

PRODUCT COMPARISON CHART

# Waste Management



Product Name	Bin Tag	Bin Tag HDX	Bin Tag HF	Bin Tag UHF	On Metal Bin Tag	Plug Tag	InLine Ultra (Weld)	InLine Ultra Slim (Weld)	IN Tag 200/300/500	IN Tag 500 UHF	IN Tag 500 UHF (OM)				
<b>Application</b>	For integration into waste management collection bins during or after molding				Especially designed for metal bins		Easy-mounting, non-removable tag for tracking containers for hazardous, recycling, medical and sensitive waste	Robust high performance, general purpose UHF transponder for metal and non metal outdoor use		Ruggedized for severe industrial environments, food compatible		Highly robust screw-on tag with anti collision support and on-metal option up to 140°			
<b>Frequency</b>	125 kHz	134.2 kHz		13.56 MHz	915 MHz (US)	125 kHz	134.2 kHz	131 kHz	134.2 kHz	865-956 MHz (EU, US, JP)		125 kHz	13.56 MHz	865 MHz (EU) / 915 MHz (US)	
<b>Size</b>	Ø30x15 mm				Ø34.5x15 mm, thread Ø33 mm		Ø9x19mm (Cap Ø15x19 mm)		97x27x15 mm (Ultra) 105x35x15 mm (Ultra plus)	97x27x9 mm (Ultra) 105x35x9 mm (Ultra plus)		Ø20 or 30x2.5 mm, Ø50x3 mm		Ø50x3.5 mm	Ø55x13 mm
<b>Screw hole</b>	N/A		Ø5.5 mm		N/A		N/A		Ø5.2 mm or optional steel ring to weld (Plus)		None (IN Tag 200) or Ø5.2mm		Ø5.3 mm		
<b>Standards / Protocol Support</b>	DIN30745	EN 14803, DIN 30745		ISO 15693, ISO 18000-3	EPC C1G2, ISO 18000-6C, DIN30745	EN 14803	EN 14803	EN 14803	ISO 18000-6C, EPC C1G2, ISO 17364		ISO 15693, ISO 18000-3	ISO 18000-6C, EPC C1G2			
<b>Chip Type</b>	Unique	FDX-b BDE	HDX	I-Code SLIx	Higgs 3	Unique	FDX-b BDE	Unique	FDX-b BDE	Monza 4QT		Hitag S, Unique	I-Code SLIx	G2XM	
<b>Memory <sup>2</sup></b>	64 bit RO	128 bit RO	128 bit RO	1024 bit RW	96 bit EPC, 64 bit TID, 512 bit RW	64 bit RO	128 bit RO	64 bit RO	128 bit RO	96 bit TID, 128 bit EPC, 512 bit RW		64 bit RO, 256 bit RW, 2048 bit RW	1024 bit RW	240 bit EPC, 64 bit TID, 512 bit RW	
<b>Anti-collision</b>					Yes				Yes		Hitag S - Yes	Yes	Yes		
<b>Reading Distance <sup>1</sup></b>					Up to 6.5ft / 2m				up to 26.2 ft (8 m)	up to 16.4 ft (5 m)			Up to 9.8 ft / 3 m		
<b>Typical Use Environment</b>	Plastic				Metal, plastic		Plastic	Metal, Plastic, Wood, Glass		Plastic, wood, glass		Plastic, wood	Metal, plastic		
<b>Mounting Method</b>	Screw-in				Screw-in		Plug-in	Screw-on or Weld		Embed, glue or screw-on		Screw-on			
<b>Operating Temperature <sup>1</sup></b>	-40 °C to +85 °C		-25 °C to +70 °C		-25°C to +85°C		-40 °C to +70 °C		-40 °C to +85 °C		-20 °C to +85 °C		-40 °C to +85 °C		
<b>Storage Temperature <sup>1</sup></b>	-40 °C to +90 °C		-40 °C to +85 °C		-40°C to +90°C		-40 °C to +70 °C		-40 °C to +90 °C		-20 °C to +85 °C		-40 °C to +90 °C		
<b>Peak Temperature <sup>1</sup></b>									Shock -40° to +85°		+140 °C (100h)		+140 °C (100h)		
<b>Housing Material</b>	Housing PA6, potting - PUR				Housing PA6, potting - PUR		PA6	PA6		PC-ABS		PPA		PPA	
<b>Chemical and Environmental Resistances <sup>1</sup></b>	Water, IP67 (1m, 1 hr), salt mist, fuel B, petroleum, mineral and vegetable oils				Water, IP67 (1m, 1 hr), salt mist, fuel B, petroleum, mineral and vegetable oils		Water, IP 68 (1m, 24 hrs)		Water, IP68 (1m, 24h), Salt Mist, Petroleum, Oils, Humidity 70°/80%		Water, IP68 (1m, 24h), Salt mist, Fuel B, Petroleum, Mineral and vegetable oils, Food compatible		Water, IP68 (1m, 24h), Salt mist, Fuel B, Petroleum, Mineral and vegetable oils, Food compatible		
<b>Mechanical Resistances <sup>1</sup></b>	Vibration IEC 68.2.6, shock IEC 68.2.29, compression 1000N				Vibration IEC 68.2.6, shock IEC 68.2.29, compression 1000N		Vibration IEC 68.2.6, Shock IEC 68.2.29		Vibration IEC 68.2.6, Shock IEC 68.2.29, Impact IEC 62262-IK09		Vibration IEC 68.2.6, shock IEC 68.2.29		Vibration IEC 68.2.6, shock IEC 68.2.29		
<b>Axial / Radial Force <sup>1</sup></b>	1000N (10 sec)								1000N		800N / 500N (10 sec)		800N / 500N (10 sec)		
<b>Warranty <sup>3</sup></b>												7 years			

