

Service Manual



Local Machine

NLM-8000C

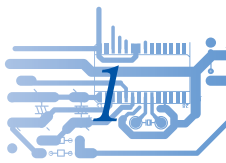
CONTENTS

Specifications	1
Electrical Parts List	2
Top and Bottom View of P.C. Board	4
Wiring Diagram	6
Block Diagram	7
Schematic Diagram	8
Exploded View of Cabinet & Chassis / Mechanical Parts List	10

SPECIFICATIONS

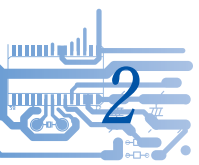
	NLM-8000C
Communication mode	CAN (Controller Area Network)
Communication speed	20kbps
Communication distance	MAX 300m(Including LINK connection)
Power Source	DC 40V
Power consumption	2.4W
Weight(Set)	133g/0.29lb
Dimensions(Set)	70(W) x 115(H) x 39.7(D)mm 2.75(W) x 4.52(H) x 1.56(D)in

* Design and specification are subject to be changed for the improvement of product quality without pre notice.



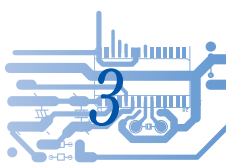
ELECTRICAL PARTS LIST

REF	ITEM NO.	DEFINE	VALUE
MAIN			
FB12	103528	100MHZ/BEAD/103528,100MHz	100MHz
CON201-202	110821	MD/PCB825/08H/110821,MODULAR08P	MODULAR08P
CN103-104	111344	04P/LA-5268/2.5,LA5268-04P	LA5268-04P
SW201	112007	PU/JPS2281-EAB,JPS2281EAB	JPS2281EAB
SW102	112104	SL/SSSS222700,SSSS222700	SSSS222700
Q101	118665	PNP/KTA1663-Y/SOT89,KTA1663-Y	KTA1663-Y
Q102-105 Q200	118672	NPN/MMBT3904/SOT23,MMBT3904	MMBT3904
IC105	118980	7812/KIA/SOT89,7812	7812
IC108	119133	74LV14D/SO14P,74LV14D	74LV14D
IC104	119147	AP1117E33L/SOT223,AP1117E33L	AP1117E33L
D202	119182	D/SX34/SMA,SX34	SX34
D101 D200 D203	119190	D/BAS21/SOT23,BAS21	BAS21
L201	119250	15UH/SHP0760P,15uH	15uH
R1-2 R101 R110-111			
R114-115 R119-120			
R154	119333	R0J/1608,0	0
R202	119334	R0J/2012,0	0
R103 R122 R125	119352	R100J/1608,100	100
R144-146	119361	R1KJ/1608,1K	1K
R102 R117-118 R121			
R124 R152-153	119366	R10KJ/1608,10K	10K
R214	119369	R100KJ/1608,100K	100K
R203	119391	R120J/1608,120	120
R210 R217	119422	R1.5KJ/1608,1.5K	1.5K
R215	119427	R15KJ/1608,15K	15K
R130	119464	R180KJ/1608,180K	180K
R208	119475	R20KJ/1608,20K	20K
R105-109 R113			
R147-149	119486	R22J/1608,22	22
R201	119487	R22J/2012,22	22
R126-127	119496	R2.2KJ/1608,2.2K	2.2K
R216	119498	R22KJ/1608,22K	22K
R116	119522	R270J/1608,270	270
R128 R137-139 R219	119575	R3.3KJ/1608,3.3K	3.3K
R129 R220	119579	R33KJ/1608,33K	33K
R221-222	119605	R3.9KJ/2012,3.9K	3.9K
R104 R112 R150	119616	R47J/1608,47	47
R218	119624	R4.7KJ/1608,4.7K	4.7K
R211	119629	R47KJ/1608,47K	47K
R140-143	119645	R4.7J/2012,4.7	4.7
R212-213	119653	R5.1KJ/1608,5.1K	5.1K
RM101	120089	R10KJ/ARY8Y/SMD/2,10K	10K
C210	120101	EC47U16M/JC,47/16	47/16
C205	120116	EC47U50M/SC,47/50	47/50
C123	120120	EC100U6.3M/RC,100/6.3	100/6.3
C120	120131	EC22U16M/RC,22/16	22/16
C110	120246	CE0.1U50Z/1608,0.1U	0.1U
C104 C208	120250	CE1U50K/1608,1U	1U
C101-102	120267	CE20P50J/1608,20P	20P
C209	120351	CE100P50J/1608,100P	100P
C124-126 C207	120415	CE0.01U50K/1608,0.01U	0.01U
C1-2 C103 C105-109			
C112 C114-115			
C117-118 C121-122			
C127 C203 C206			
C211-213	120419	CE0.1U50K/1608,0.1U	0.1U
C201	120421	CE0.1U50K/2012,0.1U	0.1U
IC102	122231	24LC256/SOIC08P/2,24LC256	24LC256
SW101	124663	TC/ITS-1163,ITS-1163	ITS-1163
X101	127027	8MHZ/-20~70C/C5-35S18/SMD,8MHZ	8MHZ
FB101 FB201-202	127459	120OHM/BEAD/127459,120ohm	120ohm
R209	128443	R6.2KJ/1608,6.2K	6.2K
D201	128444	ZD/5.6V/350MW/SOT23,5.6V	5.6V
R204-207	129194	R0.02F/2012,0.02 1%	0.02 1%

