

**<DR970X Plus Bill of Material>**  
**Front Camera Module(FCAM) BOARD**

Version MP\_V1.0  
 Date 2023.11.15

담당자  
 관리자

<SMD PART>							
자재번호	자재명	규격	품목설명	REFERENCE NO.	VENDOR	QTY	REMARK
HSPB97PFM0	PCB_FCAM	FCAM / MP_V1.0 / 28 x 21mm / MLB-6L / 1.0T / 16연배	PCB_FCAM(IMX678)	-	TWOINONE	1	
HSCA0104J5	CAPACITOR 0201	MLCC / 0603(0201) / 100nF / 6.3V / X5R	100nF	C2, C4, C6, C8, C10, C12, C14, C20, C22, C25	ANY	10	
HSCA0103C7	CAPACITOR 0201	MLCC / 0603(0201) / 10nF / X7R	10nF	C16, C18	ANY	2	
HSCA0105J5	CAPACITOR 0201	MLCC / 0603(0201) / 1uF / X5R (GRM033R61A105ME44D)	1uF	C1, C3, C5, C9, C19, C21, C24, C26, C28, C29	ANY	10	
HSCA1106J5	CAPACITOR 0402	MLCC / 1005(0402) / 10uF / 6.3V / X5R	10uF/6.3V	C7, C11, C13, C15, C17, C23, C30, C31, C32	ANY	9	
HSCA1475J5	CAPACITOR 0402	MLCC / 1005(0402) / 4.7uF / 6.3V / X5R	4.7uF/6.3V	C27	ANY	1	
HSCSENIMG	CMOS SENSOR	IMX678-AAQR1 / 1/1.8" / 8.4MP(4K)	IMX678-AAQR1	U1	SONY	1	
HSCNBTB004	CONNECTOR	AXK6F34347YG / 0.5mm PITCH / 34PIN / HEADER	AXK6F34347YG	CN1, CN2	PANASONIC	2	
HSRE0100RJ	RESISTOR 0201	RES / 0603(0201) / 100ohm / J	100R	R1, R2, R3, R4, R5	ANY	5	
<Ass'y PART>							
MPMLX016B0	LENS HOLDER	H2201 / M12 x P0.35	H2201	HD1	ADT	1	
HALE8M2300	LENS	TRC-1007D26-02 / 4K Lens / F=1.7 / TTL=24.49mm / 4G+3P+1IR	TRC-1007D26-02	-	ADT	1	
MPBBT20P06	SCREW	CH(3Φ) M/S 2.0X5mm	-	-	DONGWON STEEL	2	

