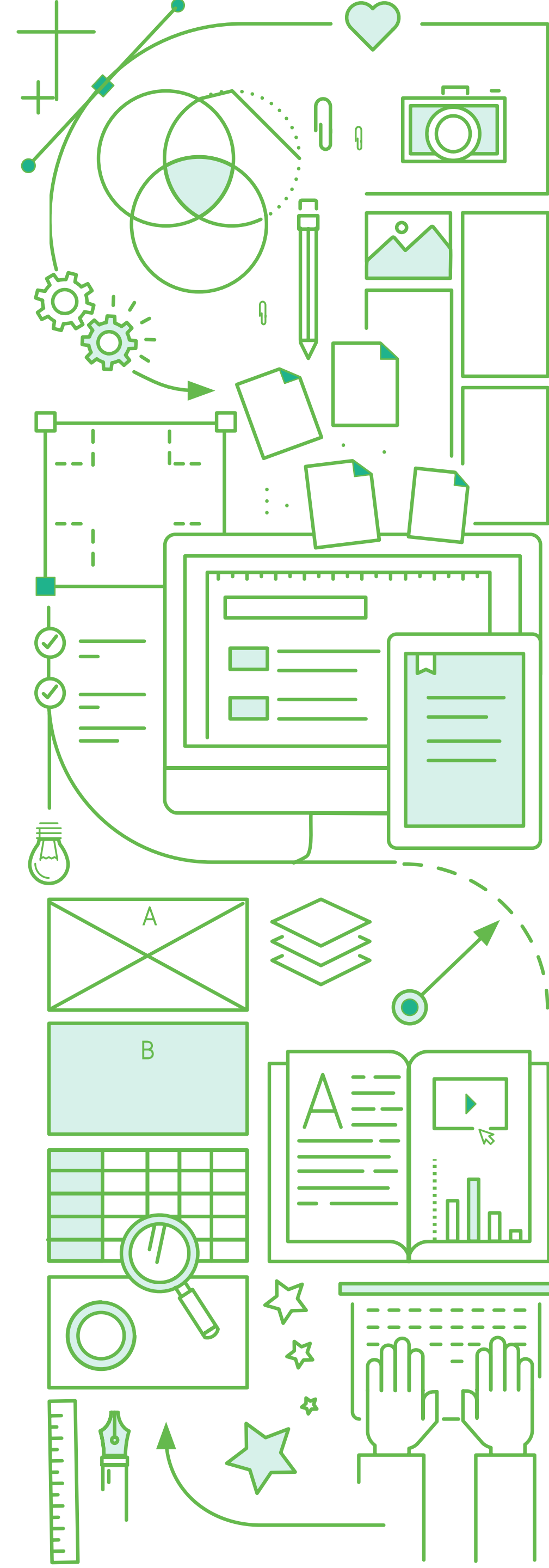# Datasheet

Carrier Grade eXpress (CGX) 5.0

MontaVista is your Linux partner

Kernel, Driver and Userland Customization	Custom Board Support Packages (BSPs)	Customized Service Level Agreements (SLAs)	Porting and Migration Services	System Tuning and Performance Optimization	Security Assessment and Certification

Expertise

Only working on Linux since 1999 – first Pre-emptible kernel, first Carrier Grade (6-9s HA)

Supported embedded Linux in variety of markets and industries

Accelerate your schedule –Triage problems quickly, backport future features, dedicated support engineering

Reliability and Certainty

Robust quality assurance (QA) testing

Frequent critical security patches and bug fixes

Board Maintenance Program (BMP) – QA performed on customer hardware

**Lower Total Cost of Ownership (TCO) - Open Source +**

Embedded Linux distribution ready to run on SoC of choice, TODAY

10+ years maintenance

Commercial Linux at a fraction of the cost of doing yourself

MontaVista® Linux® Carrier Grade eXpress (CGX) delivers Carrier Grade Linux reliability, security, and serviceability to embedded Internet of Things (IoT) devices along with high configurability and flexibility.

MontaVista® Linux® CGX provides an all-in-one platform that meets the latest demands of interconnected smart devices, allowing application portability, dynamic configuration, field maintenance, and real-time performance.

MontaVista® CGX supports state-of-the-art development across a wide range of embedded applications across markets from Medical, Industrial IoT, Networking and Telecom to Military and Aerospace.

