

Deliver Flexibility, Reliability & Security for the 5G Wireless Network

“Network” for “Things” : MontaVista CGX®+ 5G Application Service

Intelligent devices have revolutionized the way we experience the world and have created a limitless platform for innovation. The infrastructure that enables and powers these intelligent devices, the network, is in need of its own revolution. MontaVista participates in the way next generation (5G) networks are created and deliver applications that require omnipresent scalable service with highest reliability and performance.



Flexibility

Scalable Service Delivery for both Broadband & Machine type



Reliability

Always ON with remote serviceability & upgrade



Security

Secure boot, Secure firmware upgrades & Secure data storage

Fig 1: 5G Networks Demands “Higher capacity, lowest latency and more consistent experience”

MontaVista Carrier Grade eXpress provides the necessary software, tools and support to help custom designs:

- ◆ **Flexible:** 5G network will be characterized by a much higher native flexibility and programmability for all non-radio network segments including SDN, NFV And IoT Networks. This level of complexity necessitates the selection of a reliable system software like MontaVista CGX.
- ◆ **Reliable :** Yocto™ based Linux solution with pre-certified Linux BSP (Board Support Packages) on the latest and greatest hardware from our SOC partners. Additional profiles for Virtualization and Data-Path along with bring-up support (Trainings, MontaVista Solution Engineering samples and MV Support)
- ◆ **Secure:** MontaVista CGX Security profile can be customized to enable secure gateway partitions, utilizing an ARM TrustZone® enabled secure world environment. This offers secure boot, applications including certificate management, secure firmware upgrades, and secure data storage.

BENEFITS

OUT OF BOX EXPERINEECE WITH PRE-TESTED BSPs
 REAL TIME LINUX + Virtualization (KVM + Containers)
 Multi-Architecture & HW/FPGA Optimization
 BUILT IN FLEXIBILITY, RELIABILITY AND SECURITY
 SECURE LIVE KERNEL AND APPLICATION UPDATE

APPLICATIONS / USE CASES

CGX Foundation, Virtualization & Security Profiles

- ◆ SDN & NFV
- ◆ 5G WIRELESS AND
- ◆ INTERNET OF THINGS

USE CASES LIKE

- ◆ Autonomous Driving
- ◆ Industrial IoT / Advanced Robotics
- ◆ Tactile Application and many others

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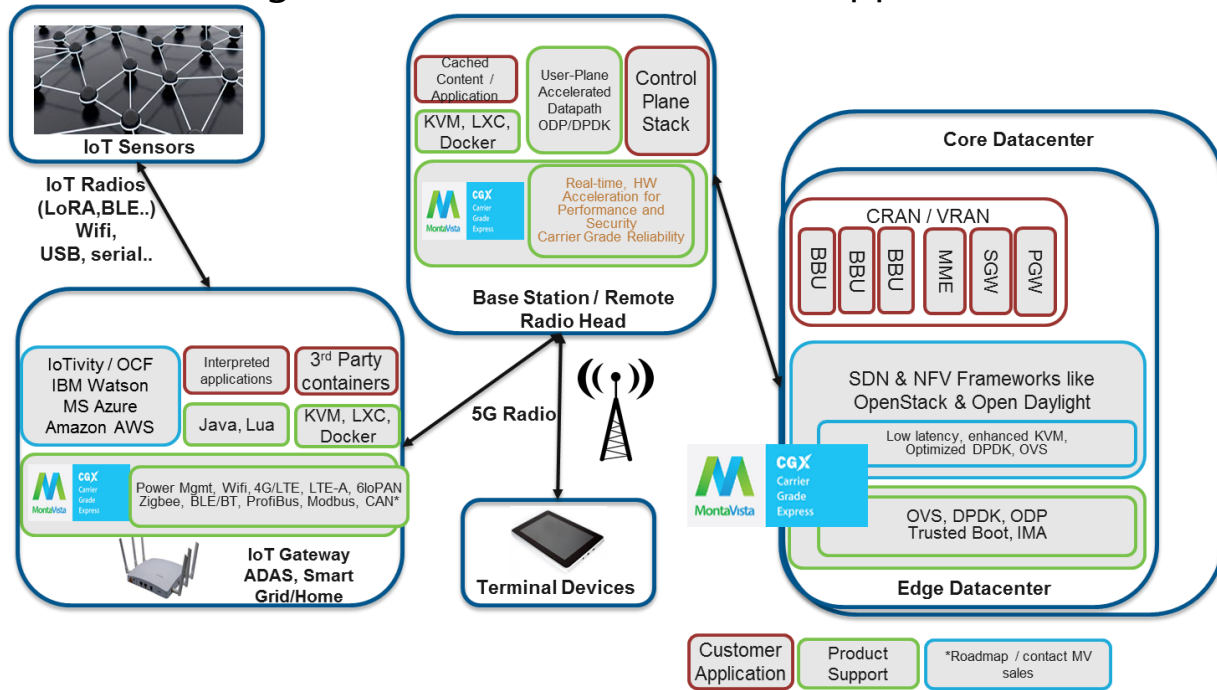


Fig 2: 5G Architectural Design Consideration for “Network of Things”

“NETWORK” for “THINGS”

The setup shown in Fig2, highlights a typical 5G application use case to service the need for a flexible and scalable network that be used as a reliable Access and Core Networks considerations—

- ◆ Low Latency and Bandwidth
- ◆ Content Caching
- ◆ Heterogeneous Networks / IoT Convergence
- ◆ Radio and Baseband separation
- ◆ Network Slicing
- ◆ Edge Computing, Multi-Tier Data Centers
- ◆ Control- and User Plane Separation
- ◆ Reliability
- ◆ Security

End-to-end Encryption

Communications between the things, the gateway, and the Cloud service in the 5G realm must be cryptographically secured to preserve confidentiality, integrity, and authenticity.

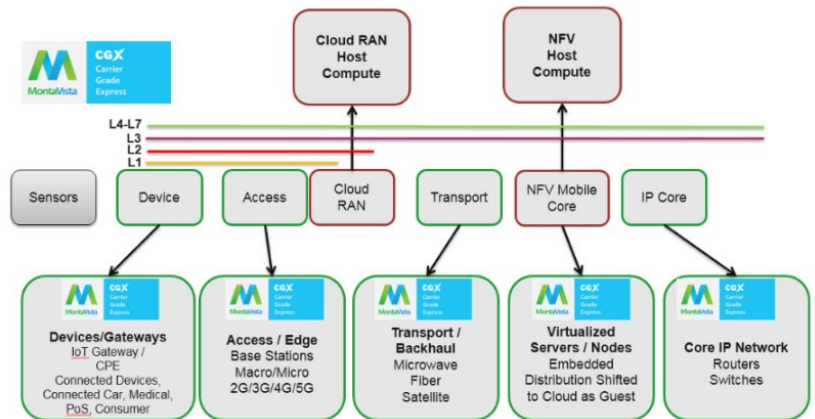


Fig 3: CGX for Next Generation Networks

“Network” for “Things” prototype leverages MontaVista Carrier Grade eXpress (CGX) Linux and optimized market specific profiles with extensive board support to demonstrate a flexible, reliable and secure prototype for potential 5G use cases, driven by things (IoT) .

eXpress.Connected.Everything.

About MontaVista Software

MontaVista Software, LLC, a wholly owned subsidiary of Cavium Networks (NASDAQ:CAVM) is a leader in embedded Linux commercialization. For over 15 years, MontaVista has been helping embedded developers get the most out of open source by adding commercial quality, integration, hardware enablement, expert support, and the resources of the MontaVista development community.



All Ways Open

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