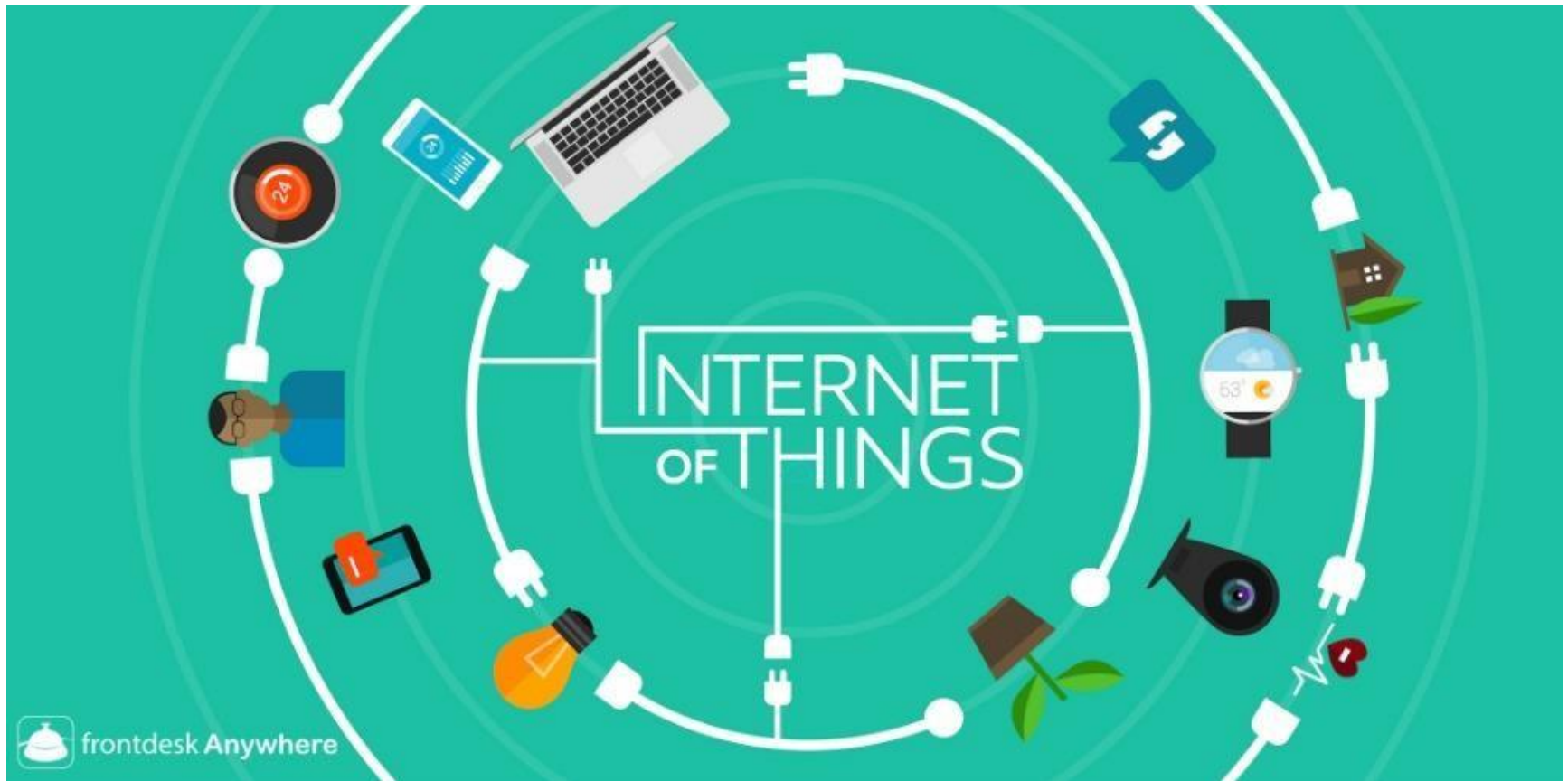


INTERNET OF THINGS (IoT)





