

PRODUCT FLYER

ATE Core Configurations

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ATE Core Configurations



- Standardized mechanical, power, and safety infrastructure for deployment of rack-based automated test systems
- Layout flexibility for PXI, CompactDAQ, CompactRIO, and other instrumentation with preinstalled drivers
- Design engineered for safety and convenience with emergency shutoff, thermal shutdown, and power and Ethernet routing
- Power and size options from 24U to 40U and low, medium, and high power, both single- and three-phase
- IEC 61010-01 compliant system that can be shipped anywhere in the world with expedited delivery options
- Complete system integration with NI's wide array of Alliance Partners

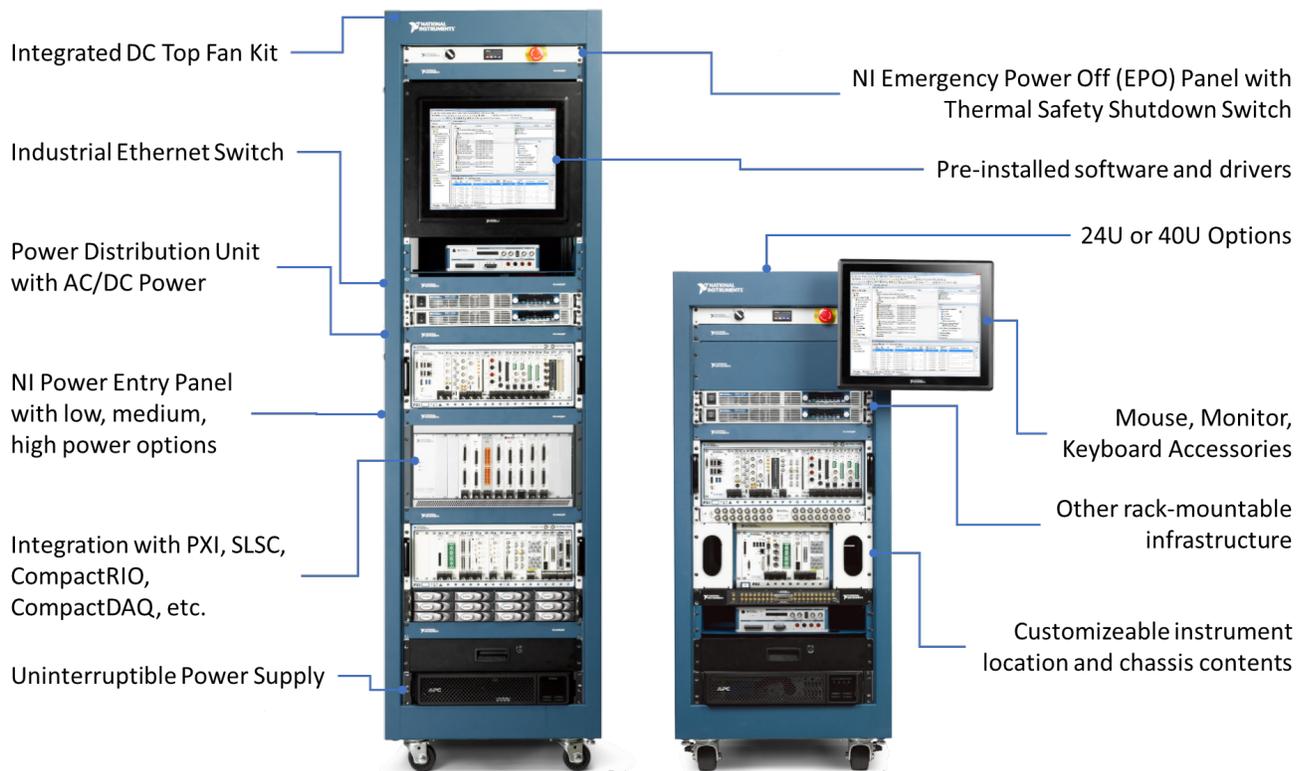
Streamlined Automated Test Equipment Procurement

Test engineers and directors, no matter the field, are under immense pressure to deliver complex test systems under increasingly shrinking schedules while optimizing for budget. ATE Core Configurations streamline the procurement of automated test systems by keeping costs and timelines in control with expedited delivery of preassembled, configured systems from a single vendor. Reduce the time and cost of multiple purchase orders (POs) by acquiring a full tester from one vendor who can rapidly deliver IEC 61010-01 compliant systems anywhere in the world.