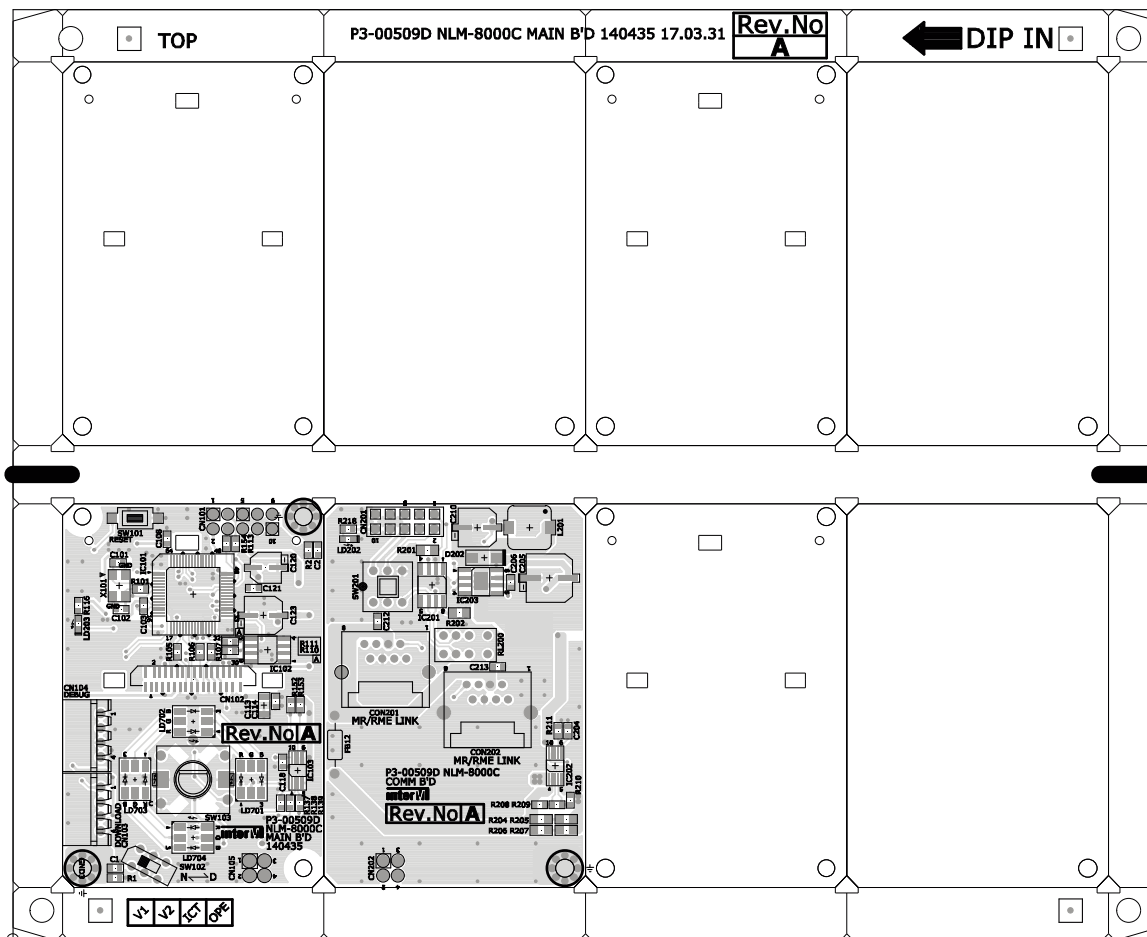


ELECTRICAL PARTS LIST

REF	ITEM NO.	DEFINE	VALUE
C204	129255	CE0.47U16M/1608,0.47U16	0.47U16
C116	129256	CE10U6.3K/1608,10U6.3	10U6.3
C119	129260	CE4.7U10K/1608,4.7U10	4.7U10
C111 C113	129264	CE10U25K/3216,10U25	10U25
LD202	129959	LD/G/1608/BL-HGE36A,BL-HGE36A	BL-HGE36A
LD203	129968	LD/R/1608/BL-HUE36A,BL-HUE36A	BL-HUE36A
R131-134	132848	R330J/3216,330	330
RL200	133899	24V/AGN20024/S2L1,24V	24V
IC101	135157	STM32F103RCT6/LQFP64P/2,STM32F103RCT6	STM32F103RCT6
IC203	136256	LM22672/SOP08P/2,LM22672	LM22672
IC202	136817	LM5069/TSSOP10P/2,LM5069	LM5069
IC201	137171	SN65HVD230D/SOIC08P/2,SN65HVD230D	SN65HVD230D
Q201	138155	N/IRF7855/SO8,IRF7855	IRF7855
CN102	138422	30P/FFCFPC05005HS/0.5/SMD,FFCFPC05005HS-30P	FFCFPC05005HS-30P
SW103	138429	EC/V/EC12D1524403/13E17.5F,EC12D1524403	EC12D1524403
LD701-704	139052	LD/RGB/5X5/ETL-F2F1300-C,ETL-F2F1300-C	ETL-F2F1300-C
IC103	139292	PCA9632DP2/TSSOP10P/2,PCA9632DP2	PCA9632DP2
CN101	139781	10P/PHTPH03-100/10,TPH03-100-10P	TPH03-100-10P
CN201	139782	10P/TSS-254-10A,TSS-254-10P	TSS-254-10P
CN105	140182	04P/PHTPH03-100/10,TPH03-100-04P	TPH03-100-04P
CN202	140183	04P/TSS-254-04A,TSS-254-04P	TSS-254-04P
WIRING			
	138416	OLED,1.3",UG-2864KSWLG05,12.5V	OLED



