

THE NETHERLANDS
(N E D E R L A N D)

COMMUNICATION

Concerning⁽¹⁾:

- approval granted
- ~~- approval extended~~
- ~~- approval refused~~
- ~~- approval withdrawn~~
- ~~- production definitely discontinued~~

of a type of electrical/electronic sub-assembly⁽¹⁾ with regard to Regulation number 10.

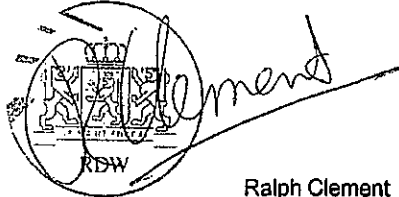

Approval number: E4-10R- 032090

Extension number: 00

1. Make (trade name of manufacturer) : RAM
2. Type and general commercial description(s) : RAM TOUGH-DOCK-PAN4
Docking Station for Tablet PC

Version(s) : 1. RAM TOUGH-DOCK-PAN4
2. RAM TOUGH-DOCK-TR7
3. RAM TOUGH-DOCK-MOT10
4. RAM TOUGH-DOCK-PAN5
3. Means of identification of type, if marked on the vehicle/component/
separate technical unit⁽¹⁾ : See 3.1
- 3.1. Location of that marking : Rating plate affixed to the housing
4. Category of vehicle : n.a.
5. Name and address of manufacturer : Shenzhen Jieruijia Technology Co., Ltd.
3-4F, Bldg 8, Baoshan (E) Industrial Zone,
Minzhi Street, Bao'an District,
Shenzhen City, Guangdong Province,
People's Republic of China



6. In the case of components and separate technical units, location and method of affixing of the ECE approval mark : Rating plate affixed to the housing
7. Address(es) of assembly plant(s) : Shenzhen Jieruijia Technology Co., Ltd.
3-4F, Bldg 8, Baoshan (E) Industrial Zone,
Minzhi Street, Bao'an District,
Shenzhen City, Guangdong Province,
People's Republic of China
8. Additional information (where applicable) : see Appendix
9. Technical service responsible for carrying out the tests : TÜV Rheinland Kraftfahrt GmbH
Technologiezentrum Verkehrssicherheit
Am Grauen Stein
D-51105 Köln
10. Date of test report : Jun 16, 2011
11. Number of test report : 85-R10-196/11
12. Remarks (if any) : see Appendix
13. Place : Zoetermeer
14. Date : 29-JUN-2011
15. Signature : 

16. The index to the information package lodged with the approval authority, which may be obtained on request, is attached.
17. Reasons for extension

⁽¹⁾ Strike out what does not apply.

APPENDIX

to type-approval communication form number: E4-10R- 032090, Extension number: 00

concerning the type-approval of an ~~electrical~~/electronic sub-assembly⁽¹⁾ under Regulation number 10.

1. Additional information
 - 1.1. Electrical system rated voltage : DC 12-24V ~~pos./neg. ground~~⁽¹⁾
 - 1.2. This ESA can be used on any vehicle type with the following restrictions : no restrictions
 - 1.2.1. Installation conditions, if any : Connected to the car battery
 - 1.3. This ESA can be used only on the following vehicle types : not applicable
 - 1.3.1. Installation conditions, if any : not applicable
 - 1.4. The specific test method(s) used and the frequency ranges covered to determine immunity were : Bulk current injection testing method (from 20 to 400MHz)
Free field testing method (from 400 to 2000MHz)
 - 1.5. Approved/accredited laboratory (for the purpose of this Regulation) responsible for carrying out the test : TÜV Rheinland Kraftfahrt GmbH
Technologiezentrum Verkehrssicherheit
Am Grauen Stein
D-51105 Köln (Poll)
2. Remarks : ---

⁽¹⁾ Strike out what does not apply.



TECHNICAL REPORT

According to ECE-Regulation

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH REGARD TO ELECTROMAGNETIC COMPATIBILITY

ECE R10

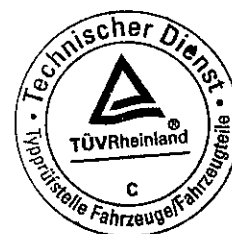
including all amendments until

Corrigendum 1 to the 03 series of amendments

Previously granted	
ECE - certificate	: ---

Structure of report :

1. Test object(s) and general test information
2. Test minutes
3. Remarks concerning tested object(s)
4. Appendices

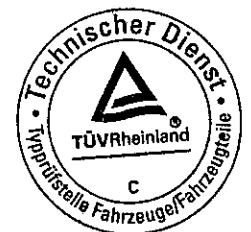


ESA type : RAM TOUGH-DOCK-PAN4
Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.



0. General information

- 0.1. Trademark or trade name of the type : RAM
- 0.2. Manufacturer's name for the type of the device : RAM TOUGH-DOCK-PAN4
Docking Station for Tablet PC
version(s) : 1. RAM TOUGH-DOCK-PAN4
2. RAM TOUGH-DOCK-TR7
3. RAM TOUGH-DOCK-MOT10
4. RAM TOUGH-DOCK-PAN5
- 0.3. Name and address of the manufacturer : Shenzhen Jieruijia Technology Co., Ltd.
3-4F, Bldg 8, Baoshan (E) Industrial Zone,
Minzhi Street, Bao'an District,
Shenzhen City, Guangdong Province,
People's Republic of China
- 0.4. Name and address of the manufacturer's authorised representative : not applicable
- 0.5. No. of information document : Jieruijia-RAM TOUGH-DOCK-PAN4-00
date of issue : April 14, 2011
date of last amendment : ---



ESA type : RAM TOUGH-DOCK-PAN4
Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.



