

Ningbo Putian Communication Technology Co., Ltd			
Device's name			
Products List			
Name	Specification	Amount	Remark
Bottom	DK-Em4	1	
Core Board	6410 core board	1	
channel board	Em4 channel board	4	
Box	DK-Em4 box	1	
Triangle screw	Em4 Screw	12	
Module Feeder	feeder	4	
Air Plug	Air plug	1	
Adapter for power	220VAC convert 12VDC	1	
Antenna	TQX-900/1800BF	4	
Module	communication module	4	

Ningbo Putian Communication Technology Co., Ltd						
PCB Name		ARM 4-channel circuit backplane				
PCB REV		DK-EM4-MAINBOARD-S V1.2 09-11-30				
Document No.						
Production date:				applied Batch	Amount	
Developed:		checked:		Approval:		
Name	Specification	Package	Amount	Bit No.	Remark	
Capacitor	15PF	0603	2	C38 C42		
Capacitor	22PF	0603	6	C10 C14 C44 C46 C15 C17		
Capacitor	220P	0603	5	C59 C61 C87 C97 C98		
Capacitor	104	0603	55	C7 C11 C13 C16 C18 C19 C21-C23 C26-C35 C37 C39-C41 C43 C47-C54 C56-C58 C64 C66-C69 C71 C72 C74 C76 C79 C82-C84 C86 C89 C90 C92-C94 C96		
Capacitor	104	0805	5	C25 C99 C108 C125 C127		
Capacitor	105	0603	14	C2 C4 C5 C12 C36 C63 C65 C70 C73 C75 C77 C78 C91 C95		
Capacitor	475	0603		C80 C81 C85 C88		
Tantalum Capacitor	10uF/16V	3528	12	C1 C6 C8 C9 C20 C24 C55 C100 C107 C109 C110 C126		
Tantalum Capacitor	22uF/6.3V	3216	3	C3 C60 C62		
Nickel capacitor	10uF/35V	1210	4	C101-C104	使用10uF/16V钽电容代替 Tantalum capacitors instead of using the 10uF/16V	
Chip Capacitor	470uF/16V	C SMT	3	C105 C106 C111		
Capacitor	103/2KV	RAD0-3	1	C45		
Capacitor	0	0603	1	R98		
Capacitor	22	0603	7	R17 R18 R66-R68 R69 R70	R15, R22 not welding	
Capacitor	49.9 1%	0603	4	R29-R32		
Capacitor	680	0603	8	R14 R33 R40 R42-R45 R82		
Capacitor	2K	0603	1	R12		
Capacitor	2.43K	0603	1	R35		
Capacitor	4.7K	0603	8	R71 R72 R74-R77 R79 R80		
Capacitor	6.8K	0805	1	R41		
Capacitor	8.2K	0603	4	R73 R78 R81 R83		
Capacitor	10K	0603	37	R7-R11 R28 R34 R36-R39 R46-R57 R87-R95 R97 R102-R105		
Capacitor	15K	0603	10	R13 R16 R19-R21 R23-R27		
Capacitor	47K	0603	5	R58 R59 R84-R86		
Capacitor	100K	0603	7	R1 R60-R65		
Beads	INDUCTOR	1206	3	L1-L3		
Inductance	33uH	L3 SMT	1	L4		
Transistor	2N5551	SOT-23	8	Q1-Q8		
Light-emitting diode	GLED	LED	5	D1-D5	5-line LED	
diode	1N4148	MLL-34	2	D6 D9		
Schottky Diode	SS33	SMC-1	2	D7 D8		
Single-row 3-pin pin	CON3	SIP3	2	J24 J25	General, 2.54 Pitch	
Double-row 50-pin SMT Female	CONN SOCKET 25x2	idc50_smt	6	J1 J2 J6-J9		
Double-row 10-pin SMT Female	CON_POWER	idc10_smt	8	J10-J17		
SIM card socket (pop-up)	CON8	SIM_8	4	J18 J19 J27 J28		
pin single row socket	CON6	SIP6	2	J20 J21	General, 2.54 Pitch	
pin single row socket	CON6	SIP6	2	J3 J26	General, 2.55 Pitch	
Double-row 20-pin pin	CON20	IDC20	1	J29	General, 2.56 Pitch	

XH-2 power outlet	CON2	XH2	1	J23	
Single-row two-pin pin	CON-2	sip2	1	J22	
Bending-pin DB9 socket, female head	DB9	DB9-F	1	P1	
Transformer RJ45 head with a network	ETH_CON	RJ45-3	1	J5	
Double-row 10-pin pin	CON10	IDC10	1	J4	
Double row of 100-pin Chip Female	CON100	idc100_smt	2	U1 U2	
mini USBoutlet	USB-MINI	USB-MB	1	CN1	
STM chip	STM32F103VC	tqfp100	1	U4	
Network chip	DM9000A	LQFP48	1	U5	
max232 chip	MAX232	so-16	1	U7	
USB4-port HUB-chip	UPD720114	TQFP48	1	U6	
Button Battery socket	CR1220	BAT1	1	BAT1	
电源芯片Power Chip	LM2596	T0-220-52	1	U16	贴片SMD
电源芯片Power Chip	MAX682	so-8	1	U3	
Power Chip	SPX1587	T0-263	1	U17	
Power Chip	AMS1117-1.8	SOT223	1	U22	
Electronic Switch	SGM3005	SOP10-20-118	7	U8-U13 U15	
Voice Chip	WM9713L	QFN48	1	U14	
Crystal	32.768K	yj26	1	X1	
Crystal	8M	49S	1	X2	
Crystal	30M	49S	1	X3	
Crystal	25.000M	49S	1	X4	
Crystal	24.576M	ho-36	1	X5	

