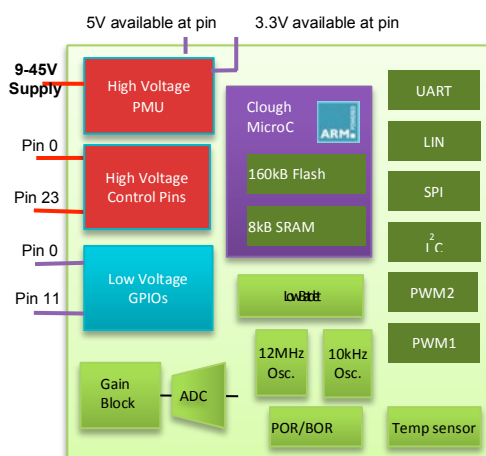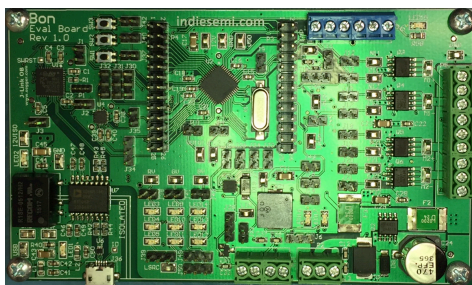## BON Features

- High voltage supply 9-45V
- ARM M0 32-Bit MCU
- 160kB Flash / 8kB SRAM
- (2) 8/10 bit ADCs, 27 channel
- (24) High Voltage GPIOs
- (12) Low Voltage GPIOs
- LED drivers RGB
- 5V, 3.3V & 1.8V outputs
- 12MHz RC Oscillator
- 10kHz Auxiliary Clock (<1uA)
- (2) 12-bit PWM, (3) 32-bit Timers
- (1) LIN Interface (2.0)
- (1) I^{2}C Interface,
- (1) UART
- (1) SPI Interface

Block Diagram

Application board:

iND83201 - "BON"
32-Bit ARM M0-Based uController with high voltage support and power I/O control

Device Description

BON is part of indie's HV/Automotive series of ARM M0-based microcontrollers. The Cortex M0 core integrates 160kB of Flash and 8kB of SRAM on die for feature-rich applications or those requiring redundancy of data storage. BON integrates a power management block including on-chip regulators and can be powered from a wide voltage range of 9V to 35V (45V load dump). The on-chip power management also produces regulated 1.8V, 3.3V and 5.0V supplies to external pins. All of the iND83201 pins are 8kV Latch-up resistant. BON integrates multiple types of GPIOs. There are 24 high voltage (9-35V) GPIOs which can source 5mA or sink 25mA of current, 8 high voltage (9-35V) GPIOs which can sink 200mA in order to drive a relay coil, 1 high voltage (9V-35V) GPIO which can source 200mA or sink 25mA and 12 low voltage (3.3V nominal) GPIOs.

Bon is intended to support a wide array of applications including automotive applications, industrial control applications and security systems as well as automotive alarm systems. The high drive output can reduce the need for motor control pre-drivers. The device can also easily drive RGB LEDs. indie provides an advanced development board, with motor control, Relay, Triac, and LIN interface to allow fast validation of a wide range of high power, high voltage type applications

The iND83201 integrates multiple clocking options including a high accuracy (1%) 12MHz RC oscillator, and a low power (<1uA) 10kHz auxiliary clock. It also contains three 32-bit timers and a watchdog timer for high performance, low power designs.

BON has several options to interface to other integrated circuits such as I^{2}C, SPI, UART, and LIN interfaces. 2 ADC and 2 PWMs are also available through multiple 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
iND83201 uSesame	General purpose and HV/Auto uC applications	-40C to +85C	7x7 mm QFN	48 Pins 0.50 mm Pitch