1. Test object(s) and general test information

- 1.1. Test object(s)
- Identification no. : not applicable
 - Model : RAM TOUGH-DOCK-PAN4
 - Remark : ~~The test results showed no measurable disturbance over the whole frequency range.~~
- 1.2. General test information
- 1.2.1 Order issued by (if different from manufacturer) : ---
 - 1.2.2 Test object received on : ---
 - 1.2.3 Test date : May 20, 2011
 - 1.2.4 Test site : TÜV Rheinland (Guangdong) Ltd. EMC Laboratory
Guangzhou Auto Market, Yuan Gang Section of Guangshan Road
Guangzhou 510650 P.R. China
 - 1.2.5 Remark : The results of the test refer exclusively to the objects mentioned under point 1.1. of this report.

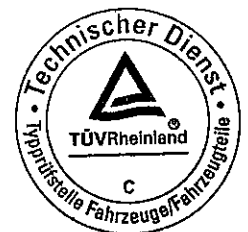


ESA type : RAM TOUGH-DOCK-PAN4
Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.



2. Test minutes

- 2.1. Test facilities : The measurement equipment used was in compliance with the test requirements.
- 2.2. Test results : ~~The ESA has been tested according the amendments mentioned in Appendix 0.~~
~~The actual measurement test of the ESA was not required. The test result of the previous test are still valid.~~
Tests of immunity and radiated narrowband / broadband electromagnetic emission have been conducted.
- Markings : The approval mark is marked clearly legible and indelible on the housing.
- 2.2.1 Test data : see Appendix
- 2.3. Variants and components : not applicable



ESA type : RAM TOUGH-DOCK-PAN4
Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.



3. Remark concerning tested object(s)

All versions of the ESA type as stated in the information document are covered with the tested version(s) and test object(s) respectively.

4. Appendices

- 0 List of modifications
- 1 Test protocol
- 2 Information folder No. : Jieruijia-RAM TOUGH-DOCK-PAN4-00
(incl. apps.)

5. Statement of conformity

The information folder and the type described there comply with the requirements in the above mentioned regulation.

The test laboratory is accredited for the above mentioned tests by the accreditation body of the RDW, Vehicle Technology and Information Centre, as the competent Administrative Department for the Netherlands; Certification No: RDW-99050014-05.

The technical report comprises the pages 1 to 15 (including appendices 0 to 1) and shall not be reproduced except in full without the written approval of the test laboratory.

June 16, 2011
QH / SP

A handwritten signature in black ink, appearing to read "Shawn Peng".

Shawn Peng



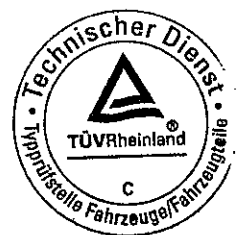
ESA type : RAM TOUGH-DOCK-PAN4
Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.



List of modifications

Appendix 0

Correction of : ---
Modification of : ---
Addition of : ---
Deletion of : ---



ESA type : RAM TOUGH-DOCK-PAN4
Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.



Test protocol

Appendix 1

Test object

Trade name : RAM

Version(s) : RAM TOUGH-DOCK-PAN4

Technical data of the tested ESA type

Electrical system rated voltage : DC 12-24V, negative grounding

This ESA can be used on any vehicle type with the following restrictions : no restrictions

Installation conditions : Connected to the car battery

This ESA can be used on the following vehicle types : not applicable

Installation conditions : not applicable



ESA type : RAM TOUGH-DOCK-PAN4
Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.



Test results

Rated voltage : DC 24V (the worst condition compared with DC 12V)

1. Radiated narrow band / broadband electromagnetic emissions

Radiated broadband electromagnetic emissions : As shown in the table

Radiated narrowband electromagnetic emissions : As shown in the table

Antenna position : horizontal and vertical

Mode : On with PC and USB peripherals



ESA type : RAM TOUGH-DOCK-PAN4
 Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.



Peak value scan graph (Horizontal)

TUV Rheinland (Guangdong) Ltd.

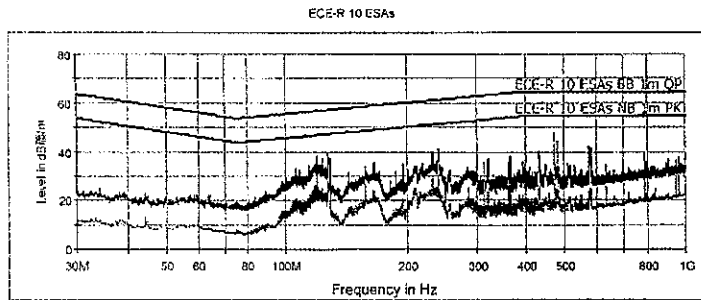
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer: JIERUIJIA
 Test Item: Docking Station for Tablet PC
 Identification: RAM TOUGH-DOCK-PAN4
 Test Standard: RCE-R 10
 Test Detail: RE
 Operation Mode: ON
 Climate Condition: 23 °C; 50 %RH; 101 kPa.
 Test Voltage/ Freq: DC 27V
 Receipt No: 173059382
 Report No:
 Result: Pass
 Comment: Test distance is 1m, Vertical

Subrange 1
 Frequency Range: 30M-1GHz
 Receiver: TUV ESCI 3
 Transducer: TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168



Date: 5/20/2011 - Time: 12:31:25

Tested by: *[Signature]* Reviewed by: *[Signature]*



ESA type : RAM TOUGH-DOCK-PAN4
 Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.