<sup>1</sup> For further specification details, please see datasheets of the respective products  
<sup>2</sup> Read range is strongly dependent upon multiple parameters including reader, environment and application. HID Global tags are tested and proven to be at the top of their class.  
<sup>3</sup> Warranty: Storage condition must not exceed specification for temperature, chemical, mechanical, electrical condition, storage from -25°C to + 50°C, humidity 20% to 80%

# Animal Identification



Product Name	Glass Tag Ultra		Glass Tags				E-Unit Rod	E-Unit Disc		
Application	Glass Tube with up to 35% better read range than standard tube of same size		Small size with high chemical resistance provides an ideal solution for injection and long term immersion				Embeddable RFID tags - ideal as customizable implants. Please contact HID sales for details.			
Size	Ø2x9 mm, Ø2x12.5 mm	Ø2x8.5 mm	Ø2x12 mm <sup>3</sup>	Ø3x13 mm	Ø3x15 mm	Ø4x22 mm	Ø4x34 mm	Ø1x7 mm, Ø1.8x15 mm	Ø 20, 24, 27, 28 mm or custom	
Frequency	134.2 kHz		125 kHz		134.2 kHz		134.2 kHz			
Standards / Protocol Support	ISO 11784, ISO 11785				ISO 11784, ISO 11785		ISO 11784, ISO 11785			
Chip Type	EM4305		Hitag S, EM4305		Hitag S		Hitag S, EM4305			
Memory <sup>1</sup>	512 bit RW		256 bit RW, 512 bit RW, 2048 bit RW		256 bit RW		256 bit RW, 512 bit RW, 2048 bit RW			
Tagging Method	Subcutaneous		External housing e.g. pigeon ring		Subcutaneous, primarily horses		External housing e.g. ceramic bolus (stomach)		Ear tag or customized implant	Ear tag
Operating Temperature <sup>2</sup>			-25 °C to +85 °C				-25 °C to + 60 °C			
Storage Temperature <sup>2</sup>			-40 °C to +90 °C				-40 °C to + 60 °C			
Peak Temperature <sup>2</sup>			+120 °C (100h) +140 °C (10h)		+120 °C (100h)		+120 °C (100h) +140 °C (10h)			
Housing Material	BIO Glass		Glass		BIO Glass					
Chemical and Environmental Resistances <sup>2</sup>			Water, IP68 (1m, 24hrs), saltwater, alcohol, HCL, fuel, ammonia				Depends on finished product			
Mechanical Resistances <sup>2</sup>			Vibration IEC 68.2.6, shock IEC 68.2.29							
Parylene Coating Available (better tissue adhesion)	Yes		Yes		Yes					
Warranty <sup>4</sup>			2 years				2 years			

## Finding what you need

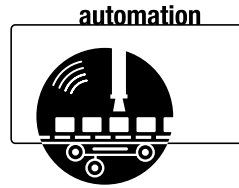
HID Global has many more products to offer than fit on this page. Please refer to [hidglobal.com](http://hidglobal.com) or contact an HID representative for further assistance in evaluating these tags or selecting a solution that best fits your particular requirements.

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<sup>1</sup> For further specification details, please see datasheets of the respective products.  
<sup>2</sup> Hitag S (256 bit RW), EM4305 (512 bit RW)  
<sup>3</sup> Optionally available with on-demand custom programming, see <http://www.hidglobal.com/main/services/on-demand/pet-programming/>  
<sup>4</sup> Warranty: Storage condition must not exceed specification for temperature, chemical, mechanical, electrical condition, storage from -25°C to + 50°C, humidity 20% to 80%  
 For unpackaged tags: Warranty would depend on finished product and can only be given as long as raw product is not processed / packaged