TOP & BOTTOM VIEW OF P.C BOARD

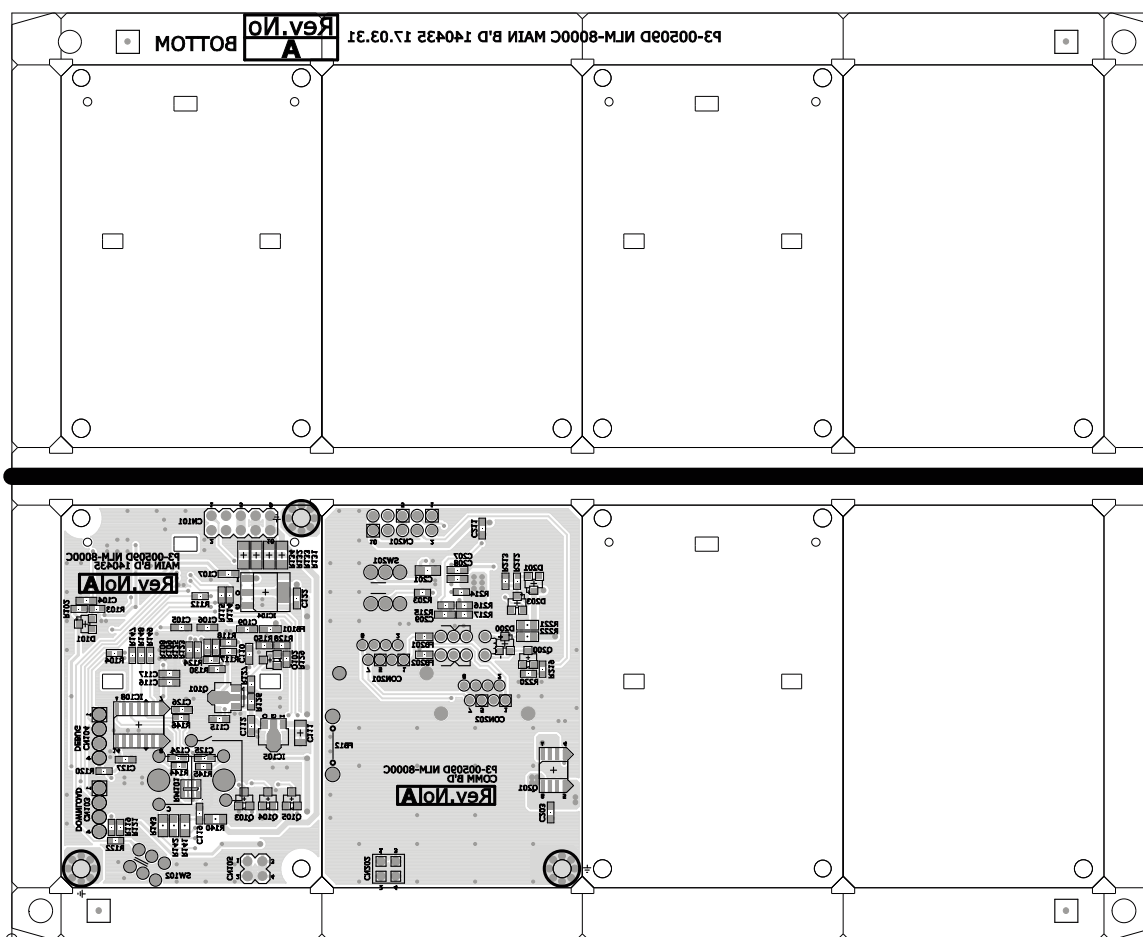


GERBER NAME	Silkscreen Top
MODEL	NLM-8000C
B'D	MAIN
ITEM NO	140435
STEP	M.P
Rev.NO	A
SIZE	197 X 160
ARRAY	4Pair 1Place
KIND	FR-4
THICKNESS	1.6 T
LAYER	2LAYER
COPPER	1 OZ
PLATING	Pb-free (FLUX)
DATE	2017.03.31
DRAWN	Keng Hoon
TEL	02-2289-8234
E-mail	denk0018@inter-m.com
PCB Maker	SK Tech

interM
http://www.inter-m.com/

REVISION HISTORY		
NO	E.S	DATE
NO	E.S2	DATE
NO	P.P	DATE
NO	M.P	DATE
NO	Rev.A	DATE
NO	-	DATE
NO	-	DATE
NO	-	DATE
NO	-	DATE

