetworking;
- Customer port size - Nx64k, T1, E1;
- CIR range - 8k – 1536k.

Pricing

A Telstra Wholesale account manager can supply pricing details.

Ordering

Account managers provide and receive order forms. A completed form should be submitted to the account manager.

End-to-end provisioning, following a feasibility study is managed through our central Australian-based provisioning centre. A project manager is assigned and international carriers are coordinated through the customer's Australian-based project manager.

Telstra may supply IPL half circuit customers with provisioning for the entire service.

Billing and payment

Customers are invoiced monthly on their nominated Telstra account. Subject to discussion and negotiation with Telstra and the third party carrier, Telstra can provide IPL half circuit customers with single billing for the entire service.

Payment is made electronically only, to Telstra's nominated account.

International data products and solutions are rebillable and resellable. These solutions allow our customers to develop highly scalable global networks for data transmission. They are for resale by carriers, service providers and ISPs or can be utilised to extend and enhance a carrier's own network coverage and capacity.

Delivery

The standard lead time is four to six weeks after completion of the feasibility study.

The minimum term is 12 months, with two and five year terms available.

Operations and maintenance

- Centralised international network management;
- 24-hour, seven day a week international customer care, including local language support;
- High-level network protection and redundancy;
- Online service monitoring.

International customer care is available 24 hours a day, seven days a week. Telstra Wholesale is developing monthly reports showing availability and round-trip delay statistics for IPL customers, and availability, packet-throughput and packet loss ratios for ATM and Frame Relay customers.

Customers can call 1800 028 555 for product support within Australia. A detailed international number guide for international customers will be supplied at the time of provisioning and service activation.

IPL customers can view availability reports for their service online. ATM and Frame Relay customers can go online to view monthly utilisation and availability reports.

Managing faults

Any faults in the customer's Telstra Wholesale service should be lodged on 1800 028 555 within Australia or +612 8289 8222 if calling from an overseas destination. Single point of contact for fault reporting is available for the entire service.

The services are backed by competitive service level assurances (SLAs) on availability. ATM and Frame Relay also have SLAs for network round trip delay and packet loss.

- Service activation: five working days for a PVC (Frame Relay);
- Cell loss ratio (CLR) is 1E-5 (ATM);
- Response time is 30 minutes;
- Mean time to repair is four hours for ATM and Frame Relay.

Details on SLAs and service assurance options are included in the customer agreement with Telstra Wholesale.

Related products

IPL

Telstra Wholesale is able to offer restoration services to ensure business continuity, such as through-running a parallel cable in the event of a broken cable.

A suite of additional services, including international data centre access and internationally managed CPE services are available to complement an IPL service. Protection and/or restoration on international and local loop components are also available to enhance our customers' total global service offering to their customers.

When combined with Telstra Wholesale Internet, IPL products create an international private internet or intranet for our customers and their customers.

With IPL, our customers can sell private point-to-point, clear channel access solutions to their business customers, covering both voice and data.

International ATM and Frame Relay

International ATM and Frame Relay, combined with other Telstra Wholesale products, including Telstra Wholesale Internet and MegaPoP®, provide the necessary network infrastructure for customers to build their own global networks with access to voice, IP and data transmission services.

ATM and Frame Relay inter-networking offers smooth, cost-effective migration from one service to the other when higher bandwidth is required.

ATM and Frame Relay provide access to revenue-generating products such as Telstra Wholesale Internet and MegaPoP®. They also provide resale opportunities in the WAN market.

These robust, managed communications services enable customers to offer a broad range of applications to their customers. Flexible charging options enable our customers to match costs with their actual business volume, ensuring that only used capacity is paid for, so they can save valuable resources that can be used to expand their business.

Telstra Wholesale international data services provide interconnection to cost-effective connectivity solutions with one of Asia's largest carrier of data services.

Telstra/Reach combined can offer a genuine pan-Asian presence with major hubs in Hong Kong and Australia and offices in 12 countries throughout the Asia Pacific, as well as customer project managers and multilingual customer care throughout Asia.

End-to-end management and a single point of contact reduce time and expenditure spent dealing with multiple vendors.

Telstra Wholesale international ATM and Frame Relay give customers the widest choice of quality service.

More information

Telstra Wholesale account managers can provide further details, which can also be obtained at www.telstrawholesale.com.