WE EVOLVE BECAUSE WE COMMUNICATE



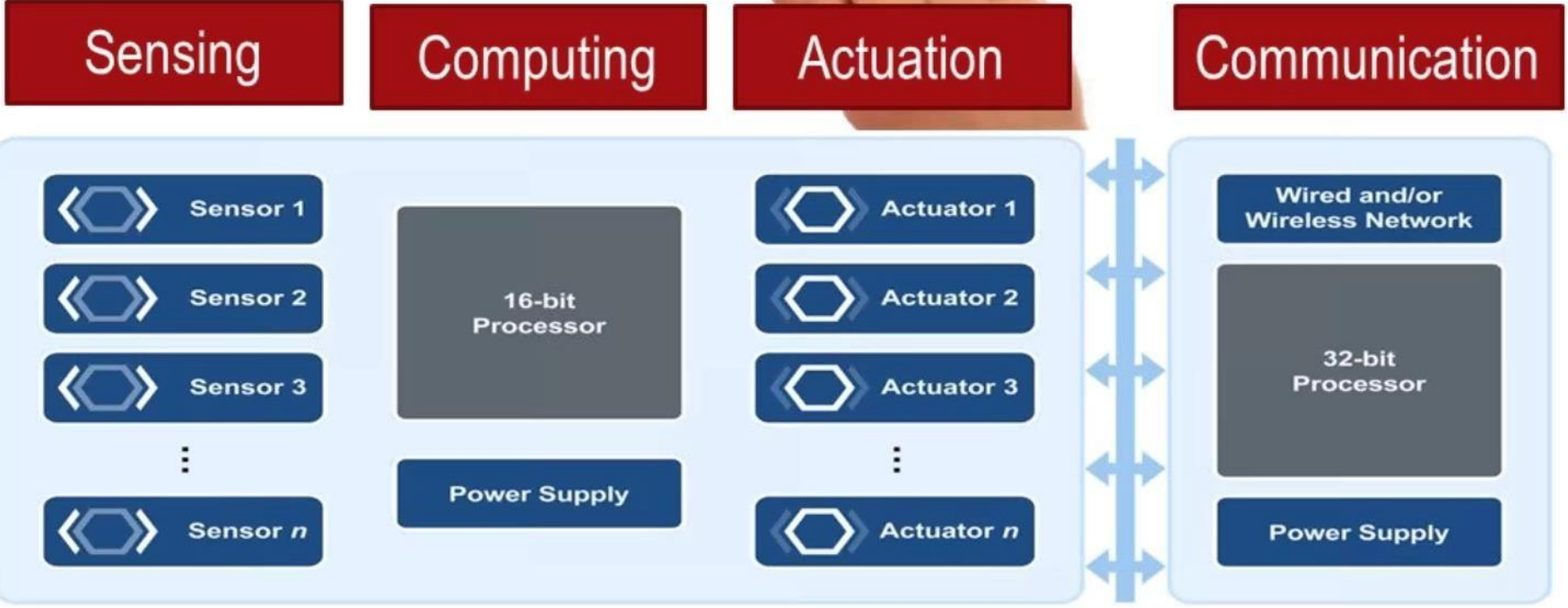
1. What is IoT?
2. IoT device.
3. Components.
 - a) MCU.
 - b) Communication modules
 - c) Protocols
 - d) Cloud computing
4. Programming language
5. Operating system
6. IDE
7. Use cases of IoT

The internet of every thing will be 5-10 times more impactful in next decade than entire internet has been to date.

