SAMSUNG

Bringing 5G Indoors : The Critical Next Step in 5G's Evolution

Introducing Samsung Link Series

Why 5G indoor solution is required

As 5G gains momentum, operators are focused on providing stable and reliable 5G services to their customers. One element to improving the user's network performance satisfaction is to provide a stable indoor network since eighty percent of data traffic is generated indoors and that is where users spend most of their time. By leveraging the indoor 5G network, operators not only increase the user's network satisfaction but they generate new revenue by providing new services.

80% of data traffic come from indoors in the 5G era

The higher the radio frequency, the shorter the wavelengths

Modern Buildings need a new modern solution

The higher the 5G frequency, the shorter the wavelengths and as a result, the radio waves hard to propagate through external or even internal walls, which are currently being used in previous generation technologies.

Today's modern buildings are built with glass windows that are transparent and contain special coatings to improve thermal efficiency and keep indoor temperatures steady and comfortable. For example, most high efficiency low-E glass coatings have one or more thin continuous layers of metallic silver — acting as a blocker of electromagnetic waves — which results in the attenuation of signals from outside.

Industrial transformation is happening indoors

With the 5G era, the services being introduced in many indoor environments are rapidly diversifying and the data traffic generated is expected to increase tremendously.

Moving forward, massive amounts of data traffic in B2B areas such as smart factories, offices and cities are going to be generated not only by people, but by a whole new swath of 'things', from machines to sensors and more.

5G promises super-fast speeds, instantaneous communications, massive connectivity with billions of things. All of this is possible indoors, as well as with various applications like 4K live broadcasting, Virtual Reality (VR), Augmented Reality (AR), telemedicine, and high definition (HD) video surveillance.

In order to overcome the limitations caused by the characteristics of high frequencies and deliver the promise of 5G today, we are pleased to introduce the Samsung Link series.

Samsung Link Series

Extend your boundary towards a better indoor 5G experience

There are several options when it comes to building an indoor 5G network. When we designed our Link series, we focused on three key fundamentals.

1. Make it simple

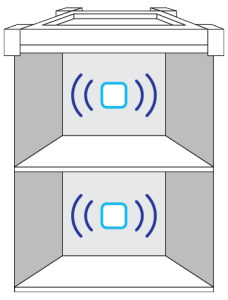
2. Make it poweful

3. Make it as cost-effective as possible

We believe the key deciding factor in selecting the right indoor solution is determined by the environment (size and type of the building), the level of service required (capacity needed) and the cabling infrastructure that is available in the building.

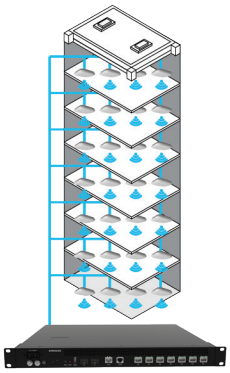
Samsung Networks has various options to meet the unique needs of customers.

Link Cell
Compact & Integrated Solution



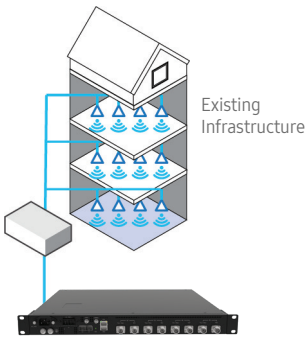
Enterprise and Hotspot

Link HubPro
Simple & Scalable Solution



Large and IT-friendly Building
with Ethernet or Optic

Link Hub
Fast & Easy Upgrade to 5G



Small to Medium Building
with Exising DAS Solution

[The Full Suite of 5G Indoor Products]

1. If you want to deploy

Integrated & powerful 5G network

in high capacity venues

Samsung Link Cell is the perfect choice

Samsung's Link Cell is the optimal product for an indoor network using high frequency, millimeter wave (mmWave) spectrum. Backed by 10 years of industry-leading mmWave research and development, we've designed the perfect product.

Link Cell is a compact indoor small cell that offers robust, ubiquitous in-building 5G mmWave coverage to deliver the high bandwidth, low latency and fast throughput needs for these businesses and public venues. The indoor solution can connect a large number of indoor users to data applications where signals from the outside 5G mmWave networks are hard to reach, enhancing productivity and providing a premium business experience. For enterprises that require dedicated connectivity and additional security needs the Link Cell can also serve as the foundation for a 5G private network. By combining a private 5G Core with Link Cells, an enterprise can have a secure, ultra-reliable, high-speed, low-latency 5G network that can accelerate their automation and digitization efforts.

Link Cell

A Simple & Integrated Solution: As the product has integrated baseband, radio and antenna into a single product, it doesn't need expensive and heavy 'fronthaul' connection using fiber. Only single Ethernet (Cat.6) is used as a backhaul connected to virtualized CU making it much easier for flexible deployment. It is also compact and aesthetically pleasing solution to be placed closer to users.

Performance: Despite its small form factor, Samsung Link Cell promises almost 2 Gbps data throughput and is suitable for highly populated hotspots generating a lot of data and cellular traffic.

Ideal Deployments
Stadiums, Arenas
Convention centers
Enterprise offices
Factories, Airports
Transportation hubs

2. If you want to Build

Simple and scalable 5G network

Samsung Link HubPro is a great option

To meet indoor coverage demands, particularly where capacity expansion is required or anticipated in the near future, Samsung offers a 5G Active DAS (Distributed Antenna System) solution called the Link HubPro. This system is especially useful in large buildings with extensive IT infrastructure. The solution includes two main components: a Radio Hub and Indoor Radio, and supports more diverse spectrums including, low-band and mid-band. With this simple architecture, single Radio Hub will allow a mobile operator to connect multiple radios and making multiple radios work as a single cell to build wide 5G indoor coverage without interference.

