

Waste Management

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)					
Application	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°				
Frequency	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)		
Size	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	
Screw hole	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			
Standards / Protocol Support	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				
Chip Type	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		
Memory ²	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		
Anti-collision					Yes				Yes		Hitag S - Yes	Yes	Yes			
Reading Distance ¹					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			
Typical Use Environment	Plastic				Metal, plastic		Plastic		Metal, Plastic, Wood, Glass		Plastic, wood, glass		Plastic, wood	Metal, plastic		
Mounting Method	Screw-in				Screw-in		Plug-in		Screw-on or Weld		Embed, glue or screw-on		Screw-on			
Operating Temperature ¹	-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 +80°C		-25°C to +85°C	-20 °C to +85 °C
Storage Temperature ¹	-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 +80°C		-40°C to +90°C	-40 °C to +90 °C
Peak Temperature ¹									Shock -40° to +85°		+140 °C (100h)		+140 °C (100h)			
Housing Material	Housing PA6, potting - PUR				Housing PA6, potting - PUR		PA6		PC-ABS		PPA		PPA			
Chemical and Environmental Resistances ¹	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			
Mechanical Resistances ¹	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			
Axial / Radial Force ¹	1000N (10 sec)								1000N		800N / 500N (10 sec)		800N / 500N (10 sec)			
Warranty ³												7 years				

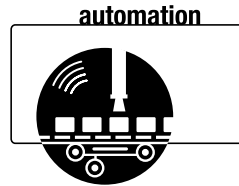
Animal Identification

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 sales for details.		
Size	Ø2x9 mm, Ø2x12.5 mm	Ø2x8.5 mm	Ø2x12 mm ³	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		Hitag S, EM4305	
Memory ¹	512 bit RW	256 bit RW, 512 bit RW, 2048 bit RW		256 bit RW		256 bit RW, 512 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	External housing e.g. ceramic bolus (stomach)	Ear tag or customized implant	Ear tag
Operating Temperature ²	-25 °C to +85 °C					-25 °C to + 60 °C			
Storage Temperature ²	-40 °C to +90 °C					-40 °C to + 60 °C			
Peak Temperature ²	+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 ²	Water, IP68 (1m, 24hrs), saltwater, alcohol, HCL, fuel, ammonia						Depends on finished product		
Mechanical Resistances ²	Vibration IEC 68.2.6, shock IEC 68.2.29								
Parylene Coating Available (better tissue adhesion)	Yes	Yes		Yes					
Warranty ⁴	2 years						2 years		

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 ¹		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 ³	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 ¹				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 ¹	-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 ¹	-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 ¹	+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 ¹	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 ¹	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 ¹	800N / 500N (10 sec)			800N / 500N (10 sec)		800N / 500N (10 sec)				500N
Warranty ⁴	7 years			7 years		2 years			2 years	

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)
Application	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°	
Frequency	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)	
Size	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
Screw hole	Ø5.3 mm	Curve radius: 450 mm		N/A	N/A	None (IN Tag 200) or Ø5.2mm		Ø5.3 mm	
Standards / Protocol Support	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	
Chip type	G2XM	Monza3	Monza 4QT	Hitag S	Unique	Hitag S, Unique	I-Code SLix	G2XM	
Memory³	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	
Anti-collision	Yes	Yes		Yes		Hitag S - Yes	Yes	Yes	
Reading distance²	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	
Typical use environment	Plastic, metal, wood	Metal kegs, drums etc.		Kegs e.g. beer	Wood	Plastic, wood, glass		Plastic, wood	Metal, plastic, wood
Mounting method	Screw-on	Weld on metal, glue		Weld on metal, glue	Nail	Embed, glue or screw-on		Screw-on	
Operating Temperature¹	-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	
Storage Temperature¹	-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	
Peak Temperature¹			Shock -40° to +85°			+140 °C (100h)		+140 °C (100h)	
Housing Material	EPDM	ABS / Steel	PC-ABS	ABS / Steel	PPA	PPA		PPA	
Chemical and Environmental Resistances¹	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	
Mechanical Resistances¹	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	
Axial / Radial Force¹			1000N			800N / 500N (10 sec)		800N / 500N (10 sec)	
Warranty⁴	2 years	2 years		2 years	2 years	7 years		7 years	

