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A UK Business Guide to SIP Trunking

Discover how SIP trunking can give you more control and flexibility over your business communications.

Contents

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Discover SIP trunking

In this guide:

We're going to break down the jargon and explain SIP technology. This will help you decide which new telephony is best for your business.

You'll learn:

- What SIP trunking is
- How SIP trunking works
- What to consider when upgrading your legacy telephony
- The relationship between SIP and VoIP

In 2025 BT is switching off its legacy ISDN service and upgrading to new technology.

And like the horse and cart, the gramophone, and the VHS tape, this change offers a chance to enhance your experience. Modern telephony solutions allow businesses to build a foundation for new technology that can improve customer experiences and employee productivity.

According to Ofcom's Communications Market Report, there are 6.4 million fixed business landlines in the UK. If you're connected to one of them, it's time to explore the option of switching to SIP/VoIP technologies or cloud telephony.

Switching from ISDN to new telephony technology is like switching from VHS to Netflix. On the one hand, you have a perfectly functional means of watching a film. On the other, you get more features, better quality, and a more exciting user experience

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Jargon busted

ISDN

Integrated Services Digital Network.

A set of standards that uses digital transmission to make phone calls over copper circuits.

PSTN

Public Switched Telephone Network.

The network of phone lines, satellites, cables etc. that connect calls.

VoIP

Voice Over Internet Protocol.

A way to send voice, and even video data, over the internet.

SIP

Session Initiation Protocol.

A type of VoIP specifically used for phone calls and multimedia conferencing.

PBX

Private Branch Exchange.

A private telephone network set up for your business phone system.

Cloud telephony

Off-site, cloud-based network and routing infrastructure.

What is SIP trunking?

SIP stands for Session Initiation Protocol.

SIP is a way to start and end connections for data and voice transfers over the internet. Trunking is a legacy term for a bundle of phone lines. Today, trunking refers to the virtual link between your PBX and the phone network via an internet connection. SIP is the protocol that initiates, manages, and ends a calling session. And it's just one of the possible protocols you can use for VoIP communications.

Any business with a modern IP PBX needs a way to connect their exchange to the wider PSTN.

Traditionally this was done using ISDN. But now that BT is switching off its ISDN, SIP trunks have become the industry standard for connecting business phone networks over the internet.

If you imagine your internet connection as a motorway, SIP trunking is a priority lane for digital phone calls. So, no matter how high your internet usage becomes, the quality of your calls doesn't change.

How does SIP trunking work?

SIP trunks work as an intermediary between your business phone system and the Internet.

SIP trunks use a packet switch network, that breaks voice calls down into digital packets and sends them across a network to their destination.

SIP phone

Internet

PSTN

Server

Devices
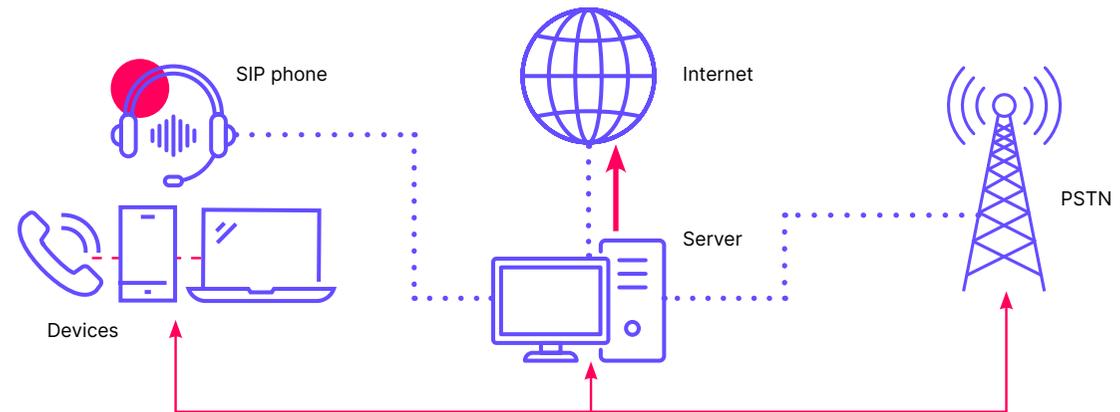
Each SIP trunk supports SIP channels. A SIP channel is equivalent to one incoming or outgoing call.