**<DR970X Plus Bill of Material>  
MAIN BOARD**

Version MP\_V1.0  
Date 2023.11.15

담당자  
관리자

-SMD PART-							
자재번호	자재명	규격	품목설명	REFERENCE NO.	VENDOR	QTY	REMARK
HSPB97PMM0	PCB_MAIN	MAIN / MP_V1.0 / 110.5 x 31mm / BUILD-UP-8L / 1.2T / 3연배					
HSBD1600XN	BEAD 0402	60ohm@100MHz / DCR=0.35ohm / 300mA	60R	L11	TWOINONE	1	
HSCA0104J5	CAPACITOR 0201	MLCC / 0603(0201) / 100nF / 6.3V / X5R	100nF	C2, C4, C7, C8, C10, C11, C12, C13, C14, C15, C16, C17, C18, C20, C21, C23, C25, C26, C30, C32, C34, C36, C37, C41, C42, C43, C44, C45, C47, C49, C53, C54, C55, C56, C64, C65, C66, C67, C68, C72, C73, C80, C82, C84, C85, C86, C87, C89, C91, C92, C93, C94, C95, C97, C98, C99, C100, C101, C102, C103, C104, C105, C106, C107, C108, C109, C110, C111, C117, C121, C124, C125, C128, C130, C132, C137, C138, C147, C148, C150, C151, C152, C154, C155, C157, C158, C159, C162, C169, C171	ANY	91	
HSCA0120EC	CAPACITOR 0201	MLCC / 0603(0201) / 12pF / 25V / COG	12pF	C27, C28	ANY	2	
HSCA0102E7	CAPACITOR 0201	MLCC / 0603(0201) / 1nF / X7R (GRM033R71E102KA01D)	1nF	C88, C144	ANY	2	
HSCA0105J5	CAPACITOR 0201	MLCC / 0603(0201) / 1uF / X5R (GRM033R61A105ME44D)	1uF	C5, C8, C19, C24, C57, C58, C76, C77	ANY	8	
HSCA0224J5	CAPACITOR 0201	MLCC / 0603(0201) / 220nF / X5R (GRM033R60J224ME15D)	220nF	C133	ANY	1	
HSCA0270EC	CAPACITOR 0201	MLCC / 0603(0201) / 27pF / 25V / COG	27pF	C1, C3	ANY	2	
HSCA10R5HC	CAPACITOR 0402	MLCC / 1005(0402) / 0.5pF / 50V / COG	0.5pF	C172	ANY	1	
HSCA1104C7	CAPACITOR 0402	MLCC / 1005(0402) / 100nF / 16V / X7R	100nF	C140	ANY	1	
HSCA1101HC	CAPACITOR 0402	MLCC / 1005(0402) / 100pF / 50V / COG	100pF	L24	ANY	1	
HSCA1100HC	CAPACITOR 0402	MLCC / 1005(0402) / 10pF / 50V / COG	10pF	C123	ANY	1	
HSCA1106J5	CAPACITOR 0402	MLCC / 1005(0402) / 10uF / 6.3V / X5R	10uF/6.3V	C40, C51, C52, C59, C60, C62, C63, C71, C74, C81, C90, C96, C129	ANY	13	
HSCA1105A5	CAPACITOR 0402	MLCC / 1005(0402) / 1uF / 10V / X5R	1uF/10V	C145	ANY	1	
HSCA1105J5	CAPACITOR 0402	MLCC / 1005(0402) / 1uF / X5R	1uF	C174	ANY	1	
HSCA1225J5	CAPACITOR 0402	MLCC / 1005(0402) / 2.2uF / X5R	2.2uF/6.3V	C22, C46, C48	ANY	3	
HSCA1221HC	CAPACITOR 0402	MLCC / 1005(0402) / 220pF / 50V / COG	220pF	C165	ANY	1	
HSCA1475J5	CAPACITOR 0402	MLCC / 1005(0402) / 4.7uF / 6.3V / X5R	4.7uF/6.3V	C33, C38, C69, C146, C149, C152, C156	ANY	7	
HSCA1474A5	CAPACITOR 0402	MLCC / 1005(0402) / 470nF / 10V / X5R	470nF	C35	ANY	1	
HSCA1560HC	CAPACITOR 0402	MLCC / 1005(0402) / 56pF / COG	56pF	C114	ANY	1	
HSCA2106A5	CAPACITOR 0603	MLCC / 1608(0603) / 10uF / 10V	10uF/10V	C31, C127, C139, C161, C162, C164	ANY	6	
