



# Data Connectivity

Connect every element of your business

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BETTER PERFORMANCE. BETTER CONNECTIVITY. BETTER RETURN ON INVESTMENT.



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# Data Connectivity



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## Data connectivity that unlocks your full potential

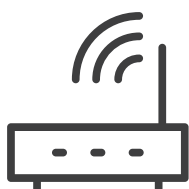
Broadband technology has transformed the way that businesses operate. It is a powerful tool for boosting productivity, encouraging collaboration and enhancing efficiency. It can allow your people to remotely access documents, emails, applications and other network resources from wherever they are, along with constant access to the tools they need to do their jobs.

A growing number of businesses, regardless of their size, are seeking to improve their business communications infrastructure by utilising data connectivity solutions which can link your people to your premises, your networks and your customers from wherever they are.

Our solutions allow for fast and easy access to your network and can be tailored to fit the exact needs of your business and utilise the latest technologies to keep you ahead of the competition.



# Broadband



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## Reliable, superfast connectivity solutions

In today's interconnected global marketplace superfast broadband is an essential tool, no matter how big or small your business is.

With an increasing number of applications moving from physical servers to the Cloud, it's more important than ever to stay connected.

Superfast broadband provides efficiency improvements, enhanced productivity and cost savings through improved online sales and marketing.

If you employ a large team, superfast connectivity will ensure your employees won't have to compete for access to slow and limited conventional broadband services. It will also enable flexible working for your employees, so that they can work from home and access company systems remotely, saving costs and reducing your carbon footprint.

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## Why Spectrum?

We do things differently. Instead of identifying products that you need, we work with you to create solutions that will help your business be better.

Offering the latest generation of connectivity from the best-of-breed networks, we design tailored broadband packages to help you achieve goals and challenge you to improve performance.

Delivering a better performance, our broadband solutions give you better ways for you to connect to, and engage with, your customers by phone, email, social media and online.

Whether you need to support voice, data or video services, we offer the perfect tailored broadband solution for you, meaning you deal with only one company and receive one monthly bill.

With our bespoke broadband solutions, we'll help you build a better way. Always.

## ADSL

### Key Features

- A cost-effective way for smaller companies to get connected to the internet
- Speed up to 24Mbps downstream and up to 1.8Mbps upstream
- Unlimited usage packages available
- Quick 10-day installation lead time

### Who is it for?

- Sites: Small/Home office
- Getting connected for the first time
- Keeping costs to a minimum
- Not always in the office
- Back-up connection

## FTTP & FTTH

### Key Features

- Fibre all the way to your premises
- Up to 40 times faster than copper broadband
- Can be used for converged internet and voice services
- 24/7 UK-based helpdesk
- 20-day installation lead time

### Who is it for?

- Sites: Small/Medium office
- Keeping costs down
- Multiple data users
- Voice-enabled services
- Data used for browsing, email, SaaS, Online docs
- Back-up service

## FTTC

### Key Features

- Fibre delivery to local cabinet and copper to the premises
- Converged internet and voice with speeds of up to 80Mbps
- Faster download, approx 4:1 download v upload
- 24/7 UK-based helpdesk
- 20-day installation lead time

### Who is it for?

- Sites: Small/Medium office
- Keeping costs down
- Multiple data users
- Voice-enabled services
- Data used for browsing, email, SaaS, Online docs
- Back-up service





# Ethernet



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## Robust, Resilient and Reliable

Ethernet you can rely on.

Businesses are becoming increasingly reliant on online applications for their day-to-day operations, especially as they grow, which means they require ICT infrastructure that is flexible enough to handle the growth and not stifle productivity.

If being connected is critical to your business, Ethernet could be for you. Also known as Leased Lines or Dedicated Internet Access, the whole internet connection is yours and yours alone.

Spectrum Ethernet provides outstanding value for money, compared with many alternatives and can boost productivity, provide a more secure and reliable connection, and lower overheads, which make it an ideal solution for businesses that want to perform better than their competition.

## Why Spectrum?

We believe there's always room to be better.

That's why we offer and build a wide range of bespoke Ethernet solutions that challenge you to be better.

As part of a single service, our solutions ensure that you only have to deal with one company and receive one monthly bill.

With year-round 24/7 network monitoring and traffic management, we give you the peace of mind of knowing that if your connection does go down, our expert team of engineers will resolve it quickly and seamlessly.

We'll take the time to build a partnership and gain a true understanding of your business, so we can deliver a bespoke Ethernet solution tailored to your exact needs.