Limit and Margin BB

Frequency (MHz)	Quasi-Peak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
34.150000	18.3	18.5	42.3	60.6	V
64.100000	18.3	18.5	35.4	53.7	V
98.200000	15.3	17.6	38.5	53.8	V
120.000000	36.3	18.6	18.8	55.1	V
157.700000	36.3	18.6	20.6	56.9	V
166.550000	32.9	20.8	24.3	57.2	V
240.000000	31.3	20.3	28.3	59.6	V
315.500000	40.3	18.3	21.1	61.4	V
364.900000	28.0	20.2	34.4	62.4	V
473.100000	32.6	21.2	30.4	63.0	V
580.700000	44.2	23.6	18.8	63.0	V
788.600000	36.4	25.7	26.6	63.0	V
960.100000	37.0	29.2	26.0	63.0	V

Limit and Margin NB

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
44.400000	12.7	19.1	35.0	47.7	V
60.000000	12.9	18.4	31.5	44.4	V
99.050000	16.1	16.2	27.7	43.8	V
120.050000	29.2	18.6	15.9	45.1	V
155.050000	17.0	20.8	29.8	46.8	V
166.150000	21.6	20.3	25.6	47.2	V
239.950000	28.2	18.3	21.4	49.6	V
315.350000	28.2	18.3	23.2	51.4	V
361.250000	17.2	21.2	35.1	52.3	V
473.200000	38.4	23.7	14.6	53.0	V
630.850000	25.2	26.9	27.8	53.0	V
796.300000	25.1	26.9	27.9	53.0	V
943.300000	21.7	31.3	31.3	53.0	V



ESA type : RAM TOUGH-DOCK-PAN4
 Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.



Peak value scan graph (Vertical)

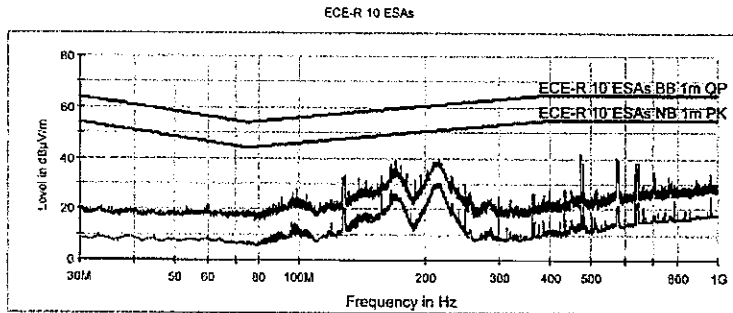
TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	JIERUIJIA
Test Item:	Docking Station for Tablet PC
Identification:	RAM TOUGH-DOCK-PAN4
Test Standard:	RCE-R 10
Test Detail:	RE
Operation Mode:	ON
Climate Condition:	23 °C; 50 %RH; 101 kPa.
Test Voltage/ Freq:	DC 27V
Receipt No:	173059382
Report No:	
Result:	Pass
Comment:	Test distance is 1m, Horizontal
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168



Date: 5/20/2011 - Time: 12:12:29

Tested by: *[Signature]* Reviewed by:



Limit and Margin BB

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
34.900000	15.2	17.9	45.1	60.3	H
60.000000	15.2	17.9	39.2	54.4	H
99.750000	16.1	17.5	37.7	53.8	H
127.550000	17.1	14.9	38.4	55.5	H
165.950000	30.5	17.7	26.7	57.2	H
170.400000	34.5	18.8	22.9	57.4	H
216.600000	31.6	18.3	27.4	59.0	H
250.000000	35.5	15.5	24.4	59.9	H
365.000000	25.6	16.5	36.8	62.4	H
473.100000	22.8	18.8	40.2	63.0	H
573.550000	37.3	20.8	25.7	63.0	H
701.150000	33.5	22.4	29.5	63.0	H
960.050000	31.5	27.1	31.5	63.0	H

Limit and Margin NB

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
39.350000	8.7	18.5	40.3	49.0	H
60.050000	8.4	17.4	36.0	44.4	H
96.200000	8.4	17.4	35.2	43.6	H
120.000000	15.2	17.3	29.9	45.1	H
157.100000	17.8	19.3	29.1	46.9	H
166.100000	26.6	18.8	20.7	47.2	H
214.250000	28.5	15.4	20.4	48.9	H
251.500000	11.1	16.5	38.9	50.0	H
356.400000	8.5	18.6	43.7	52.2	H
473.150000	37.8	20.8	15.2	53.0	H
636.850000	16.1	23.6	36.9	53.0	H
788.600000	16.1	23.6	36.9	53.0	H
960.050000	25.0	27.1	28.0	53.0	H

Maximum Narrow Band AV value:

Frequency [MHz]	Test results [dBµV/m]		Reference AV Limit [dBµV/m]	Margin to reference value [dBµV/m]
	hor.	vert.		
473.15	37.8	---	53.0	15.2
120.05	---	29.2	45.1	15.9



ESA type : RAM TOUGH-DOCK-PAN4
 Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.