HSCA2106J5	CAPACITOR 0603	MLCC / 1608(0603) / 10uF / 6.3V / X5R	10uF/6.3V	C170	ANY	1	
HSCA2224E7	CAPACITOR 0603	MLCC / 1608(0603) / 220nF / 25V / X7R	220nF/25V	C142, C143	ANY	2	
HSCA2226J5	CAPACITOR 0603	MLCC / 1608(0603) / 22uF / 6.3V / X5R (GRM188R60J226ME40D)	22uF/6.3V	C39, C50, C61, C115, C116, C118, C119, C120, C126, C166	ANY	10	
HSCA3226A5	CAPACITOR 0805	MLCC / 2012(0805) / 22uF / 10V / X5R	22uF/10V	C112, C122, C131, C141, C176, C177, C178, C179, C180, C181	ANY	10	
HSCA3476J5	CAPACITOR 0805	MLCC / 2012(0805) / 47uF / 6.3V	47uF/6.3V	C135, C136	ANY	2	
HSTCA477AX	CAPACITOR TANTAL	TANTAL T520V477M006ATE035 / TAJE477K010RNJ	470uF/10V/E	CE1	AVX	1	
HDATWIDU00	CHIP_ANTENNA	CERAMIC PIFA / WIFI ANTENNA 2.4+5GHz	SHDA10312442B	ANT1	AMOTECH	1	
HSCNCLP000	CLIP	KIC6508STP / SHIELD CAN CLIP	KIC6508STP	ST1, ST2, ST3, ST4, ST5, ST6, ST7, ST9, ST11, ST12, ST13, ST14, ST15, ST16, ST17, ST18	KICREX	16	
HSCNWTB005	CONNECTOR	12505WR-03 / 1.25mm PITCH(Right Angle)	12505WR-03	CN11	Yeonho Electronics	1	
HSCNWTB001	CONNECTOR	12505WS-02 / 1.25mm PITCH(Straight Type)	12505WS-02	CN1	Yeonho Electronics	1	
HSCNWTB010	CONNECTOR	12505WS-05 / 1.25mm / Right Angle	12505WS-05	CN6	Yeonho Electronics	1	
HSCNBTB001	CONNECTOR	AKX5F34347YG / 34PIN SOCKET(0.5mm PITCH)	AKX5F34347YG	CN4, CN5	PANASONIC	2	
HSCNFCP000	CONNECTOR	FCZVA2-0811WTR(0.5mm PITCH FFC(Vertical))	FCZVA2-0811WTR	CN7	ELETE TECH	1	
HSCNBTB002	CONNECTOR	NLWB505-30C-3.5H / 30PIN SOCKET(0.5mm PITCH)	NLWB505-30C-3.5H	CN8, CN9, CN10	LINKWORK	3	
HSXTCRY000	CRYSTAL	8224070012 (24MHz/16pF) 코운용	24MHz	X1	TXC	1	
HSICDCAD00	IC_DCDC	FP6373A56C	FP6373A	U7	FITPOWER	1	
HSICDCAD09	IC_DCDC	RT8059GJ5 - EML3023-00VFONRR	RT8059GJ5	U8, U14	RICHTEK	2	
HSICDDR009	IC_DDR3L	EM6HE16EWAKG-10H	EM6HE16EWAKG-10H	U5, U6	ETRON	2	멀티 승인
		H5TC4G63EFR-RDA	H5TC4G63EFR-RDA		SK HYNIX		
		K4B4G1646E-BYMA	K4B4G1646E-BYMA		SAMSUNG		
		MT41K256M16TW-093	MT41K256M16TW-093		MICRON		
HSICDES000	IC_DESERIALIZER	MAX9288GT/V+T / 3Gbps MIPI GMSL Deserializer	MAX9288	U12	MAXIM	1	
HSICLD3308	IC_LDO	RP102N331D-FE	RP102N331D-FE	U10	RICOH	1	
HSICLD1800	IC_LDO	RT9198-18PBR(GBR) =EMP8734-18VF05GRR	RT9198-18PBR(GBR)	U9	RICHTEK	1	멀티 승인
HSICLD1801	IC_LDO	RT9013-18GB	RT9013-18GB				
HSICLSW000	IC_Load Switch	AP2151WG-7 / ET20161	AP2151WG-7 / ET20161	U4, U11	DIODES / ETEK	2	
HSICLSW001	IC_Load Switch	AP2281-3WG-7 / 1.5-6.0V / 2.0A	AP2281	U13	DIODES	1	
HSICNFF010	IC_NAND FLASH	MT29F2G01ABAGDWB-IT.G / 2Gb(256MB)	MT29F2G01ABAGDWB-IT.G	U3	MICRON	1	멀티 승인
