

decode

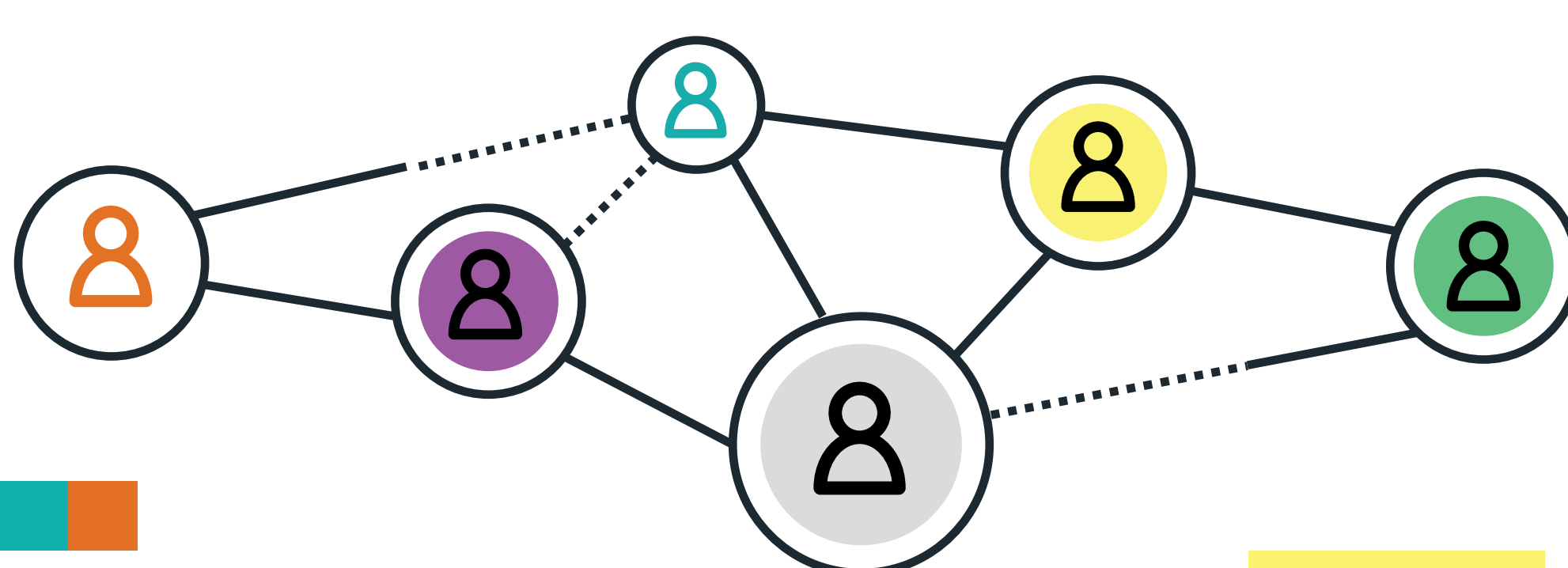
Technical Specifications and Operating System

DECODE (DEcentralised Citizen-owned Data Ecosystems) will develop technology that puts people in control of their personal data, giving them the ability to decide how it is shared.

In DECODE, entitlements attached to private data, including from Internet of Things devices, will be searchable in the public domain but will grant access only to those parties that have the entitlement to access it.

Hardware

- Computation units for privacy.
- **Arduino** has done and provided extensive research over a period of a year on the right kind of hardware.
- Must run DECODE OS or Ubuntu.



Operating System

- OS designed by DYNE.
- Open ended and flexible.
- Privacy by design.



DECODE:

Hardware Testing

TESTING CRITERIA

- Testing of Hardware was based on the Phoronix Test Suite.
- Phoronix Test Suite is a free, open-source benchmark software for Linux and other operating systems.
- This allowed for the hardware to be tested fairly and cohesively.

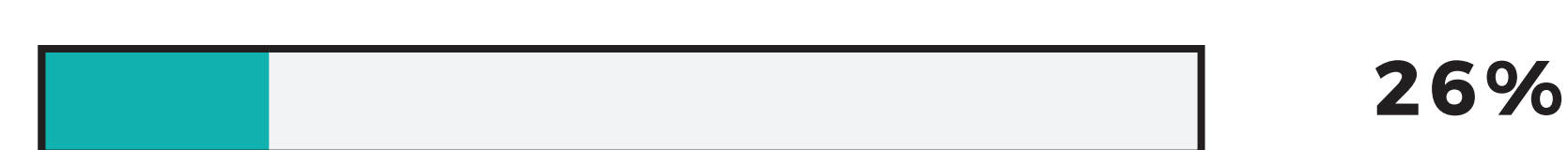
Testing performed by David Cuartielles, Arduino Founder.