PRODUCT COMPARISON CHART

# Automation & Manufacturing



Product Name	IN Tag 200/300/500			IN Tag 500 UHF	IN Tag 500 UHF (OM)	Poly Tag 340			Volcano Tag 231	Brick Tag Nova
Application	Ruggedized for severe industrial environments, food compatible			Highly robust screw-on tag with anti collision support and on-metal option up to 140°		Durable tag for outdoor use requiring extreme impact resistance			Tag to withstand high temperatures	Tag for car immobilizers and other special applications where small size is required
Frequency	125 kHz	13.56 MHz		865 MHz (EU) / 915 MHz (US)		125 kHz	13.56 MHz		125 kHz	130 kHz
Size	Ø20 or 30x2.5 mm, Ø50x3 mm		Ø20x or 30x2.8 mm Ø50x3.3 mm	Ø50x3.5 mm	Ø55x13 mm	Ø34x8 mm			Ø26x4 mm	12.1 x 6.1 x 3.0 mm
Screw Hole	None (IN Tag 200) or Ø5.2mm			Ø5.3 mm		Ø5.4 mm			Ø4.5 mm	
Standards / Protocol Support <sup>1</sup>		ISO 15693, ISO 18000-3	ISO 15693	ISO 18000-6C, EPC C1G2			ISO 15693, ISO 18000-3			
Chip Type	Hitag S, Unique	I-Code SLIx	F-Mem	G2XM		Unique	Hitag S	I-Code SLIx	Unique, Q5, Hitag S	Nova
Memory <sup>3</sup>	64 bit RO, 256 bit RW, 2048 bit RW	1024 bit RW	16 Kbit RW	240 bit EPC, 64 bit TID, 512 bit RW		64 bit RO	256 bit RW, 2048 bit RW	1024 bit RW	64 bit RO, 256 bit RW, 264 bit RW, 2048 bit RW	160 bit RW
Anti-collision	Hitag S - Yes	Yes	Yes	Yes		Yes			Hitag S - Yes	
Reading Distance <sup>1</sup>				up to 9.8 ft / 3 m						
Typical Use Environment	Plastic, wood, glass			Plastic, wood	Metal, plastic, wood	Plastic, wood			Any to withstand equal temperatures	Car key or custom enclosure
Mounting Method	Embed, glue or screw-on			Screw-on		Screw-on			Screw-on	Enclose
Operating Temperature <sup>1</sup>	-25 °C to +85 °C			-20 °C to +85 °C		-40 °C to +85 °C	-25 °C to +85°C		-25 °C to +85 °C	-40 °C to +90 °C
Storage Temperature <sup>1</sup>	-40 °C to +90 °C			-40 °C to +90 °C		-40 °C to +90 °C	-40 °C to +90°C		-25 °C to +140 °C	-40 °C to +120 °C
Peak Temperature <sup>1</sup>	+140 °C (100h)			+140 °C (100h)		+100 °C (100h)	+130 °C (100h)		+160 °C (100h) +200 °C (10min)	
Housing Material	PPA			PPA		PA6			PPA	Epoxy
Chemical and Environmental Resistances <sup>1</sup>	Water, IP68 (1m, 24 hrs), salt mist, fuel B, petroleum, mineral and vegetable oils, food compatible			Water, IP68 (1m, 24h), Salt mist, Fuel B, Petroleum, Mineral and vegetable oils, Food compatible		Water, water with salt, unleaded gasoline, petroleum, mineral and vegetable oils, humidity 90% HR @ 90 °C			Water, IP68 (1m, 24Hrs)	Water IP68, saltwater, gasoline, oil, HCL, bleach, formic acid, caustic soda
Mechanical Resistances <sup>1</sup>	Vibration IEC 68.2.6, shock IEC 68.2.29			Vibration IEC 68.2.6, shock IEC 68.2.29		Vibration IEC 68.2.6, shock IEC 68.2.29			Vibration IEC 68.2.6, shock IEC 68.2.29	
Axial / Radial Force <sup>1</sup>	800N / 500N (10 sec)			800N / 500N (10 sec)		800N / 500N (10 sec)				500N
Warranty <sup>4</sup>	7 years			7 years		2 years			2 years	

## Finding what you need

HID Global has many more products to offer than fit on this page. Please refer to [hidglobal.com](http://hidglobal.com) or contact an HID representative for further assistance in evaluating these tags or selecting a solution that best fits your particular requirements.

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<sup>2</sup> Read range is strongly dependent upon multiple parameters including reader, environment and application. HID Global tags are tested and proven to be at the top of their class.  
<sup>3</sup> Unique (64 bit RO), Q5 (264 bit RW), Hitag S (32 bit RO, 256 bit RW, 2048 bit RW), Titan (1024 bit RW), EM4305 (512 bit RW)  
<sup>4</sup> Warranty: Storage condition must not exceed specification for temperature, chemical, mechanical, electrical condition, storage from -25°C to + 50°C, humidity 20% to 80%