A SIP trunk can hold an unlimited number of channels, so your business only needs one SIP trunk no matter how many concurrent calls you expect. The number of channels required depends on how many calls your business will make at any one time.

VoIP lets you transfer voice and video data over the internet and SIP is the protocol that initiates, manages, and ends those calling sessions.

But while VoIP is limited to transferring voice data over the internet, a SIP trunk can transfer packets of multimedia data to enable channels like:

- Video conferencing
- Instant messaging
- Sending and receiving multimedia messages

This can enable businesses to scale up their capacity during peak time to match customer demand and maintain quality experiences for their customers.

8 Benefits of SIP trunking

1. **A foundation for the future**
2. **Cost-effectiveness**
3. Scalability
4. No installation
5. Greater resilience
6. Enhanced contact centre capabilities
7. Unify your communications
8. Get total visibility

1. A foundation for the future

ISDN has been an effective way for businesses to combine voice and data services with traditional lines. But today, connectivity is king.

Business telephony revolves around the power and reliability of their internet connection and the efficiency of the services they've chosen. IP-based PBXs, whether on-premise or cloud-based, are essentially mandatory.

SIP trunking easily integrates new communication services into your system without a complete replacement to your current setup.

2. Cost effectiveness

Thanks to SIP trunking, you'll no longer fear your monthly phone bill. The cost of your entire phone system becomes simple and predictable.

This is possible because:

- Typical SIP plans use a per-user recurring rate
- SIP calls use the internet instead of expensive physical phone lines
- SIP makes long-distance and international calls local, minimising costs

So, a per-user rate combined with no additional charges for international calls means no more scratching your head over complex monthly phone bills. This is particularly important for businesses with high outbound call volumes, like call centres, large sales teams, and consultancies
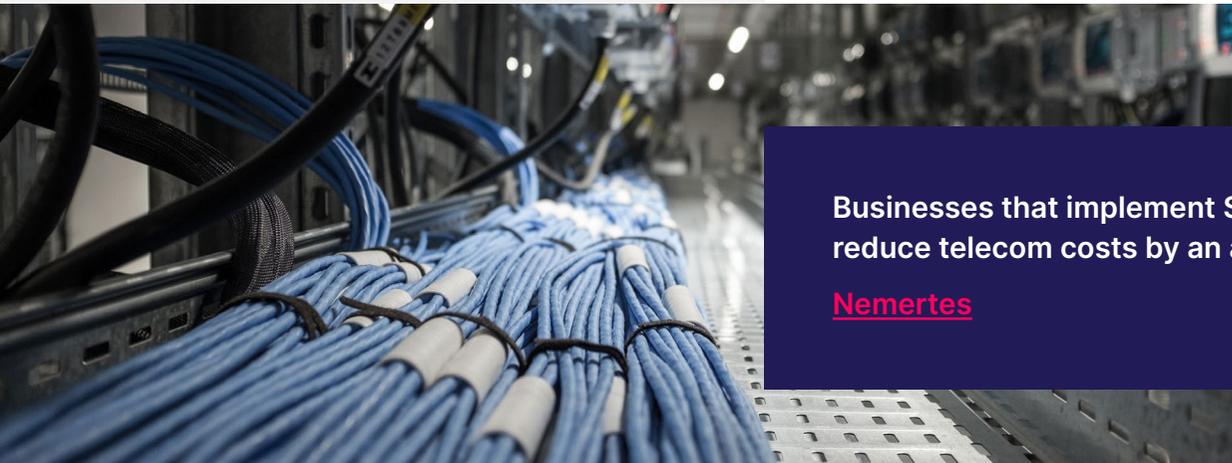
Businesses that implement SIP trunking reduce telecom costs by an average of 16.1%.

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3. Scalability

Traditional, wired phone systems limit your business growth. And if you do want to grow, the additional infrastructure installation costs are high.

Because SIP and VoIP networks use the internet, scalability is simple. If you suddenly experience significant growth, you don't have to install new ISDN lines. The subscription-based, per-user experience makes it easy to add and remove users, while the cloud makes it simple to add new services and features.

4. No installation

SIP trunking is a virtual, rather than physical installation. As such, trunks can be setup quickly – even within 48 hours. In most cases, businesses can just use their existing internet connectivity and infrastructure, with no need for extra installation.

