openreach

Connecting Britain with ultrafast Gfast technology

We're on a mission to build the best broadband network with the highest quality service.

Right now, we're building a new Gfast network that delivers ultrafast broadband speeds of more than 100Mbps. It's giving people access to the best online content and services, and helping businesses thrive and compete in a global market

- We'll make ultrafast speeds of more than 100Mbps available to 12 million homes and businesses by the end of 2020
- 10 million of those will be using Gfast technology
- We've already made ultrafast services available to around 550,000 homes and businesses using full fibre or Gfast, and more than 100,000 customers have ordered a service using these technologies
- Gfast helps us bring ultrafast speeds to the largest number of customers in the shortest possible time, with minimal disruption
- We want to go further, and we're consulting with the industry on ways to build a larger-scale full fibre network

Gfast – ultrafast speeds, ultrafast deployment

Our ambition

We're working tirelessly to give people the broadband speeds they need at work and at home.

Over the last decade, we've invested more than £11 billion into our network to do that. We manage more than 158 million kilometres of cable stretching from Scotland to Cornwall, and from Wales to the east coast - and we're making superfast speeds available to thousands more homes and businesses every week.

But it doesn't stop there.

We're also building the next generation of ultrafast broadband networks, and that includes pioneering Gfast technology.

Gfast is great. It builds on our existing infrastructure and changes the way we transmit broadband signals to make them ultrafast without the need to install new cabling all the way to a property. It means we can make speeds of up to 330Mps - nearly 10 times today's UK average – available to millions of homes and businesses in a fast and cost effective way, with minimal disruption.

Our R&D team has pioneered Gfast, including the development of international standards, and in 2017, we switched on our first Gfast cabinets in Scotland. We then connected our first Gfast customer - a family-run book-keeping business in Gillingham - and now we're leading the world with an ambition to make Gfast available to 10 million homes and businesses by the end of 2020.

Ultrafast is about everyone being able to do everything online at the same time, with no interruptions

Video on demand – Stream ultra-high definition or 4K TV, or catch-up services instantly.

Virtual storage – Store photos, documents, music and videos online – in the cloud.

HD video calling – Chat with colleagues, friends and family around the world.

Gaming – Enjoy and share the latest live immersive experiences.

Working from home – Work as effectively as you would in the office.

Expand your business – Have a competitive advantage in connecting, serving, collaborating and competing online.

How we build Gfast

It typically takes us about three months to plan and build Gfast services in a new location.

The network build starts with a survey, to establish what infrastructure we already have in place, and what we need to build. And if there's any usable infrastructure nearby then we'll take advantage of that.

Next we check our street cabinets have the space to bolt a new Gfast side pod on the side. If not, we need to seek permission from the authorities to move the cabinet or place the Gfast unit separately nearby.

Our engineering teams then set about installing the side pod. They connect a fibre cable from our local exchange to the new equipment and then test everything.

The side pod enables us to upgrade areas fast without needing additional planning permissions and engineering work. It also takes advantage of the power supply, fibres and battery back-up kit that are already in the existing cabinet.

Once the side pod's attached and connected, we're ready to take orders from communications providers. We'll make sure our online fibre checker is updated so that the public can see it's available to them and their location appears on the systems our communications providers use to order service.

Speeds and prices

We're offering two headline download speeds in our pilots (see the next section for details), and the prices below are the prices that will be available through our early market phase, which launches in late 2017.

	Download speed	Upload speed	Connection price £ (wholesale)	Rental price per month (wholesale)
Gfast	**160Mbps**	30Mbps	£99 for Install with communications providers router or £150 for Managed install with Openreach modem	£11.49
Gfast	**330Mbps**	50Mbps		£14.99
FTTC for comparison	**80Mbps**	20Mbps	£49 to Self–Install or £99 with Openreach engineer	£9.95

Note - Prices at launch are subject to change and may not be these commercial prices that prevail. For the latest Openreach prices please check the Openreach pages, www.openreach.co.uk/pricing

Communications providers have the freedom to design and price their own packages when the product is launched.

We believe that the higher speed products will be of particular interest to small and medium businesses.

Dedicated 'leased lines' offering speeds of 10Mbps to 10Gbps – known as Ethernet - are already available from Openreach to communications providers throughout the UK, but the ultrafast speeds provided by Gfast offers a useful alternative to leased lines for some smaller and medium size business customers.

Gfast trials and pilots

We began technical trials of Gfast back in the summer of 2015 in Gosforth in Newcastle and Huntingdon in Cambridgeshire, and we've worked closely with our partners Huawei and Nokia in the tests and pilots to prove the effectiveness of the service.

We offered Gfast free of charge to communications providers during the trial and in May 2017 we began pilots in Cherry Hinton.

In total we've now selected 46 Gfast pilot locations where we're testing our deployments techniques at scale, exploring different technical scenarios and testing the speeds that we can deliver.

Gfast works really well technically, but it's important we understand the end-to-end performance of the product fully, working with our communications providers customers to test real customers' experiences of using the service.

Gfast communication providers

We have four communications providers taking part in our pilots; TalkTalk, Plusnet, BT business and BT Consumer. We expect these companies and others to subsequently launch commercial products.

What next

We're rapidly increasing the number of customers that can order a Gfast service. The total number of UK premises able to take part in our current pilot is more than 250,000, with the rollout expected to reach a million premises by the end of the year.

We're aiming to reach 10 million premises with the technology by 2020 and we're close to launching a commercial Gfast product with formal pricing and service levels.

We're also investigating ways in which we can boost the speeds we offer over Gfast. In our labs we've already proven it can achieve speeds of 500Mbps, and potentially it's capable of much faster speeds.

To find more about ultrafast broadband visit:
www.openreach.co.uk/ultrafast

Customer experiences

Residential customer Margaret Broughton from Gosforth, immediately noticed a marked difference in her broadband service.

"The other day I downloaded an hour long TV programme in High Definition and it was ready to watch straight away. There was no waiting at all."

The Hyst Bar in Swansea has turned itself as a live music and entertainments venue and plans to become a broadcaster with its own TV channel.

The newly transformed venue now boasts its own purpose built digital TV and radio studio along with a stage area for featuring live performances from local bands to interviews with local celebrities.

Openreach is Britain's digital network business. We connect homes, mobile phone masts, schools, shops, banks, hospitals, libraries, broadcasters, governments and businesses - large and small - to the world.

www.openreach.co.uk