PRODUCT COMPARISON CHART

# Returnable Transport Items



Product Name	InLine 120/52 UHF Tag	On Metal RTI Transponder	InLine Ultra Curve	Beer Keg Tag	Nail Tag	IN Tag 200/300/500		IN Tag 500 UHF	IN Tag 500 UHF (OM)
<b>Application</b>	Chemical resistant tag for all applications in logistics (pallet and container tracking), high-value assets and railroad applications where long distance reading performance is required	Robust high performance transponder for curved metallic returnable transport items like beer kegs, gas cylinders etc.		Tag especially designed for kegs with optional metallic ring	Glass-fiber nail tag for easy insertion into wood for use in pallet identification	Ruggedized for severe industrial environments, food compatible		Highly robust screw-on tag with anti collision support and on-metal option up to 140°	
<b>Frequency</b>	865 MHz (EU) 915 MHz (US)	865-956 MHz (EU, US, JP)		123 kHz	125 kHz	125 kHz	13.56 MHz	865 MHz (EU) / 915 MHz (US)	
<b>Size</b>	120x52x20 mm	88x37x14.5 mm (including metal ring)		Ø33.6x12.9 mm, Ø43.6x12.9 mm (including metal ring)	Ø4x35.5 mm	Ø20 or 30x2.5 mm, Ø50x3 mm		Ø50x3.5 mm	Ø55x13 mm
<b>Screw hole</b>	Ø5.3 mm	Curve radius: 450 mm		N/A	N/A	None (IN Tag 200) or Ø5.2mm		Ø5.3 mm	
<b>Standards / Protocol Support</b>	ISO 18000-6C, EPC C1G2, ISO 17364	ISO 18000-6C, EPC C1G2, ISO 17364		ISO 17364	ISO 17364	ISO 17364	ISO 15693, ISO 18000-3, ISO 17364	ISO 18000-6C, EPC C1G2, ISO 17364	
<b>Chip type</b>	G2XM	Monza3	Monza 4QT	Hitag S	Unique	Hitag S, Unique	I-Code SLix	G2XM	
<b>Memory<sup>3</sup></b>	240 bit EPC, 64 bit TID, 512 bit RW	96 bit EPC	96 bit TID, 128 bit EPC, 512 bit RW	256 bit RW, 2048 bit RW	64 bit RO	64 bit RO, 256 bit RW, 2048 bit RW	1024 bit RW	240 bit EPC, 64 bit TID, 512 bit RW	
<b>Anti-collision</b>	Yes	Yes		Yes		Hitag S - Yes	Yes	Yes	
<b>Reading distance<sup>2</sup></b>	Up to 19.7 ft (6 m)	Up to 22.9 ft (7 m)	up to 26.2 ft (8 m)					Up to 9.8 ft / 3 m	
<b>Typical use environment</b>	Plastic, metal, wood	Metal kegs, drums etc.		Kegs e.g. beer	Wood	Plastic, wood, glass		Plastic, wood	Metal, plastic, wood
<b>Mounting method</b>	Screw-on	Weld on metal, glue		Weld on metal, glue	Nail	Embed, glue or screw-on		Screw-on	
<b>Operating Temperature<sup>1</sup></b>	-40 °C to +75 °C	-30 °C to +70 °C	-40°C to +80°C	-25 °C to +85 °C	-25 °C to +85 °C	-25 °C to +85 °C		-20 °C to +85 °C	
<b>Storage Temperature<sup>1</sup></b>	-40 °C to +90 °C	-40 °C to +70 °C	-40°C to +80°C	-40 °C to +85 °C	-25 °C to +85 °C	-40 °C to +90 °C		-40 °C to +90 °C	
<b>Peak Temperature<sup>1</sup></b>			Shock -40° to +85°			+140 °C (100h)		+140 °C (100h)	
<b>Housing Material</b>	EPDM	ABS / Steel	PC-ABS	ABS / Steel	PPA	PPA		PPA	
<b>Chemical and Environmental Resistances<sup>1</sup></b>	Water, IP68 (1m, 24hrs), saltwater, motor-oil, acetic acid, bleach	Water, IP67 (1m, 1hr), salt mist, petroleum, oils	Water, IP68 (1m, 24h), Salt Mist, Petroleum, Oils, Humidity 70%/80%	Water, IP67 (1m, 1hr)	Water, IP67 (1m, 1hr)	Water, IP68 (1m, 24 hrs), salt mist, fuel B, petroleum, mineral and vegetable oils, food compatible		Water, IP68 (1m, 24h), Salt mist, Fuel B, Petroleum, Mineral and vegetable oils, Food compatible	
<b>Mechanical Resistances<sup>1</sup></b>	Vibration IEC 68.2.6, shock IEC 68.2.29, impact IEC 62262-IK08	Vibration IEC 68.2.6, shock IEC 68.2.29, impact IEC 62262-IK08	Vibration IEC 68.2.6, Shock IEC 68.2.29, Impact IEC 62262-IK08 1000N	Vibration IEC 68.2.6, shock IEC 68.2.29		Vibration IEC 68.2.6, shock IEC 68.2.29		Vibration IEC 68.2.6, shock IEC 68.2.29	
<b>Axial / Radial Force<sup>1</sup></b>			1000N			800N / 500N (10 sec)		800N / 500N (10 sec)	
<b>Warranty<sup>4</sup></b>	2 years	2 years		2 years	2 years	7 years		7 years	

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<sup>2</sup> Read range is strongly dependent upon multiple parameters including reader, environment and application. HID Global tags are tested and proven to be at the top of their class.  
<sup>3</sup> Unique (64 bit RO), Q5 (264 bit RW), Hitag S (32 bit RO, 256 bit RW, 2048 bit RW), EM4305 (512 bit RW)  
I-Code SLix-L (512 bit EEPROM, incl. 256 bit user memory), I-Code SLix (1024 bit EEPROM, incl. 896 bit user memory), I-Code SLix-S (2048 bit EEPROM, incl. 1280 bit user memory)  
<sup>4</sup> Warranty: Storage condition must not exceed specification for temperature, chemical, mechanical, electrical condition, storage from -25°C to +50°C, humidity 20% to 80%

