

Demystifying Broadband

The Flint IT Broadband Promise

We believe that the connectivity services we offer outstrip any you could get by going direct to a broadband provider. We work together with our broadband partners to guarantee high-quality support for our customers with our characteristic fast and friendly troubleshooting service. We also liaise with our broadband partners to ensure that our customers don't have to deal with the hassle of broadband migrations, address changes or backup installations themselves.

The Broadband Dilemma

We know how indispensable high-quality broadband is for any business and that is why we offer our customers a wide range of high-speed business broadband connections. However, getting your head round all the different connections available and deciding which suits your business needs can be confusing, and that is why we have put together this report.

Here you will find all the information you need in one easily-accessible place. If you are looking for a better broadband connection for your company, we guarantee that this post will help.

The table below summarises each of the connections available to you if you go through Flint IT. If you like the look of any of the connections, scroll down for a more detailed explanation of each and a glossary page for any of the underlined key terms you're not sure about.

Broadband Connection	Details	Speed
1. <u>ADSL2+</u>	<ul style="list-style-type: none"> • Exceptionally fast business broadband • Option of backup circuits • Unlimited telephone support • Run bandwidth-hungry applications 	Maximum downstream of 24Mb and upstream of 1Mb

2. VDSL2	<ul style="list-style-type: none"> • High speed and guaranteed throughput • Greater coverage than ADSL • Unlimited telephone support • Run bandwidth-hungry applications 	Maximum downstream of 40Mb and upstream of 10Mb
3. SDSL	<ul style="list-style-type: none"> • High upstream and guaranteed quality • SLAs on jitter, packet loss and delays • Ideal for uploading large amounts of data • Unlimited telephone support • Static IP address 	Guaranteed 2Mb bandwidth for download and upload
4. Annex M	<ul style="list-style-type: none"> • Voice quality SLAs • Perfect for voice and data transfer • Reduces downstream to double upstream speed • Static IP address • SLAs for latency, jitter and packet loss 	2Mb upstream speeds with guaranteed throughput of 1Mb
5. Fibre Ethernet	<ul style="list-style-type: none"> • High speed, symmetrical bandwidth • Greater throughput and reliability • A choice of backup line • Ideal for combined voice and data circuits • Use for point-to-point connections or a private MPLS network 	Bandwidth options vary from 10Mb up to 1Gb
6. Copper Ethernet (EFM)	<ul style="list-style-type: none"> • Increased resilience and reliability • Best site-to-site connectivity available in the UK • Use for point-to-point connections or a private MPLS network 	Bandwidth options vary from 2Mb to 35Mb

1. ADSL 2+
Exceptionally fast business broadband connected to BT Wholesale 21C network allowing customers the option of backup circuits via separate DSLAMs. Max downstream of 24Mb and upstream of 1Mb with premium service. ADSL 2+ will give you unlimited telephone support and will run bandwidth hungry applications that standard broadband may not support.
2. VDSL (VDSL2)
Fibre broadband which uses BT Wholesale's faster connection. VDSL2 uses Fibre-to-the-Cabinet (FTTC) technology to deliver high speed and guaranteed throughput, with downstream of up to 40Mb and upstream of up to 10Mb. Because VDSL uses a fibre to connect to a local cabinet, this service offers greater coverage to those currently restricted by ADSL's distance limitations. VDSL2 will give you unlimited telephone support and will run bandwidth hungry applications that standard broadband may not support.
3. SDSL
Comes in two varieties; SDSL and SDSL M. If you are looking for high upstream and guaranteed quality this line - with SLAs on jitter, packet loss and delays – should be perfect for your needs. Upload speeds are four times faster than on standard ADSL making this line ideal for clients linking sites or homeworkers who need to upload large amounts of data. The SDSL range offers four different products, all with guaranteed 2Mb bandwidth, static IP addresses and unlimited telephone support.
4. Annex M
Offers increased upstream speeds of up to 2Mb and guaranteed throughput of up to 1Mb. Voice quality SLAs mean that this line is perfect for voice and data solutions. Compared to ADSL2+, Annex M reduces your downstream slightly in order to double the upstream speed and allow you to download and send data with reliability and business grade performance. Static IP addresses are included as standard and Annex M offers SLA for latency, jitter and packet loss.
5. Fibre Ethernet
Provides dedicated high-speed, uncontended, full duplex, symmetrical bandwidth. Ethernet provides greater throughput and reliability than traditional broadband services. Bandwidth options vary from 10Mb up to 1Gb and Ethernet can be used for point-to-point connections or private MPLS networks. Spitfire's Ethernet service offers you a choice of digital subscriber line backup, guaranteed SLAs with service credits and SNMP monitoring. Ethernet circuits are also ideal for combined voice and data circuits.
6. Copper Ethernet (EFM)
Delivers low cost, high quality, business standard internet access with increased resilience and reliability due to being delivered through multi copper cores. Copper Ethernet provides a range of options with speeds from 2Mb right up to 35Mb where available, and provides the best site-to-site connectivity available in the UK. It can also be used for point-to-point connections or to provide a private MPLS network.



GLOSSARY:

DSLAM	Digital Subscriber Line Access Multiplexer enables faster connection between telephone lines and the internet.
Fibre-to-the-Cabinet Technology	Uses BT's 21C Network to provide faster speeds than ADSL2+with higher line rates of up to 40Mb downstream and 10Mbupstream. The DSLAM is in a cabinet on the street and linked back to the exchange with a fibre to carry broadband signals.
Full Duplex	Communication system that allows information to be transmitted in both directions simultaneously, such as a standard telephone. Full duplex Ethernet uses two pairs of twisted cables; one for receiving and one for sending information thereby doubling the maximum data capacity that can be supported by the connection.
Jitter	A drop in your internet signal which means you will not be getting your specified bandwidth. It could be due to electromagnetic interference and can result in a flickering monitor or loss of transmitted data between network devices.
Latency	Delays in the processing of network data. Excessive latency will prevent you from receiving data and impacts could be temporary or persistent depending on the source of the delays. If using a connection with high latency you will notice a significant delay in the loading and re-writing of web pages.
Packet Loss	Voice is transmitted over the internet in segments or 'packets'. Packet loss can happen because of a poor network connection meaning packets are damaged in transfer, or because the internet is congested. Packet loss of more than 5% begins to reduce call quality.
Point-to-Point Connection	A common way of delivering voice, video, data and mobile over fibre networks. It uses a dedicated fibre to transport data from the operator to the user's home, ensuring the highest possible throughput speeds.
Private MPLS Network	Uses Multi-Protocol Label Switching technology to make your IP network safer, more reliable and easier to administrate and customise. This gives you quality, security and flexibility as you access the internet and transmit data, voice and video.
SNMP	Simple Network Management Protocol is used for managing devices which access IP networks such as routers, servers and printers. It exposes data about the system configuration of these devices which then allows for settings to be modified or new configurations to be applied.
Symmetrical Bandwidth	Internet service which provides equal bandwidth for uploading and downloading data.