MontaVista® CGX adheres to the Carrier Grade Linux (CGL) 5.0 specification and Common Criteria Evaluation Assurance Level 4+ certification, ensuring an out-of-box experience for developers!
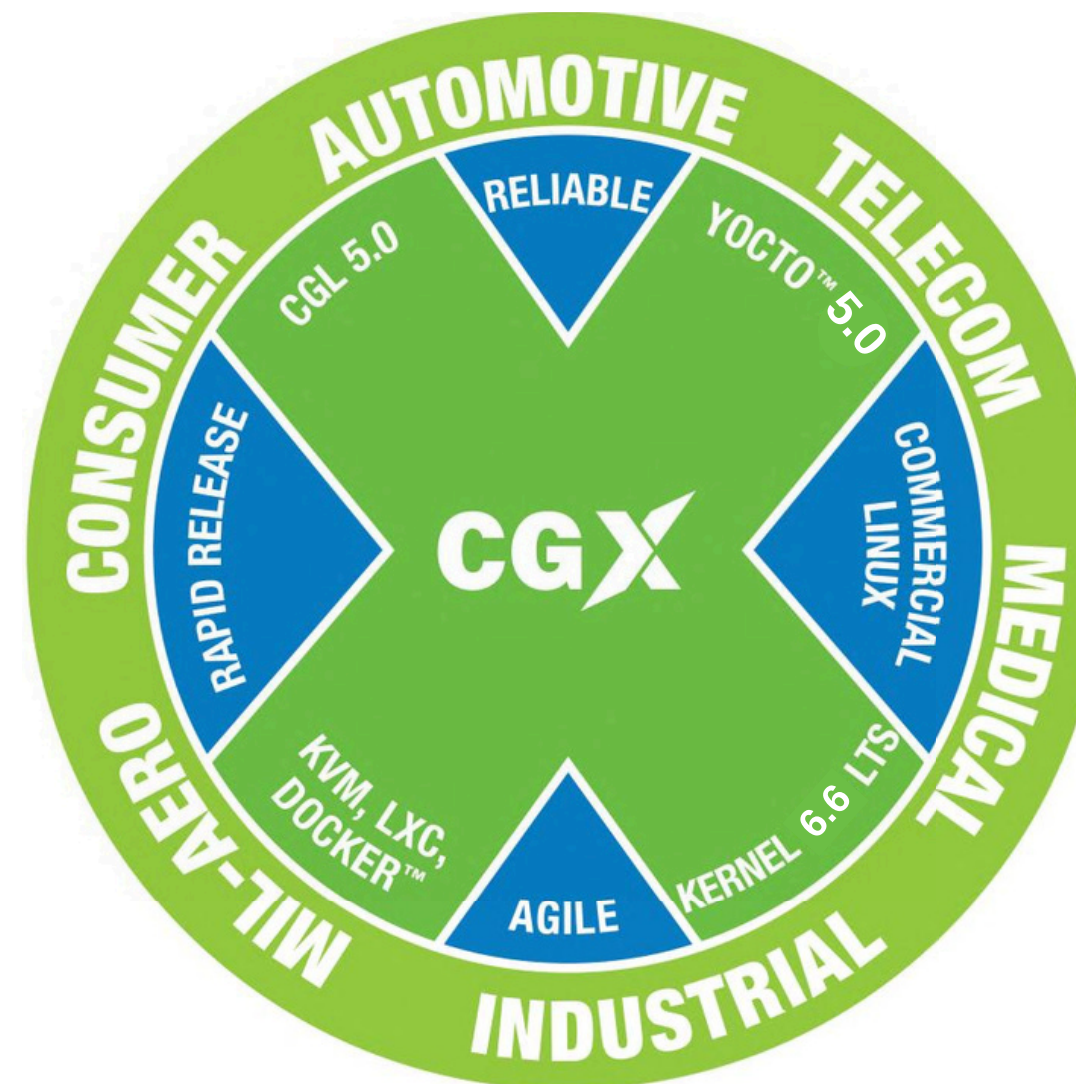
Reliable

MontaVista® CGX offers Carrier Grade Linux with enhancements, including high availability, security, rich networking and I/O support, real-time response time with high throughput, and multicore and virtualization support.

Commercial

Developers can leverage rich productivity tools, intensive testing and bug fixes of MontaVista® CGX to deliver proven quality in commercial products. Consistent security updates, technical support and training, custom engineering, along with access to GPL legal expertise and export compliance make CGX a full featured platform solution.