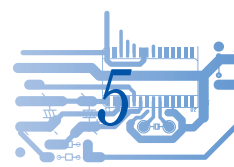
TOP & BOTTOM VIEW OF P.C BOARD



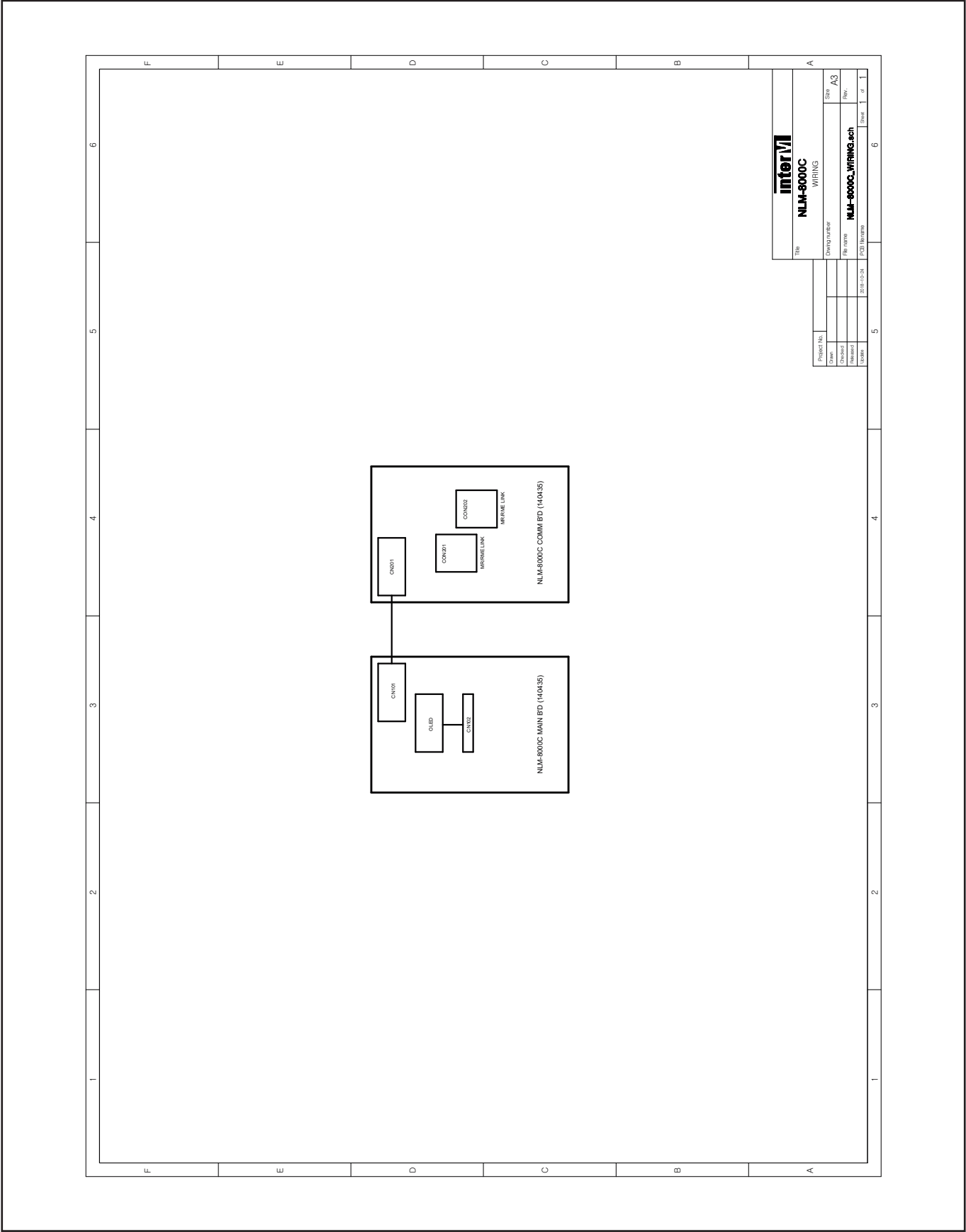
GERBER NAME	Silkscreen Bottom
MODEL	NLM-8000C
B/D	MAIN
ITEM NO	140435
STEP	M.P
Rev. NO	A
SIZE	197 X 160
ARRAY	4Pair 1Place
KIND	FR-4
THICKNESS	1.6 T
LAYER	2LAYER
COPPER	1 OZ
PLATING	Pre-free (FLUX)
DATE	2017.03.31
DRAWN	Kang Hoon
TEL	02-2289-8234
E-mail	deri0018@inter-m.com
PCB Maker	SK Tech