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## Reasons to move to Ethernet

- Moving to SaaS
  - Mergers & Acquisitions
  - Outgrowing Infrastructure
  - Latency & QOS
  - Supplier & Support Performance
  - Converged Network
  - Contract Renewal & Upgrade
  - Consolidation of Service
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## What's the difference between Broadband & Ethernet?

### Broadband

**Contended**

At peak times your connection will slow down because you share it with other users.

**Low-level service level agreements (SLA)**

It will only get fixed as and when an Openreach engineer can get to it.

**Lower upload speeds than download**

Ok for browsing and downloading, but not good for VoIP, cloud backup or SaaS.

### Ethernet

**Uncontended**

You don't have to worry about degradation, as your speed is guaranteed.

**Stringent service level agreements (SLA)**

If anything goes wrong, you'll be up and running again within seven hours, or you can start claiming compensation.

**Symmetrical Connections**

You get the same guaranteed upload and download speeds, great for VoIP and uploading or sharing data.



# MPLS & VPLS



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## Secure & reliable MPLS, VPLS & hybrid network solutions

### MPLS & VPLS – what's the difference?

As a multi-site business, MPLS and VPLS both provide effective solutions for creating network connections and sharing data between your locations. However, each has distinct benefits and advantages, which makes choosing the right option for your business crucial.

MPLS – or Multiprotocol Label Switching – is an efficient way of directing network traffic to prioritise your most important data. It provides a highly-flexible backbone for your network with high levels of scalability.

VPLS, on the other hand, allows two remote networks to be joined over a single connection, allowing them to safely communicate with one another across the same local network.

However, just because MPLS and VPLS are different technologies, it doesn't mean they are mutually exclusive. They can, in fact, both be deployed within your network to give your business the best of both worlds.

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## Why Spectrum?

We believe that there's always room to be better.

That's why we offer fully-inclusive end-to-end MPLS, VPLS and hybrid solutions which deliver secure and resilient connectivity across all your business' locations.

Challenging your business to be better, we work with a range of leading providers to deliver bespoke MPLS and VPLS solutions to help your business achieve its goals.

With the flexibility to connect to any business location via a variety of technologies including fibre or copper Ethernet, ADSL, VDSL and SDSL, along with QoS-enabled bandwidth prioritisation, we ensure the integrity of all your time-critical data.

Seamlessly integrated into existing and new business sites, irrespective of location, our solutions allow easy integration of VoIP and SIP trunks for low-cost and free voice calls.

Delivering a better performance, our solutions help you build a better way. Always.

# Point-to-Point



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## Robust, resilient and reliable

Market-leading point-to-point solutions.

We offer a wide choice of permanently connected, high bandwidth point-to-point solutions which can help you to extend your networks and deliver a range of high-quality services to your customers.

The Ethernet fibre network that underpins them, provided by BT Openreach, offers unrivalled geographic coverage of the UK, serving many remote business locations.

These solutions are an ideal solution for your business if you have multiple locations across a single region, or for offsite back-up or disaster recovery.

Our point-to-point solutions are available in a wide variety of speed, many of which are scalable over time, depending on the needs of your business.



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## Why Spectrum?

Giving you ultimate flexibility, control and the ability to prioritise traffic across the network, our point-to-point solutions are designed to help you be better.

Because they are not internet-facing, they are secure and completely private and offer very cost-effective connectivity for locations within the same telephone exchange.

Completely bespoke and adaptable, our point-to-point solutions can be used with many other technologies, giving you the level of network integrity you need to grow your business and deliver a better performance.

We believe that there's always room to be better. With our bespoke point-to-point solutions, we help give you the way to be better. Always.

# Converged Services



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## Solutions that streamline

### Future-proof your business.

Maintaining effective communications is key to remaining competitive.

A regular challenge facing many businesses is what to do with an ageing data network and telecoms system which lacks functionality and is incompatible with the latest technologies.

Converging your voice and data networks is the ideal solution. Convergence can deliver significant cost savings by consolidating your voice and data to one connection. With dedicated and uncontended bandwidth – which can be increased as your business grows – you benefit from fast speeds, high capacity, flexible connectivity and low latency.

It will also help increase profitability, streamline your communications and ensure your business is future-proofed against further advances in technology.

## Why Spectrum?

There's always room to be better.

Instead of offering you services, we design our bespoke solutions around where you want to be better.