Agile

MontaVista® CGX facilitates rapid development via flexible import of custom packages, real-time capabilities, power management, memory footprint optimization, and deep connectivity support.

Rapid Release

MontaVista® CGX will follow rapid release cadence to better align with the latest Yocto Project® Long Term Support (LTS) releases, enabling adoption of newer LTS kernels and toolchains.

Benefits

Powerful Linux platform with Carrier Grade Linux reliability, security and serviceability

Alignment with the latest revisions of Yocto® Project LTS releases and LTS Linux kernel

Virtualization: Docker, Kubernetes, Linux Containers (LXC) and Kernel-based Virtual Machine (KVM)

Security: Secure Boot, SELinux, Kernel integrity subsystem (Linux IMA/EVM) and OP-TEE framework

Agile development with QEMU (Quick Emulator), rapid release cadence and flexible configuration

Prebuilt cross architecture BSPs based on ARM® and Intel® x86-64 (Power PC and MIPS as per roadmap)

Real-time/ deterministic kernel, Low image footprint configuration, Power management and Fast Boot

Non-unified kernel approach to reduce production cost and release cadence (unified kernel available per demand)

Carrier Grade reliability: CGL 5.0 availability, serviceability, performance and security with long-term support (10+ years)

Carrier Grade eXpress (CGX) 5.0

MontaVista's 15th generation Carrier Grade Linux

Highlights

- Professionally supported Linux baseline
- Support to all major CPU architectures - x86, ARM, PowerPC, MIPS and RISC-V
- Yocto 5.0 compatible
- Linux 6.6 LTS kernel
- GCC 13 and CLANG 18 toolchain
- AI-Ready and Secure by Design

1 Secure by Design enabled by a Secure by Default configuration, comprehensive CVE management and standard Software Bill of Materials (SBOM) generation for enhanced software supply chain security

2 Enabled offline/runtime kernel integrity management with Secure Boot, SELinux, Linux IMA/EVM, Address Space Layout Randomization (ASLR) and Kernel ASLR (KASLR)
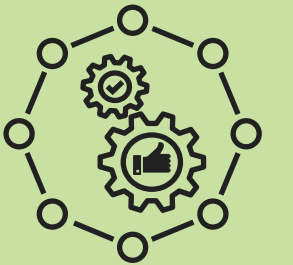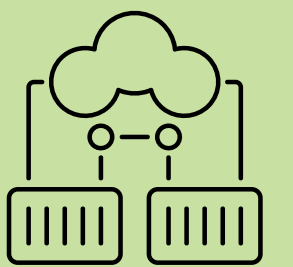
3 Secure software update via The Update Framework (TUF) or Over-The-Air (OTA), seamless upgrade to MVEdge

4 Enhanced Linux Virtualization support for Docker, Linux Containers (LXC), Kernel-based Virtual Machine (KVM) and Kubernetes (Container Orchestration)
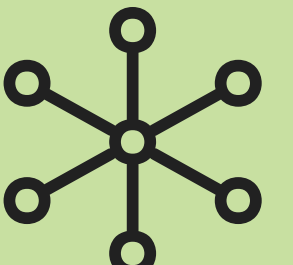
5 Out-of-the-box experience with pre-tested board support packages (BSPs) integrated with Yocto Core
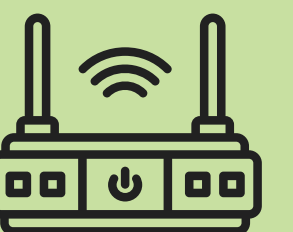
6 Enabled connection with next-generation networks such as Bluetooth Low Energy (BLE), 5G/4G/LTE, Zigbee, LoRA, CANbus, Modbus, and Profibus

7 Intelligent gateway for IoT, Robotics and Industrial applications with features supporting top-end graphics (Flutter, Qt6, Wayland) and AI accelerator chips (embedded TPUs and GPUs)

Comprehensive Development Platform

Yocto SDK

MontaVista® Linux® CGX delivers a comprehensive platform that meets product developers' needs for a truly open and fully tested solution to get an embedded device to enter the market faster. MontaVista supports risk mitigation by providing a protection from IP and patent infringement as well as full US export registration coverage for CGX.

• Linux Board Support with LTS Kernel version with Pre-integrated OE userland.
• Software Development Kit includes latest Yocto latest release with GNU toolchains.
• MontaVista Zone secure content repository.