HSICNFF012	IC_NAND FLASH	F50L2G41XA -104YG2B / 2Gb(256MB)	F50L2G41XA -104YG2B		ESMT		
HSICCPU015	IC_SOC	SAV837GW	SAV837GW	U1	SIGMSTAR	1	
HSIN12N7XX	INDUCTOR	2.7nH / 1005	2.7nH	C173	ANY	1	
HSP16R8U00	INDUCTOR	LBC3225T6R8MR(6.8uH)	6.8uH	L19	TAIYO YUDEN	1	
HSP1R33U00	INDUCTOR	LQW18CNR33J00(330nH)	330nH	L18	MURATA	1	
HSP1101U00	INDUCTOR	NRS6028T101MMGJ	100uH	L20	TAIYO YUDEN	1	
HSP12R2U00	INDUCTOR_POWER	MAMK2520H2R2M(2.2uH (유리송진))	2.2uH	L16, L17, L23	TAIYO YUDEN/INPAQ/INNOCHIPS	3	
HSLD16080W	LED	AOT-TAWD-XXBCZ / Pure White Color	AOT-TAWD-XXBCZ	LED1	AOT	1	
HSMDFW002	MODULE_WIFI/BT COMBO	WCT0VR1001S / RTL8821CU-CG / WLAN_2.4G_5G / BT4.2 / USB INTERFACE	WCT0VR1001S	U15	GSD	1	
HSRE0000RJ	RESISTOR 0201	RES / 0603(0201) / 0ohm / J	0R	R20, R22, R30, R31, R32, R33, R34, R35, R46, R53, R57, R61, R68, R75, R79, R80, R84, R86, R92, R94, R96, R116, R117, R118, R120, R124, R129	ANY	27	
HSRE0100KJ	RESISTOR 0201	RES / 0603(0201) / 100Kohm / J	100K	R43, R44	ANY	2	
HSRE0100RJ	RESISTOR 0201	RES / 0603(0201) / 100ohm / J	100R	R138	ANY	1	
HSRE0100KJ	RESISTOR 0201	RES / 0603(0201) / 10Kohm / J	10K	R3, R4, R5, R11, R12, R13, R14, R17, R18, R26, R54, R55, R78, R83, R85, R91, R93, R95, R119, R121, R127, R128, R142	ANY	23	
HSRE001K0F	RESISTOR 0201	RES / 0603(0201) / 1Kohm / F	1K/F	R66, R67	ANY	2	
HSRE001K0J	RESISTOR 0201	RES / 0603(0201) / 1Kohm / J	1K	R6, R15, R102, R103, R104, R105, R112, R113, R135, R137	ANY	10	
HSRE002K2J	RESISTOR 0201	RES / 0603(0201) / 2.2Kohm / J	2.2K	R1, R2, R73, R74, R114, R115	ANY	6	
HSRE0240RF	RESISTOR 0201	RES / 0603(0201) / 240ohm / F	240R/F	R59, R63	ANY	2	
HSRE002K0F	RESISTOR 0201	RES / 0603(0201) / 2Kohm / F	2K	R28	ANY	1	
HSRE030K0J	RESISTOR 0201	RES / 0603(0201) / 30Kohm / J	30K	R100	ANY	1	
HSRE033R0J	RESISTOR 0201	RES / 0603(0201) / 33ohm / J	33R	R7, R10, R48, R49, R50, R51, R52, R72, R125, R126, R131, R133, R141	ANY	13	
HSRE004K7J	RESISTOR 0201	RES / 0603(0201) / 4.7Kohm / J	4.7K	R24	ANY	1	
HSRE049R9F	RESISTOR 0201	RES / 0603(0201) / 49.9ohm / F	49.9R/F	R87	ANY	1	
HSRE056R0F	RESISTOR 0201	RES / 0603(0201) / 56ohm / F	56R/F	R64, R65	ANY	2	
HSRE068R0F	RESISTOR 0201	RES / 0603(0201) / 68ohm / F	68R/F	R56, R58, R60, R62	ANY	4	
HSRE1000RJ	RESISTOR 0402	RES / 1005(0402) / 0ohm / J	0R	L1	ANY	1	
HSRE1100KF	RESISTOR 0402	RES / 1005(0402) / 100Kohm / F	100K/F	R70, R76, R123	ANY	3	
HSRE1100RF	RESISTOR 0402	RES / 1005(0402) / 100ohm / F	100R/F	R89, R90	ANY	2	
HSRE1120KF	RESISTOR 0402	RES / 1005(0402) / 120Kohm / F	120K/F	R77	ANY	1	
HSRE1124KF	RESISTOR 0402	RES / 1005(0402) / 124Kohm / F	124K/F	R69	ANY	1	