Used in applications for aerospace, transportation production test, electronic device validation, and more, ATE Core Configurations provide the option to configure and customize your automated test solution. With power, mechanical, safety, and instrumentation options, ATE Core Configurations are truly a custom test solution for your application that you can order and reorder based on your production needs.

ATE Core Configurations	Size	Power
RMX-10011 Low Power (24U)	24U	16 A, 100–240 V, 3.8 kW
RMX-10011 Medium Power (24U)	24U	24 A, 220–240 V, 5.7 kW
RMX-10011 High Power (24U)	24U	16 A, 3-Phase, 200–208 V, 11.5 kW
RMX-10011 High Power (24U)	24U	16 A, 3-Phase, 380–415 V, 11.5 kW
RMX-10011 Low Power (40U)	40U	16 A, 100–240 V
RMX-10011 Medium Power (40U)	40U	24 A, 220–240 V
RMX-10011 High Power (40U)	40U	16 A, 3-Phase, 200–280 V
RMX-10011 High Power (40U)	40U	16 A, 3-Phase, 380–415 V

Detailed View of ATE Core Configurations



Key Features

Procure a Complete System From a Single Source

Reducing test system procurement to one vendor mitigates schedule risk and saves time and money by decreasing the number of POs. ATE Core Configurations enable each test engineer or director to significantly reduce the hassle of procuring the elements of a tester from multiple vendors.

With ATE Core Configurations, you can specify and purchase automated test equipment and infrastructure including rack, uninterruptible power supply, emergency power off, power distribution unit, and other rack-mountable components all from a single source.



A single source of purchase also means a single source of repair. You can replace or repair nearly all components in the rack through NI support. Trust that even in the worst circumstances, your production line test system can be brought back to working condition quickly because you use only one vendor for repairs and replacements. NI hardware service options include component RMAs, custom sparing that ships replacement hardware within one working day, and a calibration plan.

Reduce Schedule Risk With Rapid Delivery

With encroaching production deadlines, ensuring that a test system arrives on time is extremely important. That is why NI stocks and offers expedited shipment on all ATE Core Configurations. Once NI completes your configuration, it ships your ATE Core Configurations setup within two weeks so you can modify and expand the testers with minimal impact.



Simplify Test With Standardized Equipment

Test managers often must coordinate tests across multiple facilities with a variety of test equipment. ATE Core Configurations provide a standardized platform on which to build tests that can be translated easily from production line to production line to optimize developer time. With IEC 61010-1 compliant testers, NI can save any build or custom configuration for your future purchases.

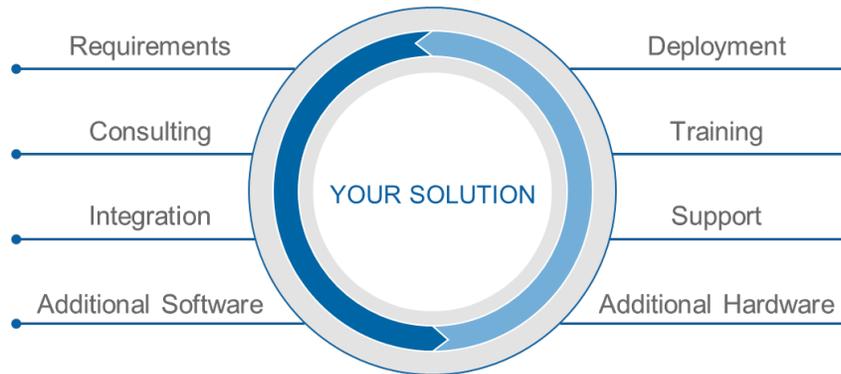
Reduce Hardware Assembly Burden

Every time they receive a test rack, test engineers must spend time assembling, wiring, and installing software before performing any tests. But their time is most efficiently spent on other tasks such as ensuring the test sequence is performing as expected. With ATE Core Configurations, all standard rack assembly, connections, and software installation are performed before shipment by NI engineers. This saves integration time and frees up engineers to perform more critical tasks that are necessary to reduce schedule risk.



