

## IP TELEPHONY



Today, IP telephony provides sound business benefits, allowing voice and data convergence, where voice traffic effectively 'rides for free' over your data network.

With IP telephony, voice is converted into small data packets, and wrapped in an IP 'envelope' which contains critical information about where the data is going and at what priority. It is this ability to control the priority of traffic that is enabling voice calls to be made over IP-based data networks.

IP telephony can deliver major advantages, especially in terms of cost, as it makes more efficient use of bandwidth with multiple packets of data being able to travel down the same line at the same time.

Whether you require a sophisticated IP solution, or a hybrid of the two, Strata CIX will deliver the ultimate, modular, scalable and secure communication system your organisation needs.

### Key benefits of IP telephony:

- » Enables more flexible working options for your employees with remote or home working opportunities.
- » Reduces operating costs with a converged network, allowing voice to 'ride for free' over existing networks between sites.
- » Removes obstacles to growth with easy addition of more lines when necessary, wherever or whenever needed.
- » Flexible IP-QSig configuration providing feature transparency across branch office locations.
- » Feature-rich IP end-points, including one with a separate analogue line to allow users to call out in the event of network failure, and emergency services to be dialled from the exact location of the user.
- » Flexible configuration allowing you to deploy a digital solution today, and easily and cost-effectively move to IP when it's right for your business.

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### IP security

Whilst Toshiba have experience of both voice and data, we do not believe that combining the products into a single platform is in the interest of our customers. Aside from potentially duplicating technology and increasing the cost of the solution, keeping voice and data products separate increases both the security and reliability of your phone system.

Combining the product into a single solution would require the telephone switch to be exposed to the Internet. This would open the platform to 'Denial of Service' attacks such as fragmented packet bursts that are designed to slow or stop all firewall activity. Any intrusion from the Internet would immediately be on the switch, and if the same product is processing firewall activity and voice calls, your business could be seriously interrupted.

The Strata CIX platforms have therefore been designed to sit in the application area of a business network, meaning that there is no need for a built-in firewall. Additionally, each IP card has its own IP address allowing only the cards that need to be exposed to the Internet to be placed in the De-Militarized Zone (DMZ).

With only required IP cards being exposed to the Internet, all internal calls are made on the safe side of the network. Therefore, the increased overhead of a built-in Virtual Private Network (VPN) is not only unnecessary, but also adds additional information to the voice packets which increases bandwidth requirements.

Site to site connections can then be made using existing data connections that would already be secure. Remote, home workers would already need a secure VPN solution for their data connection, which can be used to securely transfer the voice call as well.

The Strata CIX processor card sits on the trusted network with a static IP address, making it practically impossible to find. The IP cards then sit on a separate Virtual Local Area Network (VLAN) which makes it even more difficult for any attack to penetrate the core switch.

Finally, our Strata CIX solution also runs bespoke software that is loaded when the platform is turned on. This means that 'trojans' cannot be added to the software, and a power off will reset the switch to the default settings. In addition, the backplane runs Toshiba software which is impossible to penetrate from the card. This means that the need for patches are reduced to feature enhancements, rather than vulnerabilities in the underlying operating system.

Just like firewalls, routers and other products from the data world, the Strata CIX platform uses dedicated hardware designed for a specific task. This makes it both secure and reliable, and allows customers to integrate the system into their existing equipment, rather than forcing them to make changes to their infrastructure.

### Pure IP vs hybrid IP

If you have identified with the benefits of IP telephony, you then face the decision of whether to implement a pure IP, or hybrid IP solution. Both have benefits of their own and for this reason, Toshiba's Strata CIX communication platforms can be easily re-configured to provide a hybrid of pure IP solutions as the requirements of your organisation change.

#### Key benefits of hybrid IP solutions:

- » Allows deployment of IP devices where required.
- » Remote offices can effectively be called for free.
- » Provides guaranteed Quality of Service (QoS) to head-office based staff.
- » Minimises business risk by providing redundancy options should the IP network fail.

#### Key benefits of pure IP solutions:

- » Reduction in costs of calls between head and branch offices.
- » Reduces bandwidth for internal calls in branch offices through peer-to-peer technology.
- » Cheaper, quicker and easier to establish new or temporary offices, or link buildings together.
- » Peer-to-peer technology ensures best possible QoS for IP telephony.



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Toshiba is committed to providing flexible, reliable and feature-rich communication solutions that help companies increase efficiency, reduce costs and improve customer satisfaction. With best in class reliability and customer investment protection, Toshiba are perfectly placed to satisfy the communication needs of our customers today and in the future.

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