

Linux boards and their use

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Introduction

Linux Boards

Peter Babič

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Boards

Single Board
Computers

Pioneers

Projects

Embedded

Common Boards

GL-Net

Operating
system

Linux

OpenWRT

The Future

IoT

Epilogue

What is a Linux board? Where did it come from?



I don't have time for this!

Single Board Computer

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A "single board" computer

SBC Pioneers

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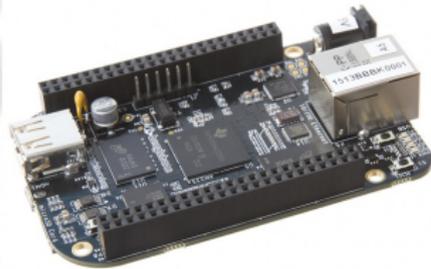
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Why are SBC useful?

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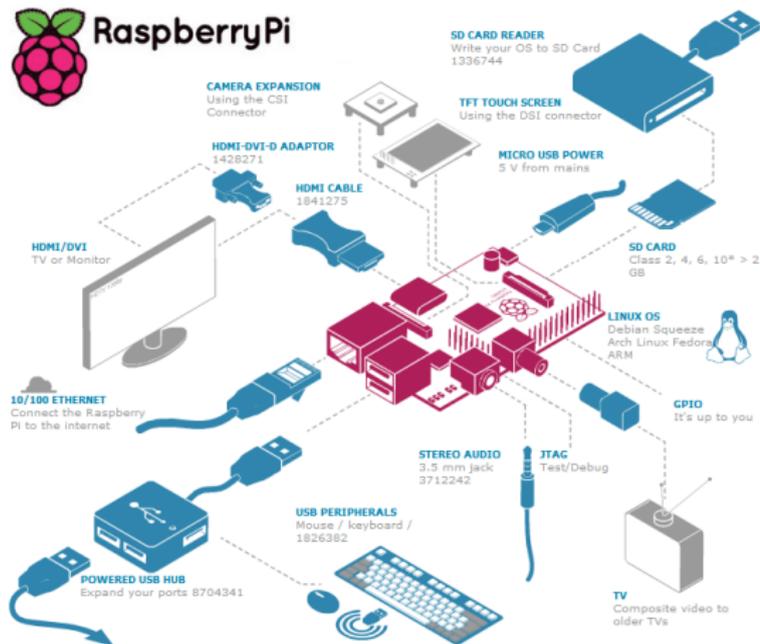
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Raspberry Pi with a range of available peripherals

Done by others

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- CNC and 3D printer controllers
- Clusters, parallel computers
- Handheld game devices
- Computer console emulators (MAME)
- Vending machine controllers
- Various robots
- Bitcoin miners
- Educational tools

Embedded Computing

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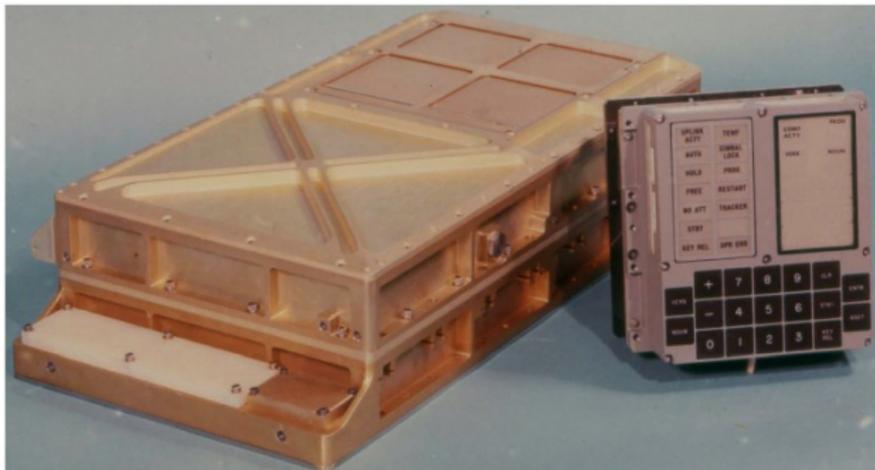
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Apollo Guidance Computer and Numeric Display with a Keyboard