HSRE1130RJ	RESISTOR 0402	RES / 1005(0402) / 130ohm / J	130R	R132	ANY	1	
HSRE1453KF	RESISTOR 0402	RES / 1005(0402) / 453Kohm / F	453K/F	R122	ANY	1	
HSRE2000RJ	RESISTOR 0603	RES / 1608(0603) / 0ohm / J	0R	R144	ANY	1	DR970X 모델 표시용
HSCNSDC000	SOCKET_MICRO-SD CARD	DM3AT-SF-PEJM5	DM3AT-SF-PEJM5	CN3	HIROSE	1	
HSCNKEY000	SWITCH_TACT	FE-1112E-3 / ANGLE	FE-1112E-3	SW1	DAEJIN INDUSTRY	1	
HSOQTR000	TRANSISTOR	DCT144EMT2L / NPN	DCT144EMT2L	Q3	ROHM	1	
HSOQTR006	TRANSISTOR	MMBT2907 / PNP / SOT23	MMBT2907	Q1	ANY	1	
HSOQTR002	TRANSISTOR	MMBT3904 / NPN / SOT23	MMBT3904	Q2	ANY	1	
HSVA0100DX	VARIATOR	ICV50318100FR	ICV50318100FR	V1, V2, V3, V4, V5, V6, V7, V8, V10	INNOCHIPS	9	
HSVA2R15EX	VARIATOR	IVGS10248015FR	IVGS10248015FR	V9	INNOCHIPS	1	
-	CAPACITOR	DNI	DNI	C6, C70, C113, C134, C167, C168	-	6	
-	RESISTOR	DNI	DNI	R8, R9, R21, R23, R25, R27, R38, R39, R40, R41, R42, R45, R47, R71, R81, R82, R88, R130, R134, R136, R143, R145, L2	-	23	
-	CONNECTOR	DNI	DNI	CN2	-	1	
-	CLIP	DNI	DNI	ST8, ST10	-	2	
-Assy PART-							
HDCNMCX000	JACK_MCX	MCX-F-R/A-S-4P	MCX JACK	J1	SAE-BIT ELECTRONICS	1	일반 모델 적용
HDCNMCX00A	JACK_MCX(for OM)	919-119J51AX	MCX JACK		Amphenol	1	음니트랙형에안 적용
HAMIC0N000	MIC_UNIT	(R)OBM-415L40-RC1882M / Ø4 ECM / Wire 50mm / AWG30	MIC_MODULE	-	BSE	1	
MPPS77X1X0	SHIELD_CAN	MAIN/ CPU / 53.6 X 23.9 X 2.3T / SUS	SHIELD_CAN	CAN1	신일정밀	1	
MPPX9XP150	SHIELD_CAN	FRONT CAMERA / SHIELD CAN / 29.7 X 23.1 X 9.2T / 양백 0.2T / CORNER CUT	SHIELD_CAN	CAN2	신일정밀	1	
MPPS755150	SHIELD_CAN	MAIN / DDR / 20.7 X 16.25 X 1.7T / SUS	SHIELD_CAN	CAN3	신일정밀	1	
MPS79XP3B0	INSULATION TAPE	38.50 X 17.50 / PET 0.065T / Blue	INSULATION TAPE	-	유진테크	1	
MPPS77X2X0	SHIELD_CAN	MAIN / NAND+WIFI / 42.95 X 21.9 X 2.0T / SUS	SHIELD_CAN	CAN4	신일정밀	1	
MPS777X1G0	THERMAL PAD	MAIN / CPU_IN / 52.8 X 23 X 0.8T	방열패드_CPU 내측	-	GW	1	
MPS775X2G0	THERMAL PAD	MAIN / DDR_IN / 19.9 X 15.4 X 0.5T	방열패드_DDR 내측	-	GW	1	
MPS757X7G1	THERMAL PAD	MAIN / DDR_OUT / 19.9 X 15.4mm X 3.0T	방열패드_DDR 외측	-	GW	1	
MPS79XP1B0	THERMAL PAD	MAIN / CPU_OUT / 18.0 X 18.0 X 10.0T	방열패드_CPU 외측	-	GW	1	
MPS79XP2B0	THERMAL PAD	MAIN / BtoB / 14.4 X 14.4 X 5.0T	B-to-B 커넥터 사이	-	GW	1	
-	PBA_FCAM	IMX678 4K Camera Module	FRONT CAMERA PBA	-	PITTSOFT	1	
EPBD770XT0	PBA_TOUCH	DR770X/DR970X/DR800 GOLD Touch PBA	Touch PBA	-	PITTSOFT	1	
HAMDGPS002	MODULE_GNSS	GNSS Module / M8 / 자사화 모듈	GPS MODULE	-	PITTSOFT	1	멀티 승인
HAMDGPSH10	MODULE_GNSS	UBX-M10050-KB / 28X15mm / 자사화 모듈	GPS MODULE	-	PITTSOFT	1	
HAMDGPS004	MODULE_GNSS	MT115M4-2815 / MT115M4-2815-R1	GPS MODULE	-	FESNU	1	
HACBWIR003	CABLE_BTOW	Board-to-wire Cable Assy / 45mm					



