

A Total Station consists of a telescope, a computer, and a reflector. They also have a built-in robotic controller, which allows the instrument to be controlled remotely from a data collector. Some total stations have the capability to connect to external devices such as GPS receivers, which allows for the integration of total station data with GPS data, providing a more accurate and detailed survey. The telescope is used to aim at a target, and the EDM measures the distance to the target by sending out a laser beam and measuring the time it takes for the beam to be reflected back. What is a Total Station
The telescope also has a built-in electronic theodolite that measures the horizontal and vertical angles to the target. Another example is the 3D total stations, which are able to measure angles and distances in three dimensions, providing users with a more complete picture of the area being surveyed.