OVERALL PERFORMANCE TEST

Odroid-Xu4



Banana Pi



Raspberry Pi3



Khadas Vim2



Olimex A20



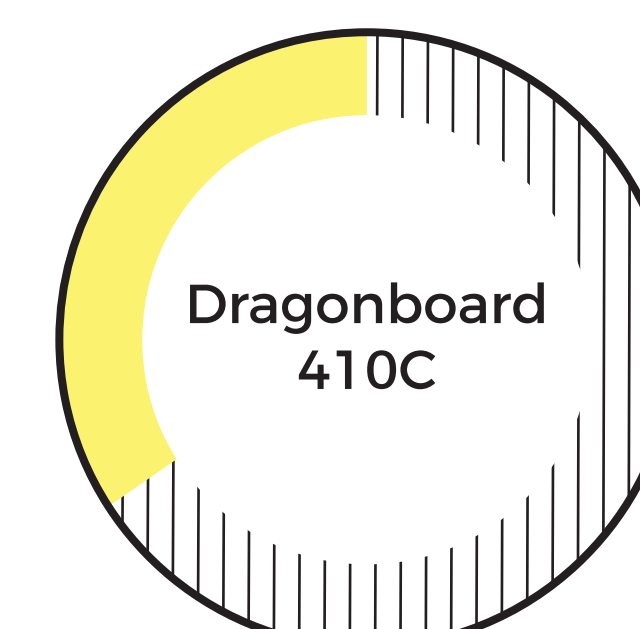
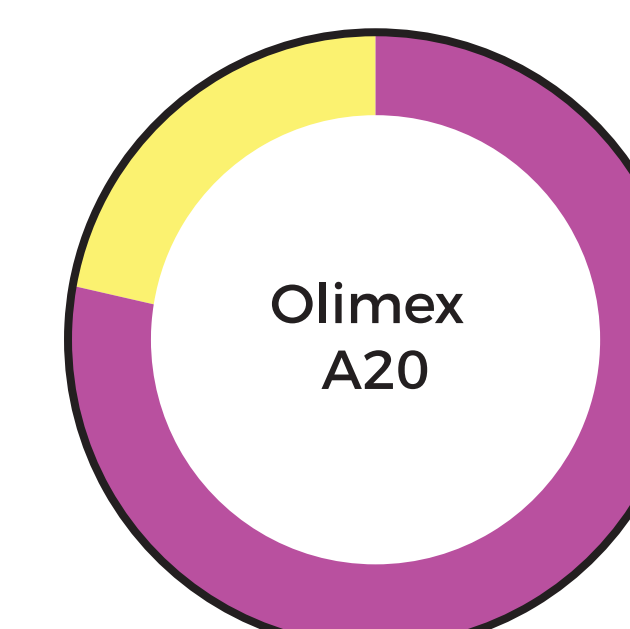
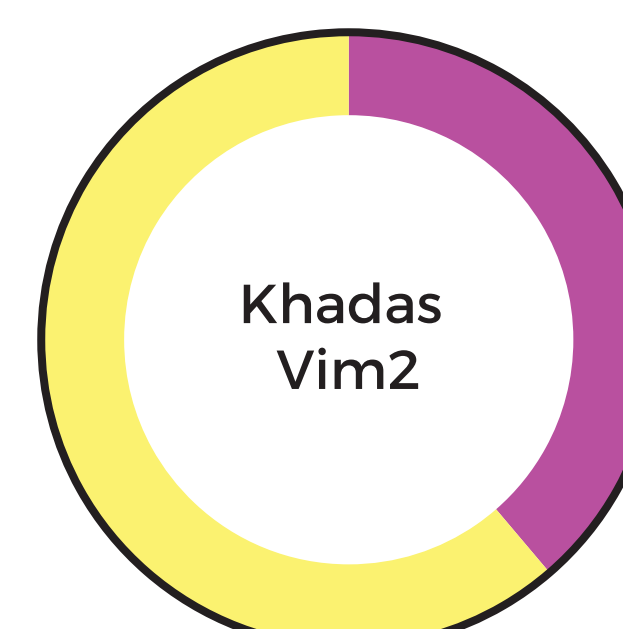
FURTHER TESTING:

Cost Analysis for Manufacturing

- Availability of parts.
- Cost.
- ||| Malfunction.

Making something cost effective is key here. For manufacturing purposes, cost should be within budget.