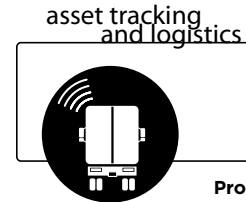
Medical and Health

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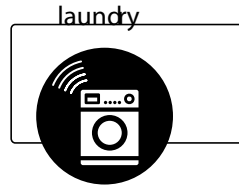
Product Name	Epoxy Disc			Piccolino Tag	Logi Tag 141	Logi Tag 161
Application	Robust, general pupose flat disc to glue or screw-on			Tiny tag for custom housing with high memory capacity and fast anti-collision	Mechanical, chemical and temperature resistant tags for harsh environments	
Frequency	125 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 ¹	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 ²	-25 °C to +85 °C			-25 °C to +70 °C	-25 °C to +85 °C	
Storage Temperature ²	-40 °C to +85 °C			-40 °C to +85 °C	-25 °C to +85 °C	
Peak Temperature ²	+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 ²	Water, IP67 (1m, 1hr), mineral oils, ethanol, petrol, fuel			Depends on finished product	Water, IP68 (1m, 24h), HCL, Bleach, Perchlorethylen	
Mechanical Resistances ²					Vibration IEC 68.2.6, shock IEC 68.2.29, 100 drops 1.8 m	
Axial / Radial Force ²					1000N / 1000N (10 sec)	
Water Pressure ²					20 bars (100 x 3 min)	
Warranty ³	2 years			2 years	2 years	

Asset Tracking & Logistics



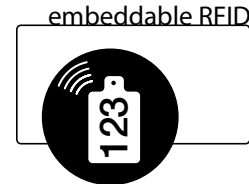
Product Name	InLine Ultra (Weld)	InLine Ultra Slim (Weld)	InLine 120/52 UHF Tag	InLine 230/15 UHF Tag	SlimFlex	World Tag		Jewelry Tag	Tamper Evident Jewelry Tag	Epoxy Tag (key fob)	
Application	Robust high performance, general purpose UHF transponder for metal and non metal outdoor use		Very robust tag 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	
Frequency	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
Size	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	
Screw Hole	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	
Standards / Protocol Support	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
Chip Type	Monza 4QT		G2XM		Higgs 3	Hitag S, Q5, Titan, Unique		I-code SLix-L		Hitag S, Unique	I-code SLix
Memory¹	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
Anti-collision	Yes		Yes		Yes	Hitag S - Yes		Yes		Hitag S - Yes	Yes
Reading Distance²	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)						
Typical Use Environment	Metal, Plastic, Wood, Glass		Plastic, metal, wood		Plastic, dry wood	Plastic, glass		Valuable assets in stores e.g. jewelry		Access control & time attendance	
Mounting Method	Screw-on or Weld		Screw-on		Glue or screw-on	Glue or screw-on	Screw-on	Attach with string		Keyring, chain	
Operating Temperature³	-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	
Storage Temperature³	-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	
Peak Temperature³	Shock -40° to +85°				Shock -40 to +90°	+130 °C (100h)	+100 °C (100h)			+140 °C (1x24h)	
Housing Material	PC-ABS		EPDM	ABS-PC	TPE	PC		PC		Epoxy	
Chemical and Environmental Resistances³	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	
Mechanical Resistances³	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)	
Axial / Radial Force³	1000N				1000N	500N / 300N (10 sec)	500N / 100N (10 sec)				
Warranty⁴	7 years		2 years		2 years	2 years		2 years		5 years	