Discover Connect4Teams

Add external calling capabilities into a Teams environment using Direct Routing Technology. Using our OneCloud platform, Connect4Teams offers a quick and simple set-up.

Unlock new communication and collaboration capabilities from any location, on any device. Perfect for growing businesses looking to access world-class cloud telephony on a reduced scale.

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5. Greater resilience

Business continuity is reliant upon maintaining connections. When ISDN connections go down, they can be time-consuming and difficult to fix. Your business can be out of action for hours or even days.

With SIP trunking you get a new level of resilience. You can divert calls to a different line or redirect them to another office. You can also redirect calls to mobile devices, which can be great for remote workers or employees out for meetings.

6. Enhanced contact centre capabilities

SIP trunking is particularly helpful in high call volume departments, like contact centres. The quality, resilience, and flexibility of SIP trunks enhances productivity and customer experiences. They enable contact centres to automate workflows and integrate new technologies to boost productivity and secure continuity. As a robust, cost-effective solution, SIP is fast becoming the standard for contact centres in the UK.

And now that hybrid working is the norm, SIP allows you to decentralise your contact centre without impacting performance.
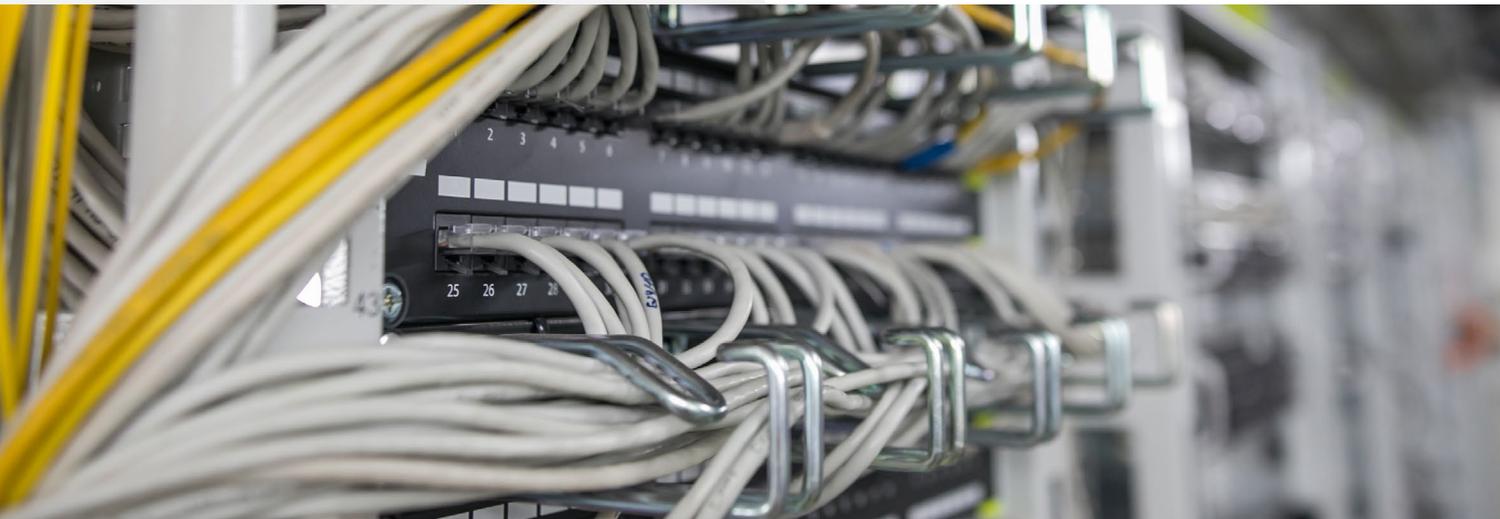
8 Benefits of SIP trunking

7. Unify your communications

Omnichannel experiences are becoming more popular for businesses who want to improve how they talk to their customers. But every new channel means adding more complexity to your network.

A SIP trunk can handle calls, texts, emails, instant messaging, conferencing, and more. It allows you to turn a patchwork of digital communications tools into one unified solution.