# Medical and Health



Product Name	Epoxy Disc			Piccolino Tag	Logi Tag 141	Logi Tag 161
Application	Robust, general pupose flat disc to glue or screw-on			Tiny tag for custom housing with high memory capacity and fast anti-collision	Mechanical, chemical and temperature resistant tags for harsh environments	
Frequency	125 kHz			13.56 MHz	13.56 MHz	
Size	Ø20, 30 or 50x1 mm	Ø30x1.5 mm	Ø30x1 mm	Ø9.5x1 mm	Ø14x2.9mm	Ø16x2.9mm
Screw Hole	None, Ø3.2 or Ø4.3 mm	Ø3.2 mm	Ø12 mm		N/A	
Standards / Protocol Support				ISO 15693, ISO 18000-3	ISO 15693, ISO 18000-3	
Chip Type	Hitag S	Unique	Q5	I-code SLix / SLix-S	I-Code SLix-L	I-Code SLix-L, SLix
Memory <sup>1</sup>	2048 bit RW	64 bit RO	264 bit RW	1024 bit RW 2048 bit RW	512 bit RW	512 bit RW, 1024 bit RW
Anti-collision	Yes			Yes	Yes	
Typical Use Environment	Plastic			Depends on finished product	Cloth	
Mounting Method	Screw-on, glue or encapsulate			Depends on finished product	Embed	
Operating Temperature <sup>2</sup>	-25 °C to +85 °C			-25 °C to +70 °C	-25 °C to +85 °C	
Storage Temperature <sup>2</sup>	-40 °C to +85 °C			-40 °C to +85 °C	-25 °C to +85 °C	
Peak Temperature <sup>2</sup>	+140 °C (1x24h)		+120 °C (1x24h)		+120 °C (100h), Heat patch +220 °C (30s)	
Housing Material	Epoxy			Depends on finished product	PPS	
Chemical and Environmental Resistances <sup>2</sup>	Water, IP67 (1m, 1hr), mineral oils, ethanol, petrol, fuel			Depends on finished product	Water, IP68 (1m, 24h), HCL, Bleach, Perchlorethylen	
Mechanical Resistances <sup>2</sup>					Vibration IEC 68.2.6, shock IEC 68.2.29, 100 drops 1.8 m	
Axial / Radial Force <sup>2</sup>					1000N / 1000N (10 sec)	
Water Pressure <sup>2</sup>					20 bars (100 x 3 min)	
Warranty <sup>3</sup>	2 years			2 years	2 years	

## Finding what you need

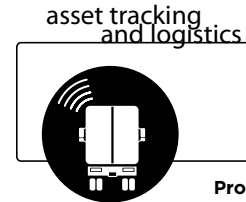
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<sup>1</sup> Unique (64 bit RO), Q5 (264 bit RW), Hitag S (32 bit RO, 256 bit RW, 2048 bit RW), EM4305 (512 bit RW), I-Code SLix-L (512 bit EEPROM, incl. 256 bit user memory), I-Code SLix (1024 bit EEPROM, incl. 896 bit user memory), I-Code SLix-S (2048 bit EEPROM, incl. 1280 bit user memory)  
<sup>2</sup> For further specification details, please see datasheets of the respective products.  
<sup>3</sup> Storage condition must not exceed specification for temperature, chemical, mechanical, electrical condition, storage from -25°C to + 50°C, humidity 20% to 80%

