Technology for brand communication, protection and security applications

MICROCODE READER

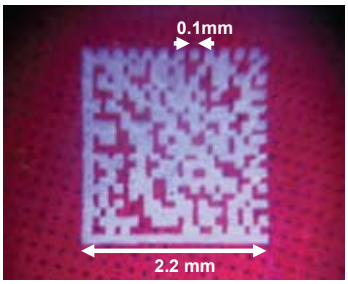
Universal Microcode Reader Module in mobile phones and camera systems.

Flexibility of Microcode Reader

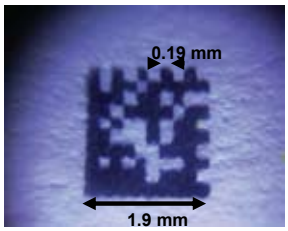
- Microcode reader can be customised for different camera systems
- Microcode reader can be customised for different inks
  - UV-LEDs for UV-fluorescent inks
  - IR-LEDs for IR-inks
- Microcode reader can read engraved codes
- Microcode reader can even read optical effects made by diffractive gratings
  - Direction and angle of LEDs can be customised
- Same decoding software can be used for microcodes as is used for macrocodes
- Detecting unique surface features in “fingerprint” type of security applicationsp

Example Pictures of Microcodes

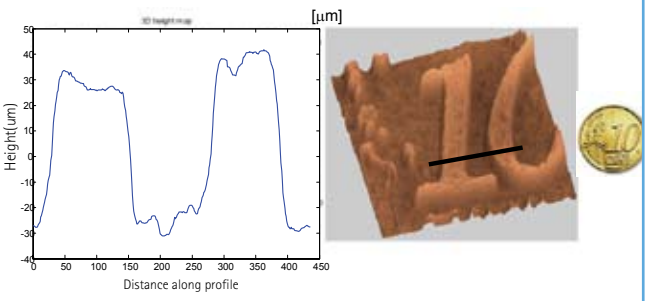
Laser engraved code



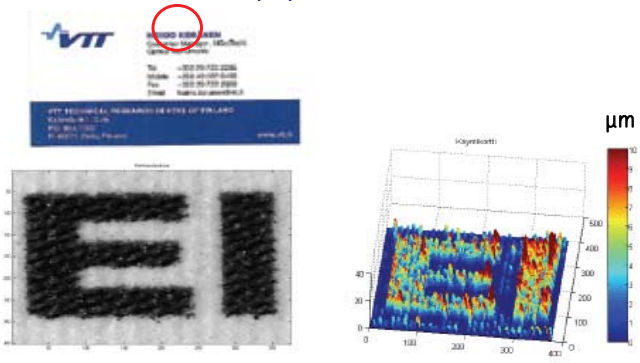
Digitally printed code



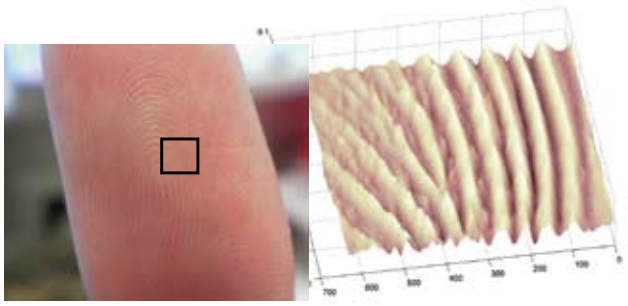
Micro topography measurement : 3D image of a coin



2D and 3D images of a printed paper surface



3D shape of a fingerprint



Benefits of Microcodes

- Microcodes are more difficult to copy thanmacrocodes
- Microcodes increase the data capacity per area
- Invisible microcodes made by special inks like UV or IR are very difficult to detect by normal methods and suitable for advanced security applications
- Microcodes can be combined with unique surface features of the substrate to create “unique fingerprint”
- Engraved microcodes offer a solution for direct security marking of metallic or plastic spare parts

Additional information

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