MT 1050 RCP

Entry-level Performance

ModelingTech
远 宽 能 源

ARM CORTEX®-A9 — Dual-Core CPU

ZYNQ. — FPGA

MT 1050 is an entry-level rapid control prototyping product that helps users to quickly debug and validate control algorithms in a safe laboratory, facilitating teaching and research applications such as motor control and renewable energy converter control in the field of power electronics and power transmission.

Detailed Highlights

Hardware architecture of CPU+ FPGA

The hardware architecture is based on ARM dual-core CPU and Xilinx ZYNQ-7100 FPGA, providing algorithm developers with customized, high-performance rapid control prototyping tools.

High-frequency control of 50K

Based on bare metal technology with high speed and low latency, thus realizing high switching frequency control.
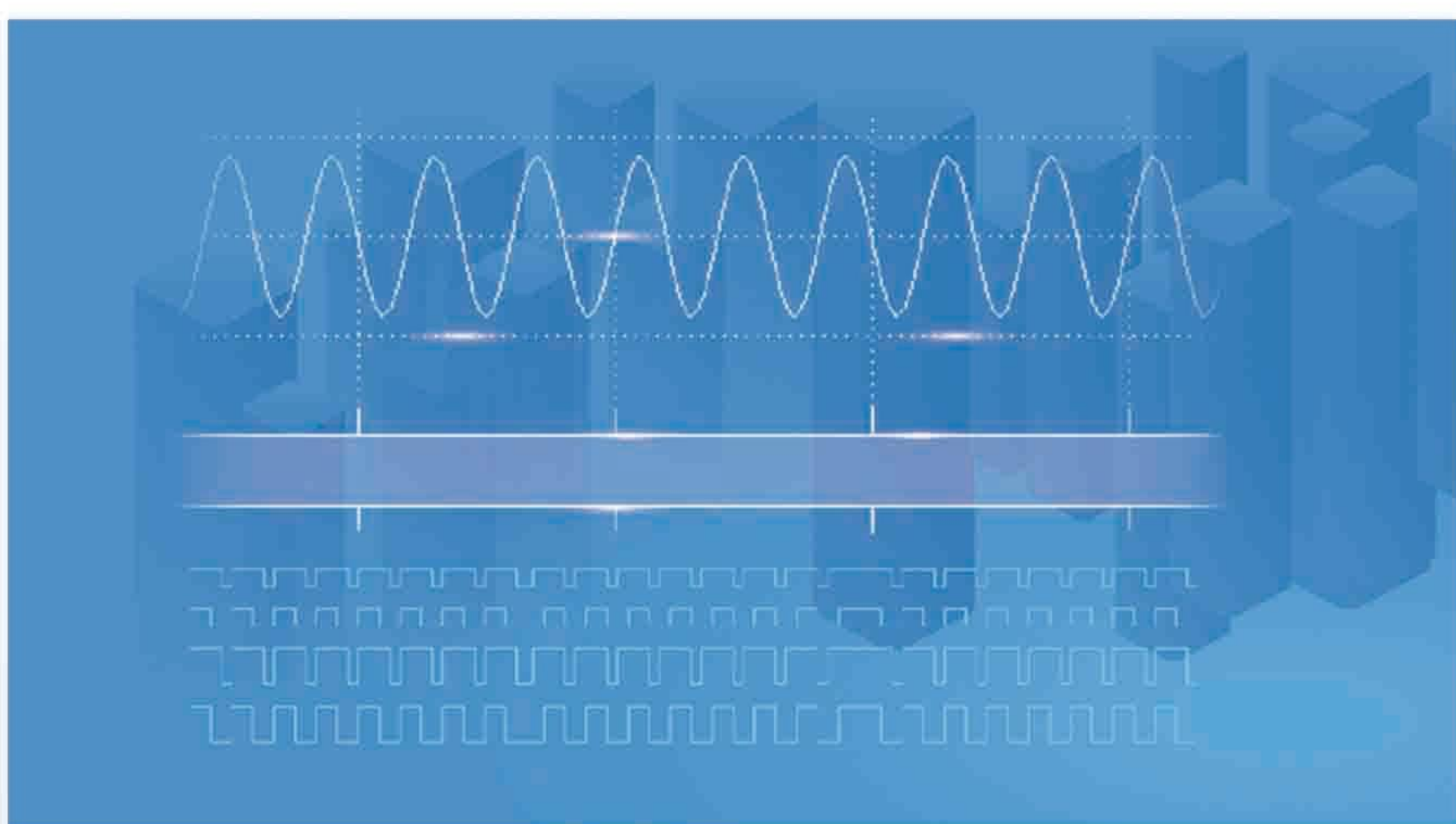
Support common industrial communication protocols

Supporting Modbus TCP/RTU, CAN, Ethernet TCP/UDP, Serial and other industrial communication protocols to meet the needs of industrial-grade power hardware control.

MODBUS   CAN   ......

SERIAL   ETHERNET

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System schemes

Algorithms

PWM

U/I

Physical test platform

StarSim RCP

Technical Parameters

Model	MT 1050
Processor	Dual-core ARM Cortex-A9, 800MHz
Memory	2GB DDR3 SDRAM
FPGA	444K Logic Cells , 26.5Mb Block RAM, 2,020 DSP Slices
Analog Output	8 channels, 16bit, 1MSPS, ±10V
Analog Input	16 channels, 16bit, 1MSPS, ±10V
Digital Input	16 channels
Digital Output	16 channels DO, 0~3.3V TTL; 32 channels PWM Output, 0~3.3V TTL
Communication	Modbus TCP/RTU, CAN, Ethernet TCP/UDP, Serial, 4 SFP+
Dimension	307mm*335mm*134mm(L*W*H)

Application Scenarios

RCP Power Device Control

The distinctive Power Device Control System launched by Modelingtech combines virtual and physical elements, which enables better cultivation of students' practical and hands-on abilities.

Microgrid Research

Running microgrid EMS algorithms and the underlying inverter control of photovoltaic, wind energy storage, etc., to quickly realize the verification and testing of control strategies.

Innovative Teaching Experiments

As a part of the MT simulation experiment platform, it helps students to complete experiments of basic power electronic control, grid-connected control of renewable energy inverters, motor control and so on.

Renewable Energy Inverter Control

Capable of rapid verification and testing of renewable energy inverter control algorithms and systems, helping users save time and reduce costs in the process of product development and release.