PRODUCT COMPARISON CHART

# Asset Tracking & Logistics

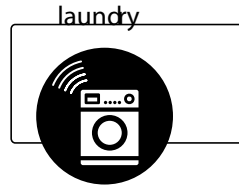


Product Name	InLine Ultra (Weld)	InLine Ultra Slim (Weld)	InLine 120/52 UHF Tag	InLine 230/15 UHF Tag	SlimFlex	World Tag		Jewelry Tag	Tamper Evident Jewelry Tag	Epoxy Tag (key fob)	
<b>Application</b>	Robust high performance, general purpose UHF transponder for metal and non metal outdoor use		Very robust tag for long-range outdoor applications		Flexible, ruggedized UHF tag for industrial / outdoor environments	Best general use price/performance ratio for indoor asset identification		Tag to track and inventory high-value merchandise like jewelry		Printable, engravable tag with high mechanical and thermal stability, suits most standard applications for access control or time and attendance	
<b>Frequency</b>	865-956 MHz (EU, US, JP)		865 MHz (EU) / 915 MHz (US)		860-960 MHz (EU, US, JP)	125 kHz		13.56 MHz		125 kHz	13.56 Mhz
<b>Size</b>	97x27x15 mm (Ultra) 105x35x15 mm (Ultra plus)	97x27x9 mm (Ultra) 105x35x9 mm (Ultra plus)	120x52x20 mm	230x15x15 mm	77x25x3 mm	Ø20 or 30x2.1 mm	Ø50x2.1 mm	22x16.5x3.3 mm	Ø16.5x22.75x2.5 mm	45x30x1.6 mm	
<b>Screw Hole</b>	Ø5.2 mm or optional steel ring to weld (Plus)		Ø5.3 mm	Ø5.2 mm	Ø3 mm	none or Ø3.2 mm	Ø4.2 mm	85 mm (Nylon or cotton string optional)	60 mm wire length	Ø5 mm	
<b>Standards / Protocol Support</b>	ISO 18000-6C, EPC C1G2, ISO 17364		ISO 18000-6C, EPC C1G2, ISO 17364		EPC C1G2, ISO 18000-6C			ISO 15693, ISO 18000-3			ISO 15693, ISO 18000-3
<b>Chip Type</b>	Monza 4QT		G2XM		Higgs 3	Hitag S, Q5, Titan, Unique		I-code SLix-L		Hitag S, Unique	I-code SLix
<b>Memory<sup>1</sup></b>	96 bit TID, 128 bit EPC, 512 bit RW		240 bit EPC, 64 bit TID, 512 bit RW		64 bit TID, 96 bit EPC, 512 bit RW	64 bit RO, 256 bit RW, 264 bit RW, 1024 bit RW, 2048 bit RW		512 bit RW		64 bit RO, 256 bit RW	1024 bit RW
<b>Anti-collision</b>	Yes		Yes		Yes	Hitag S - Yes		Yes		Hitag S - Yes	Yes
<b>Reading Distance<sup>2</sup></b>	up to 26.2 ft (8 m)	up to 16.4 ft (5 m)	Up to 19.7 ft (6 m)		Up to 19.7 ft (6 m)						
<b>Typical Use Environment</b>	Metal, Plastic, Wood, Glass		Plastic, metal, wood		Plastic, dry wood	Plastic, glass		Valuable assets in stores e.g. jewelry		Access control & time attendance	
<b>Mounting Method</b>	Screw-on or Weld		Screw-on		Glue or screw-on	Glue or screw-on	Screw-on	Attach with string		Keyring, chain	
<b>Operating Temperature<sup>3</sup></b>	-40°C to +80°C		-40 °C to +75 °C	-20 °C to +70 °C	-40°C to +70°C	-25 °C to +70 °C		0 °C to +60 °C		-25 °C to +85 °C	
<b>Storage Temperature<sup>3</sup></b>	-40°C to +80°C		-40 °C to +90 °C	-40 °C to +70 °C	-40°C to +70°C	-40 °C to +90 °C		-20 °C to +85 °C		-40 °C to +95 °C	
<b>Peak Temperature<sup>3</sup></b>	Shock -40° to +85°				Shock -40 to +90°	+130 °C (100h)	+100 °C (100h)			+140 °C (1x24h)	
<b>Housing Material</b>	PC-ABS		EPDM	ABS-PC	TPE	PC		PC		Epoxy	
<b>Chemical and Environmental Resistances<sup>3</sup></b>	Water, IP68 (1m, 24h), Salt Mist, Petroleum, Oils, Humidity 70%/80%		Water, IP68 (1m, 24hrs), saltwater, motor-oil, acetic acid, bleach	Water, IP67 (1m, 1hr), ethanol, petrol, fuel, mineral oil	Water, IP68 (1m, 24h), Salt mist, Petroleum, Mineral and vegetable oils					Water, IP67 (1m, 1hr), mineral oil, ethanol, petrol, fuel	
<b>Mechanical Resistances<sup>3</sup></b>	Vibration IEC 68.2.6, Shock IEC 68.2.29, Impact IEC 62262-IK09		Vibration IEC 68.2.6, shock IEC 68.2.29		Vibration IEC 68.2.6, Shock IEC 68.2.29	Vibration IEC 68.2.6, shock IEC 68.2.29,				Drop test 1.8m (10x10 cycles)	
<b>Axial / Radial Force<sup>3</sup></b>	1000N				1000N	500N / 300N (10 sec)	500N / 100N (10 sec)				
<b>Warranty<sup>4</sup></b>	7 years		2 years		2 years	2 years		2 years		5 years	

<sup>1</sup> Unique (64 bit RO), Q5 (264 bit RW), Hitag S (32 bit RO, 256 bit RW, 2048 bit RW), EM4305 (512 bit RW), I-Code SLix-L (512 bit EEPROM, incl. 256 bit user memory), I-Code SLix (1024 bit EEPROM, incl. 896 bit user memory), I-Code SLix-S (2048 bit EEPROM, incl. 1280 bit user memory), Titan (1024 bit RW)  
<sup>2</sup> Read range is strongly dependent upon multiple parameters including reader, environment and application. HID Global tags are tested and proven to be at the top of their class.  
<sup>3</sup> For further specification details, please see datasheets of the respective products.  
<sup>4</sup> Storage condition must not exceed specification for temperature, chemical, mechanical, electrical condition, storage from -25°C to +50°C, humidity 20% to 80%

