

2) Give an overview of the attributes of dependability and show how they influence each other

Reliability

- dependability with respect to continuity of service
- The ability of the system to deliver services as specified

Availability

- dependability with respect to readiness for usage
- The ability of the system to deliver services when requested

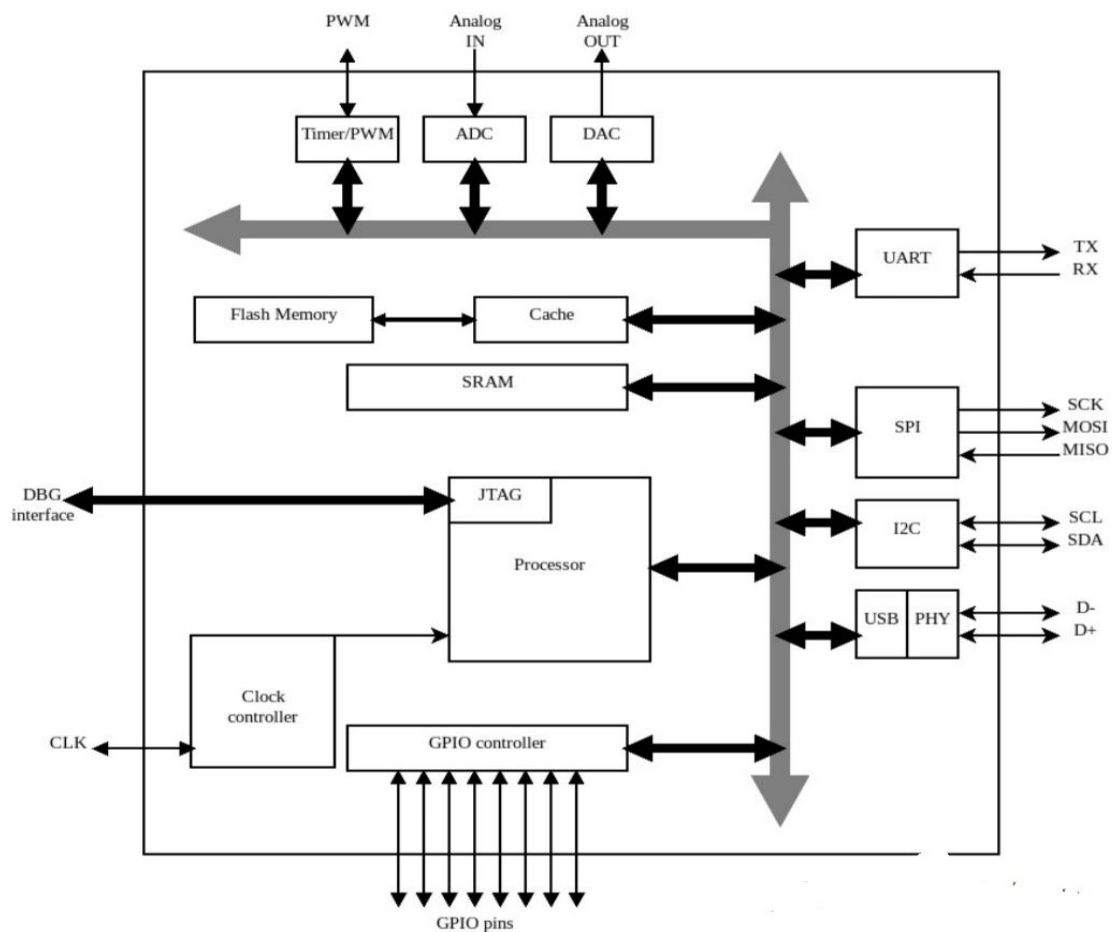
Safety

- dependability with respect to avoidance of catastrophic consequences
- The ability of the system to operate without catastrophic failure

Security

- dependability with respect to prevention of unauthorized access and/or handling of information
- The ability of the system to protect itself against accidental or deliberate intrusion

3) Give a schematic overview on the main elements of a microcontroller



4) Which processors are typically used for microcontrollers?

General purpose microprocessor: X86

Highly integrated microprocessor: additional I/O on the chip

Single-chip microcomputer: I/O, Rom, RAM

Single-chip microcontroller: microcomputer with realtime clock, A/D and D/A converters,

Digital signal processor: extremely high throughput, optimized for numerical operations

Mixed-signal processor: direct interface to analogous and digital signals

Bespoken System-on-chip design: FPGAs or ASICs that may incorporate microprocessors and memory