**<DR970X Plus Bill of Material>**  
**POWER BOARD**

Version MP\_V1.0  
Date 2023.11.15

담당자  
관리자

**<SMD PART>**

자재번호	자재명	규격	품목설명	REFERENCE NO.	VENDOR	QTY	REMARK
HSPB97XPW0	PCB_POWER	POWER / MP_V1.0 / 91.3 x 29mm / MLB-6L / 1.2T / 8면배	DR770X/DR970X/DR800 GOLD	-	TWOINONE	1	
HSCA0104J5	CAPACITOR 0201	MLCC / 0603(0201) / 100nF / 6.3V / X5R	100nF	C20, C25, C26, C27, C28, C32, C37, C57, C59, C64, C65, C69	ANY	12	
HSCA0105J5	CAPACITOR 0201	MLCC / 0603(0201) / 1uF / X5R (GRM033R61A105ME44D)	1uF	C24, C44, C63, C66, C67	ANY	5	
HSCA0224J5	CAPACITOR 0201	MLCC / 0603(0201) / 220nF / 6.3V / X5R	220nF	C70	ANY	1	
HSCA0474J5	CAPACITOR 0201	MLCC / 0603(0201) / 470nF / 6.3V / X5R	470nF	C38	ANY	1	
HSCA1104C7	CAPACITOR 0402	MLCC / 1005(0402) / 100nF / X7R (GRM155R71C104KA88D)	100nF	C11, C15, C34, C43, C49, C54, C62	ANY	7	
HSCA1103H7	CAPACITOR 0402	MLCC / 1005(0402) / 10nF / 50V / X7R	10nF/50V	C12	ANY	1	
HSCA1105A5	CAPACITOR 0402	MLCC / 1005(0402) / 1uF / 10V / X5R	1uF/16V	C29, C31	ANY	2	
HSCA1332H7	CAPACITOR 0402	MLCC / 1005(0402) / 3.3nF / X7R	3.3nF/50V	C14, C94	ANY	2	
HSCA1330HC	CAPACITOR 0402	MLCC / 1005(0402) / 33pF / 50V / COG급	33pF	C6, C96	ANY	2	
HSCA1470HC	CAPACITOR 0402	MLCC / 1005(0402) / 47pF / 50V / COG	47pF	C13, C95	ANY	2	
HSCA2104H7	CAPACITOR 0603	MLCC / 1608(0603) / 100nF / 50V / X7R	100nF/50V	C1, C30, C93	ANY	3	
HSCA2106A5	CAPACITOR 0603	MLCC / 1608(0603) / 10uF / 10V	10uF/10V	C22, C23, C68, C77	ANY	4	
HSCA2226J5	CAPACITOR 0603	MLCC / 1608(0603) / 22uF / 6.3V / X5R (GRM188R60J226MEA0D)	22uF/6.3V	C35, C36, C39, C40, C45, C46, C47, C48, C50, C51, C52, C53	ANY	12	
HSCA3226A5	CAPACITOR 0805	MLCC / 2012(0805) / 22uF / 10V / X5R	22uF/10V	C7, C8, C9, C10, C16, C17, C18, C19, C33, C41, C42, C60, C61, C81, C82, C83, C84, C85, C86	ANY	19	
HSCA4106H5	CAPACITOR 1206	MLCC / 3216(1206) / 10uF / 50V / X5R	10uF/50V	C2, C3, C4, C5, C21, C92	ANY	6	
HSCNWTB001	CONNECTOR	12505WS-02 / 1.25mm PITCH(Straight Type)	12505WS-02	CN2, CN4	Yeonho Electronics	2	
HSCNB7B003	CONNECTOR	NLWB05-30C-1.0H / 30PIN / PLUG / 0.5mm PITCH	NLWB05-30C-1.0H	CN6, CN7, CN8	LINKWORK	3	
HSXTCRY014	CRYSTAL	SC-325 / 32.768KHz / 7pF	SC-325	X1	Sii	1	멀티 승인
HSXTCRY019		SC-205 / 32.768KHz / 7pF	SC-205				
HSICDID000	DIODE	1SS400 / SCHOTTKY BARRIER	1SS400	D6	ROHM	1	
HSICDID001	DIODE	FM340-AS / B340A-13-F / SCHOTTKY BARRIER RECTIFIER	FM340-AS	D2, D3, D4	FOMOSA MS	3	
HSICDID002	DIODE	SMAJ36CA / TVS DIODE	SMAJ36CA	D1, D5	FOMOSA MS	2	
HSBD1121XH	FERRITE BEAD	BLM15PD121SN1D / 1005	BLM15PD121SN1D	L11, L12	MURATA	2	
HSFTCOM202	FILTER	ICMEF112P900MFR / ESD / 6P / COMMON MODE FILTER	ICMEF112P900MFR	F1	INNOCHIPS	1	
HSICSEN3G3	IC_3G SENSOR	SMA131	SMA131	U11	BOSCH	1	멀티 승인
HSICSEN3G0		BMA250 / BMA253	BMA250 / BMA253				
HSICAMP000	IC_AMP	MAX98300ETA+ / Mono 2.6W Class D Amplifier	MAX98300	U13	MAXIM	1	
HSICDCAD27	IC_DCDC	AP64350SP-13 / DC-DC CONVERTER	AP64350	U1, U2	DIODES	2	
HSICDCAD04	IC_DCDC	MP2122GJ-Z	MP2122	U7	MPS	1	
HSICDCAD03	IC_DCDC	MP2143DJ-LF-Z	MP2143	U8, U9	MPS	2	
HSICLD3300	IC_LDO	RT9198-33GBR(SOT23-5) = EMP8734-33VF05GRR	RT9198-33PBR(GBR)	U3	RICHTEK	1	
HSICMCU004	IC_MICOM	M551XB9AE	M551XB9AE	U4	NUVOTON	1	
HSICRST001	IC_RESET	RT9819C-30GV	RT9819C-30GV	U6	RICHTEK	1	멀티 승인
HSICRST012		DIO6809TST3	DIO6809TST3		DIO MICROCIRCUITS		
HSICRST013		GSR809TZF	GSR809TZF		GLOBALTECH		
HSICRST014		MAX809TEUR+T	MAX809TEUR+T		MAXIM		
HSICRST015		APX809S-31-SA-7	APX809S-31-SA-7		DIODES		