interM
http://www.inter-m.com/

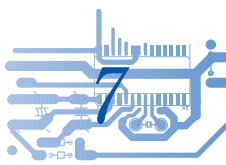
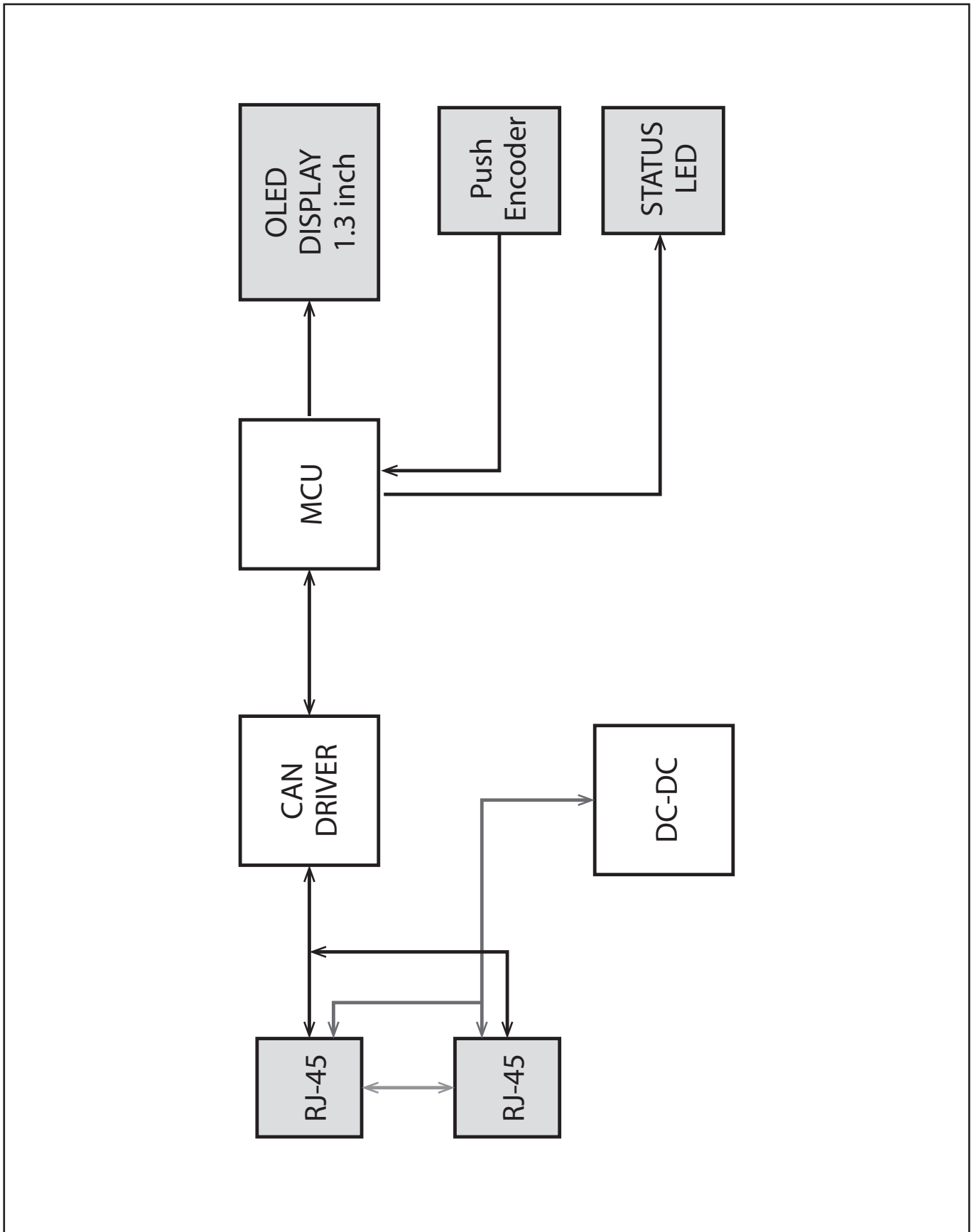
REVISION HISTORY			
NO	E.S	DATE	2015.12.24 Kim Seon
NO	E.S2	DATE	2016.03.31 Kim Seon
NO	P.P	DATE	2016.06.17 Kim Seon
NO	M.P	DATE	2016.09.22 Kim Seon
NO	Rev.A	DATE	2017.03.31 Kang Hoon
NO	-	DATE	-
NO	-	DATE	-
NO	-	DATE	-
NO	-	DATE	-



