

## Data Sheet

### Hitag\_transponders.pdf

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### Summary of Hitag 1, Hitag 2 and Hitag S transponder features

Product Features	HITAG™ 1 (Note 1)	HITAG™ 2 (Note 2)	HITAG™ S (Note 3)
<b>Memory</b>			
Size [bit]	2048	256	32, 256, 2048
Write Endurance [cycles]	100,000	100,000	100,000
Data Retention [yrs]	10	10	10
Organization	64 blocks x 4 bytes	8 blocks x 4 bytes	64 blocks x 4 bytes
<b>RF-Interface</b>			
According to	HITAG 1	HITAG 2, ISO 11784/85 (Note4)	HITAG 1+, ISO 11784/85 (Note 4)
Frequency (Note 5)	100 - 150 kHz	100 - 150 kHz	100 - 150 kHz
Baudrate [kbit/s]	up to 4	up to 4	up to 8
Anticollision	yes, collision detection	-	yes, collision detection
Operating Distance [m]	up to 1.5	up to 1.5	up to 2.0
<b>Security</b>			
Unique Serial Number [byte]	4	4	4
Write Protection	blockwise	blockwise	blockwise, multi user mode
Access Keys	32-bit	48-bit	48-bit
Access Conditions	Encrypted Mutual Authentication or Plain Encrypted	Mutual Authentication or Plain Encrypted – PASSWORD mode	Mutual Authentication or Plain Encrypted
Encryption Algorithm	yes	yes	yes, for authentication only

Note 1: Hitag S256/2048 is recommended for new designs. HS is protocol and command compatible with H1.

Note 2: MicroRWD H2 version supports Philips default Hitag 2 PASSWORD access mode.

Note 3: MicroRWD H1/HS version supports HitagS256/2048 in Philips default PLAIN memory mode.

Note 4: MicroRWD H1/HS or H2 versions do NOT support Hitag2 and HitagS ISO 11784/85 animal tag modes.

Note 5: MicroRWD modules support 125kHz operation only.