PRODUCT COMPARISON CHART

Laundry



Product Name	Logi Tag 141	Logi Tag 161	Logi Button Tag 162	Logi Tag 120	Logi Tag 160
<b>Application</b>	Mechanical, chemical and temperature resistant tags for harsh environments such as laundries		Mechanical, chemical and temperature resistant tags for harsh environments such as laundries	Mechanical, chemical and temperature resistant tags for harsh environments such as laundries	
<b>Frequency</b>	13.56 MHz		13.56 MHz	125 kHz	
<b>Size</b>	Ø14x2.9 mm	Ø16x3 mm	Ø16x2.5 mm	Ø12.4x2 mm	Ø16x3 mm
<b>Standards / Protocol Support</b>	ISO 15693, ISO 18000-3		ISO 15693, ISO 18000-3		
<b>Chip Type<sup>1</sup></b>	I-Code SLix-L	I-Code SLix-L, I-Code SLix	I-Code SLix-L	Hitag S, Q5, Unique	
<b>Memory</b>	512 bit RW	512 bit RW, 1024 bit RW	512 bit RW	64 Bit RO, 256 bit RW, 264 bit RW, 2048 bit RW	
<b>Anti-collision</b>	Yes		Yes	Hitag S - Yes	
<b>Reading Distance<sup>2</sup></b>	Up to 12.6" (32 cm)	Up to 13.4" (34 cm)			
<b>Mounting Method</b>	Embed in cloth		Sew-on	Embed in cloth	
<b>Operating Temperature<sup>3</sup></b>	-25 °C to +85 °C		-25 °C to +85 °C	-25°C to +85°C	-25°C to +85°C
<b>Storage Temperature<sup>3</sup></b>	-25 °C to +85 °C		-25 °C to +85 °C	-40 °C to +130 °C	-25 °C to +120 °C
<b>Peak Temperature<sup>3</sup></b>	+120 °C (100h), heat patch +220 °C (30s)		+120 °C (100h)	+160 °C (35h)	
<b>Spin Dryer / Tunnel Finisher<sup>3</sup></b>	+175 °C (100 x 10 min)		+175 °C (100 x 10 min)	+175 °C (100 x 10 min)	
<b>Thermal Shock<sup>3</sup></b>	-20 °C to +160 °C (100 x 5 min)		-20°C to +160°C (100 x 5 min)		
<b>Housing Material</b>	Modified Thermoplastic		PPS with epoxy potting		
<b>Chemical and Environmental Resistances<sup>3</sup></b>	Water, IP68 (1m, 24h), HCL, Bleach, Perchlorethylen		Water, IP68 (1m, 24h), Industrial laundry detergent pH 10-11, Neutralizing agent, Hydrogen peroxide 5%, Perchlorethylen	Water IP68 (1m, 24hrs), saltwater, gasoline, oil, HCL, bleach, formic acid, caustic soda	
<b>Mechanical Resistances<sup>3</sup></b>	Vibration IEC 68.2.6, Shock IEC 68.2.29, 100 drops 1.8 m		Vibration IEC 68.2.6, shock IEC 68.2.29		
<b>Axial / Radial Force<sup>3</sup></b>	1000N / 1000N (10 sec)		800N / 500N (10 sec)		1000N / 1000N (10 sec)
<b>Water Pressure<sup>3</sup></b>	20 bars (100 x 3 min)		20 bars (100 x 3 min)		
<b>Warranty<sup>4</sup></b>	2 years		2 years	2 years	

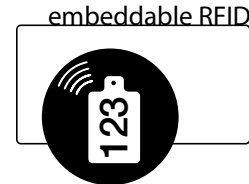
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20111202-ids-laundry-chart-en

<sup>1</sup> Unique (64 bit RO), Q5 (264 bit RW), Hitag S (256 bit RW, 2048 bit RW), I-Code SLix-L (512 bit EEPROM, incl. 256 bit user memory), I-Code SLix (1024 bit EEPROM, incl. 896 bit user memory), I-Code SLix-S (2048 bit EEPROM, incl. 1280 bit user memory)  
<sup>2</sup> Read range is strongly dependent upon multiple parameters including reader, environment and application. HID Global tags are tested and proven to be at the top of their class.  
<sup>3</sup> For further specification details, please see datasheets of the respective products.  
<sup>4</sup> Storage condition must not exceed specification for temperature, chemical, mechanical, electrical condition, storage from -25°C to + 50°C, humidity 20% to 80%