Complete System Integration With NI Alliance Partners

If you're looking for the fastest way to implement ATE Core Configurations for a specialized application, whether it be in aerospace, defense, transportation, or electronics test, NI has partnered with companies around the world that can take a test system from components to a turnkey solution. ATE Core Configurations provide standardized and configured system infrastructure, but they do not contain the application software or mass interconnect needed to be a complete system. You can trust Alliance Partners to do this work and more; they offer consulting, training, support, and integration services worldwide.



Finding an Alliance Partner

Need help finding an Alliance Partner? Search by industry and location in our [Alliance Partner Directory](#) to find a company with the right specialties and location for your test project.

Rack Infrastructure Details

Power Entry Panel

The Power Entry Panel (PEP) routes power, Ethernet, and USB from the external facility into the ATE Core Configurations rack. It also acts as the main power breaker for circuit and thermal protection as well as emergency shutoff.

ATE Core Configurations offer four distinct power configurations:

- Lower power
- Mid power
- High power (delta)
- High power (wye)

Each PEP contains the IEC connector, circuit protection, line filters, kill-switch relays for emergency shutoff, two USB extension ports, an Ethernet port to route network connection to the Ethernet switch, and an external grounding lug.

Power Distribution Unit

The Power Distribution Unit (PDU) distributes input power to outlets used to power components in the system.

Each single-phase PDU contains eight IEC C13 outlets, four DC outlets (12 V, 24 V, 24 V, 48 V), two power-sequenced outlet banks, circuit protection, and remote inhibit and emergency power off.

The three-phase PDUs support either 200–208 V delta or 380–415 V wye power configurations. They contain six IEC C13 outlets, three IEC C19 outlets, four DC outlets (12 V, 24 V, 24 V, 48 V), two power-sequenced outlet banks, circuit protection (master and per-phase), and remote inhibit and emergency power off.

Power Levels	Phase	Wattage	Number of PDUs
Low	Single	3.8 kW	1
Mid	Single	5.7 kW	2
High	Three	11.5 kW	1

Emergency Power Off Panel

When a test system encounters a serious issue or an emergency occurs in the facility, operators need the ability to quickly power off the test system. Emergency Power Off (EPO) mechanisms are included in the ATE Core Configurations to simplify connectivity and inhibit power switching. When the EPO is pressed, power does not flow past the PEP or Uninterruptible Power Supply. The EPO features a temperature controller that shuts off the rack if the internal temperature reaches a certain user-programmable level.

Uninterruptible Power Supply

The Uninterruptible Power Supply (UPS) powers critical components in a system during power loss, brownouts, and normal operation. The UPS option provided in ATE Core Configurations is an APC-branded UPS.

Monitors, Mouse, and Keyboard

Using ATE Core Configurations as a test station traditionally requires a monitor or other user interface mounted on the rack. You can choose from three main options to integrate a mouse, monitor, or keyboard (MMK) in the rack: mounted in an MMK drawer, mounted on an adjustable mounting arm, or flush-mounted in the rack.

Other Rack Accessories

Mechanical Infrastructure

Model	Height (including casters)	Width	Depth	Max. Static Load	Caster Support
24U	53.26 in. (1,353 mm)	23.0 in. (584.2 mm)	31.5 in. (800 mm)	1,000 lb (454 kg)	(4) Swivel-Locking 3.0 in. diameter
40U	81.55 in. (2,071 mm)	23.0 in. (584.2 mm)	31.5 in. (800 mm)	1,000 lb (454 kg)	(4) Swivel-Locking 3.0 in. diameter

Mounting Rails

Each ATE Core Configurations model contains three sets of mounting rails (10–32 threads) to easily mount equipment of different sizes and provide flexibility for thermal management. Total mounting depth is 29.5 in. (749 mm), and the middle-mounting rail is 7.0 in. (178 mm) from the rear rail.