2. Conducted emissions

Test method : ISO 7637-2 2nd edition: 2004

12V

Polarity of pulse amplitude	Maximum allowed value for vehicles with 12V systems	Measured Pulse amplitude True value
Positive	+ 75	+ 11.4
Negative	- 100	- 14.0

24V

Polarity of pulse amplitude	Maximum allowed value for vehicles with 24V systems	Measured Pulse amplitude True value
Positive	+ 150	+ 19.2
Negative	- 450	- 14.4

3. Immunity to electromagnetic radiation

Test method : ISO 11452-4 3rd edition: 2005
 Bulk current injection testing method (from 20 to 200MHz)

ISO 11452-2 2nd edition: 2004
 Free field testing method (from 200 to 2000MHz)

24V

Frequency range (MHz)	Test level	Type of modulation	Test distance	Antenna position	Result
20~400	60 mA	/	150mm	/	Pass*
400~800	30volts/m	AM, 80%	1 m	Vertical	Pass*
800~2000	30volts/m	PM, 577µs	1 m	Vertical	Pass*

Remark:

* - no degradation of performance of 'immunity-related functions'.



ESA type : RAM TOUGH-DOCK-PAN4
 Manufacturer : Shenzhen Jieruijia Technology Co., Ltd.

4. Immunity to transient disturbances

Test method : ISO 7637-2 2nd edition: 2004

Rated voltage : DC12V and DC 24V

Test pulse	Test level		Number of pulse / test time	Burst cycle / pulse repetition time	Required minimum function status**	Status of function true value		Result
	24V	12V				24V	12V	
1	-450V	-75V	5000 pulses	0.5 s	D	C	C	passed
2a	+37V	+37V	5000 pulses	0.2 s	D	A	A	passed
2b	+20V	+10V	10 pulses	0.5 s	D	C	C	passed
3a	-150V	-112V	1 h	90 ms	D	A	A	passed
3b	+150V	+75V	1 h	90 ms	D	A	A	passed
4	-12V	-6V	1 pulse	--	D	C	A	passed

Remark:

** - Class A: all functions of a device/system perform as designed during and after exposure to disturbance.

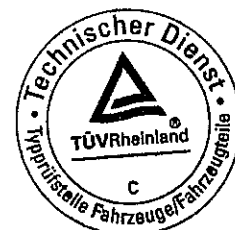
Class B: all functions of a device/system perform as designed during exposure. However, one or more of them can go beyond specified tolerance. All functions return automatically to within normal limits after exposure is removed. Memory functions shall remain class A.

Class C: one or more functions of a device/system do not perform as designed during exposure but return automatically to normal operation after exposure is removed.

Class D: one or more functions of a device/system do not perform as designed during exposure and do not return to normal operation until exposure is removed and the device/system is reset by simple "operator/use" action.

Class E: one or more functions of a device/system do not perform as designed during and after exposure and cannot be returned to proper operation without repairing or replacing the device/system.

⁽¹⁾ Strike out what does not apply.



Contents

DOCUMENT	PAGE
Technical description	2-3
Mark	4
Constructed profile	5
Connect Schematic	5-6
Circuit Diagram	7
PCB Layout	8-9
Bill of Materials	10-12



Shenzhen Jieruijia Technology Co., Ltd.
Information folder No. : Jieruijia-RAM TOUGH-DOCK-PAN4-00

Issuing date: April 14, 2011

INFORMATION DOCUMENT FOR TYPE-APPROVAL OF AN ELECTRIC/ELECTRONIC SUB-ASSEMBLY
WITH RESPECT TO ELECTROMAGNETIC COMPATIBILITY ACCORDING ANNEX 2B OF ECE-R10.03

- 0.1 Make (trade name of the manufacturer) : RAM
- 0.2 Type and general commercial description(s) : RAM TOUGH-DOCK-PAN4
Docking Station for Tablet PC
- Version(s) : 1. RAM TOUGH-DOCK-PAN4
2. RAM TOUGH-DOCK-TR7
3. RAM TOUGH-DOCK-MOT10
4. RAM TOUGH-DOCK-PAN5
- 0.3 Means of identification of type if marked on the vehicle/component/STU : See 0.3.1
- 0.3.1 Location of that marking : Label affixed to back housing
- 0.5 Name and address of the manufacturer : Shenzhen Jieruijia Technology Co., Ltd
Address: 3-4F,Bldg 8,Baoshan(E)Industrial Zone,Minzhi Street,Bao'an District,Shenzhen City ,Guangdong Province,People's Republic of China
- 0.7 In the case of components and separate technical units, location and method of affixing of the approval mark : Label affixed to back housing
- 0.8 Address(es) of assembly plant(s) : Shenzhen Jieruijia Technology Co., Ltd
Address: 3-4F,Bldg 8,Baoshan(E)Industrial Zone,Minzhi Street,Bao'an District,Shenzhen City ,Guangdong Province,People's Republic of China
- 1 This ESA shall be approved as a : Component
- 2 Any restrictions of use and conditions for fitting : No restrictions



