NXP ICODE SLI-S
HF RFID smart label IC
with password protection

Take security to the next level

Now you can offer the smart label market an enhanced security option – password protection. With our ICODE SLI-S, you can deliver the perfect balance of security, privacy and cost effectiveness. It's your ideal smart label solution for secure, globally compliant applications.

Key applications
▸ Libraries and rental services
▸ Pharmaceutical
▸ Fashion
▸ Retail
▸ Item-level tagging

Key features
▸ Optional, configurable password-protected memory access for read / write, EAS and privacy-related applications
▸ 2048 bits of on-chip memory
  - 64 bits UID
  - 96 bits EPC (OTP)
  - 1280 bits programmable user memory
▸ Interface complies fully with ISO 15693, ISO 18000-3 and EPCglobal HF Class 1 standards
▸ Multi-label operation up to 60 tags/sec according to the ISO protocol and up to 200 tags/sec according to the EPC protocol
▸ Operating distances up to 2 m
▸ Runs on the same infrastructure as ICODE SLI, ICODE 1, ICODE EPC and ICODE UID
▸ 23.5 pF and 97.0 pF (for smaller labels) versions

Key benefits
▸ World's first product with password-protected EAS functionality
▸ First ISO 15693-compliant IC offering privacy protection with specific destroy and privacy commands
▸ More customer-programmable memory
▸ Significantly improved response signal
▸ Robust and reliable RF technology suitable for noisy environments
▸ Supported by established reader infrastucture worldwide
▸ Tags, labels and readers available from numerous suppliers

The ICODE SLI-S is a dedicated IC for passive, intelligent tags and labels supporting the ISO 15693, ISO 18000 and HF EPCglobal/Auto ID standards. For enhanced security, it offers password-protected memory access that can be tailored to meet your specific needs. In particular, it's the world's first solution with password-protected EAS functionality – letting you address the need for higher security standards.

In addition to the configurable password-protected memory, the ICODE SLI-S features increased user memory. So you can use 32-bit or 64-bit passwords for even higher security in your applications.
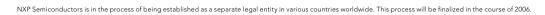
With operating distances up to 2 m, the ICODE SLI-S is specifically designed for long-range applications. Combined with its security features and high anti-collision rates, this makes the ICODE SLI-S ideal for libraries, rental services, the fashion industry, pharmaceutical supply chain management and other item-level tagging applications. Furthermore to help you address consumer concerns, it offers the most comprehensive privacy-protection features currently available on a smart label IC.

Our ICODE platform is the industry standard for high-frequency (HF) smart label solutions. With more than 250 million ICs sold, representing the world's largest installed base, ICODE is a proven and reliable technology. The entire ICODE family is supported by ISO 15693, ISO 18000 and EPCglobal compliant infrastructure. This ensures you can seamlessly integrate the ICODE SLI-S into existing applications to improve performance and functionality.

Product Features	ICODE SLI-S	ICODE SLI-S HC (High Capacitance)
Memory		
Size [bit]	2048	2048
Write endurance [cycles]	100 000	100 000
Data retention [yrs]	10	10
Organization	16 pages each 4 blocks by 4 bytes	16 pages each 4 blocks by 4 bytes
RF interface		
Standards	ISO 15693, ISO 18000-3, EPC	ISO 15693, ISO 18000-3, EPC
Frequency [MHz]	13.56	13.56
Baud Rate	Up to 53 Kbit/s	Up to 53 Kbit/s
Anticollision	Acc ISO 15693, ISO 18000-3, EPC	Acc ISO 15693, ISO 18000-3, EPC
Operating distance	Up to 2.0 m*	Up to 2.0 m*
Resonance capacitance [pF]	23.5	97.0
Security		
Unique serial number [byte]	8	8
Write protection	Blockwise	Blockwise
Access passwords	32 bit or 64 bit	32 bit or 64 bit
Access conditions	Plain, Password	Plain, Password
Configurable password protection read / write	Pagewise	Pagewise
Encryption Algorithm	-	-
Special Features		
EAS (Electronic Article Surveillance)	Yes	Yes
AFI (Application Field Identifier)	Yes	Yes
EPC (Electronic Product Code)	Yes	Yes
Destroy command	Yes	Yes
Privacy command	Yes	Yes
Packaging		
Sawn wafer (Au bumped)	SL2ICS53	SL2ICS54
MOA2 Module	SL2MOS53	SL2MOS54
FCP Module	SL2FCS53	SL2FCS54

* based on ECC regulations

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