You no longer need to subscribe to different services for voice and data. Instead, you can build a solid infrastructure through SIP trunking. Unifying your communications simplifies a variety of processes, including:

• Billing
• Network management
• Security
• Compliance
• Customer service

8. Get total visibility

As a digital channel, SIP trunks allow you to tap into your call data to gather business intelligence (BI). Analytical tools allow you to measure a variety of call metrics on a per-person or per-team basis. This is the first step toward improving productivity and customer experience.

Communication channels that are unified into a SIP trunk enable combined billing management. Not only does that help you optimise your bills to save money, but it also saves you time.
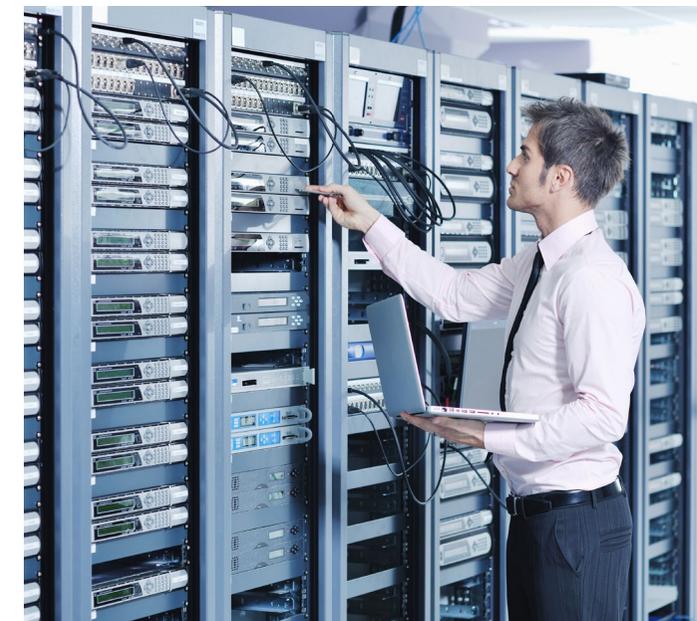
SIP trunking is suitable for any business

If you already have an IP PBX, you'll know that SIP trunks are essential. But if you're new to phone systems or are changing from an analogue PBX, you have a choice to make between an on-premises IP PBX or a cloud-hosted PBX system.

Using on-premise hardware combined with SIP trunks is particularly suited to businesses with the following characteristics:

Costly on-premises telephony

On-premise PBX systems need experts to set up and maintain them. Whether these experts are in-house or managed service providers, knowledge of telephony becomes mission-critical. Not only is there a cost associated with that knowledge, the hardware limits your opportunities for growth.

High call volume

Any business with a high volume of outbound and inbound calls can take advantage of the flexibility and cost-effectiveness that SIP trunking provides. Many modern call centres are highly likely to run more complex PBX systems supported by specialist high-volume SIP services.