Type RAM TOUGH-DOCK-PAN4

Page 2 of 12

- 1 Additional information
- 1.1 Electrical system rated voltage : DC 12V-24V, negative ground
- 1.2 This ESA can be used on any vehicle type with the following restrictions : No restrictions
- 1.2.1 Installation conditions : Directly connected to car battery
- 1.3 This ESA can be used on the following vehicle types : Not applicable
- 1.3.1 Installation conditions : Directly connected to car battery
- 1.4 The specific test method(s) used and the frequency ranges covered to determine immunity were : Bulk current injection testing method (from 20 to 400MHz)
Free field testing method (from 400 to 2000MHz)
- frequency range : ---
- Remarks : RAM TOUGH-DOCK-TR7,
Input: 12-24VDC, 6.0A
Output: 12-24VDC, 4A for Tablet PC;
5VDC, 1A for USB Stack 1; 5VDC, 1A for USB Stack 2
- RAM TOUGH-DOCK-MOT10,
Input: 12-24VDC, 6.0A
Output: 12-24VDC, 4A for Tablet PC;
5VDC, 1A for USB Stack 1; 5VDC, 1A for USB Stack 2
- RAM TOUGH-DOCK-PAN4,
Input: 12-24VDC, 6.0A
Output: 12-24VDC, 4A for Tablet PC;
5VDC, 1A for side USB;
5VDC, 1A for USB Stack 1; 5VDC, 1A for USB Stack 2
- RAM TOUGH-DOCK-PAN5,
Input: 12-24VDC, 6.0A
Output: 12-24VDC, 4A for Tablet PC;
5VDC, 1A for side USB;
5VDC, 1A for USB Stack 1; 5VDC, 1A for USB Stack 2



 **RAM**
 Docking Station for Tablet PC
 Model: RAM TOUGH-DOCK-TR7
 Input: 12-24V $\bar{\text{~}}$ 6.0A
 Output: 12-24V $\bar{\text{~}}$ 4A for Tablet PC
 5V $\bar{\text{~}}$ 1A for USB stack 1
 5V $\bar{\text{~}}$ 1A for USB stack 2

FC CE 
 

 **RAM**
 Docking Station for Tablet PC
 Model: RAM TOUGH-DOCK-MOT10
 Input: 12-24V $\bar{\text{~}}$ 6.0A
 Output: 12-24V $\bar{\text{~}}$ 4A for Tablet PC
 5V $\bar{\text{~}}$ 1A for USB stack 1
 5V $\bar{\text{~}}$ 1A for USB stack 2

FC CE 
 

 **RAM**
 Docking Station for Tablet PC
 Model: RAM TOUGH-DOCK-PAN4
 Input: 12-24V $\bar{\text{~}}$ 6.0A
 Output: 12-24V $\bar{\text{~}}$ 4A for Table PC
 5V $\bar{\text{~}}$ 1A for USB stack 1
 5V $\bar{\text{~}}$ 1A for USB stack 2
 5V $\bar{\text{~}}$ 1A for side USB

FC CE 
 

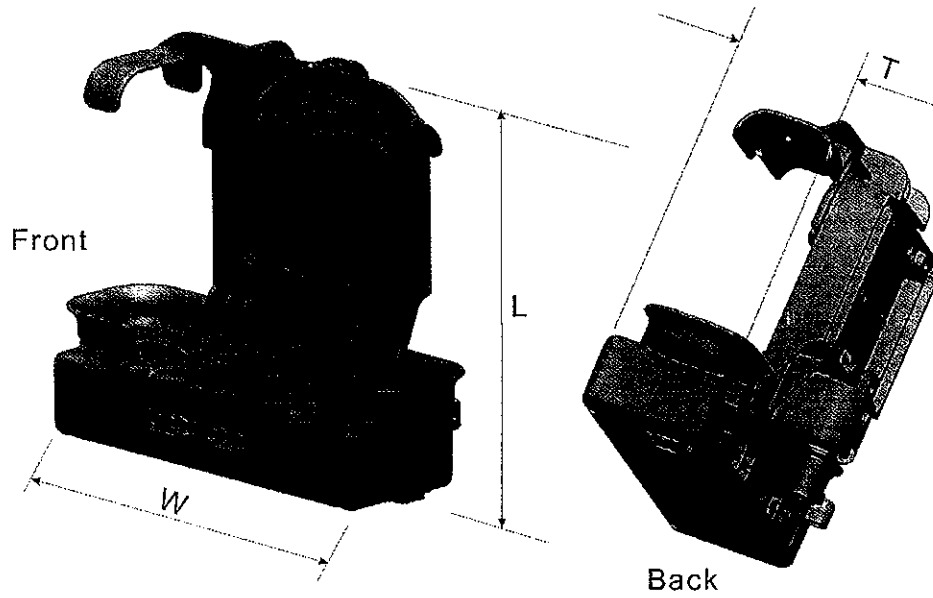
 **RAM**
 Docking Station for Tablet PC
 Model: RAM TOUGH-DOCK-PAN5
 Input: 12-24V $\bar{\text{~}}$ 6.0A
 Output: 12-24V $\bar{\text{~}}$ 4A for Tablet PC
 5V $\bar{\text{~}}$ 1A for USB stack 1
 5V $\bar{\text{~}}$ 1A for USB stack 2
 5V $\bar{\text{~}}$ 1A for side USB