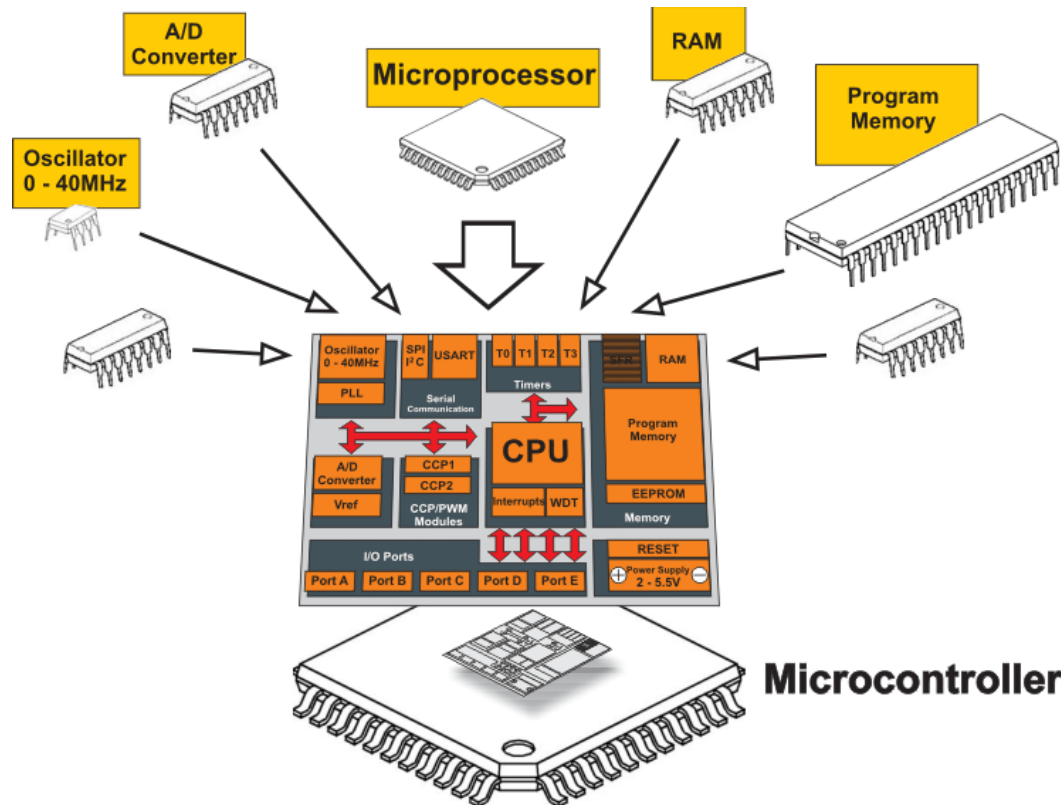
-Cisco CEO

WHEN THINGS START TO THINK ?



