ASIC Emulation
Designing complex systems, from platform level down to ASIC, typically involves a crucial simulation phase to ensure that the proposed architecture achieves the desired functionality and performance. Where implementation is expensive, such as ASIC development, companies will also aim to emulate a design before committing. This step can take roll-out from over twelve months to less than six, with large cost savings and a huge impact on product launch. The more complex the design, the larger the emulation platform needed, driving a constant hunger for larger and faster FPGA-based platforms.

To be effective in this space, highly capable FPGAs need to be configured in a way that provides flexible, high-bandwidth interconnects. Requirements change from one application to another, so a modular architecture is required, preferably based on an open standard and supported by storage and I/O for ease of integration into larger systems. Designers will look for a consistent emulation approach from one product generation to the next, so will prefer platforms that can be upgraded as new technology becomes available.

VadaTech provides a strong range of AMCs based on Xilinx UltraScale and UltraScale+ FPGAs in the AMC59x and AMC58x family. These products not only support the latest and largest FPGAs on the market, including XCVU440, but also offer the connectivity needed to form an emulation network. They are supported by high-performance chassis such as the VT866 and VT884, that offer 40G backplanes and thermal management appropriate for dense, high-power configurations. These are based on industry standard form factors and include intelligent platform management that allows users to easily manage even large groups of platforms.

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The VT866 provides the power and cooling to support up to 12 full-size AMCs, making it suitable for large, power-hungry FPGAs. The backplane supports 40G links and dual MCH can implement PCI-e Gen3, XAUI, SRIO, or low-latency Aurora between the slots.

VT866
5U 12-slot MTCA chassis, 40G backplane

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VT884
3U 12-slot MTCA chassis, enhanced connectivity

The VT844 can house up to 12 mid-size AMCs, each of which can be up to XCVU440 thanks to the advanced airflow design. Supporting PinoutPlus™, the chassis provides up to 160Gb/s between slots in addition to the standard fabric connections.

VT835 & ATC126
3U 12-slot MTCA chassis w/ Rugged Blade Processor

The VT835 provides a 40G backplane and allows a very powerful Intel Blade, such as the ATC126, to be coupled to up to 8 AMC59x AMCs, giving users the ability to mix FPGA and GPP technology in their emulation platform.
Choose VadaTech

We are technology leaders
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• Continuous innovation
• Open systems expertise

We commit to our customers
• Partnerships power innovation
• Collaborative approach
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We deliver complexity
• End-to-end Processing
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• Configurable solutions

We manufacture in-house
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• Accelerated deployment
• AS9100 accredited