Outline

• Lynx camera introduction
• Applications in food sorting
Lynx

• Uncooled InGaAs linescan camera
• Spectral response ~800 – 1700 nm
  - Lynx 512 (40 kHz line rate)
    25 µm pixel pitch
  - Lynx 1024 (40 kHz line rate)
    12.5 µm pixel pitch
  - Lynx 2048 (10 kHz line rate)
    12.5 µm pixel pitch

• Camera interface
  - CameraLink
  - GigE Vision
Food sorting

- Sorting based on water content
  - Frozen fruit and vegetable (vs. plastic, cardboard, metal…)

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**Food sorting**

- Colour defects and shape sorting: visible detectors
- InGaAs detectors for foreign material detection
Food sorting

- Foreign material
  - Packaging
  - Plastic
  - Cardboard
Food sorting: operation

OPERATION

1. Input product is loaded into the in-feed hopper;
2. It moves along the vibrating plate until it flows on to a sloping chute where it is individually checked and sorted by state-of-the-art cameras;
3. (CCD cameras for standard version and additional cameras for bichromatic, NIR and InGaAs versions) situated in the front and rear of the flow.
4. Depending on the signals received by the optical device, the sorter software controls the pneumatic device, which physically separates the unwanted products out of the conforming ones which naturally reach their discharging hopper.
5. The rejected products are instead deviated by a jet of compressed air produced by the relevant ejector and discharged in the front side hopper.

In automatic re-pass versions, the sorted or rejected product is automatically conveyed to another section of the machine for undergoing an identical process.