



## **An Overview of Building Automation**

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The term Building automation refers to an intelligent network of programmable controllers and software that monitors and controls mechanical heating, ventilation and air conditioning equipment, and indoor and outdoor lighting in a building. The primary function of a building automation system or energy management system is to increase the efficiency of a building and reduces energy and maintenance costs.

Building Automation systems optimize the performance and maintenance of multiple building control systems including;

- Heating, ventilation, and air conditioning (HVAC) – These systems include central plants, air handling units, package units and fan coils.
- Lighting systems – including indoor and outdoor systems.
- Metering systems – including electrical meters, gas meters and BTU meters.

There are two major components to building automation systems; the user interface software and the controller. The user interface is typically a computer based graphical software application that allows the user to interface with the system and provides the user full control over the building automation system.

A controller is an electronic device that monitors and changes the operations of a specific system. The operational conditions include output variables of the system which can be affected by adjusting certain inputs. For example, an HVAC system in a commercial building can be equipped with a controller for sensing air temperature (output variable) which can turn on or off a heater when the air temperature becomes too high or too low. These controllers come in a wide range of sizes and varying functionalities that control several devices in a building.