For these businesses, getting the right SIP provider that fits their calling profile can mean serious cost savings in the long run.
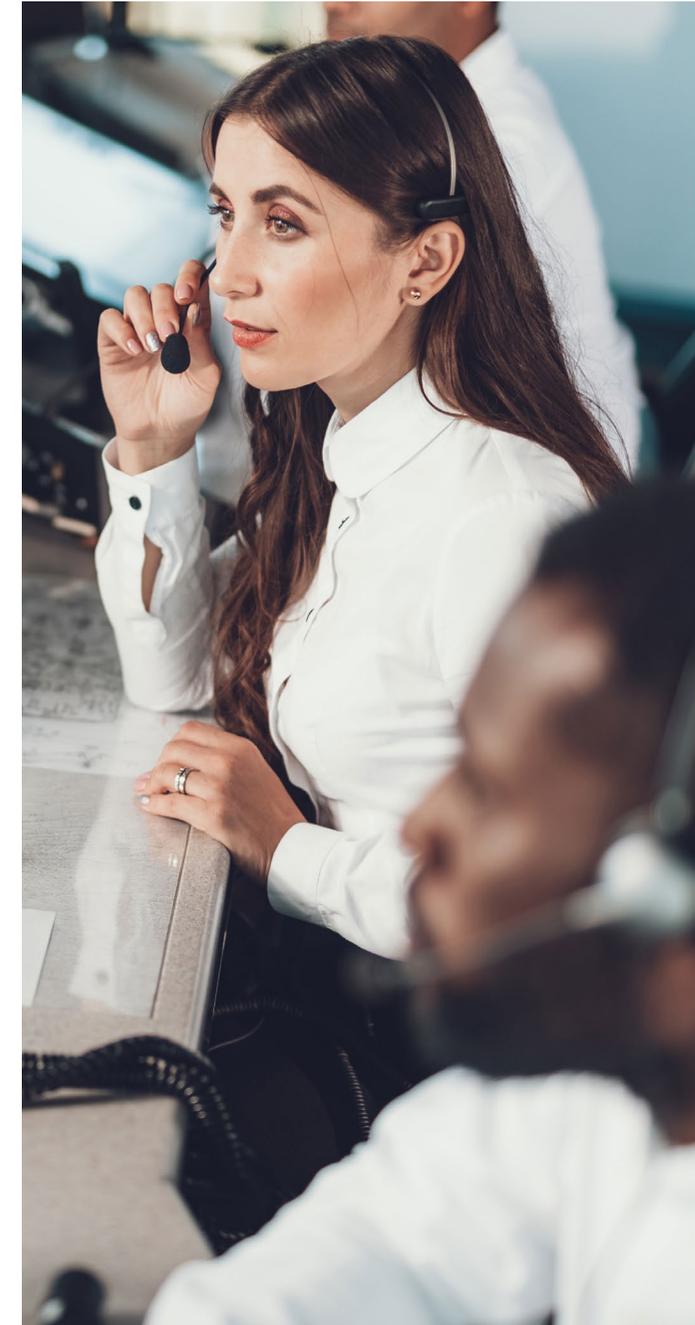
What do I need to consider?

It's important to research SIP Trunk services with some key factors in mind:

Your internet speed and quality

The limitation is based on Internet bandwidth capacity. Each non-compressed call uses approximately 85-100kbps of bandwidth.

In most Internet connections your upload speed is typically slower, so when determining the number of calls your connection will support, use your upload speed.

How many concurrent calls will you need?

Concurrent call numbers dictate the number of SIP channels you need. So, it's important to understand your call volumes. But don't worry about being spot on – one benefit of SIP services is that adding and removing channels is easy.

How many minutes will you need?

Many providers offer bundled minutes together with channels, but for some businesses, making calls based on a set tariff may actually be cheaper. This would usually only be the case for very low volume call businesses.

Connect4Teams from Onecom gives you flexible, simple to manage tariffs which can scale up or down as required.

With a 4mbps upload speed, the maximum recommended number of calls would be 40.

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What do I need to consider?

How many new numbers will you need?

If you're looking at a new provider, why not also get some new numbers? This may be particularly useful if you're opening a new office in a different location and you want to look small and local.

If you're a small business, SIP services allow you to appear much larger and more efficient.

For example: A UK business creating an international support number based in Germany that's displayed to German customers and routes to a different extension or device.

You can do this cheaply and quickly.

Are you porting any existing numbers over?

Unless you're a new business, you'll probably have a pre-existing business number. Porting becomes essential as you don't want to lose touch with your customers who are familiar with using a particular number for sales or support.

Porting is simple but it can take longer than other elements of the SIP Trunk process, often lasting around 1-2 weeks.

Or, if you are all set with SIP, Connect4Teams seamlessly connects your existing on-site or cloud telephony platform into Microsoft Teams in minutes. The clever integration allows you to leverage existing investments, utilising existing SIP trunks, keeping all existing numbers, routing, and call centre functionality in place, whilst using Teams as the single user interface.

SIP trunk setup checklist

☑ **Internet connection**
☑ **SIP-compatible PBX box (IP PBX)**
☑ **VoIP phone, or VoIP adapters if you'll use your existing traditional phones**
☑ **Network connection for your phones**

If you have an older PBX system, you may need a SIP-ISDN gateway. Newer systems may not require this additional hardware.

Choosing a SIP service provider

Making the switch from ISDN to SIP is simple, but it's important to choose the right partner. With the right telecoms service, you can secure your business, prime it for growth, and deliver better experiences.

SIP trunks exist outside your network, so it's crucial to ensure the service provider you choose follows security and privacy best practices.

