

Application Note 165

Intermec RFID Printers and Smart Labels



Radio frequency identification (RFID) technology is currently being introduced to enhance existing bar code label applications. RFID labels, tickets, and tags enable users to read labels without requiring direct line of sight to the label, ticket, or tag. The multi-function Intellitag PM4i printer gives you the reliability, ruggedness and performance you have come to expect in a barcode printer from Intermec, along with the latest RFID technology in the same box.

At this time Intermec are only introducing the PM4i printer and available labels to meet ISO standards. Future printer and label offerings will support EPC specifications, including EPC UHF Generation 2.

Benefits of RFID

- Improve supply chain responsiveness
 - Improve internal process efficiency including error proofing
 - Reduce costs early RFID adopters reduced costs 3-5% (AMR Research)
 - Increase revenue early adopters increased 2-7% (AMR research)
 - Reads multiple label, tickets, and tags simultaneously without human intervention
- Eliminates potential data collection human error



Automated Prescription Fulfillment prints 60 million labels per year using EasyCoder 501XP smart label printer and RFID

- ③ Stand alone smart label 501XP printer interfaces directly with host and automatically labels prescription bottles
- ③ RFID embedded tag in plastic transport carrier (see insert picture at left)
- ③ Full application case study is available at <u>www.intermec.com</u>

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How RFID Works

RFID wirelessly exchanges information between a tagged object (pallets, containers, vehicles) and a reader/writer. The EasyCoder PM4i reads, writes, and prints the RFID tag / label, with or without human readable text, required to communicate information.



Intellitag PM4i Printer Features

- ISO/IEC 18000 Part 6b Specification
- First RFID printer to encode frequency- agile UHF tags
- Ability to encode and print RFID labels without host system eprogramming
- Simultaneously print barcodes, human readable text, and graphics
- Supports stand alone printer applications
- Integrated EasyLAN[™] Ethernet, USB, and Serial interface standard
- Optional EasyLAN[™] Wireless interface

Specifications

ISO/IEC 18000 Part 6b Specification First RFID printer to encode frequencyagile UHF tags Ability to encode and print RFID labels without host system reprogramming Simultaneously print barcodes, human readable text, and graphics Supports stand alone printer applications Integrated EasyLAN™ Ethernet, USB, and Serial interface standard Optional EasyLAN™ Wireless interface Field upgradeable to support alternative pending specifications



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RFID Field Upgradeable

RFID field upgradeable kits are not available today but are coming. Intermec realizes the value of protecting customer investments. For this reason development is focused on providing field upgradeable kits for existing PM and PX series printers upon release of EPC UHF Generation 2 standards.



RFID Antenna ISO RFID Printer & Smart Labels

Primary Markets and Applications

Primary markets for the Intellitag[®] PM4i label printer are predominantly consumer goods manufacturers.



- o Pallet identification
- o Case tracking
- oShipping / Receiving
- Manufacturing
 - o Product labeling
 - oWork in process
 - o Parts management

Part Number	Description	AUS List	Discount
		Price	Code
PM4A414000000020	IM3 ISO RFID printer, Fingerprint	\$5700	М
	firmware, EasyLAN™ Ethernet,		
	200dpi		
PM4A414000001020	IM3 ISO RFID printer, Fingerprint	\$6110	М
	firmware, EasyLAN™ Ethernet, LTS +		
	Self Strip, 200dpi		

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RFID Label and Label Inlay Benefits and Availability

Intermec offers labels, tags, and ribbons to support all EasyCoder bar code printers. Intermec RFID labels and label inlays are:

- ③ Co-engineered with Intermec printers to provide optimal performance
- ③ Provide the same print quality as achieved with non-RFID labels
- ③ Currently available in the sizes listed below as take from stock quantities may be limited.

Silicon	Part Number	Description	Format	Good Labels per Roll Number of	of Rolls per Carton Number	Minimum Order
	ILR00121	4"x6" Label, ISO, Thermal Transfer Film, 915 MHz, Optimized for Corrugated Cardboard	Rolls	490	4	1 Carton
	ILS00121			50	2	
	ILR00037	4"x3" Label, ISO, Thermal Transfer Film, 915 MHz,		960	2	
Philips UCODE HSL	ILS00037	Optimized for Corrugated Cardboard		50	2	
	IIR00001 IIR00002	Inlay, Tunable, Large, ISO 18000-6B Compliant, Non-tuned		6,000 1,500	1 1	
	IIS00001		Rolls	50	2	1 Carton

③ Custom labels available – please contact UMD.

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