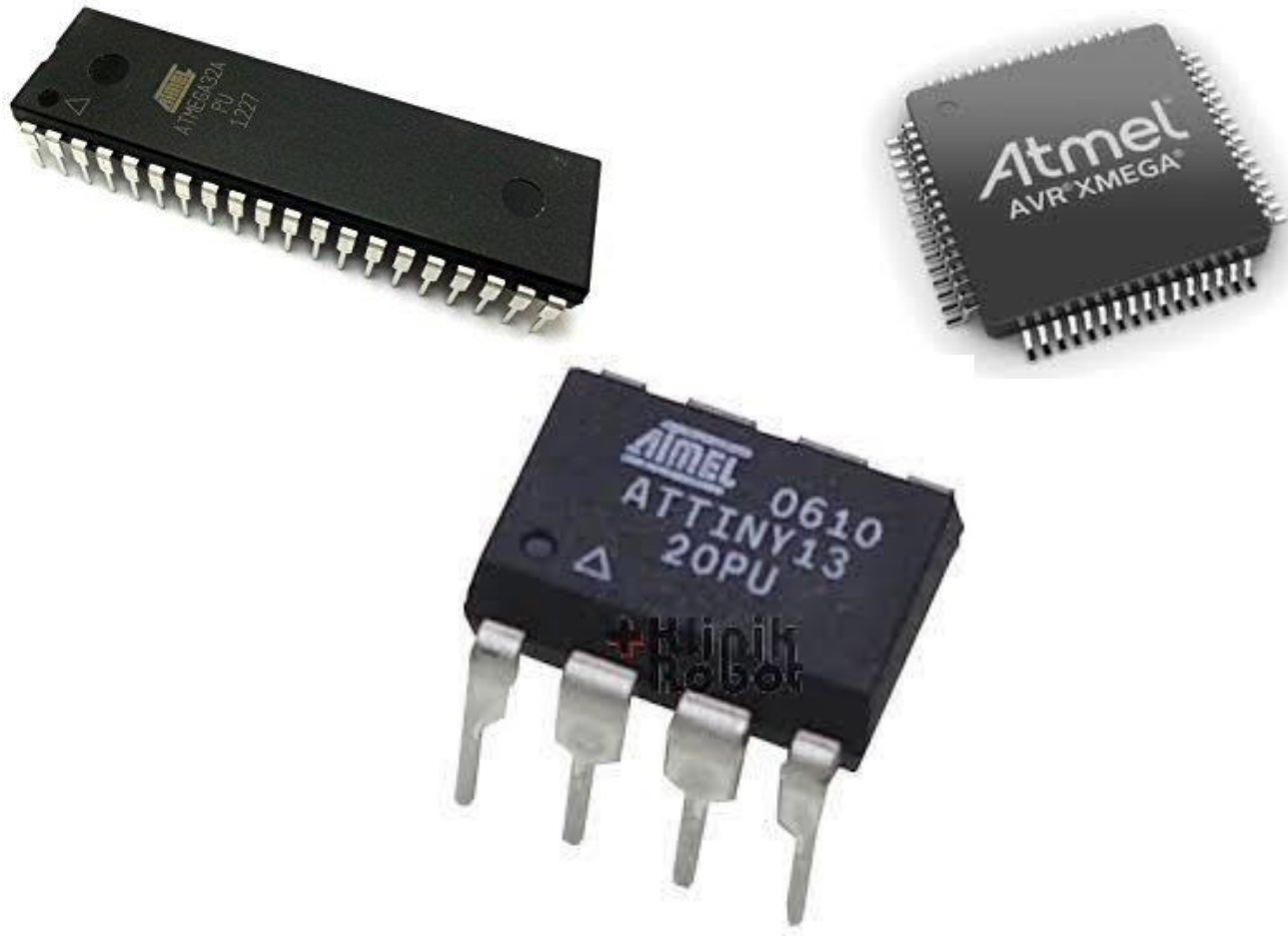


WHAT IS COMPUTER?



- A SINGLE COMPUTER ON A SINGLE CHIP CONTAINING PROCESSOR, MEMORY, INPUT/OUTPUT
- TYPICALLY EMBEDDED INSIDE SOME DEVICES THAT THEY CONTROL

Microcontrollers examples



APPLICATIONS

Examples of Embedded Systems



PROTOTYPING BOARDS



RASPBERRYPI



Pin 1	Pin 2
3.3 V	5 V
GPI0 0	5 V
GPI0 1	GND
GPI0 4	GPI014
GND	GPI015
GPI017	GPI018
GPI021	GND
GPI022	GPI023
3.3 V	GPI024
GPI010	GND
GPI0 9	GPI025
GPI011	GPI0 8
GND	GPI0 7

Pin 25 Pin 26

Raspberry Pi
(Rev. 1)

Pin 1	Pin 2
3.3 V	5 V
GPI0 2	5 V
GPI0 3	GND
GPI0 4	GPI014
GND	GPI015
GPI017	GPI018
GPI027	GND
GPI022	GPI023
3.3 V	GPI024
GPI010	GND
GPI0 9	GPI025
GPI011	GPI0 8
GND	GPI0 7

Pin 25 Pin 26

Raspberry Pi
(Rev. 2)



Pin 25 Pin 26

- MCU PROTOTYPING PLATFORMS
- ENERGY EFFICIENCY
- EMBEDDED ARCHITECTURE WITH A RICH SOFTWARE ECOSYSTEM
- PORTFOLIO BREADTH THAT ENABLES SOFTWARE SCALABILITY
- PORTFOLIO BREADTH THAT COST EFFECTIVELY ENABLES DIFFERENT LEVELS OF PERFORMANCE AND ROBUST MIX OF I/O INTERFACES
- COST EFFECTIVENESS
- QUALITY AND RELIABILITY
- SECURITY

COMMUNICATION TECHNOLOGIES



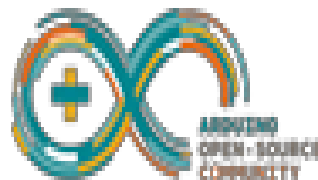
Infrared



433MHz



IPv6-based Low-power
Wireless Personal Area Networks



CONTACT US

EXCELR
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www.excelr.com



enquiry@excelr.com



Toll FREE : 1800-212-2120 (India)

0044-203-514-6638 (UK)

006-128-520-3240 (Australia)

001-844-392-3571 (USA)

+2348181496946 (Nigeria)

THANK YOU

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