MT 6020 Simulator



Entry-level Performance



MT 6020 Simulator is an entry-level real-time simulator independently developed by ModelingTech. It uses FPGAs as the computing core and can simulate controlled objects in time steps as small as 1µs. It creates a safe testing environment for users to quickly verify control algorithms and test under fault conditions, which dramatically improves the efficiency of new product&technology pre-research, control algorithm optimization and product iterative testing.

Detailed Highlights

Innovative Hardware Architecture

Adopting the hardware architecture of CPU+FPGA, it supports users to realize the joint simulation of power system and power electronic system with large and small timesteps on the same platform.

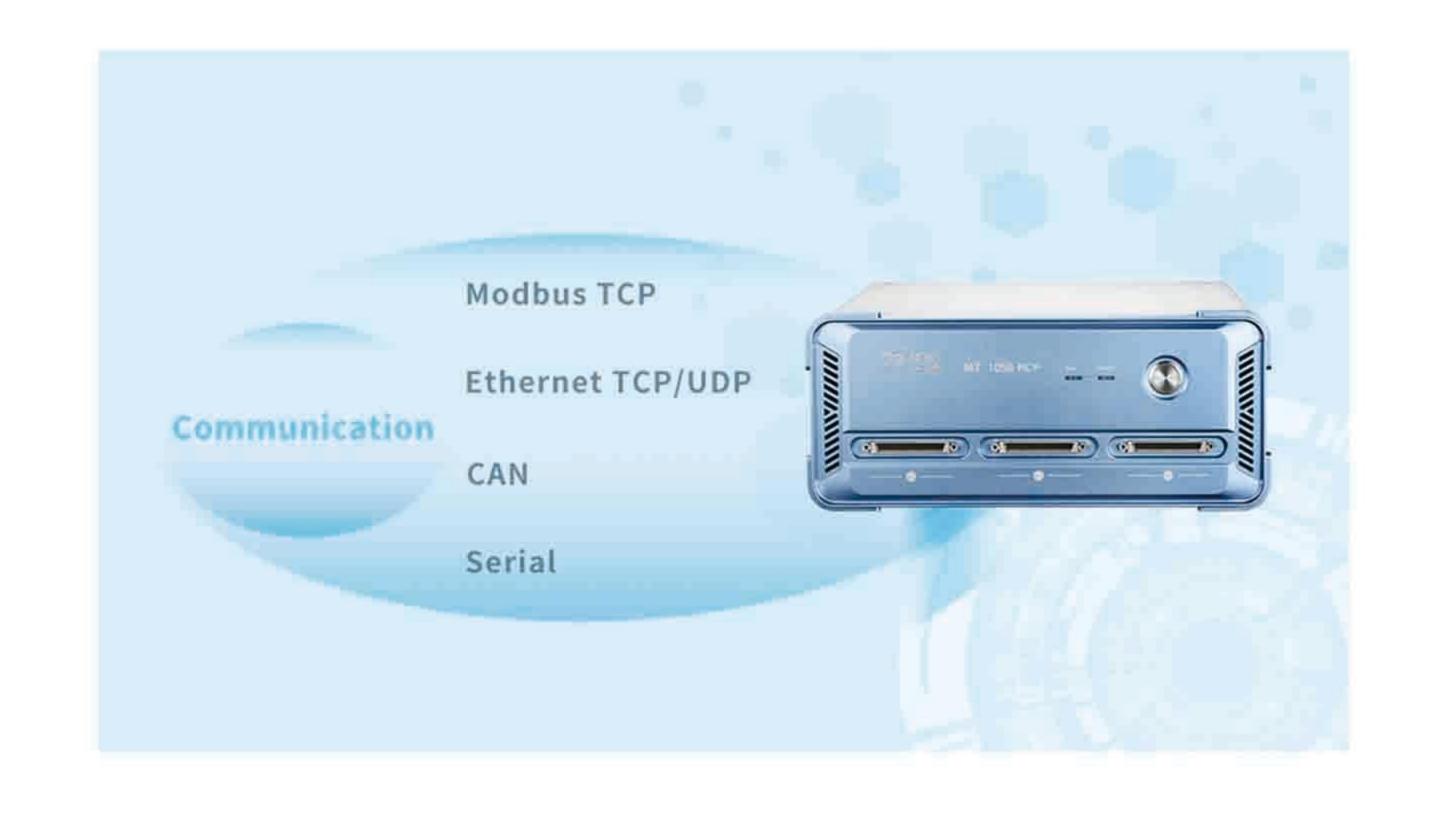


Multi-FPGA cascade simulation

Configured with 4 SFP+ fiber optic interfaces, it helps users to realize synchronous parallel simulation of multiple FPGAs and meet the demand for parallel simulation of multiple inverters.

