

## **Traceability for Industry 4.0: barcode and beyond**

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The need for object identification and item traceability is at the base of the cyber-physical system concept and of the new Industry 4.0 paradigm. The ability to learn and identify product attributes beyond a bar code are becoming increasingly more valuable for manufacturing processes and logistic operations. Advances in OCR and Pattern Recognition are being used in conjunction with or in the absence of barcodes even when dealing with poor quality printed data, information directly marked onto challenging backgrounds, randomly oriented and partially visible objects, thus delivering more robust solutions for item identification.