FC CE 
 

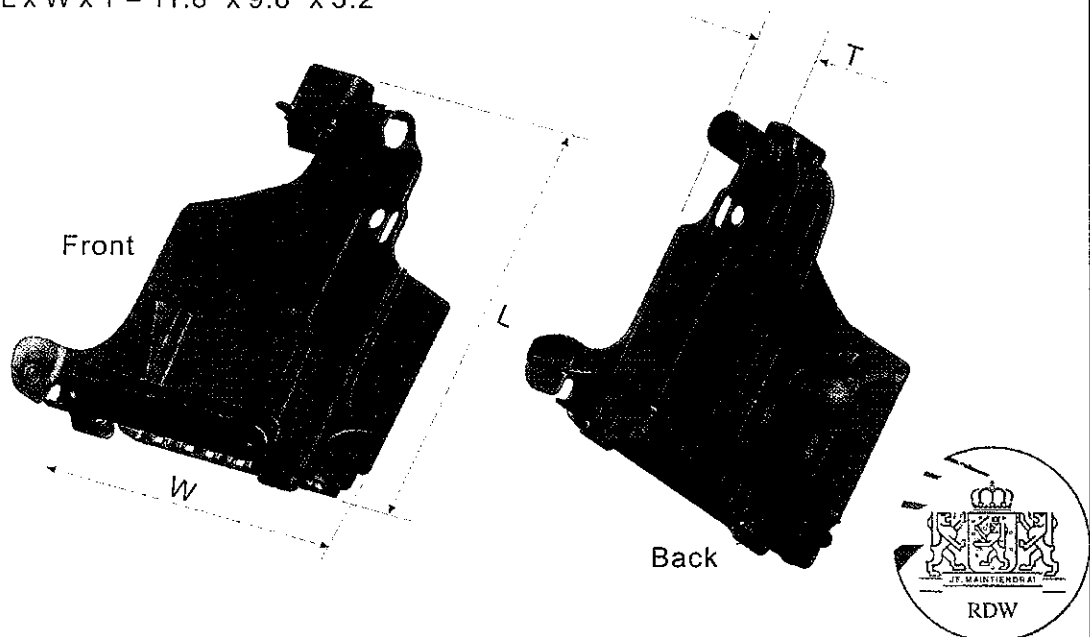


DRW.		Mark
------	--	------

Model: Yuma, TR7
L x W x T = 8.2" x 8.6" x 4.8"

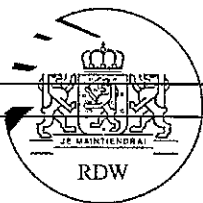
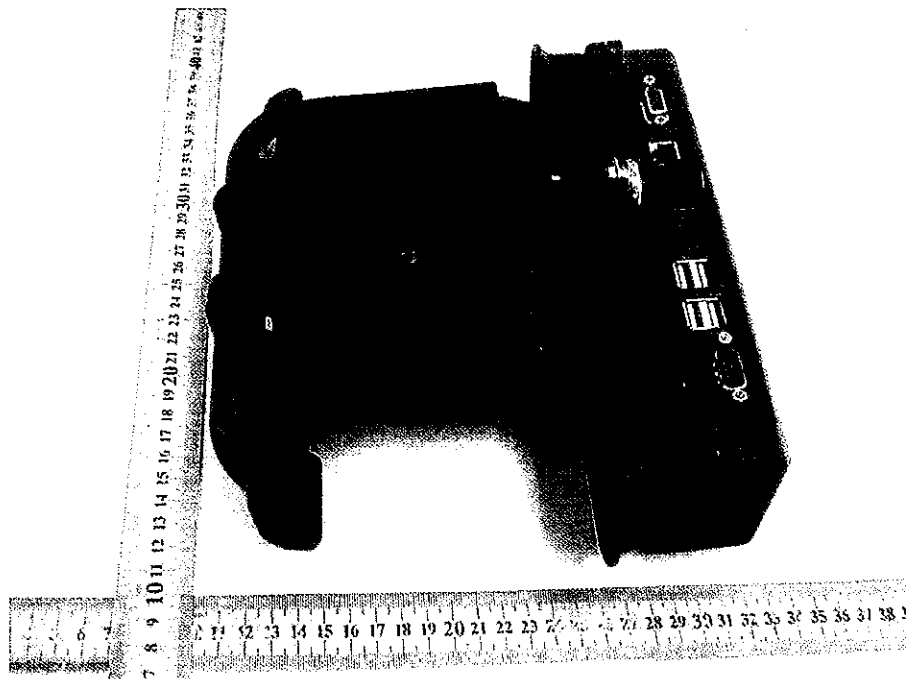
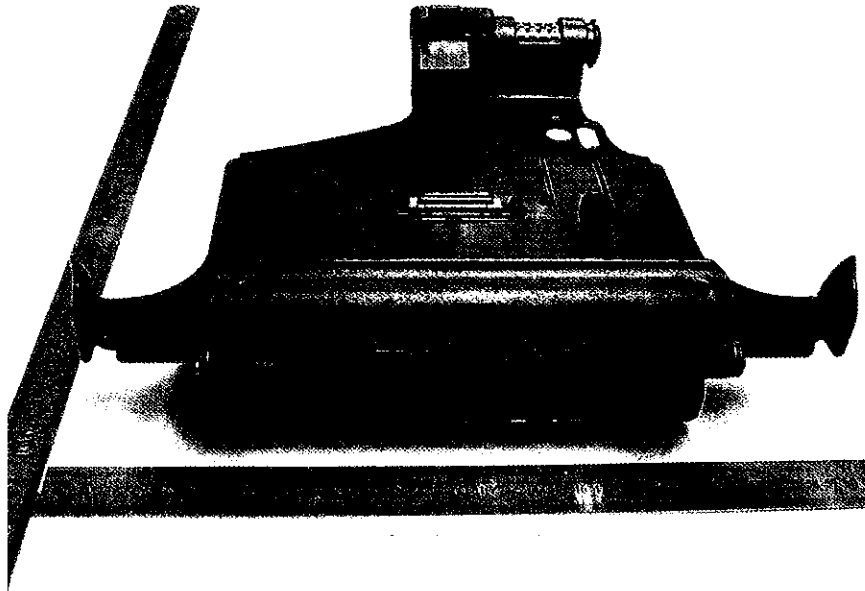