Laundry



Product Name	Logi Tag 141	Logi Tag 161	Logi Button Tag 162	Logi Tag 120	Logi Tag 160
Application	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	
Frequency	13.56 MHz		13.56 MHz	125 kHz	
Size	Ø14x2.9 mm	Ø16x3 mm	Ø16x2.5 mm	Ø12.4x2 mm	Ø16x3 mm
Standards / Protocol Support	ISO 15693, ISO 18000-3		ISO 15693, ISO 18000-3		
Chip Type¹	I-Code SLix-L	I-Code SLix-L, I-Code SLix	I-Code SLix-L	Hitag S, Q5, Unique	
Memory	512 bit RW	512 bit RW, 1024 bit RW	512 bit RW	64 Bit RO, 256 bit RW, 264 bit RW, 2048 bit RW	
Anti-collision	Yes		Yes	Hitag S - Yes	
Reading Distance²	Up to 12.6" (32 cm)	Up to 13.4" (34 cm)			
Mounting Method	Embed in cloth		Sew-on	Embed in cloth	
Operating Temperature³	-25 °C to +85 °C		-25 °C to +85 °C	-25°C to +85°C	-25°C to +85°C
Storage Temperature³	-25 °C to +85 °C		-25 °C to +85 °C	-40 °C to +130 °C	-25 °C to +120 °C
Peak Temperature³	+120 °C (100h), heat patch +220 °C (30s)		+120 °C (100h)	+160 °C (35h)	
Spin Dryer / Tunnel Finisher³	+175 °C (100 x 10 min)		+175 °C (100 x 10 min)	+175 °C (100 x 10 min)	
Thermal Shock³			-20 °C to +160 °C (100 x 5 min)	-20°C to +160°C (100 x 5 min)	
Housing Material	Modified Thermoplastic			PPS with epoxy potting	Epoxy
Chemical and Environmental Resistances³	Water, IP68 (1m, 24h), HCL, Bleach, Perchloroethylen		Water, IP68 (1m, 24h), Industrial laundry detergent pH 10-11, Neutralizing agent, Hydrogen peroxide 5%, Perchloroethylen	Water IP68 (1m, 24hrs), saltwater, gasoline, oil, HCL, bleach, formic acid, caustic soda	
Mechanical Resistances³	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	
Axial / Radial Force³	1000N / 1000N (10 sec)			800N / 500N (10 sec)	1000N / 1000N (10 sec)
Water Pressure³	20 bars (100 x 3 min)			20 bars (100 x 3 min)	
Warranty⁴	2 years		2 years	2 years	

Embeddable RFID



Product Name	Glass Tags							Glass Tag Ultra	Clear Disc		Piccolino Tag	E-Unit Rod	E-Unit Disc	e-Module	
Application	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	
Frequency	125 kHz			131 kHz	134.2 kHz	13.56 MHz	134.2 kHz	125 kHz		13.56 MHz	134.2 kHz		13.56 MHz		
Size	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
Standards / Protocol Support¹					EN14803	ISO 15693, ISO 18000-3					ISO 15693, ISO 18000-3	ISO 11784, ISO 11785		ISO 15693, ISO 18000-3	
Chip type	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
Memory²	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
Anti-collision	Yes	Hitag S - Yes	Hitag S - Yes				Yes		Hitag S - Yes		Yes	Hitag S - Yes		Yes	
Typical Use Environment	Used in customized housings for non-animal applications								Depends on finished product		Depends on finished product	Depends on finished product			
Mounting Method	External housing								Depends on finished product		Depends on finished product	Depends on finished product			
Operating Temperature³	-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	
Storage Temperature³	-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	
Peak Temperature³	+120 °C (100h) +140 °C (10h)														
Housing Material	Glass							Bio Glass	Polyethylen + Polyester (outside)		Epoxy			FR4 + Epoxy glob top	
Chemical and Environmental Resistances³	Water, IP68 (1m, 24 hrs), saltwater, alcohol, HCL, fuel, ammonia								Depends on finished product		Depends on finished product	Depends on finished product			
Mechanical Resistances³	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	
Warranty⁴	2 years								2 years		2 years	2 years			

¹ ISO 11784, ISO 11785 for Hitag S and EM4305 chip only

Industry & Logistics Readers



Product Name	Multi-Tag
Product Type	Reader Core
Base Model Number	701800013
Dimensions	25.5mm x 30.5mm x 6mm
Power Supply	5VDC +/- 10% Regulated
Power Supply Connector	N/A
Antenna Support	Single External
External Antenna Connector	N/A
RF Transmit Frequency	125kHz , 134.2kHz
Supported Standards	ISO 11784, ISO 11785 ISO 18000-2
Supported Tag-IC's	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
Communication Interface	CMOS-TTL Serial Interface 9600Bits/s to 115kBits/s, 8, N, 1
Global Certification	RoHS, WEEE
Software	DLL (C++) & Reader Utility Program
Warranty	6 Months