Side Panels and Rear Door

The RMX-10011 racks have removable side walls and a locking rear door. Side panels use quarter-turn inset screws for added serviceability. The rear door is 8U short of total rack height to allow for a 4U power inlet panel and 4U air inlet panel. You can mount the rear door either directly above the 4U air inlet panel or flush with the top of the rack.

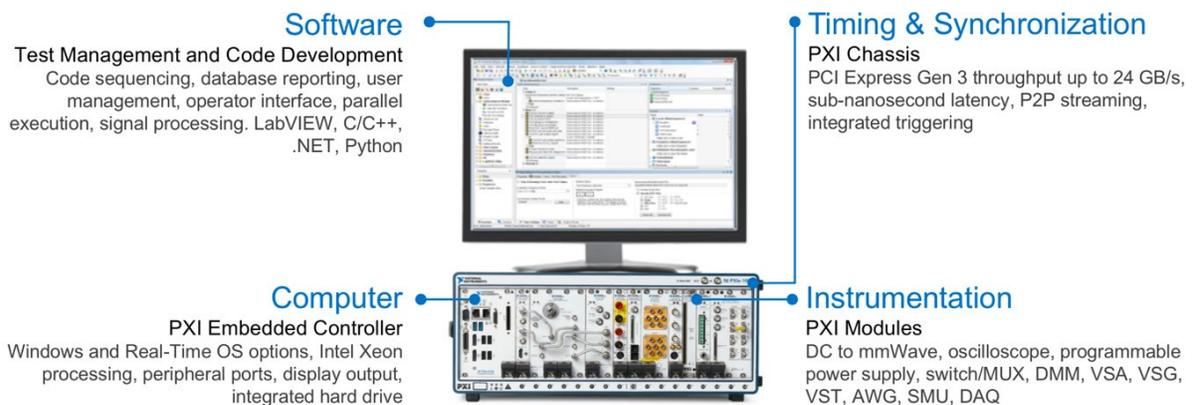
Configuring Your Own ATE Core Configurations System

Start configuring your own ATE Core Configurations system today by contacting NI at ni.com/contact-us.

Platform-Based Approach to Test and Measurement

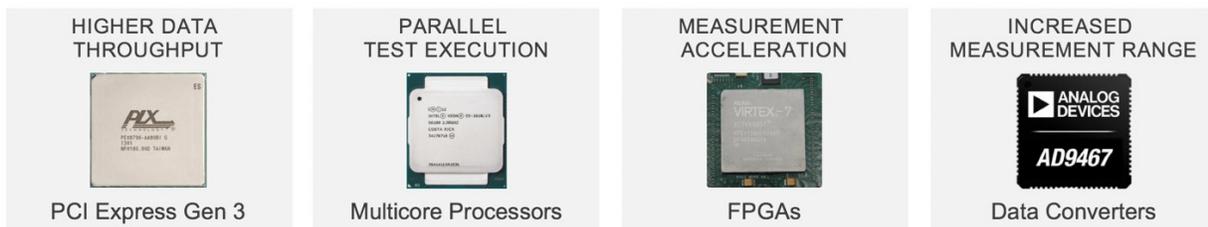
What Is PXI?

Powered by software, PXI is a rugged PC-based platform for measurement and automation systems. It combines PCI electrical-bus features with the modular, Eurocard packaging of CompactPCI and then adds specialized synchronization buses and key software features. PXI is both a high-performance and low-cost deployment platform for applications such as manufacturing test, military and aerospace, machine monitoring, automotive, and industrial test. Developed in 1997 and launched in 1998, PXI is an open industry standard governed by the PXI Systems Alliance (PXISA), a group of more than 70 companies chartered to promote the PXI standard, ensure interoperability, and maintain the PXI specification.



Integrating the Latest Commercial Technology

By leveraging the latest commercial technology for its products, NI can continually deliver high-performance and high-quality products to its users at a competitive price. The latest PCI Express Gen 3 switches deliver higher data throughput, the latest Intel multicore processors facilitate faster and more efficient parallel (multisite) test, the latest FPGAs from Xilinx help to push signal processing algorithms to the edge to accelerate measurements, and the latest data converters from TI and ADI continually increase the measurement range and performance of NI instrumentation.



