

FOR ALL (30 minutes):

Consider the following line scan cameras: **Device “1”**: sensor of **8192 points**, each point of **1.6 micron * 1.6 micron**, able to acquire up to **20.000 lines per second**, price **1200 euro**. **Device “2”**: sensor of **4096 points**, each point of **2.2 micron * 2.2 micron**, able to acquire up to **30.000 lines per second**, price **700 euro**.

Define **two setups** for analysing objects having a **surface of 3 m * 15 m** at a resolution of **at least 1 pixel / 200 micron** (both along X and along Y): **setup 1** based on Devices like the “1”, **setup 2**, based on Devices like the “2”.

Which is the **preferable setup, in case we wish save money?**

Which is the **preferable setup in case we wish the fastest acquisition period?**

Consider now only the setup 2:

- **How many objects** can be analysed in 1 hour?
- **And at which distance from the object** the camera should be located mounting a lens having focal length of 35 mm?
- **Which is the smallest size of a detectable defect**, if your software needs at least **10 pixel * 10 pixel** for a correct processing?