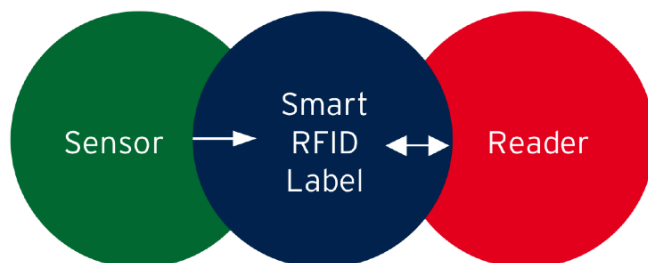


SL13A Tracks, Monitors and Logs

IDS Microchip significantly broadens the scope of affordable RFID automatic data logging applications with its unique SL13A smart label chip.

Priced up to 10 times lower than existing RFID temperature-sensing modules, this sophisticated chip for the first time makes it practical and affordable to automatically track, monitor, time-stamp and record information about any goods in any supply chain or cold chain transport.

The SL13A works in semi-passive mode (battery-assisted) as well as in fully passive mode. The chip is ideal for applications using thin and flexible batteries (1.5V or 3V) for autonomous logging from the integrated temperature sensor or an external sensor with time-stamp from on-chip real-time clock. The SPI bus allows connection of other external circuits.