Reducing your total cost of ownership (TCO) with a fully supported, standardized Linux platform is no longer out of the question with MontaVista® CGX. The "make-or-buy" decision can be resolved: Adopting CGX is the right choice for OEMs to build a device platform as it will eliminate concerns about reliability, security, upgrades or patches, and allow them to focus on core value-added expertise in application development.
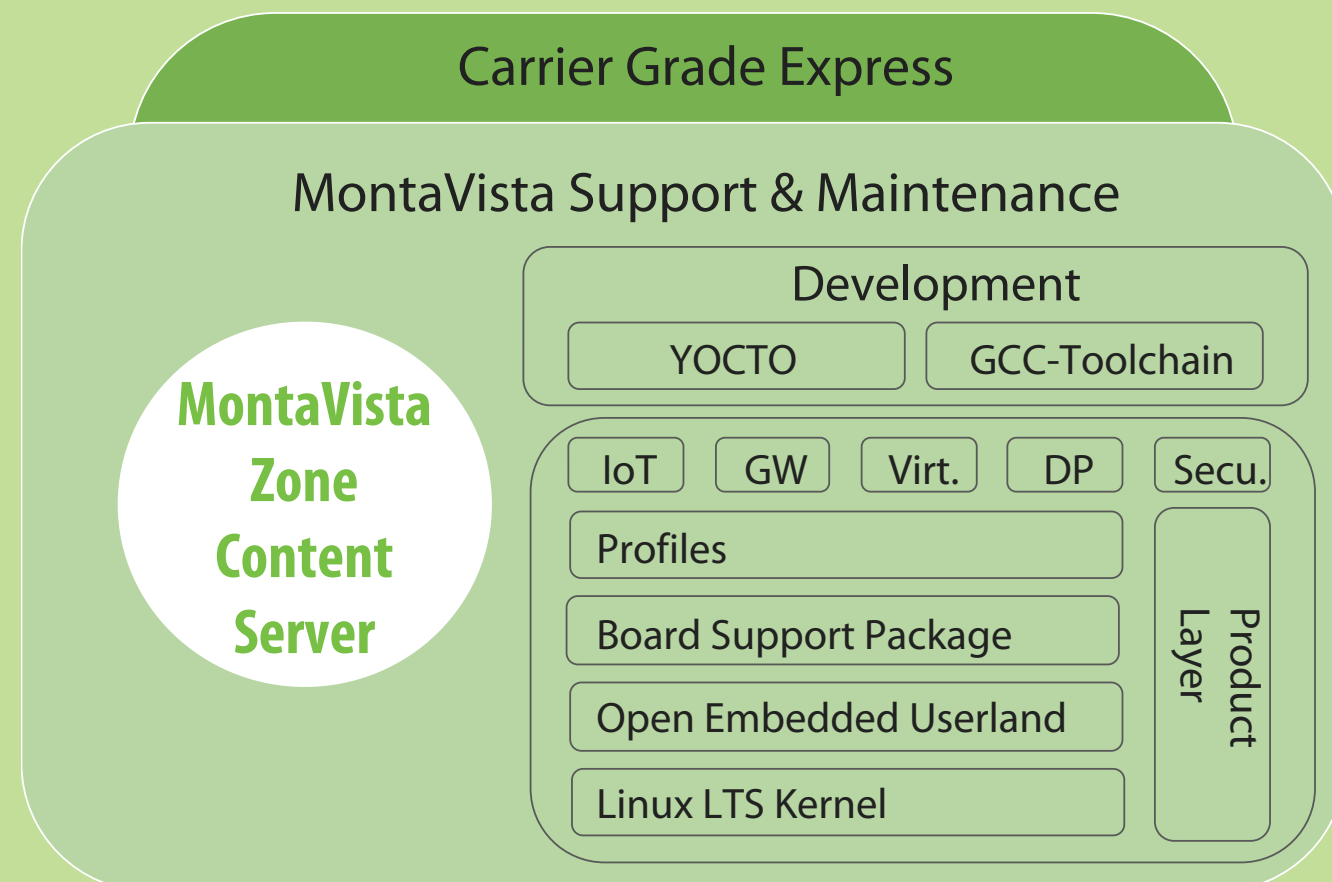
MontaVista Sofwatre is a member of the Yocto Project Advisory Board as it is a productive tool for early-stage embedded Linux development.