Ningbo Putian Communication Technology Co., Ltd					
PCB Name		EM4-CHBOARD			
PCB REV		EM4-TD6311 V10 2009.10.15			
Document No.					
Production date:				applied Batch	Amount
Developed:		checked:		Approval:	
Name	Specificatio n	Package	Amount	Bit No.	Remark
Resistance	100K	0603	2	R6 R7	
Resistance	10K	0603	2	R8 R28	
Resistance	24K	0603	1	R27	
Resistance	2K	0603	3	R31 R30 R55	
Resistance	4.7K	0603	1	R48	
Resistance	0	0603	3	R39 R40 R41	
Resistance	300K	0603	1	R5	
Capacitor	10U/16V	3528	13	C4 C12 C11 C10 C9 C22 C21 C20 C19 C18 C17 C16 C15	
Capacitor	104	0603	4	C1 C34 C23 C8	
Capacitor	10P	0603	1	C35	
Capacitor	20P	0603	2	C2 C3	
Capacitor	30P	0603	1	C36	
Crystal	3.5795M	XTAL1	1	Y2	
	29302		1	U5	
	HT9170	SOL-18	1	U4	
	SMG3005	MSOP10	1	U6	
	50-pin pin		1	J3	
	10-pin pin		2	J1, J2	
Module	TD6311		1		

Ningbo Putian Communication Technology Co., Ltd					
PCB Name		6410 core board			
PCB REV		CORE			
Document No.					
Production date:			: applied Batch		Amount
Developed:		checked:		Approval:	
Name	Specification	Package	Amoun	Bit No.	Remark
Capacitor	10PF	0603	2	C1, C5	
Capacitor	15PF	0603	2	C46, C51	
Capacitor	22PF	0603	2	C43, C47	
Capacitor	33PF	0603	2	C2, C3	
Capacitor	102	0603	2	C13, C14	
Capacitor	107	3216	37	C7, C8, C9, C11, C12, C15, C19, C21, C22, C29, C31, C32, C34, C37, C41, C42, C44, C48, C49, C52, C53, C54, C55, C56, C66, C92, C120, C121, C122, C124, C125, C126, C127, C129, C131, C132, C134, C136, C137	
Capacitor	104	0402	25	C57, C60, C85, C86, C145, C147, C10, C16, C17, C20, C23, C28, C30, C33, C35, C36, C39, C61, C68, C69, C70, C87, C148, C63, C64, C71	
Capacitor	105	0402	2	C18, C45	
Capacitor	475	0402	2	C4, C6	
Resistance	0	0402	13	R1, R2, R5, R6, R10, R16, R17, R59, R60, R61, R76, R78,	
Resistance	22	0402	11	R26, R27, R28, R32, R33, R55, R56, R114, R115, R118, R119, R127	
Resistance	49.9	0402	4	R31, R34, R35, R36	
Resistance	100	0402	2	R43, R44, R126	
Resistance	470	0402	1	R75	
Resistance	680	0402	7	R29, R37, R62, R65, R66, R67, R68	
Resistance	1.5K	0402	2	R57, R90	
Resistance	2K	0402	2	R41, R42	
Resistance	2.43K	0402	1	R94	
Resistance	4.7K	0402	7	R15, R20, R38, R46, R52, R53, R54	
Resistance	6.8K	0402	1	R30	
Resistance	8.2K	0402	1	R230	

Resistance	10K	0402	14	R70, R71, R100, R107, R108, R109, R110, R111, R112, R113, R116, R117, R120, R121	
Resistance	100K	0402	3	R64, R80, R82	
Resistance	150K	0402	1	R229	
Resistance	330K	0402	1	R58	
Inductance	4.7uH	5050	3	LA3 LA4 LA5 LA6	
Single-row 3-pin pin	CON3	SIP3	1	J4	
Thin-switch	CON12	SSOP12	1	CAT1	
RESET Button	RESET	RESET	1	SW1	
Bead	INDUCTOR	0805	3	L1, L2, L3	
Diode	1N4148	MLL-34	1	D2	
Light-emitting diode	GLED	0805LED	1	D1	
Double-row 50-pin pin	CONN SOCKET 25x2	idc50_127	2	J1 J5	1.27
Double-row 100-pin socket	CON100	idc100_127	2	J2 J3	1.27
Treatment Chip	S3C6410XH-66	FBGA424	1	U5	
Flash chip	K9K8G08U0M	WSOP48	1	U8	
clip	K4X51163PG	FBGA60	2	U3 U4	
Power Chip	XC9216A12CMR	DBV5	1	U8	
Power Chip	XC9216A18CMR	DBV5	2	U10 U11	
Power Chip	XC9216A11CMR	DBV5	1	U7	
Power Chip	XC6219B331MR	DBV5	2	U1 U2	
Reset Chip	MAX811-T	DBV4	1	U9	
Crystal	12M	so-36	1	Y1	
Crystal	27M	so-36	1	Y2	
Crystal	32.768k	49S	1	Y3	
Crystal	48M	so-36-2	1	Y4	