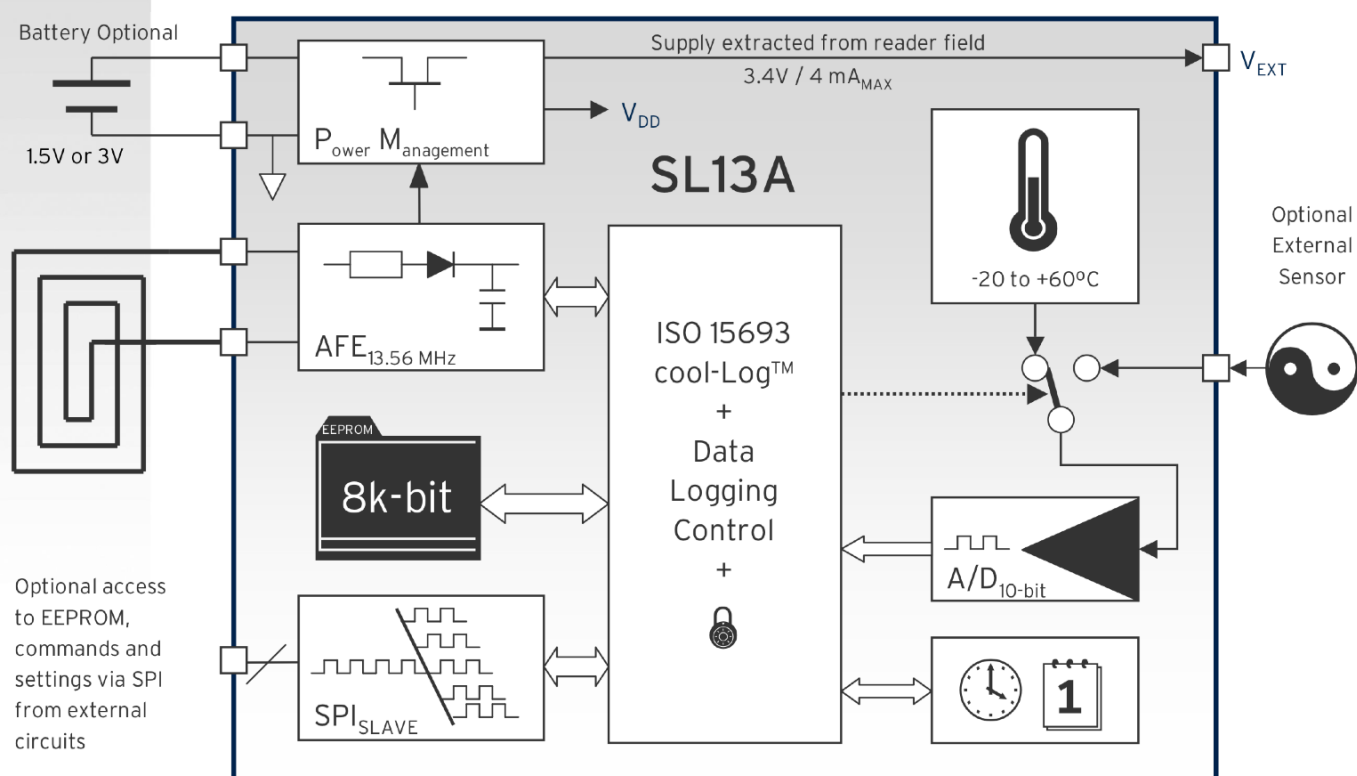


- Enabling affordable data logging
- Works in both semi-passive mode (battery-assisted) and fully passive mode
- Supports communication via SPI bus

Development Kit

A complete development kit including an R13MP reader board and a SL13A smart data logger board is available. The kit comes with demo application and GUI software with source codes.

Typical Application - Single-Chip ISO 15693 Temperature Logger



Quick Reference Data

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V_{BAT}	Input Battery Supply Voltage	Automatically detects 1.5V or 3V battery and adapts accordingly*	1.2 2.2	1.5 3.0	1.6 3.3	V
I_{DD}	Supply Current	Standby Active (RTC running) Logging mode (20 ms)		2 200	0.1	μ A
F	Frequency Band		13.553	13.56	13.567	MHz
T_A	Operating Ambient Temperature		-40		110	$^{\circ}$ C
T_{S-R}	Temperature Sensor Range	Nominal range With reduced integral non-linearity	-20 -40		60 80	$^{\circ}$ C
T_{S-A}	Temperature Sensor Accuracy	-20 $^{\circ}$ C to 60 $^{\circ}$ C		+/-0.5		$^{\circ}$ C
T_{RTC-I}	Real-Time Clock, Interval	Programmable	2		32,768	sec
T_{RTC-A}	Real-Time Clock, Accuracy				+/-3	%
	Protocols and Data Rates	ISO 15693 cool-Log™		1.66 / 26.5 Proprietary		kbps

*) The chip automatically detects whether a 1.5V, a 3V or no battery is connected and adapts accordingly for optimal performance.

Delivery Form

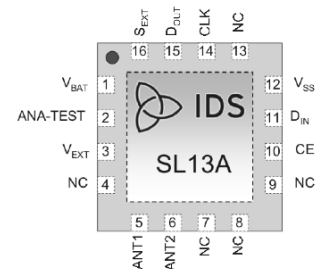
The SL13A is available in a 16-LD QFN (5x5 mm; RoHS) or as tested wafers (8"). Inlays and labels are available through our partners.

Complementary Products

The 13.56 MHz multi-protocol reader chip, R13MP complements the SL13A in building complete RFID monitoring, tracking and data logging systems.

Similar Products

The SL900A is a single-chip smart data logger based on EPC Gen 2 Class 3.



About IDS Microchip AG

IDS Microchip AG is an RFID semiconductor company specialized in integrated circuits for RFID system solutions including readers, enhanced tags and labels with sensors for both HF and UHF systems. With its long history in RFID development, IDS offers one of the most complete semiconductor portfolios comprising both passive, semi-passive as well as active RFID systems.

Focusing on all silicon aspects of radio frequency identification (RFID) technology, IDS Microchip helps customers achieving cost-effective solutions. Its comprehensive portfolio comprises RFID and sensor-enabled integrated circuits and IP for highly integrated low-power RFID system solutions. Founded in 1996 and privately funded, IDS Microchip is headquartered in Wollerau, Switzerland; with a design centre in Ljubljana, Slovenia, an office in Toronto and distributors throughout the world.

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