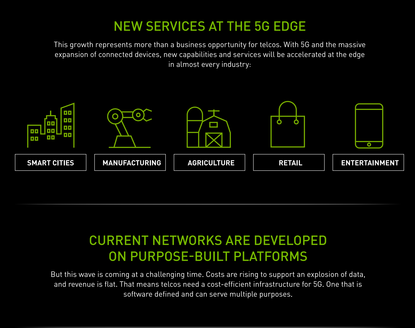
NVIDIA

OPENING NEW WAVES OF COMMUNICATION

Realize the Full Potential of 5G with GPU Acceleration

THE NETWORK IS ADVANCING

5G—the next technology evolution in telecommunications (telco)—is rapidly approaching. And it's poised to offer major benefits to the industry. In the next five to ten years, the market for AI at the edge, the number of connected devices, even revenues and investments are projected to grow exponentially.



NEW SERVICES AT THE 5G EDGE

This growth represents more than a business opportunity for telcos. With 5G and the massive expansion of connected devices, new capabilities and services will be accelerated at the edge in almost every industry:

SMART CITIES | MANUFACTURING | AGRICULTURE | RETAIL | ENTERTAINMENT

CURRENT NETWORKS ARE DEVELOPED ON PURPOSE-BUILT PLATFORMS

But this wave is coming at a challenging time. Costs are rising to support an explosion of data, and revenue is flat. That means telcos need a cost-efficient infrastructure for 5G. One that is software defined and can serve multiple purposes.

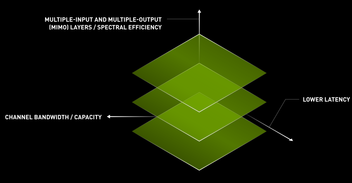
A NEW KIND OF NETWORK

They need to upgrade their networks while reducing costs and improving service quality. The key is a solution with high programmability, scalable performance, and commercial off-the-shelf (COTS) availability. Combined with GPU acceleration, new exciting services such as AI, augmented reality (AR), virtual reality (VR), and immersive gaming become possible at the telco edge.

WHAT IS PROGRAMMABILITY?

The more programmable a network is, the more providers can open it up to third parties to integrate new capabilities and services.

Telcos Need a High-Performance, Scalable Solution

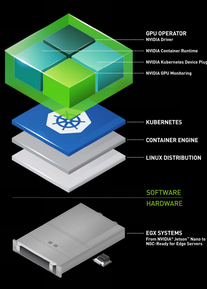


INTRODUCING THE GPU-ACCELERATED 5G NETWORK

NVIDIA brings the power of GPUs to 5G with a software-based solution that can help telcos realize the full potential of these newest, advanced technologies.

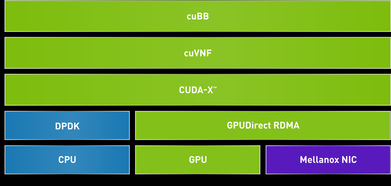
NVIDIA EGX

The NVIDIA EGX platform delivers GPU-accelerated AI/ML/HPC networks/vRAN. Its powerful, cloud-native software stack can analyze continuous streams of data in real time, making new 5G services possible.



NVIDIA AERIAL

NVIDIA Aerial is a CUDA® SDK that virtualizes 5G virtual radio area networks (RANs). Virtualization makes RANs more agile, efficient, and programmable, delivering the high bandwidth and ultra-low latency 5G needs. With NVIDIA EGX and NVIDIA Aerial, GPU-accelerated and software-defined vRAN is arriving sooner than you think.



WHY IS SOFTWARE-DEFINED RAN IMPORTANT?

A radio access network (RAN) enables end devices like smartphones to communicate with the core network of a telco system. Software-defined RANs are critical to modern 5G infrastructure to enable fungible capacity and dynamic services.

The Value of NVIDIA Aerial

COST-EFFECTIVE
Software-based means that telcos can quickly upgrade to new technologies and features at low cost.

PROGRAMMABLE
The fully programmable Jetson's stack makes the platform readily reconfigurable for different radio and edge applications.

CLOUD NATIVE
Cloud-native, scalable software enables easy provisioning of GPU servers.

COTS
As the widest-adopted AI and accelerated computing platform in the world, it's available on every cloud and through every OEM.

Accelerate AI at the Edge and Unleash the Full Potential of 5G

NVIDIA