We create completely tailored packages, from large-scale data centre consolidation to more modest network refinements.

Our converged solutions give you ultimate flexibility and control of your voice and data networks, enabling you to streamline your communications and networks and reduce the cost of your infrastructure ownership by up to 50%.

Adaptable and able to develop as your business grows, our solutions give you future-proof ways to be better. Always.

# Wireless Connectivity



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## Safe and secure wireless solutions for ultimate flexibility

Unlock your full potential with wireless connectivity.

Wireless technology has transformed the way that businesses operate. It is a powerful tool for boosting productivity, encouraging collaboration and enhancing efficiency. It can allow your people to remotely access documents, emails, applications and other network resources from wherever they are, along with constant access to the tools they need to do their jobs.

A growing number of businesses, regardless of their size, are seeking to improve their business communications infrastructure by utilising wireless connectivity solutions, which can link your people to your premises, your networks and your customers from wherever they are.

Our wireless connectivity solutions allow for fast and easy access to your network and can be tailored to fit the exact needs of your business and utilise the latest technologies to keep you ahead of the competition.

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## Why Spectrum?

We create bespoke wireless connectivity solutions that unlock your business' full potential.

Working with market-leading providers of wireless technology, our solutions give you better collaborative, home and flexible working.

Our cost-efficient wireless solutions address your deployment, management, security and control issues, improving your productivity by enabling real-time access to your communications and network resources.

Believing there's always room to be better, our wireless connectivity solutions are built to help and challenge you to be better. Always.

# Case Study

## Derbyshire Fire & Rescue benefit from better ways of working

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Derbyshire Fire & Rescue Service (DFRS) is responsible for making the county of Derbyshire a safer place to live, work and visit by preventing fires and other emergencies, protecting people, property and the environment and responding to fire and rescue emergencies.

It covers a geography of over 1,000 square miles, which includes a variety of urban and rural communities with a population of approximately 980,000.

The service currently employs approximately 360 wholetime firefighters, 331 retained firefighters, 27 command and control personnel and 176 support personnel. It operates 31 fire stations, four area offices and a headquarters in Ripley.

It appointed Spectrum to provide a replacement solution for its end-of-life Nortel PBX systems, by utilising a resilient deployment of its existing Skype for Business infrastructure in its head office and across its remote sites.

### Solution

- Project design, configuration and implementation support
- Centralised SIP connectivity at the new HQ and DR in an Active/Active load shared mode
- First level failover capability between HQ and DR locations and SBCs
- Second level failover at HQ and DR locations to PSTN and alternative SIP service
- SBC deployments across all remote locations with SBAs for local Skype server resilience
- Local inbound SIP connectivity for remote site resilience
- Consolidated voice services provision, billing and support

### Results

- Enhanced connectivity and voice routing options
- Access to latest technology
- Real-time control of data usage
- Enhanced network security
- Cost saving through rationalisation

## The Challenge

The opening of newly-refurbished headquarters, which are jointly shared with the Derbyshire Constabulary, in August 2016 coincided with the need for DFRS to replace its end-of-life Nortel PBX systems, which presented the opportunity to implement a new, upgraded multi-site Skype for Business deployment.

With the rapid development of cloud communication technologies, DFRS was aware of the need to invest in the latest connectivity and devices to futureproof their network infrastructure and gain greater control of their multi-site voice and data requirements.

## Spectrum's Approach

A full voice and connectivity audit was undertaken to assess DFRS' exact requirements, before we made a number of recommendations regarding the transition to the cloud.

A phased implementation plan was also prepared and executed, to support a smooth transition and end-user adoption in two stages – initially at the Ripley HQ site and, six months later, at its four area offices across Derbyshire.

Rationalisation of existing connectivity and migration over to a Spectrum IP telephony solution, incorporating SIP and ISDN services, took place, providing complete control over the routing of individual DDIs.

Integration of a Sonus Session Border Controller into existing infrastructure, enabled any-to-any connectivity between legacy PBX technology and SIP connectivity.

## The Results

Spectrum delivered an easily-managed, resilient, feature-rich, highly-scalable and futureproofed telephony platform which is adaptable to suit the growing needs and capabilities of DFRS.

Consolidation led to increased flexibility and cost savings for the delivery of network services using Spectrum SIP products.

Employees now have access to a wide range of communication tools, which offer greater flexibility in call handling, interaction and internal team working.

These considerable benefits were combined with the design, procurement and complete lifecycle delivery offered by Spectrum.



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