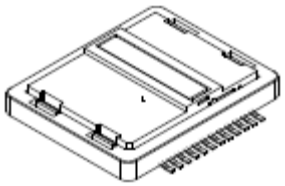
LITEON® LITE-ON SEMICONDUCTOR CORP. 敦南科技股份有限公司

FLB Fingerprint Band Sensor

LiteBand®

FLB6100

Fingerprint Sensor



The FLB6100 is an optical type finger- print band sensor that is dedicated to add security onto mobile multi-media devices.

The FLB6100 integrates CMOS sensor, ASIC, image reconstruction, and matching algorithm into one total-solution. The optical mechanism is optimized for best image capture and uniformity.

The FLB6100 can be applied in variant concepts:

- Security
- Privacy
- Personalization
- Entertainment

Features

- Industry best resolution.
- Automatic power management circuit.
- Light source illumination control.
- Memory-control-like interface.
- Fast scan rate.
- Ultra-hard scratch resistance surface.
- Easy access for sliding fingers.
- Robust mechanical packaging.
- High sensitivity CMOS image sensors.
- Minimized cost.
- Switch-enable resolution modes.

Specifications

Outstanding electronics

- Operation voltage of 3.3V power supply
- Built-in hi-speed 8 bits ADC / 4Mhz
- Memory control like interface with 8bit data bus.
- Maximum data transfer rate: 8MByte/Sec.
- 48MHz operation, with crystal, resonator, or external clock input
- Maximum scan speed 24 cm/sec

Strong reliability

- IEC 6100-4-2 Level 4 ESD Capability (+/- 15KV)
- Operation temperature : -20℃ ~ 60℃
- Storage temperature: -40℃~ 85℃
- Hardness: 6H
- Scratch resistance of 10M rub times

Chic dimension

- 16.5 * 15.76 * 3.08 mm

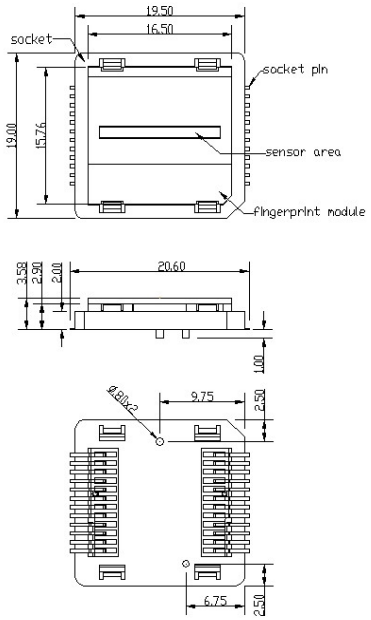
Highest resolution

- High Definition 616 pixels @ 1200DPI sensor resolution
- Low Definition 308 pixels @ 600DPI sensor resolution

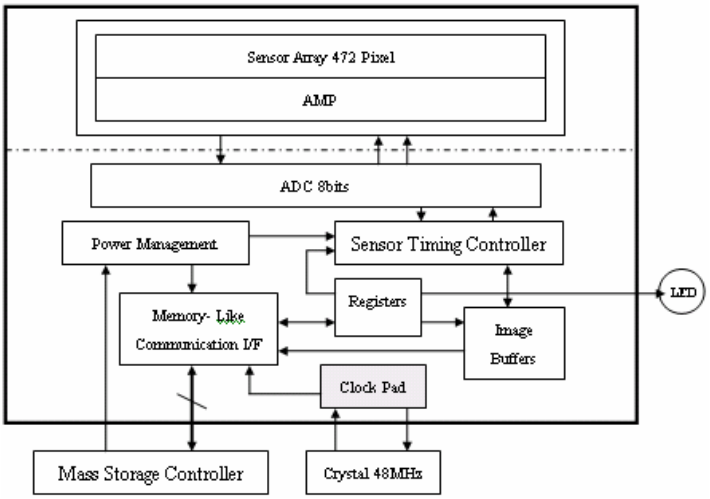
Power consumption

- Operation mode: under 55 mA
- Standby mode: under 1 mA
- Support Power Down

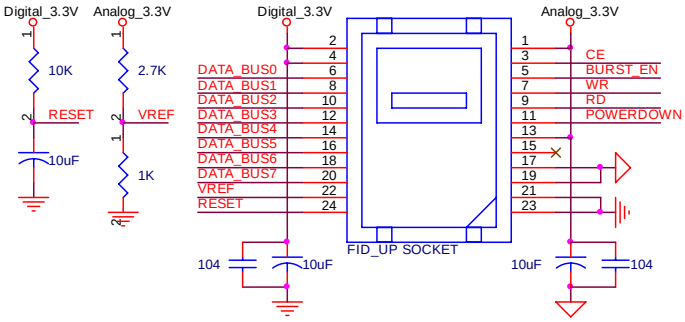
Overview



System block diagram



Reference Design Circuit



Pin assignment

PIN	FUNCTION	PIN TYPE	DESCRIPTION
3	CE	I	Chip enable Active Low
7	WR	I	Write clock enable Active Low
9	RD	I	Read clock enable Active Low
5	BURST_EN	I	Status Low or Image High
6,8,10,12,14, 16,18,20	DATA_BUS [7:0]	IO	8 bit data bus
2,4	DVDD	P	Digital power
21,23	DGND	P	Digital ground
1,13	AVDD	P	Analog power
17,19	AGND	P	Analog ground
11	PD	I	Power down enable Active Low
22	VREF	I	A/D reference input
24	RESET	I	Hardware reset
15	NC		No connect

Recommended operating condition

Sbol	Parameter	Min	Typ	Max	Unit
V_{DD}	Supply Voltage	3.0	3.3	3.6	V
V_{iH}	High level input voltage	1.3		Vdd	V
V_{iL}	low level input voltage	-0.5		0.3	V
I_T	Input transition time			3	ns

Absolute maximum rating

Symbol	Parameter	Min	Max	Unit
V_{DD}	Supply Voltage	-0.5	3.6	V
V_{IN}	Signal input voltage	-0.5	V_{DD}	V
V_{OUT}	Signal output voltage	-0.5	V_{DD}	V
OPERATOR CURRENT			55	mA

For more information please contact Liteon Semiconductor Corp.

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