



What is an embedded system?

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Embedded systems applications



FIG 2 Home appliances

What is an embedded system?

- An embedded system is an electronic/electro-mechanical system designed to perform a specific function using a combination of both hardware and firmware (software).
 - An Embedded System is a computerized system that is purpose built for its application
 - An embedded system uses a microprocessor (or microcontroller) to do one task and one task only.
 - A remote control is an example of embedded system since the



FIG 1. A TV Remote control

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FIG. 3. Office equipment

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FIG 4. Embedded controllers found in a modern vehicle

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FIG 5. Traffic lights

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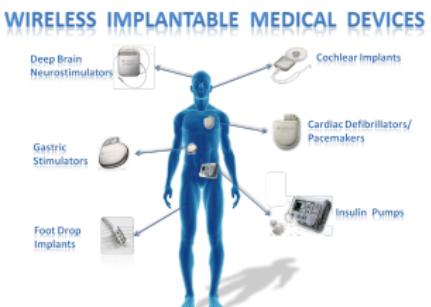


FIG 6 implantable medical devices

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FIG 7. Various biomedical devices

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FIG 8. Biomedical devices

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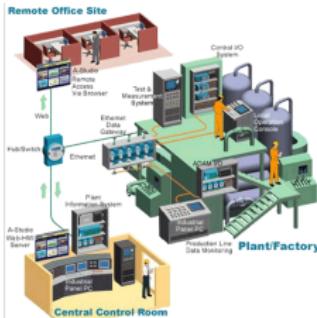


FIG 9. Industrial control systems

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FIG 10. Artist's conception of NASA's Mars Exploration Rover on Mars

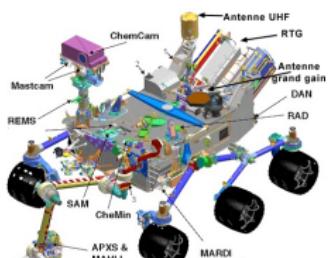


FIG 11. Instrumentation of the Mars Exploration Rover

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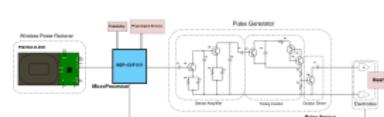
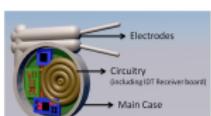
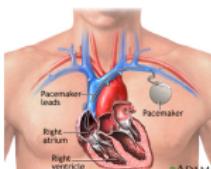


FIG 12. A pacemaker is a small, battery-operated device. This device senses when your heart is beating irregularly or too slowly. It sends a signal to your heart that makes your heart beat at the correct pace. In general, a heart pacemaker contains a small micro-controller and electrodes that connect the heart to the generator. The electrodes carry the electrical message to the heart.

The end