HSICRTC002	IC_RTC	S-35390A-i8T1U	S-35390A	U12	Sii	1	
HSICSENTE0	IC_TEMP SENSOR	MCP9800A0T-M/OT / SOT-23	MCP9800	U5	MICROCHIP	1	
HSPI2R2U00	INDUCTOR_POWER	MAMK2520H2R2M(2.2uH (듀얼승인))	2.2uH	L4, L5	TAIYO YUDEN/INPAQ/INNOCHIPS	2	
HSPI1R0U00	INDUCTOR_POWER	SPE4020-1R0N(1.0uH)	1.0uH	L6, L9	LS COMMUNICATION	2	
HSPI6R8U05	INDUCTOR_POWER	SPE4030-6R8M(6.8uH)	6.8uH	L1	LS COMMUNICATION	1	
HSPI6R8U01	INDUCTOR_POWER	SPE6045-6R8M(6.8uH)	6.8uH	L2, L13	LS COMMUNICATION	2	
HSCNDCJ001	JACK_DC_POWER	TDC-060D	TDC-060D	J1	TECHNIK INDUSTRIAL CO., LTD	1	
HSCNUSB000	JACK_USB	USB205FB-C1014228 (BMIR-B1M06F-0B5K-W) / MICRO USB B 5PIN	BMIR-B1M06F-0B5K-W	J2	CZT DONGGUAN	1	
HSLD16080B	LED	AOT-0603P-B01A-Z (BLUE / 1608)	AOT-0603P-B01A-Z	LED2	AOT	1	
HSLD16080W	LED	AOT-TAWD-XXBCZ / Pure White Color	AOT-TAWD-XXBCZ	LED3	AOT	1	
HSLD1608RG	LED	B2972HQQ20D / HT-297HQ/GQ / Bicolor(RED/GREEN)	B2972HQQ20D	LED1	HARVATEK	1	
HSLD1608V0	LED	M19-2132SYGC (Single Color LED, Yellow, 1608)	M19-2132SYGC	LED4	SEVEN LIGHT LED	1	
HSRE0000RJ	RESISTOR 0201	RES / 0603(0201) / 0ohm / J	0R	R17, R18, R19, R20, R21, R22, R24, R25, R35, R37, R46, R51, R52, R55, R56, R57, R58, R59, R65, R66, R67, R68, R69, R75	ANY	24	
HSRE0100KJ	RESISTOR 0201	RES / 0603(0201) / 100Kohm / J	100K	R1, R9, R11, R31, R61, R64	ANY	6	
HSRE010K0J	RESISTOR 0201	RES / 0603(0201) / 10Kohm / J	10K	R13, R14, R15, R23, R36, R42, R49, R50	ANY	8	
HSRE001K0J	RESISTOR 0201	RES / 0603(0201) / 1Kohm / J	1K	R12, R34	ANY	2	
HSRE002K2J	RESISTOR 0201	RES / 0603(0201) / 2.2Kohm / J	2.2K	R26, R27, R54	ANY	3	
HSRE1000RJ	RESISTOR 0402	RES / 1005(0402) / 0ohm / J	0R	R28	ANY	1	
HSRE1100KF	RESISTOR 0402	RES / 1005(0402) / 100Kohm / F	100K/F	R33	ANY	1	
HSRE1115KF	RESISTOR 0402	RES / 1005(0402) / 115Kohm / F	115K/F	R3, R10	ANY	2	
HSRE1130RJ	RESISTOR 0402	RES / 1005(0402) / 130ohm / J	130R	R70, R71, R72, R73, R74	ANY	5	
HSRE141K0F	RESISTOR 0402	RES / 1005(0402) / 14Kohm / F	14K/F	R2, R100	ANY	2	
HSRE1154KF	RESISTOR 0402	RES / 1005(0402) / 154Kohm / F	154K/F	R41	ANY	1	
HSRE1160KF	RESISTOR 0402	RES / 1005(0402) / 160Kohm / F	160K/F	R43, R53	ANY	2	
HSRE101K0J	RESISTOR 0402	RES / 1005(0402) / 1Kohm / J	1K	R96	ANY	1	
HSRE101M0F	RESISTOR 0402	RES / 1005(0402) / 1Mohm / F	1M/F	R29, R30, R32, R60	ANY	4	
HSRE1200KF	RESISTOR 0402	RES / 1005(0402) / 200Kohm / F	200K/F	R6, R8	ANY	2	
HSRE1200RJ	RESISTOR 0402	RES / 1005(0402) / 200ohm / J	200R	R16	ANY	1	
HSRE122K1F	RESISTOR 0402	RES / 1005(0402) / 22.1Kohm / F	22.1K/F	R7, R98	ANY	2	
HSRE1240RJ	RESISTOR 0402	RES / 1005(0402) / 240ohm / J	240R	R63	ANY	1	
HSRE1348KF	RESISTOR 0402	RES / 1005(0402) / 348Kohm / F	348K/F	R39	ANY	1	
HSRE104K7J	RESISTOR 0402	RES / 1005(0402) / 4.7Kohm / J	4.7K	R4	ANY	1	
HSRE1680KF	RESISTOR 0402	RES / 1005(0402) / 680Kohm / F	680K/F	R38, R40	ANY	2	
HSRE175K0F	RESISTOR 0402	RES / 1005(0402) / 75Kohm / F	75K/F	R44, R45	ANY	2	
HSRE3000RJ	RESISTOR 0805	RES / 2012(0805) / 0ohm / J	0R	L3, L7, L8	ANY	3	
HSRE903R3J	RESISTOR 2512	RES / 6432(2512) / 3.3ohm / J	3.3(1W)	R5	ANY	1	
HSOQTR000	TRANSISTOR	DCT144EMT2L / NPN	DCT144EMT2L	Q8, Q9, Q10, Q11, Q12	ROHM	5	
HSOQTR002	TRANSISTOR	MMBT3904 / NPN / SOT23	MMBT3904	Q1, Q5	ANY	2	
HSVA1100DX	VARIATOR	ICVL0518100Y500FR	ICVL0518100Y500FR	V1, V2, V3, V4	INNOCHIPS	4	
-	CAPACITOR	DNI	DNI	C55, C56, C58, C71	-	4	
-	CONNECTOR	DNI	DNI	CN1	-	1	
-	IC	DNI	DNI	U14	-	1	
-	RESISTOR	DNI	DNI	R47, R48, R62	-	3	