WIRING DIAGRAM

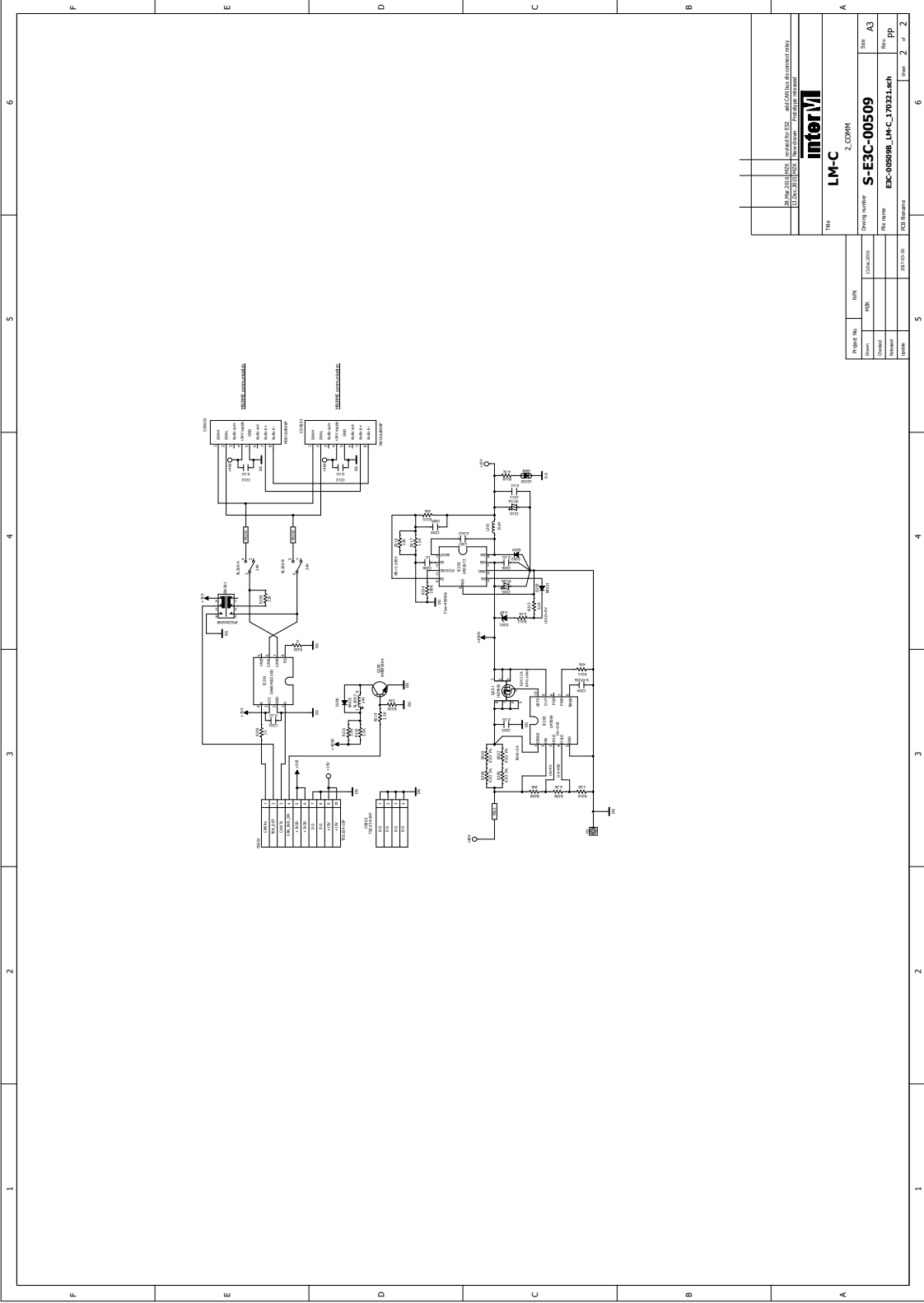


BLOCK DIAGRAM



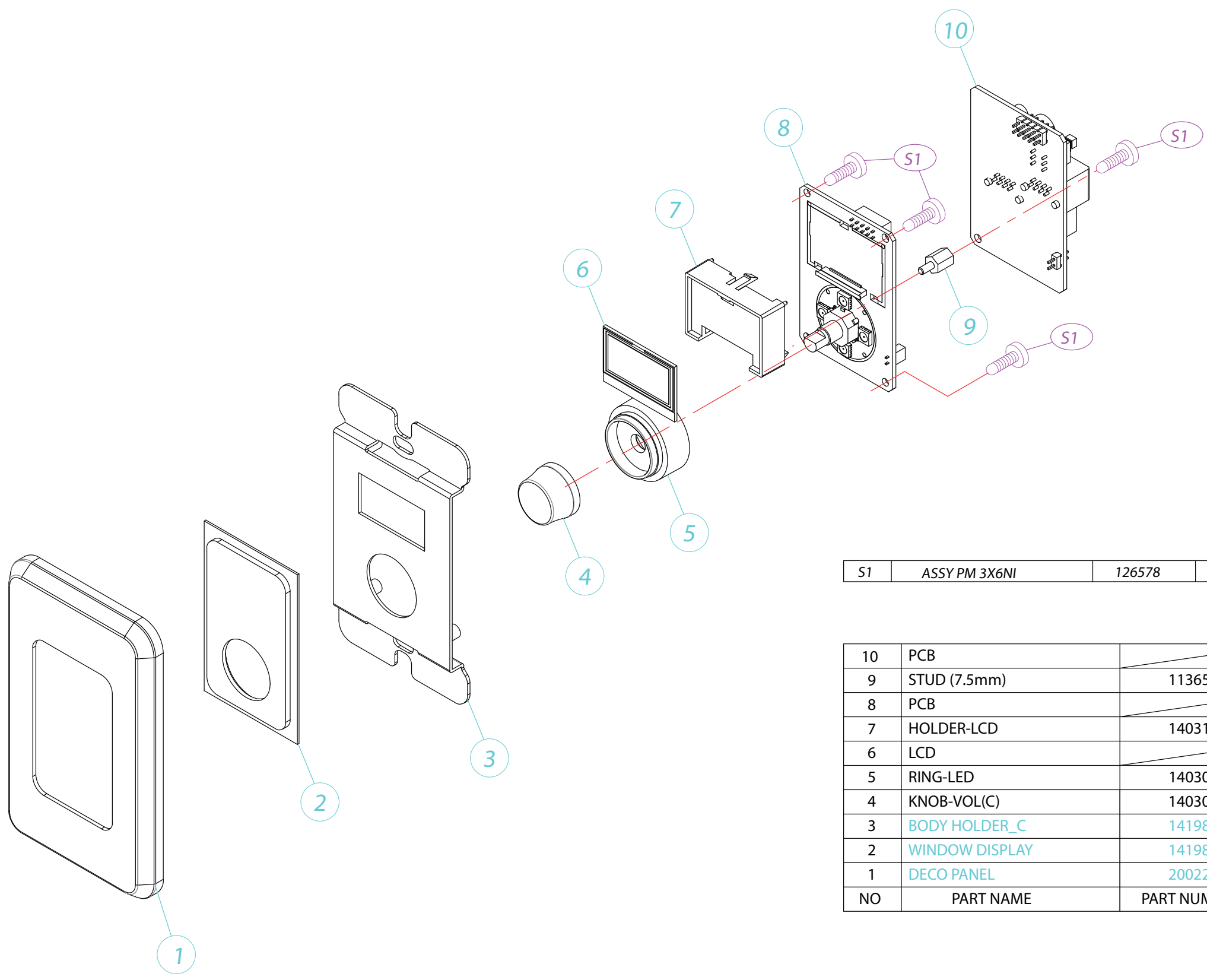


SCHEMATIC DIAGRAM



EXPLODED VIEW OF CABINET &
CHASSIS/MECHANICAL PARTS LIST

EXPLODED VIEW OF CABINET &
CHASSIS/MECHANICAL PARTS LIST



S1	ASSY PM 3X6NI	126578	4	PCB :4
----	---------------	--------	---	--------

10	PCB		1	
9	STUD (7.5mm)	113652	1	
8	PCB		1	
7	HOLDER-LCD	140311	1	
6	LCD		1	
5	RING-LED	140308	1	
4	KNOB-VOL(C)	140300	1	
3	BODY HOLDER_C	141985	1	
2	WINDOW DISPLAY	141980	1	
1	DECO PANEL	2002207	1	
NO	PART NAME	PART NUMBER	Q'TY	REMARKS

