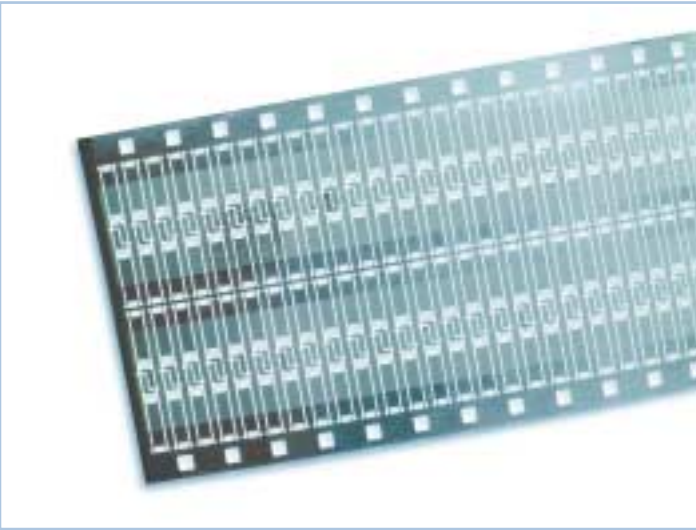# HITAG-S

3rd generation HITAG™ family

The newest addition to Philips established HITAG™ family, the revolutionary HITAG-S ICs are targeted at the high volume livestock tracking and food safety market. Significantly reducing the cost of RFID tags, HITAG-S is offered with either 32 Bit, 256 Bit or 2048 Bit memory.

Semiconductors

General Description

HITAG-S ICs feature a new, innovative, ultra low power design specifically designed to provide the longer reading ranges required for completely automated livestock tracking on today's large farms.

With a standard ISO 11784/85 gate reader, livestock tagged with HITAG-S tags can be automatically identified, even in large numbers.

Adding ISO 14223/1 also enables vaccination data to be stored directly on the tag. This operation can be restricted to authorized veterinarians. As all the animals' data is then available directly and off-line, stock tracking on industrial farms as well as reliable import/export control around the world becomes transparent, verifiable, and affordable.
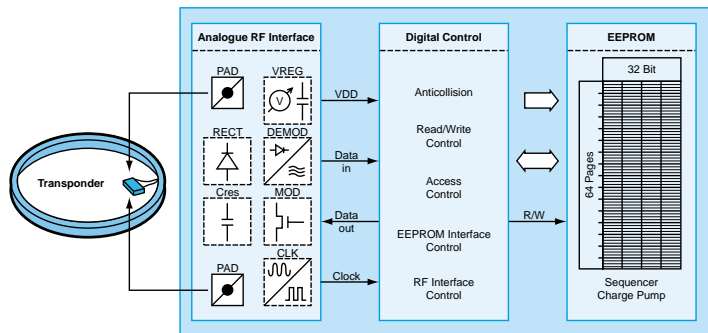
Applications

- Livestock tracking & Food Safety
- Automation of Laundry Services
- Logistic for re-usable packages (Beer Kegs, Gas Cylinders)
- Waste Management according to German BDE Standard
- Hands Free Access Control, Company Cards, Vending Machines
- Sports Timing (Marathon, Pigeon Races)
- Casino Gaming

Features

- Three memory options (32 Bit UID, 256 Bit, 2048 Bit)
- More than 100 000 erase/write cycles
- 10 years non-volatile data retention
- Frequency range 100-140 kHz
- CRC data integrity check
- Data Rates (Tag to Reader): 2.0kbits/s, 4.0kbits/s, 8.0kbits/s
- Data Rate (Reader to Tag): 5.2kbits/s
- Secure Memory Lock functionality
- 32 Bit Unique Identification Number (UID)
- 48 bit secret key based encrypted authentication

Advantages

- Small die size: fits into injectable glass tubes
- Long read/write operating range
- Compatible with HITAG 1 and HITAG 2 reader infrastructure
- Selectable operating modes provide compatibility with existing reader infrastructures
- ISO 11784/85 and ISO 14223/1 compliant
- Compliant to German Waste Management Standard (BDE)
- Compliant to German Pigeon Race Standard

hitag™

PHILIPS

HITAG-S

3rd generation HITAG™ family

www.semiconductors.philips.com

HITAG-S ICs are fully compatible with the following reader products:

- HTRC110: Analog front end of Read/Write device
- HTRC130: Security co-processor
- HTRM801: Long range Read/Write device
- HTEV801: Long range demo Kit

Selection Guide

Features	HITAG S32	HITAG S256	HITAG S2048
Memory Size	32 Bit unique identification number	256 Bit	2048 Bit
Anticollision	Yes	Yes	Yes
Encrypted Authentication	No	Yes	Yes
Compatibility to HITAG 1	Yes	Yes	Yes
Compatibility to HITAG 2	Yes, with firmware upgrade	Yes, with firmware upgrade	Yes, with firmware upgrade
ISO Animal Standard	No	Yes	Yes
German Waste Management Standard	No	Yes	Yes
Pigeon Race Standard	No	Yes	Yes

Ordering Information

Type Name	Memory Size	Delivery Type Description
HTS IC H32 01DW/V4	32 Bit	Sawn wafer on foil (FFC), 150 μm, inked and mapped, with bumps
HTS IC H56 01DW/V4	256 Bit	
HTS IC H48 01DW/V4	2048 Bit	
HTS MO H32 01DV	32 Bit	MOA2 Chip Module Package
HTS MO H56 01DV	256 Bit	
HTS MO H48 01DV	2048 Bit	
HTS FC H32 01DV/VC	32 Bit	Flip Chip Package, Cold Laminated
HTS FC H56 01DV/VC	256 Bit	
HTS FC H48 01DV/VC	2048 Bit	

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