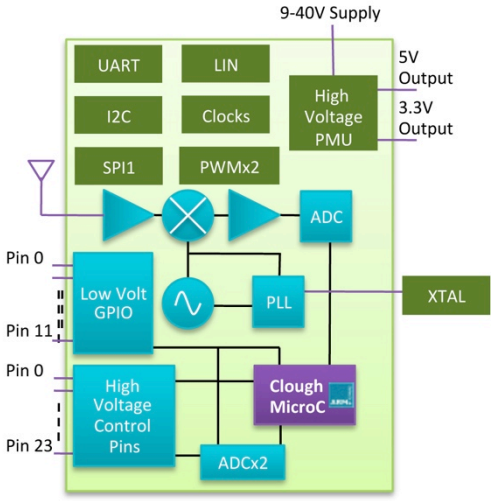
mSesame Features

- ARM M0 32-Bit MCU
- 160kB Flash / 8kB SRAM
- ISM 433MHz ASK Receiver
- Ultrasonic shock sensor
- (1) 8-10 bit ADCs
- (24) High Voltage GPIOs
- (13) Low Voltage GPIOs
- 5V, 3.3V and 1.8V regulated outputs
- 10MHz RC Oscillator
- 3.58MHz XTAL Oscillator
- 10kHz Auxiliary Clock (<1uA)
- (3) 32-bit Timers
- I^2C, SPI Interfaces, UART, LIN Interfaces
- (2) 12-bit PWM



Recommended Applications

- Garage door openers
- Automotive alarms
- Wireless industrial door and security systems

iND83225 - "mSesame"
32-Bit ARM M0 Based uController and Wireless Receiver

Device Description

mSesame is the highest-featured member of indie's HV/Automotive series of ARM M0-based microcontrollers. Clocking at up to 20MHz, the ARM M0 core integrates 160kB of flash RAM and 8kB of SRAM on die for feature-rich applications or those requiring redundancy of data storage. It integrates a superheterodyne ISM-band ASK receiver operating at 433MHz and with sensitivity performance of -110 dBm. It also contains an ultrasonic shock sensor and is intended to support a wide array of applications including radio controlled industrial door and security systems as well as automotive alarm systems.

The iND83225 integrates multiple clocking options including a high accuracy (1%) 10MHz RC oscillator, low cost 3.58MHz XTAL oscillator, and low power (<1uA) 10kHz auxiliary clock. It also contains (3) 32-bit timers, and a watchdog timer for high performance, low power designs.

mSesame has a very rich set of I/O capabilities. There are 15 high voltage (9-45V) GPIOs which can source 5mA or sink 25mA of current, 8 high voltage (9-45V) GPIOs which can sink 200mA in order to drive a relay coil, 1 high voltage (9-45V) GPIO which can source 200mA or sink 25mA and 13 low voltage (3.3V nominal) GPIOs.

mSesame integrates a power management block including on-chip regulators and can be powered from a wide voltage range of 9V to 45V. The on-chip power management block also produces regulated 1.8V, 3.3V and 5.0V supplies to external pins. All of the iND83225 pins are 8kV latch-up resistant

iND83225 has several interface options to interface to other integrated circuits (IC) such as I^2C, SPI, UART, and LIN interfaces as well as 2 PWM ouputs. There is also an 8-bit ADC (SAR architecture) with 23 channels. All of these features are packaged in a low cost, 7x7mm 48 pin QFN package and are suitable for applications from -40C to +85C.

Ordering Information

Device Ordering Name	Platform	Temp Range	Package	Pins
iND83225 mSesame	General purpose and HV/Auto uC applications	-40C to +85C	7x7 mm QFN	48 Pins @ 0.50 mm Pitch