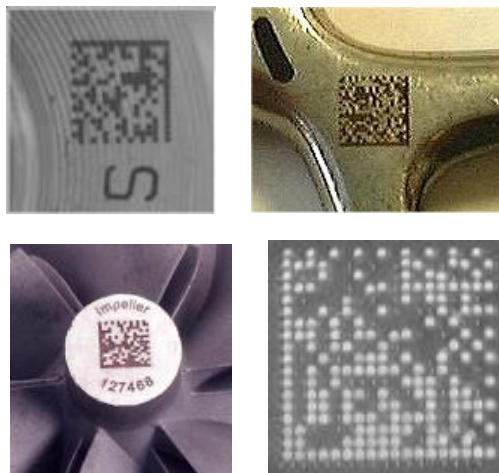


mvIMPACT Data Matrix

Data Matrix codes are a 2D symbology introduced by AIM, Inc. They are becoming commonplace as marking devices in various industries, where they can play the role of barcodes. The major advantages of such codes are increased data density, larger payload capacity and robustness to damage.

Writing technologies in use include both printing and direct part marking. In order to handle the variety of possible aspects, image processing-based decoders are required. The Data Matrix Reader module in mvIMPACT provides all versatility, robustness and performance needed.



Typical industrial Data Matrix codes



Postal application

Main features

Writing technology support

The Data Matrix module supports two modes of operation. One is suitable for printed symbols, which are usually well contrasted. The other is more appropriate for direct part marking methods such as dot peening or laser etching.

In addition, image preprocessing can be implemented to handle special cases such as textured substrates or unfavorable illumination. An additional utility program eases this task.

Automatic location and identification

The reader can work in a fully automated way and be ready to decode whatever the symbol size, resolution, orientation, type or contrast. On the other hand, faster decoding can be achieved when necessary by providing a priori information or by restricting the area of interest to be processed.

Symbol deformation, as when the background surface is curved or tilted, is dealt with too.

Error correction

Data Matrix symbols are built with a data redundancy principle that allows checking the correctness of the contents but also correcting erroneous bits of information. This is useful in case of possible damage due to scratches, dirt or misprinting. The Data Matrix Reader transparently handles error detection and correction.