PXI Instrumentation

NI offers more than 600 different PXI modules ranging from DC to mmWave. Because PXI is an open industry standard, nearly 1,500 products are available from more than 70 different instrument vendors. With standard processing and control functions designated to a controller, PXI instruments need to contain only the actual instrumentation circuitry, which provides effective performance in a small footprint. Combined with a chassis and controller, PXI systems feature high-throughput data movement using PCI Express bus interfaces and subnanosecond synchronization with integrated timing and triggering.



Oscilloscopes

Sample at speeds up to 12.5 GS/s with 5 GHz of analog bandwidth; feature numerous triggering modes and deep onboard memory



Digital Multimeters

Perform voltage (up to 1000 V), current (up to 3 A), resistance, inductance, capacitance, and frequency/period measurements as well as diode tests



Digital Instruments

Perform characterization and production test of semiconductor devices with timing sets and per channel pin parametric measurement units (PPMUs)



Waveform Generators

Generate standard functions including sine, square, triangle, and ramp as well as user-defined, arbitrary waveforms



Frequency Counters

Perform counter/timer tasks such as event counting and encoder position, period, pulse, and frequency measurements



Source Measure Units

Combine high-precision source and measure capability with high-channel density, deterministic hardware sequencing, and NI SourceAdapt transient optimization



Power Supplies and Loads

Supply programmable DC power; some modules include isolated channels, output disconnect functionality, and remote sense



FlexRIO Custom Instruments and Processing

Provide high-performance I/O and powerful FPGAs for applications that require more than standard instruments can offer



Switches (Matrix and MUX)

Feature a variety of relay types and row/column configurations to simplify wiring in automated test systems



Vector Signal Transceivers

Combine a vector signal generator and vector signal analyzer with FPGA-based, real-time signal processing and control



GPIB, Serial, and Ethernet

Integrate non-PXI instruments into a PXI system through various instrument control interfaces



Data Acquisition Modules

Provide a mix of analog I/O, digital I/O, counter/timer, and trigger functionality for measuring electrical or physical phenomena

Hardware Services

All NI hardware features a one-year warranty for basic repair coverage and includes calibration in adherence to NI specifications prior to shipment. PXI systems also include basic assembly and a functional test. NI offers additional entitlements to improve uptime and lower maintenance costs with service programs for hardware. Learn more at ni.com/services/hardware.

Additionally, you can repair and replace ATE Core Configurations all through a single source. For detailed information on component options within your ATE Core Configuration, contact NI at ni.com/contact-us.

	Standard	Premium	Description
Program Duration	1, 3, or 5 years	1, 3, or 5 years	Length of service program
Extended Repair Coverage	•	•	NI restores your device's functionality; coverage includes firmware updates and factory calibration.
System Configuration, Assembly, and Test ¹	•	•	NI technicians assemble, install software in, and test your system per your custom configuration prior to shipment.
Advanced Replacement ²		•	NI stocks replacement hardware that can be shipped immediately if a repair is needed.
System Return Material Authorization (RMA) ¹		•	NI accepts the delivery of fully assembled systems when performing repair services.
Calibration Plan (Optional)	Standard	Expedited ³	NI performs the requested level of calibration at the specified calibration interval for the duration of the service program.

¹This option is available only for PXI, CompactRIO, and CompactDAQ systems.

²This option is not available for all products in all countries. Contact your local NI sales representative to confirm availability.

³Expedited calibration includes only traceable levels.

PremiumPlus Service Program

NI can customize the offerings listed above or provide additional entitlements such as on-site calibration, custom sparing, and life-cycle services through a PremiumPlus Service Program. Contact your NI sales representative to learn more.

Technical Support

Every NI system includes a 30-day trial for phone and email support from NI engineers that can be extended through a [Standard Service Program \(SSP\)](#) membership. NI has more than 400 support engineers available around the globe to provide local support in more than 30 languages. You also can take advantage of NI's award-winning [online resources](#) and [communities](#).

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