Link HubPro

Easy Installation & Management:
To support the 5G service with Samsung Link HubPro, it only needs a single cost-effective IT-grade LAN cable (Cat.6) for both signaling and power. And this helps operators to save the time and cost to build 5G indoor network. And the Link HubPro doesn't need a separate management system, which leads to simple installation and management.

Scalable Coverage & Capacity:
Operators can design an indoor network based on their needs and the environment itself. In areas where the number of radios is small, the indoor radios can work without the Radio Hub by connecting directly to the Samsung baseband. As traffic demand increases, the Radio Hub can be added to connect multiple radios.

Ideal Deployments
Large enterprise office buildings with high traffic

3. If you want to provide

5G while protecting your existing investment

Samsung Link Hub fits the bill

Easy Upgrade to 5G:
Samsung Link Hub acts as a radio to connecting passive antennas supporting both LTE and 5G. If a building already has an existing passive DAS system, service providers can easily upgrade their indoor network to provide 5G service and reuse legacy cabling to save both time and costs. The Link Hub will act as a bridge between the 5G baseband and antennas by converting data traffic to radio signals, and vice versa, making 5G data traffic possible. The Link Hub can be managed remotely by an operator's network management system.

Link Hub

Ideal Deployments
Small to medium buildings with less traffic
(Exising DAS solution)

Link Cell

Compact & Integrated Solution

Ideal Deployments

Stadiums, Malls
Enterprise offices
Airports, Transportation Hub

Link HubPro

Simple & Scalable Solution

Ideal Deployments

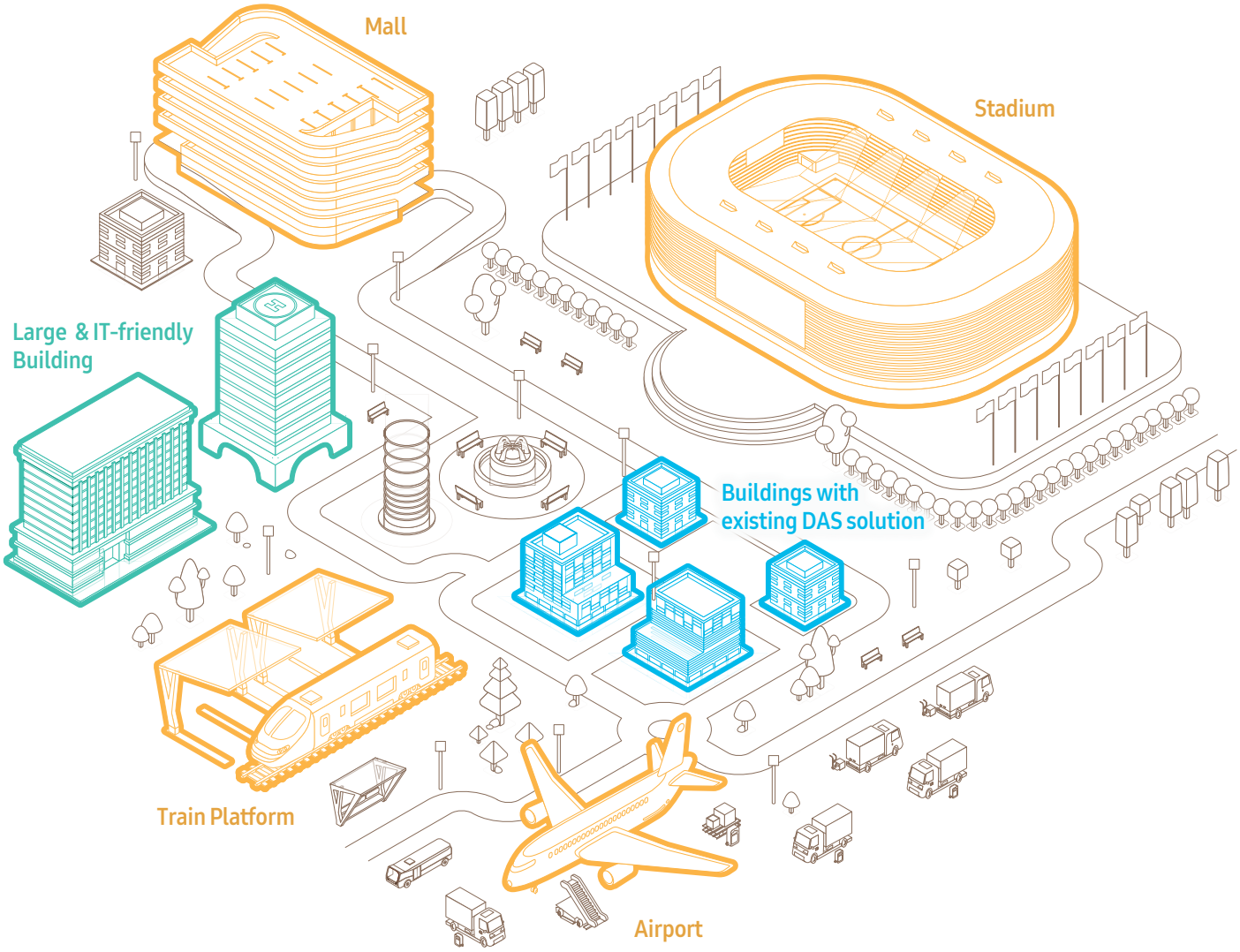
Large enterprise
office buildings
with high traffic areas

Link Hub

Fast & Easy Upgrade to 5G

Ideal Deployments

Small to medium buildings
with exising
DAS solutions



About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

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