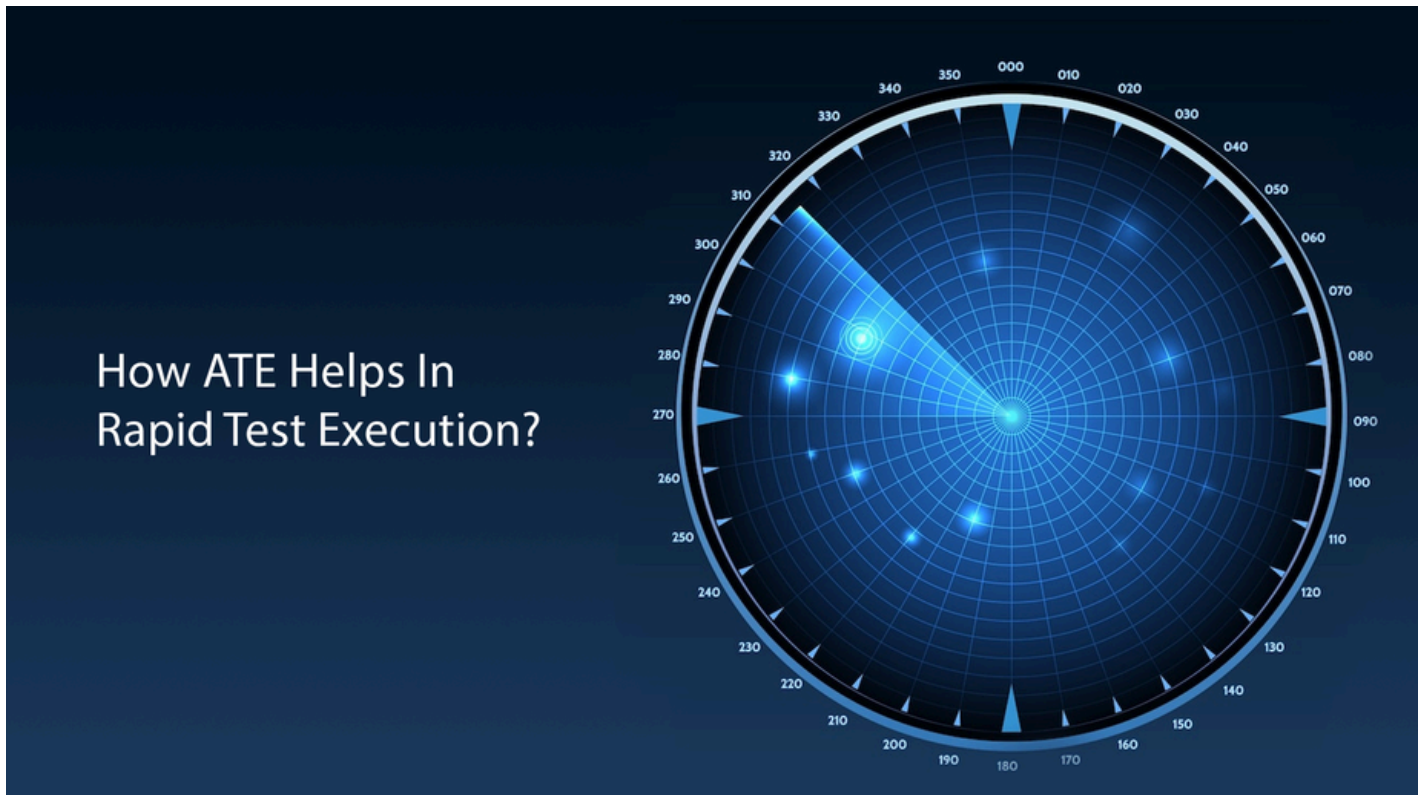




How ATE Helps In Rapid Test Execution? - TMCS India



Testing a range of electric equipment in several industries, such as defense and aerospace, automotive, and industrial automation, requires effective data gathering and a diagnostic instrument called an ATE. In addition to guaranteeing that end users of electronic equipment obtain products that work and function as intended, ATE is directly responsible for ensuring they are not put in danger.

The market for automated test equipment was estimated to be worth USD 6.87 billion in 2020. From 2021 to 2028, it is anticipated to rise at a [CAGR of 3.3%](#). Automated Test Equipment (ATE) usage in the semiconductor and automotive industries is fueling the expansion. This growth is driven by the number of connected devices and consumer electronics, as well as an increase in the firm's focus on quality improvement and end-to-end testing solutions.

How is ATE Beneficial?

The terms "device under test" (DUT), "unit under test" (UUT), or "equipment under test" (EUT) is typically used to describe the device whose characteristics the ATE evaluates. [ATE test](#) a lot

of the electronic gadgets that are in use today since they have so many benefits:

- **Faster & More Accurate Tests:** Since manual testing depends on the test engineer's efficiency and expertise, the results' speed and accuracy are only as good as the test engineer's capabilities.
- **Reduced Test & Cycle Times:** ATE's capability in troubleshooting provides test and cycle time uniformity. This automation factor thus reduces work for engineers.
- **Reduction Or Prevention Of Data Input Errors:** Making mistakes is part of human nature. If there are no equipment-related technical problems, ATE always gets it right. It thus helps in maintaining accuracy.
- **Use Of Available Engineering Resources Efficiently & Cost-Effectively:** Engineers may concentrate on the periodic testing issues rather than manually executing the tests using ATE. This results in the more efficient and economical use of engineering resources.

ATE Spotlight: National Instruments (NI)-

Due to the lifesaving, mission-critical, and safety-critical electronics used in military aircraft, ships, ground vehicles, weaponry, missile launch, radar, and wireless communication systems, the aerospace and defense sectors are major consumers of ATE.

For crucial national security and safety reasons, these equipments must be evaluated more thoroughly than electronics used in other businesses. As a result, testing and validation before deployment consume a significant amount of time and money for aerospace and defense businesses.

Before being fielded by the DoD, almost everything from a missile launch system to the avionics systems on the newest fighter aircraft is evaluated and validated by aerospace and military industries, lowering the possibility of a launch failure or a Mayday crisis during a flight.

Devices tested by ATE include integrated circuits (ICs), printed circuit boards (PCBs), hard disk drives (HDDs), electronic systems, and line-replaceable units (LRUs) that support aircraft, spacecraft, and satellites - a family of technologies known as avionics.

TMCS's Expertise In ATE Services -

India is one of the leading military forces in the world. This self-reliant initiative has accelerated the defense industry's growth considerably in the past few years and this demand is constantly increasing. [ATE Testing](#) equipment exports are encouraged by the Make in India program and the industrial environment.

With years of legacy and constant research, TMCS, the [NI Partner](#) has developed the expertise to work on the test system requirements with NI, PLC, and Embedded solutions.

With these testing solutions, TMCS has assisted defense organizations in importing substitute options. TMCS's vast experience in communication protocols on different hardware platforms for serial data bus communication, standardized power interface, environmental design, testing, and much more has helped them achieve excellence and success.

About “TMCS India”:



Theta Measurement and Control Solutions Pvt. Ltd (TMCS) mainly provides cost effective Industrial Automation, [Automation Test Systems](#), Measurement & Control solutions. This enables customers to deliver state-of-the-art technological solutions.