

IQ Pro Label

Durable RFID labels for special applications



IQ Pro labels represent high-end, durable RAIN® RFID UHF tags for applications with special needs, where standard on- or off-metal labels would not be sufficient.

The IQ Pro HT label portfolio can withstand exposure to high temperatures, chemicals, pressure and torsion, with uncompromised performance.

Originally designed for the automotive industry, these High Temperature (HT) labels help identify and track each vehicle both during assembly and throughout its life on the road. Lifetime traceability of auto parts and components enables more accurate and efficient records which can help automakers expedite service in the event of a recall.

HT Labels deliver consistent and reliable readability during the rigors of auto manufacturing, including welding operations, autoclaves, anti-corrosive electrolyte baths, cycles of paint layer application, and drying ovens that exceed 400° F (200° C).

Resistance to severe physical, mechanical and thermal environments makes this portfolio of tags ideal for all types of manufacturing, logistics and inventory control operations, especially tracking both work-in-progress and finished goods for various products such as industrial tools, medical trays, heavy equipment, car and aerospace components, cargo containers, and even blade and rack servers.

Custom form factors can be produced to meet specific needs. They may also be laser imprinted with barcodes, QR codes or text, enabling visual systems to work in combination with advanced RFID capabilities.

The thin IQ Pro 400 PC is optimized for non-metallic flat or slightly curved surfaces e.g. plastic waste bins or food crates. Its special polycarbonate construction ensures a higher durability and UV resistance compared to traditional label designs. Optional laser marking is performed into the structure of the tag to make it permanent and scratch resistant. The IQ Pro 400 PC is delivered as single pieces with strong adhesive and easy peel off tape for fast mounting. The polyimide construction of the IQ Pro 400P, 750P and 800P labels make them highly chemical resistant and thus ideal for plastic returnable transport items. Optionally they can be upgraded with an additional protective layer to add resistance to Ketones, Alkalis and Halogens on top.



KEY BENEFITS:

- **High heat resistance** – some models endure up to 446° F (230° C)
- **Impermeable** – repel moisture, oils, petroleum and salt mist
- **Flexible** – tolerate bending and torsion with uncompromised performance

KEY TECHNOLOGY HIGHLIGHTS:

- Broadband worldwide operating frequency, 865 to 956 MHz
- Some models perform from -40° to +446° F (-40° to +230° C)
- Highly resistant to water, oils, petroleum, salt mist, etc.
- Thickness down to 0.02 in (0.5 mm)
- Bendable and durable
- EPC Global Class 1 Gen 2, ISO 18000-6C





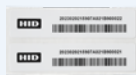

TYPICAL APPLICATION AREAS:

Automation and manufacturing

- Automotive
- Aerospace
- Machinery

Asset tracking and logistics

- Waste Management
- Container tracking
- Returnable Transport Items

	400P HT	800P HT	400P	750P	800P	400 PC
						
Base Model Number	CP16134	CP13445	CP17224	CP17253	CP17142	6H2P10
	ELECTRONIC					
Operating Frequency	865-928 MHz (Global)					
Chip Type	M730					Monza R6-P
Memory	128 bit EPC					128/96 bit EPC, 32/64 bit UM
Anti-Collision	Yes					
Reading Distance 2 W reader ERP, free space	Up to 13.1 ft (4 m)	Up to 39.3 ft (12 m)	Up to 19.6 ft (6 m)	Up to 39.3 ft (12 m)	Up to 49.2 ft (15 m)	Up to 13.1 ft (4 m)
	PHYSICAL					
Dimensions	2 x 1.2 x 0.02 in (50 x 30 x 0.5 mm)	3.3 x 2.2 x 0.02 in (85 x 55 x 0.5 mm)	1.8 x 0.5 in (46.45 x 12.32 mm)	2.3 x 0.7 in (60 x 18 mm)	3.7 x 0.8 in (95 x 21 mm)	2 x 0.9 x 0.03 in (50 x 24 x 0.7 mm)
Mounting Method	Screw, rivet, metal fastners		Self-adhesive			Solvent based Acrylic adhesive
Fixation Hole Size	Ø 0.1 in (2.5 mm) x 1	Ø 0.14 in (3.5 mm) x 2		(None)		
Affixes To	Plastic and non-metallic substrates		Non-metallic surfaces			
Housing Material	High temperature synthetic label		Polyimide - optionally available with added chemical resistant layer for Ketones, Alkalis and Halogen exposure*			Polycarbonate
Color	White					
Weight	0.02 oz (0.5 g)	0.05 oz (1.5 g)	0.02 oz (0.46 g)	0.02 oz (0.7 g)	0.03 oz (0.9 g)	0.03 oz (0.9 g)
	CHEMICAL AND MECHANICAL RESISTANCE					
Water	IP68, 68° F (20° C), 3.3 ft (1 m) x 24 h					
Withstands Exposure To	Mineral oil, 5% caustic soda, 10% salt water, vegetable oil		Resistance to harsh chemicals used for cleaning plastic RTI: Alcohols, Acids, Quaternary ammonium compounds (6.3%), Ketones*, Alkalis* (5~10%), and Halogens*			Mineral oil, petroleum, salt mist, vegetable oil, HCL (10%), Bleach (5%); UV light
Environmental Test Conditions	68° F (20° C), 100 h					
Axial / Radial Force						1000 N, 10 sec
Bending						5x500 each side, 27 mm radius; 500 each side, 45° twist
	THERMAL					
Storage	-40° to +185° F (-40° to +85° C)					-22° to +176° F (-30° to +80° C)
Operating	-40° to +185° F (-40° to +85° C)					-22° to +176° F (-30° to +80° C)
Shock/Fatigue	-40° to +185° F (-40° to +85° C), 100 x 5 min with 30 sec transition					-22° to +176° F (-30° to +80° C), 100 x 5 min with 30 sec transition
Peak	446° F (230° C), 1 h		392° F (200° C), 30 Min.			212° F (100° C), 100 h
	OTHER					
Standards	UHF EPC Class 1 Gen 2, ISO 18000-6C, RAIN					
Options	Printing (Operational Temperature); encoding; ATEX/IECEX; C1D1		Printing, encoding, ATEX/IECEX; C1D1			Laser engraving, printing, encoding
Box Size	1,020 pcs.					3,000 pcs.
Warranty	2 Years					



For more information, contact tagsales@hidglobal.com



hidglobal.com

North America: +1 512 776 9000 | Toll Free: 1 800 237 7769

Europe, Middle East, Africa: +353 91 506 900

Asia Pacific: +852 3160 9800 | Latin America: +52 55 9171 1108

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