**<Ass'y PART>**

HDSCL5055X	CAP_EDLC	VECGR0505QA-1/5F/6V	5F/6V	CAP1	VINATECH	1	DR970X & DR970X Plus 모델에 적용 / 트리플 승인
		VSCMSR4505/5F/5.4V	5F/5.4V		VITZRO CELL		
		DRMLS0505/5F/5.4V	5F/5.4V		KORCHIP		
HAMPBA024	MODULE_RTC-BAT	RTC BAT MODULE	RTC BAT MODULE	-	PITTASOFT	1	
HASP131886	SPEAKER_UNIT	TDM1813BOX-8H8LE050	TDM1813BOX-8H8LE050	-	FINE TECH	1	
MABB700180	SCREW	SCREW CH T1.4X3	T1.4X3	-	동원금속	2	스피커 조립 고정용

**<DR770X/DR970X/DR800 GOLD/DR970X Plus Bill of Material>  
TOUCH BOARD**

Version            MP\_V1.0  
Date                2022.10.05

담당자  
관리자

<SMD PART>							
자재번호	자재명	규격	품목설명	REFERENCE NO.	VENDOR	QTY	REMARK
HSPB97XTC0	PCB_TOUCH	TOUCH / MP_V1.0 / 14.4 x 22mm / MLB-4L / 1.0T / 24연배	PCB_TOUCH	-	TWOINONE	1	
HSCA1150HC	CAPACITOR 0402	MLCC / 1005(0402) / 15pF / 50V / C0G	15pF	C911	ANY	1	
HSCA1101HC	CAPACITOR 0402	MLCC / 1005(0402) / 100pF / 50V / C0G	100pF	C907, C909	ANY	2	
HSCA1105A5	CAPACITOR 0402	MLCC / 1005(0402) / 1uF / 10V / X5R	1uF	C908, C910, C912	ANY	3	
HSRE122R0J	RESISTOR 0402	RES / 1005(0402) / 22ohm / J	22ohm	R937	ANY	1	
HSRE1470RJ	RESISTOR 0402	RES / 1005(0402) / 470ohm / J	470ohm	R936,	ANY	1	
HSRE104K7J	RESISTOR 0402	RES / 1005(0402) / 4.7Kohm / J	4.7Kohm	R940, R941	ANY	2	
HSRE140R2F	RESISTOR 0402	RES / 1005(0402) / 40.2ohm / F	40.2ohm	R935	ANY	1	
HSICETC032	IC_Touch	IQS211A	IQS211A	U902	AZOTEQ	1	
HSCNFPC015	CONNECTOR	TM0520-0008 / FFC / 0.5mm pitch / 8-PIN	TM0520-0008	CON901	FINE electronics	1	
<Ass'y PART>							
HACBFFC001	CABLE_FFC	30mm * 8pin / 0.5mm Pitch	-	-	썬아이에프컴퍼니	1	