Model: MOT10
L x W x T = 11.8" x 9.8" x 3.2"



DRW.

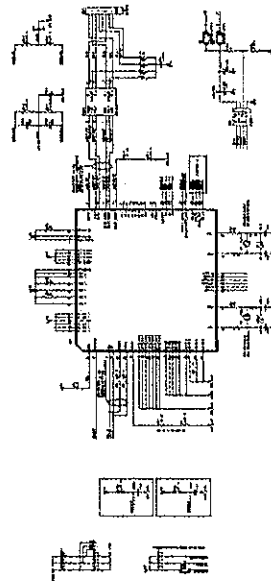
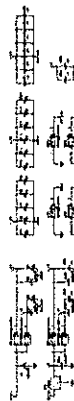
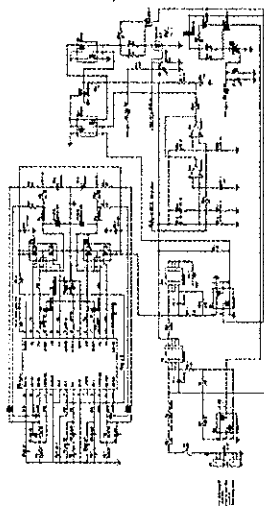
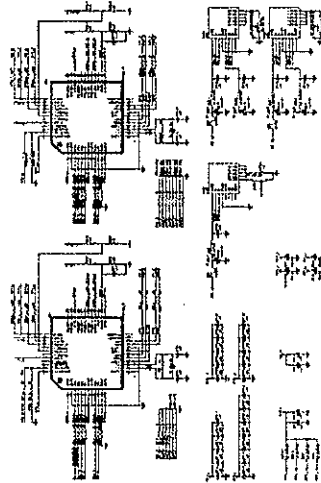
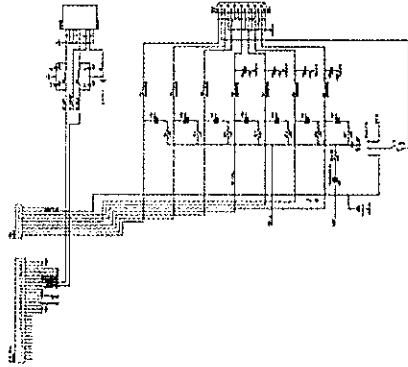
Constructed Profile



DRW.		Constructed profile
------	--	---------------------

Type RAM TOUGH-DOCK-PAN4

Schematic diagram of



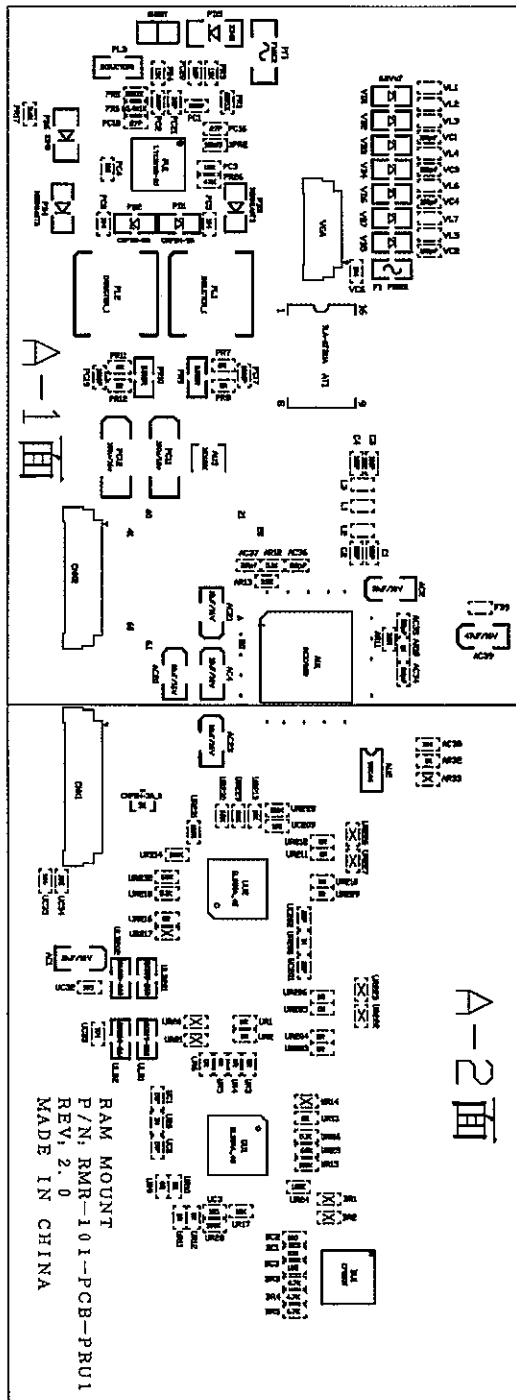
DRW.