Cheap and Common Embedded Boards

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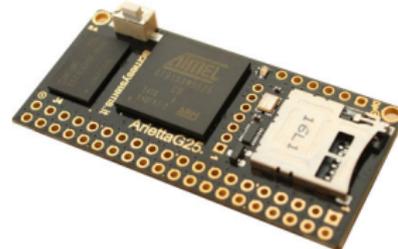
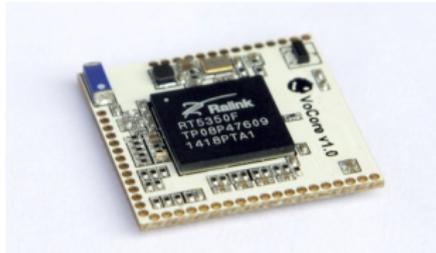
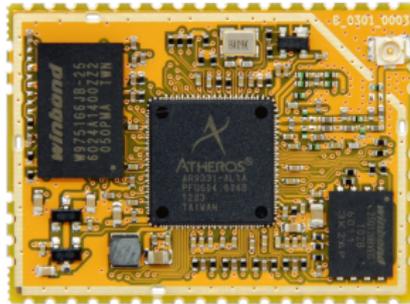
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GL-Inet Smart Router

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The personal favorite number 1

TP-Link WR703n

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The predecessor of a GL.Inet

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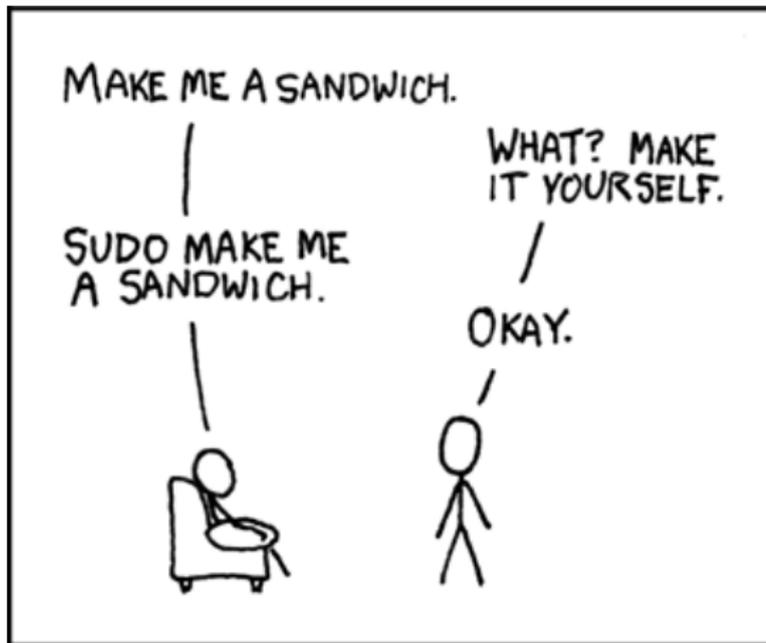
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Randall Munroe knew it before

The Linux Ecosystem

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Marketing says: IT'S ALL FREE!

OpenWRT

Question

What can you do with a full blown Linux, given only 16MB, 8MB or even 4MB RAM or Flash is available?



BusyBox (+ uClibc)

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Where is it all going?

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**KEEP
CALM
you have been
hacked**

Internet of Things

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Definition

A network of physical objects or “things” embedded with electronics, software, sensors and connectivity to enable it to achieve greater value and service by **exchanging data with the manufacturer**, operator and/or other connected devices.

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Thank you

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