Key SIP offering features

Look for these essential features to their offering:

- Call forwarding & restrictions
- Number presentation
- Blocked/nuisance caller management
- Concurrent ringing
- Number management
- Call analytics
- Business continuity plans

Great SIP service providers make it easy to connect to multiple unified communications solutions and cloud platforms, such as Five9 and 8×8.

They offer total visibility and billing control to keep your business effective today and combined analytics to help you look ahead.

Your SIP service provider should offer these qualities:

Security

If your calls are sensitive, particularly in sectors like financial services, healthcare, or insurance, are you confident your provider has a secure connection and data policy?

In addition to security, many businesses operate in industries that have strict data privacy regulations and need to ensure only authorised users can access their communications. For meeting privacy standards, you should consider a managed provider that encrypts SIP traffic using the secure real-time protocol (SRTP) and transport layer security (TLS).

Futureproofing

New digital channels appear all the time, so your communications networks will become more, not less, complex. And anyone who manages a vendor relationship will tell you that more providers only increase that complexity.

SIP trunking is only one aspect of business telecoms. So, choosing a provider, like Onecom, that offers a range of services, can enable your business-wide digital transformation.

Choosing a SIP service provider

Resilience and uptime

Ensure that your provider can show you uptime rates and has a clear monitoring policy in place. Ideally a real-time dashboard, alerts, and 365 monitoring.

OneCloud combines all your digital services in a single, consolidated view that offers advanced reporting, analytics, and more.

When it comes to voice communication, reliability is crucial for delivering a great customer experience. It's important to choose a provider that supports a modern and efficient codec like G.711 or G.729 to optimise quality and bandwidth, without impacting quality.

Support

Working with a provider that offers first-class support means you won't be without a phone line for long if anything goes wrong. Knowing that you can be up and running quickly, even when you need disaster recovery support, is essential for peace of mind and business continuity planning.

Price

SIP trunking is usually priced per user, per minute, or as part of a larger service fee that includes direct routing and other telephony infrastructure. A managed service provider can offer an end-to-end solution so that you don't need to deal with the expense of installing and maintaining telephony hardware.

SIP trunk pricing can vary from supplier to supplier. It's important to remember that it's not just about the cost of channels. You also need to know:

- Call tariffs
- Setup costs
- Number porting costs
- Maintenance fees

All good providers should be clear about these costs well before you purchase. Examine any bundled minutes offers closely.

FAQs

What is a high-volume SIP trunk?

A high-volume SIP trunk runs on a separate dedicated platform, built for high volumes of traffic. It allows you to use the volumes you want without any issues.

What's the difference between SIP and VoIP?

VoIP or Voice Over Internet Protocol makes and receives phone calls over the internet or internal networks. SIP is an application layer protocol that makes, manages, and terminates multimedia sessions, including voice, video, and messaging. While SIP is an initiation, it's mainly used to support IP technology, like VoIP calls.

What requirements do I need for a SIP Trunk?

The basic requirement for SIP trunks is an internet connection, with good bandwidth and speed. You can determine this by the number of calls you expect to be making and other web applications. You also need an IP PBX that's compatible with the SIP protocol required. If you don't have this, you may require a SIP card or license installation.

Is there a limit on how many phone numbers I can have?

Not at all! With Onecom, you can have as many phone numbers as you like from as many locations as you want.

How do I set up a SIP trunk and how much does it cost?

Setting up SIP is extremely easy. Costs vary depending on which supplier you buy your SIP trunk from. Contact us today and we'll set everything up for you in a way which best optimises your vision, and your budget.

About Onecom

Onecom is the UK's largest independent business telecoms and cloud communications provider. From our UK-wide network of regional offices, we deliver a range of tailored fixed-line, mobile, unified communications, connectivity, and cloud solutions.

We partner with the best technology and communications partners globally to enable UK-headquartered organisations to realise the potential of communication technology, develop competitive edge, and empower their people to succeed.

Onecom provides the opportunity to access all four core elements of your business communications infrastructure from one proven provider, allowing you to extend your internal resources, whilst achieving significant improvements to efficiency and substantial savings.

Features:

- Fully transparent billing from a single source
- Dedicated UK-based account managers and support teams
- Mature self-service account management options
- Simplified inventory control

Talk to us

Talk to us

Looking to switch to SIP, VoIP, or cloud telephony? Get in touch today.

onecom