Rich industrial communications

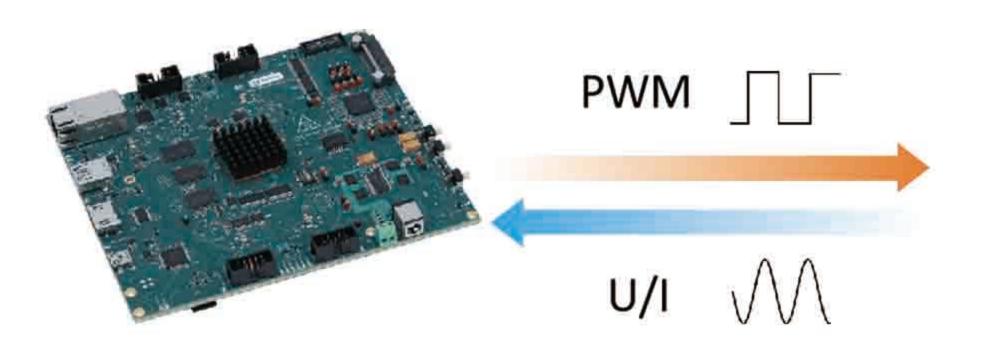
Supporting a lot of industrial communication protocols such as Modbus TCP, CAN, Ethernet TCP/UDP, Serial, which assists engineers in the actual industrial inverter testing.



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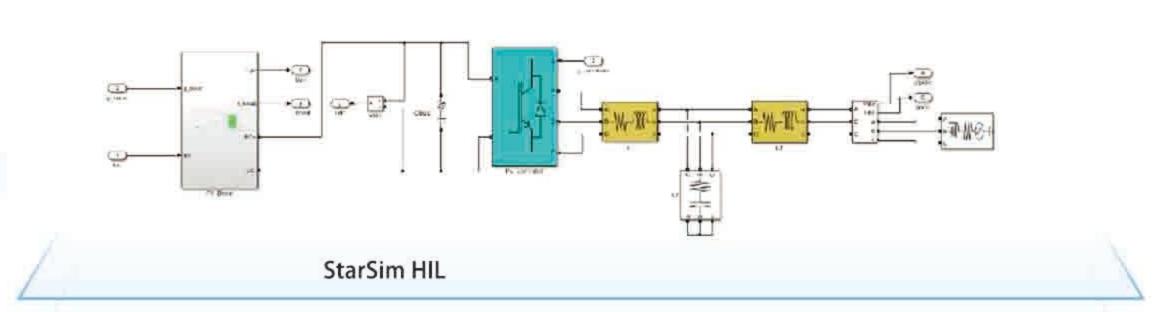


System Schemes









Controller

Main circuit model

Technical Parameters

Model	MT 6020
Processor	Dual-core ARM Cortex-A9, Clock Speed 800MHz
Memory	2GB DDR4 SDRAM
FPGA	444K logic units, 26.5Mb Block RAM, 2020 DSP Slices
Analog Output	24 channels, 16bit, 1MSPS, \pm 10V
Analog Input	16 channels, 16bit, 1MSPS, ±10V
Digital Input	64 channels
Digital Output	16 channels
Communication	Modbus TCP, CAN, Ethernet TCP/UDP, Serial, 4 SFP+
Dimension	307mm*335mm*134mm (L*W*H)

Application Scenarios



Renewable Energy

Wind Power Converter Testing

PV Inverter Testing

Multiple PCS Testing



Power System& Micro-grid

Microgrid Research

Green Hydrogen Microgrid Simulation

Renewable Energy Farm Simulation

Power Hardware in the Loop Testing



Multi-level System

Modular Multi-level Converter (MMC)

High Voltage Converter(HVC)

Static Var Generation(SVG)



Electrified Transportation

Electric Motor Drive Controller Testing

Traction Motor Testing

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