# Embeddable RFID



Product Name	Glass Tags							Glass Tag Ultra	Clear Disc		Piccolino Tag	E-Unit Rod	E-Unit Disc	e-Module			
<b>Application</b>	Small size with high chemical resistance provides an ideal solution for long term immersion into liquid or customized enclosures							Glass Tube with up to 35% better read range than standard tube of same size	Clear disc tag for custom housing		Tiny tag for custom housing with high memory capacity and fast anti-collision.	Semi-finished tags - designed for customized enclosure		Embeddable RFID tags - designed for customized enclosure			
<b>Frequency</b>	125 kHz			131 kHz	134.2 kHz	13.56 MHz	134.2 kHz	125 kHz		13.56 MHz	134.2 kHz		13.56 MHz				
<b>Size</b>	Ø2x10 mm	Ø2x12 mm	Ø3x13 mm	Ø4x34 mm	Ø3x13 mm	Ø4x22 mm	Ø4x22 mm	Ø2x9 mm, Ø2x12.5 mm		Ø20 or 30x0.6 mm	Ø22 or 30x0.6 mm	Ø7.5x1 mm, Ø9.5x1 mm	Ø1x7 mm, Ø1.8x15 mm	Ø 20, 24, 27, 28 mm or custom	Ø 10.2 x 0.9 mm	Ø 14.5 x 0.9 mm + hole Ø 6.8 mm	
<b>Standards / Protocol Support<sup>1</sup></b>							EN14803	ISO 15693, ISO 18000-3				ISO 15693, ISO 18000-3		ISO 11784, ISO 11785		ISO 15693, ISO 18000-3	
<b>Chip type</b>	Hitag S	Q5, Hitag S, Unique	Q5, Hitag S, Titan	Unique	Unique	FDX-b BDE	I-Code SLIx	EM 4305	Hitag S, Unique	Q5	I-code SLIx / SLIx-S	Hitag S, EM4305		EM4135	I-Code SLIx		
<b>Memory<sup>2</sup></b>	256 bit RW, 2048 bit RW	64 bit RO, 256 bit RW, 264 bit RW, 2048 bit RW	256 bit RW, 264 bit RW, 1024 bit RW, 2048 bit RW	64 bit RO	64 bit RO	128 bit RO	1024 bit RW	512 bit RW	64 bit RO, 256 bit RW, 2048 bit RW	264 bit RW	1024 bit RW, 2048 bit RW	256 bit RW, 512 bit RW, 2048 bit RW		2.4 kbit RW	1024 bit RW		
<b>Anti-collision</b>	Yes	Hitag S - Yes	Hitag S - Yes				Yes			Hitag S - Yes	Yes	Hitag S - Yes		Yes			
<b>Typical Use Environment</b>	Used in customized housings for non-animal applications							Depends on finished product		Depends on finished product	Depends on finished product						
<b>Mounting Method</b>	External housing							Depends on finished product		Depends on finished product	Depends on finished product						
<b>Operating Temperature<sup>3</sup></b>	-25 °C to +85 °C							-20 °C to +60 °C		-25 °C to +70 °C	-25 °C to +60 °C		-25 °C to +85 °C				
<b>Storage Temperature<sup>3</sup></b>	-40 °C to +90 °C							-20 °C to +60 °C		-40 °C to +85 °C	-40 °C to +60 °C		-40 °C to +120 °C				
<b>Peak Temperature<sup>3</sup></b>	+120 °C (100h) +140 °C (10h)																
<b>Housing Material</b>	Glass							Bio Glass	Polyethylen + Polyester (outside)		Epoxy			FR4 + Epoxy glob top			
<b>Chemical and Environmental Resistances<sup>3</sup></b>	Water, IP68 (1m, 24 hrs), saltwater, alcohol, HCL, fuel, ammonia							Depends on finished product		Depends on finished product	Depends on finished product						
<b>Mechanical Resistances<sup>3</sup></b>	Vibration IEC 68.2.6, shock IEC 68.2.29							Depends on finished product		Depends on finished product	Depends on finished product		Vibration IEC 68.2.6, Shock IEC 68.2.29				
<b>Warranty<sup>4</sup></b>	2 years							2 years		2 years	2 years						

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<sup>1</sup> ISO 11784, ISO 11785 for Hitag S and EM4305 chip only  
<sup>2</sup> Unique (64 bit RO), Q5 (264 bit RW), Hitag S (32 bit RO, 256 bit RW, 2048 bit RW), Titan (1024 bit RW), EM4305 (512 bit RW)  
<sup>3</sup> For further specification details, please see datasheets of the respective products.  
<sup>4</sup> Storage condition must not exceed specification for temperature, chemical, mechanical, electrical condition, storage from -25°C to +50°C, humidity 20% to 80%

# Industry & Logistics Readers



<b>Product Name</b>	<b>Multi-Tag</b>
<b>Product Type</b>	<b>Reader Core</b>
<b>Base Model Number</b>	701800013
<b>Dimensions</b>	25.5mm x 30.5mm x 6mm
<b>Power Supply</b>	5VDC +/- 10% Regulated
<b>Power Supply Connector</b>	N/A
<b>Antenna Support</b>	Single External
<b>External Antenna Connector</b>	N/A
<b>RF Transmit Frequency</b>	125kHz , 134.2kHz
<b>Supported Standards</b>	ISO 11784, ISO 11785 ISO 18000-2
<b>Supported Tag-IC's</b>	Hitag 1, Hitag 2, Hitag S, Q5 EM4X02, EM4X05 (ISO FDX B), EM4X50 TI-RFID Systems 134.2 kHz 64Bit R/O, TI-RFID Systems 134.2 kHz 64Bit R/W TI-RFID Systems 134.2 kHz 1088Bit Multipage
<b>Communication Interface</b>	CMOS-TTL Serial Interface 9600Bits/s to 115kBits/s, 8, N, 1
<b>Global Certification</b>	RoHS, WEEE
<b>Software</b>	DLL (C++) & Reader Utility Program
<b>Warranty</b>	6 Months

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