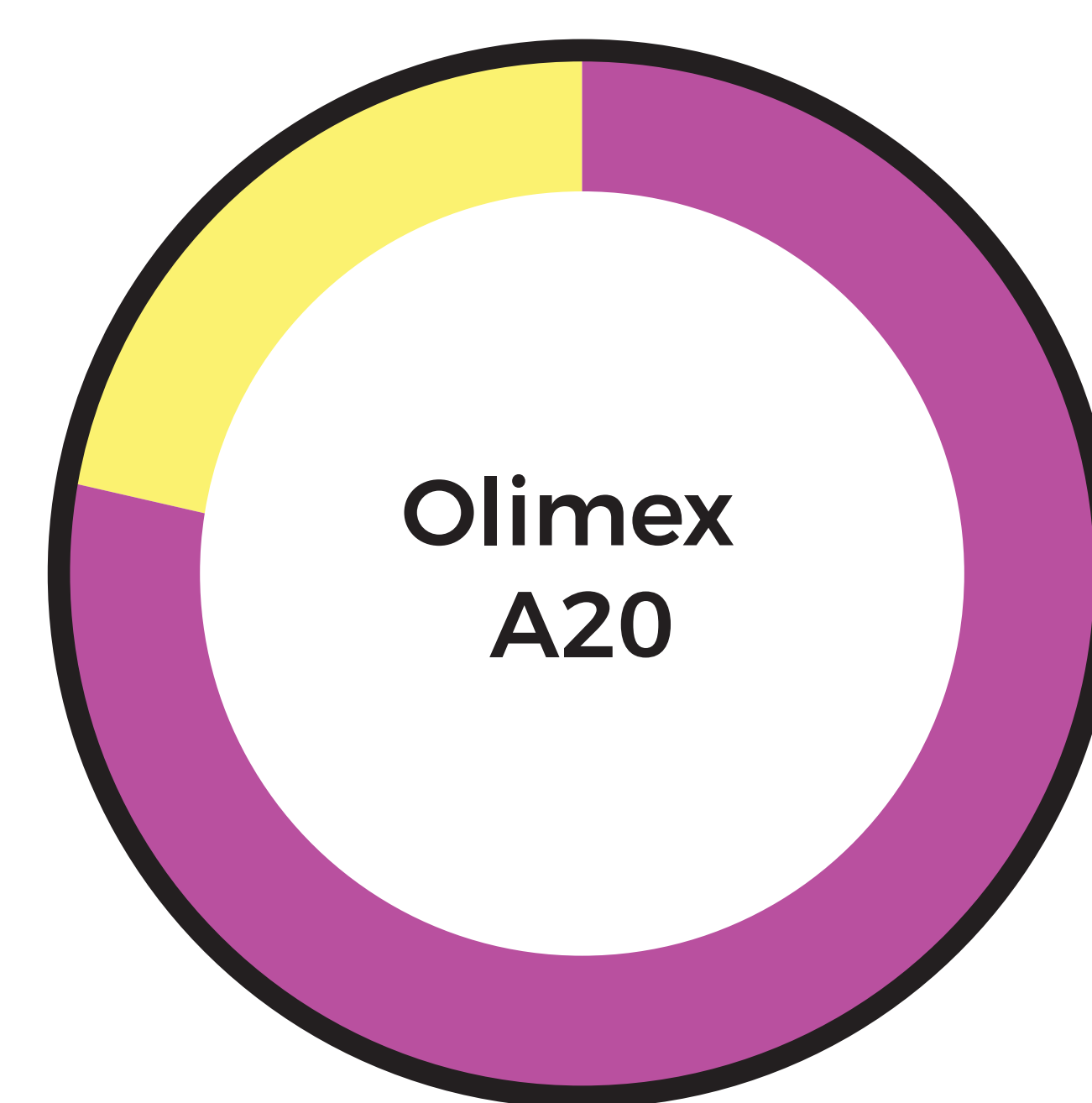
The Dragonboard 410c kept malfunctioning under testing. A cost analysis was still provided though.



BEST PERFORMING BOARD OVERALL

OLIMEX A20 is a Dual Core Cortex-A7 device running at up to 1.2Ghz

Based on the availability of parts, performance and main overall cost. The Olimex A20 has performed best so far.



Secure Operating System

The DECODE OS enables easy development and deployment of distributed applications, without any constraint on the blockchain stack being used. It is a GNU+Linux distribution geared towards security and low consumption, with modular UNIX components. It is capable of establishing automatically a peer-to-peer network among other running nodes, offering micro-services to the inside and outside.