

Labeling – 2D Barcode Basics

A simple explanation of how and why 2D barcode is beneficial to our industry.

An ECIA Knowledge Document

What is 2D Barcode?

2D Barcode labeling is the latest symbology for scanner readable information on shipping labels and documents including product or unit pack labeling, packing slips or labels, intermediate packing, and shipping containers or external packaging. A 2D barcode can hold over 2,000 characters compared with its' 1D counterpart holding merely 20-25. 2D barcode is already being used in many applications and service areas including the automotive and medical industries. Certain partners in our industry have already converted to 2D and many others are planning the transition.

Barcode Examples

1D Barcode



2D Barcodes



What's the big deal?

Today, each supplier and distributor have different labels and labeling requirements. There is no practiced industry standard for either the information on the labels or the label layout. Distributors ask suppliers to comply with the distributors' labeling or the suppliers' ship with their own labeling. This process is cumbersome, inefficient, confusing, and creates the potential for errors.

Global regulations are requiring identification of more and more part attributes. It's not enough to identify just a part number, now we must add attributes such as RoHS, REACH, Conflict Minerals Free, etc. The ability to add more information to the labels will become increasingly important.

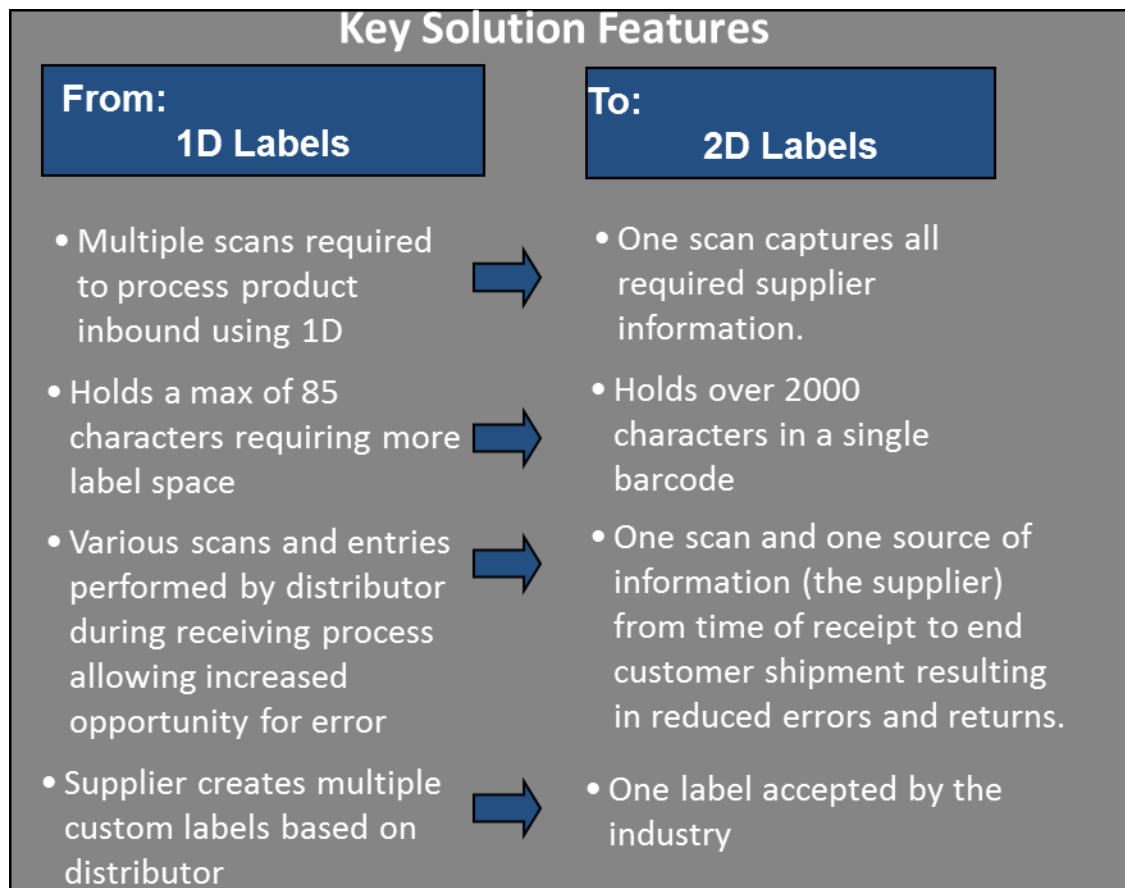
Current human readable (manual data input) and 1D barcode (multiple scan input) is costly, time consuming, and includes potential for errors. Even 1D barcode is subject to inaccuracy frequently requiring rescans.

Our Industry Solution

ECIA has created a labeling standard, *EIGP 114.1 2D Barcode Labeling Specification for Product Package and Shipments in the Electronics Industry (Including Human Readable and 1D Barcode)*. This standard will address several problems in the current system:

- The one label accepted by the industry
- It will allow single barcode scans instead of multiple scans per label improving accuracy and increasing efficiency.
- 2D will allow more information in less space on the label
- Create a standard label throughout our industry. You don't have to wait to implement 2D technology. It can standardize the label for human readable, 1D, and 2d applications.









1D vs. 2D



Sample

1D vs. 2D Visual

Containing the same data

(K) PO#: 5665PW3151104 (4K) LINE: 01	
	
(P) CUST P/N:	
	
(1P) MFG P/N: 770026 - 1	
	
(11K) PACK LIST: 99282813	
	
(Q) QTY: 250	BOX: 1 OF 6
	Weight: 5 LBS
(9D) D/C: 1324	(6D) SHIP DT: 08/07/13
	
(1T) LOT CODE: 20130614	
	



Requires 1 Scan

Requires 9 Scans