

BOM of EV3\_Sensor\_Board\_IEN0014-7

Quantity	Designator	Part Desc.2	Mfg.	Mfg. Part #	IENSO Part#
1	1	RAW PCB IEN0014-05	IENSO INC.	100325	100325
26	C1, C2, C3, C4, C5, C7, C8, C9, C11, C12, C13, C15, C17, C19, C21, C23, C25, C26, C28, C34, C42, C47, C51, C54, C55, C56	CAP CER 0.1UF 16V 10% X7R 0402	Murata Electronics	GRM155R71C104KA88D	100004
22	C6, C10, C14, C16, C18, C20, C22, C24, C29, C30, C31, C35, C37, C38, C39, C40, C43, C44, C45, C46, C50, C52	CAP CER 10UF 6.3V 20% X5R 0603	Taiyo Yuden	JMK107BJ106MA-T	100002
1	C27	CAP CER 10UF 10V 20% X5R 0603	TDK Corporation	C1608X5R1A106M	100003
5	C33, C36, C41, C48, C57	CAP CER 10000PF 16V 10% X7R 0402	Murata Electronics	CC0402KRX7R7BB103	100005
1	C49	CAP CER 4.7UF 6.3V 20% X5R 0603	Taiyo Yuden	JMK107BJ475MA-T	100159
1	J1	CONN RCPT 30POS 0.4MM SMD GOLD	Hirose Electric	BM10NB(0.8)-30DS-0.4V(51)	100241
4	R1, R2, R5, R6	RES 10K OHM 1/10W 5% 0402 SMD	PANASONIC	ERJ-2GEJ103X	100008
2	R3, R4	RES 1.5K OHM 1/10W 5% 0402 SMD	PANASONIC	ERJ-2GEJ152X	100025
1	R7	RES 33 OHM 1/10W 5% 0402 SMD	PANASONIC	ERJ-2GEJ330X	100010
6	R8, R10, R11, R17, R18, R20	RES 0.0 OHM 1/10W 0402 SMD	Panasonic	ERJ-2GE0R00X	100145
1	R12	RES 10.0K OHM 1/10W 1% 0402 SMD	PANASONIC	ERJ-2RKF1002X	100143
1	R13	RES 100K OHM 1/10W 5% 0402 SMD	Panasonic	ERJ-2GEJ104X	100263
2	R14, R15	RES 20.0K OHM 1/10W 1% 0402 SMD	PANASONIC	ERJ-2RKF2002X	100024
1	R16	RES 0.0 OHM 1/10W 0402 SMD	Panasonic	ERJ-2GE0R00X	100145
1	T1	THERMISTOR 10K OHM NTC 0402 SMD	Murata	NCP15XH103J03RC	100264
1	U1	IC I2C BUS REPEATER 8-TSSOP	NXP Semiconductor	PCA9517DP,118	100014
1	U2	1/2.3-Inch 14Mp CMOS Digital Image Sensor , 25 deg CRA	Aptina Imaging	MT9F002I12-N4001	100016
1	U3	IC SRL EEPROM 8KX8 2.5V 8-TDFN	Microchip Technology	24LC64FT-I/MNY	100015
1	U4	IC BUS TRANSCVR TRI-ST 2B 8DSBGA	TEXAS INSTRUMENTS	SN74AVCH2T45YZPR	100018
3	U6, U8, U11	IC LDO REG 200MA 1.8V 5-DSBGA	Texas Instruments	TPS79918YZUR	100020
1	U7	IC LDO REG 2.8V 1A 8-SON	Texas Instruments	TPS79628DRBT	100019
2	U9, U10	IC LDO REG 200MA 2.8V 5-DSBGA	Texas Instruments	TPS79928YZUR	100021
1	U12	IC REG LDO 100MA ADJ 8-DFN	Linear Technology	LT3020IDD#PBF	100023
1	U13	IC ACCELER 2G/4G/8G 3AXIS 16QFN	Freescale	MMA8451QR1	100265
1	U14	IC REG LDO 3.3V 250MA SOT23-5	Texas Instruments	REG102NA-3.3/250	100022

## ***Changes from EV1 to EV2 (All changes)***

New gyroscope IDG2020 (U5) and its peripheral components added

C53 made NOPOP so accelerometer U13 cannot wake MCU up.

Accelerometer's power supply is connected to SOC\_VCC\_3V3 on EV2 to solve the leakage problem when system is off.

Testpoints added for test-jig use.

Outline of the board has been changed and holes for heat-sink have been added.

PEM1, PEM2, and PEM3 (solderable nuts) have been added.

## ***Changes from EV2 to EV3 (All changes)***

Travis, Jan 30, 2013

- (1) This BOM is suitable for EV3 board; all the parts on EV2 keep unchanged.
- (2) Added FRT1,FRT2,FRT3 to the board for suppressing EMI emission; but they are undefined currently.
- (3) Added two screw holes for lens pedestal installation.
- (4) PCB layer stackup is changed to 8-layer for solving EMI issue.

## **EV3 BOM changes summary**

Travis, Feb.15, 2013

(1) Changed R16 from 374K to 0 Ohm;

(2) Deleted U5;

(3) removed 3pcs of microPEM nuts;

U5	IC GYROSCOPE MEMS 2 AXIS with Frame Sync	INVENSENSE	IDG2020
PEM1, PEM2, PEM3	SMTSO-M1.6-2ET, Type SMTSO™ ReelFast® microPEM™	Penn Engineering	SMTSO-M1.6-2ET

## **EV3 BOM changes summary**

Travis, Feb.27, 2013

(1) Changed U2 from MT9F002I12-N4000 to MT9F002I12-N4001;

## **EV3 BOM changes summary**

Travis, April.09, 2013

(1) updated IENSO Part# to 100145 for R16