Advantages of 5G for Business

5G for Business: Unleashing the Enterprise Potential

In the ever-evolving technology landscape, 5G stands out as a game - changer and a huge enabler in the proliferation of edge computing. As the fifth generation of mobile technology, 5G isn't just ubiquitous - it's the centerpiece of tech conversations worldwide. 5G promises to revolutionize wireless connectivity and propel businesses into a new era of digital transformation, which is reflected in the meteoric adoption. For example, North America is expected to have the highest 5G subscription penetration compared to all global regions, and is projected to have 92% penetration by 2029.[1]

While consumers will benefit from 5G's additional speed, the many benefits of 5G for Enterprise applications will not only help improve existing applications but will drive the deployment of new applications. At the center of every Enterprise solution is a wireless network, the key enabler that carries information to and from the mobile devices that drive your business processes.

Let's unwrap into the advantages of 5G for Enterprises:

[1] Ericsson Mobility Report, November, 2023

Exponential increases in Speeds

Download and Upload Speeds: 5G offers lightning-fast download and upload speeds equivalent to wired networks and 10-to-100 times faster than 4G LTE. This creates seamless data transfer, large files, high-resolution videos, and complex applications become a breeze.

5G takes a massive leap forward in speed and throughput:

3G	4G	5G
500 Megabytes	**500** Megabytes	**500** Megabytes
5.5minutes Download time	20 Seconds Download time	1.6 Seconds Download time
144Kb/s Average Speed	25Mb/s Average Speed	300Mb/s Average Speed
2Mb/s Bandwidth	200Mb/s Bandwidth	1Gb/s Bandwidth
200Kb/s Peak Data Rate	1Gb/s Peak Data Rate	20Gb/s Peak Data Rate

Latency Reduction

Latency, the time it takes for information to travel from a mobile device to a server and back is dramatic. 4G latency ranges from 50ms to 98ms, 5G can offer low latency below 5ms. With ultra-low latency, 5G enables real-time interactions such that remote surgeries, autonomous vehicles, and responsive augmented reality experiences - all made possible by minimal delay.

Enhanced Connectivity and Reliability

5G networks can utilize a broader range of bandwidths, accommodating both lower and higher frequencies, paving the way for a world where everything is always connected. For Enterprises that rely on uninterrupted connectivity such as industrial automation, remote monitoring, or IoT deployments, 5G ensures connectivity. 5G will support 100 times the number of devices of 4G LTE which translates to more devices connected simultaneously without compromising performance.

Smaller Physical Footprint and Energy Efficiency

Compact Infrastructure:
5G uses smaller transmitters (small cells), discreetly placed on buildings, light posts, or other inconspicuous locations. This reduces visual clutter and enhances urban aesthetics.

Energy Savings:
5G is a green technology that is actually good for the planet. Small cells require less power to operate, contributing to energy efficiency and Enterprise sustainability goals.

Unlocking New Possibilities

Edge Computing:
5G facilitates edge computing, where data processing occurs closer to the source. This enables real-time analytics, faster decision - making, and improved user experiences.

AI and IoT Integration:
Businesses can harness 5G to seamlessly integrate AI - driven insights and IoT devices. Smart cities and smart factories, predictive maintenance, and personalized customer experiences become reality.

Enterprise Use Cases

The benefits that 5G brings to Enterprises will undoubtedly benefit existing applications and use cases, but these same benefits will unlock new use cases as well.

Manufacturing: Manufacturers embracing 5G position themselves for agility, competitiveness, and growth. The factory floor evolves into a connected, responsive environment - a testament to the power of technology. Real-time data collection and analysis from sensors on the production line can help manufacturers improve efficiency, impacting production speed and workforce productivity. 5G can provide the constant connection robots require enabling the creation of the factory of the future. Plus, sensors on doors, gates and areas where sensitive information or goods are stored can help improve safety without adding manpower.

Mining: As 5G networks expand, mining operations will witness a paradigm shift. AVs, enabled with 5G, redefine safety, efficiency, and sustainability. The mining industry is on the brink of a transformative change - one where technology and safety converge.

Healthcare: In the fast-paced world of healthcare, 5G emerges as a lifeline - a conduit for speed, precision, improved patient quality of care and connectivity.

Utilities/Field Service: As 5G blankets coverage areas, utility workers step into a connected, safer, and more efficient environment. The fusion of technology and human expertise ensures reliable services and a sustainable future.

Retail: Stores and shoppers benefit from 5G making the shopping journey an immersive, efficient, and delightful experience. From personalized digital signage, to in-store navigation and customer engagement to automated inventory management and contactless payments, 5G is reimagining the retail frontier.

Hospitality: Whether it's a luxury hotel or a cozy B&B, hospitality venues transform into connected havens and guests experience seamless services, allowing staff to focus on what truly matters - guest satisfaction.

But what about 4G?

While we have demonstrated the exciting new use cases and incremental advantages of 5G, don't count 4G as being left behind. In fact, 4G is currently the most prevalent network globally, and carriers continue to make network improvements. That means the two can coexist to provide multiple network technology options, for now. The many advantages Enterprises experience will certainly mean 5G will rapidly become the dominate network of the future.

Askey Computer Corporation recently released the Askey RC40 - the affordable rugged high performance mobile computer alternative that supports the latest in wireless technologies, including 4G/LTE and 5G, integrated barcode scanning and rugged features well suited for Enterprise customers. This dual network support will allow your workforce to use 4G until full 5G coverage is in place and/or specific use cases demand 5G speeds, you optimize resource allocation. As 5G coverage expands and applications evolve, you can seamlessly transition to 5G when the time is right. This flexibility ensures a smooth migration without disrupting operations, or premature replacement of mobile devices due to lack of 5G support.

Conclusion

Embracing 5G isn't just about faster internet - it's about transforming business operations. As Enterprises adopt 5G, they position themselves at the forefront of innovation, ready to capitalize on opportunities and overcome challenges. Preparing for the 5G revolution—it's not just a network upgrade; it's a leap toward a connected, dynamic future.

Communication for the future

About Askey

Askey Computer Corporation is headquartered in Taipei, Taiwan with offices across the globe and within North America. Founded in 1989, Askey Computer Corporation is a member of AsusTEK (Asus) Computer Inc., and leveraging 35 years of telecommunication development has created an industry leading portfolio of global 5G and private 5G end-to-end network solutions for modern business environments to enhance their digital transformations. As a manufacturer of rugged mobile computing solutions since 2001, Askey has produced over 20M mobile devices to date and has helped shape Enterprise mobile computing.