MontaVista® Linux® CGX leverages latest stable Yocto release by building an embedded distribution, allowing our customers to take full advantage of the existing Yocto and Open Embedded ecosystem with its support for added feature layers and hardware support. A profile based layered approach helps program teams with a great starting point that is both fully open and optimized for use cases.

Carrier Grade Express

MontaVista Support & Maintenance

Development

| YOCTO | GCC-Toolchain |

| IoT | GW | Virt. | DP | Secu. |

Profiles

Board Support Package

Open Embedded Userland

Linux LTS Kernel

Product Layer

MontaVista Zone Content Server

Highlights

Software Development Kit

Latest Yocto build engine
Kernel and Application development tools
System measurement tools

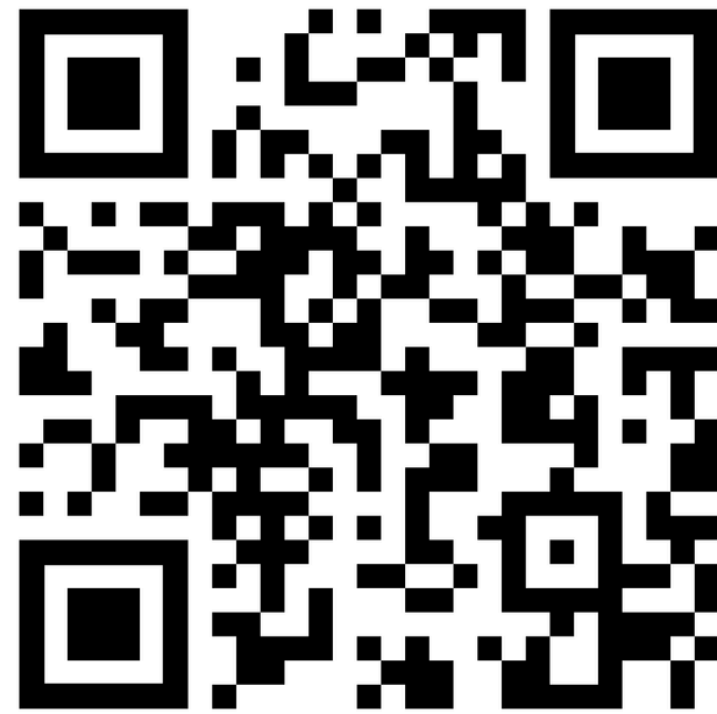## Board Support Package (BSP)

Embedded Linux kernel device drivers and libraries userland applications CGX profiles*

Profiles available as supported by BSP(s)
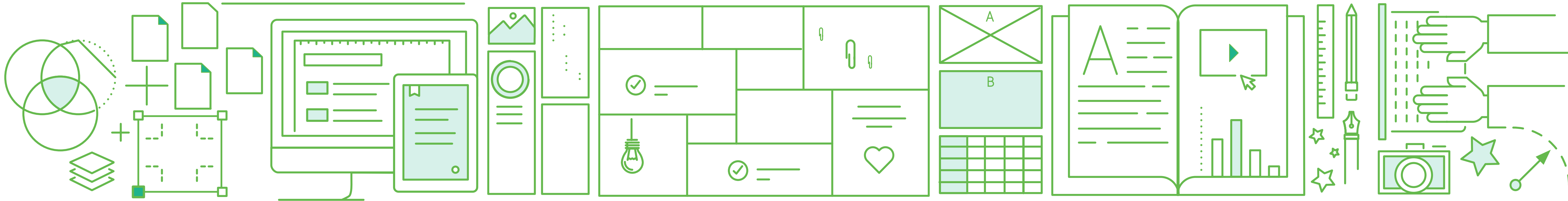
Carrier Grade Linux

High Availability
Field serviceability features additional I/O (IPMI, RAID)
CGL 5.0 compatibility
Long-Term Support (10 years)

SCAN ME

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About MontaVista Software

MontaVista Software is a leader in embedded Linux commercialization. For more than 20 years, MontaVista has been helping embedded developers get the most out of open source by commercial support and long-term maintenance of MontaVista Linux, CentOS, Rocky Linux, Yocto based distributions and other embedded Linux. With our deep technical expertise in kernel, userland/packages and toolchain, MontaVista can cost effectively assist you in getting your product to market on time and maintaining it throughout its lifecycle.

MontaVista reserves the right to change any of the features and versions without prior notice, also some features listed represent future roadmap information, and/or could required Professional Services involvement for proper configuration. Please check with your MontaVista contact for details.