

Doc. No.: 2011080084

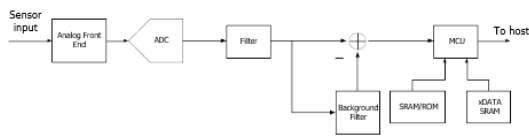
FEATURES

- **Capacitive Touch Screen Controller**
 - Supports up to 30 sensors
 - Supports screen size up to 5"
 - X, Y resolution up to 2048 pixels x 2048 pixels
 - Programmable reporting rate: max 5ms/report
 - Accurate single-touch coordinate report and two-touch gesture
 - Automatic background capacitance tracking
 - 14-bit ADC
- **Hardware**
 - 32-bit MCU
 - SRAM embedded
 - I2C slave interface, up to 400Kb/s
 - Built-in oscillator
- **Operation Voltage**
 - 2.8V ~ 3.3V
- **Misc.**
 - QFN-40 package

GENERAL DESCRIPTION

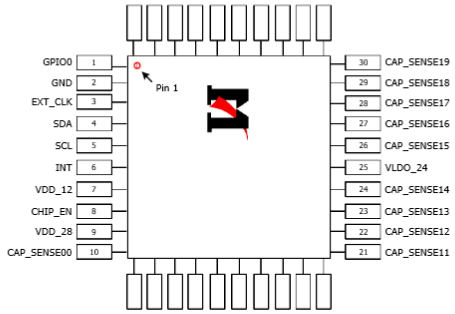
The MSG2133 is a capacitive touch screen controller. The internal ADC & DSP circuitry implement high-accuracy self-capacitance measurement. A 32-bit MCU with embedded SRAM provides programmability to suffice different requirements of various touch screen designs.

BLOCK DIAGRAM



Doc. No.: 2011080084

PIN DIAGRAM (MSG2133)



Doc. No.: 2011080084

PIN DESCRIPTION

Capacitive Touch Sensor Interface

Pin Name	Pin Type	Function	Pin
CAP_SENSE00	Analog Input	Capacitive touch sensor input	10
CAP_SENSE01	Analog Input	Capacitive touch sensor input	11
CAP_SENSE02	Analog Input	Capacitive touch sensor input	12
CAP_SENSE03	Analog Input	Capacitive touch sensor input	13
CAP_SENSE04	Analog Input	Capacitive touch sensor input	14
CAP_SENSE05	Analog Input	Capacitive touch sensor input	15
CAP_SENSE06	Analog Input	Capacitive touch sensor input	16
CAP_SENSE07	Analog Input	Capacitive touch sensor input	17
CAP_SENSE08	Analog Input	Capacitive touch sensor input	18
CAP_SENSE09	Analog Input	Capacitive touch sensor input	19
CAP_SENSE10	Analog Input	Capacitive touch sensor input	20
CAP_SENSE11	Analog Input	Capacitive touch sensor input	21
CAP_SENSE12	Analog Input	Capacitive touch sensor input	22
CAP_SENSE13	Analog Input	Capacitive touch sensor input	23
CAP_SENSE14	Analog Input	Capacitive touch sensor input	24
CAP_SENSE15	Analog Input	Capacitive touch sensor input	26
CAP_SENSE16	Analog Input	Capacitive touch sensor input	27
CAP_SENSE17	Analog Input	Capacitive touch sensor input	28
CAP_SENSE18	Analog Input	Capacitive touch sensor input	29
CAP_SENSE19	Analog Input	Capacitive touch sensor input	30
CAP_SENSE20	Analog Input	Capacitive touch sensor input	31
CAP_SENSE21	Analog Input	Capacitive touch sensor input	32
CAP_SENSE22	Analog Input	Capacitive touch sensor input	33
CAP_SENSE23	Analog Input	Capacitive touch sensor input	34
CAP_SENSE24	Analog Input	Capacitive touch sensor input	35
CAP_SENSE25	Analog Input	Capacitive touch sensor input	36
CAP_SENSE26	Analog Input	Capacitive touch sensor input	37
CAP_SENSE27	Analog Input	Capacitive touch sensor input	38
CAP_SENSE28	Analog Input	Capacitive touch sensor input	39
CAP_SENSE29	Analog Input	Capacitive touch sensor input	40