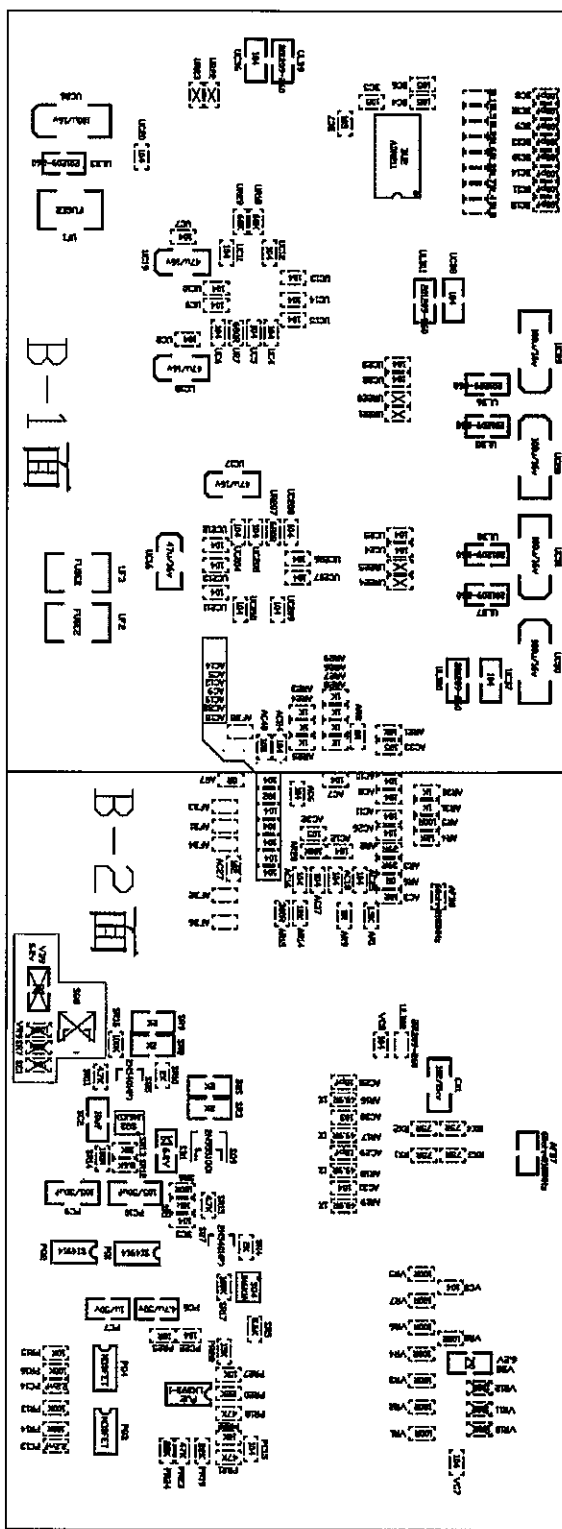
Circuit diagram

Type RAM TOUGH-DOCK-PAN4

Page 7 of 12

Component location diagram





DRW.

PCB Layout

Shenzhen Jieruijia Technology Co., Ltd.
Information folder No. : Jieruijia-RAM TOUGH-DOCK-PAN4-00

Issuing date: April 14, 2011

Bill of materials

Docking station BOM

Item	Name	Value	Location	Packaging	Usage	Manufacturer
1	Chip resistor	0R	PR7 PR8 PR11 PR12 UR209 UR210 UR211 UR212 UR203 UR204 UR205 UR206UR13 UR14 UR1 UR2 UR3 UR4 UR5 UR6 UR9 UR10 UR11 UR12 UR216 AR6 AR7 AR8 AR9	0603	29	Samsung/Yegao/alternative
2		100R	VR13VR7,VR103VR12,AR5 VR8 SR14 VR9 SR6	0603	15	Samsung/Yegao/alternative
3		15K	PR3 PR4 UR20 UR21 PR28	0603	5	Samsung/Yegao/alternative
4		20K	PR1 PR5	0603	2	Samsung/Yegao/alternative
5		22K	SR7 PR20 PR24 PR19	0603	4	Samsung/Yegao/alternative
6		1K	from AR23 to AR32	0603	10	Samsung/Yegao/alternative
7		47K	PR26 PR23 PR21 PR18	0603	4	Samsung/Yegao/alternative
8		9.6K	PR17	0603	1	Samsung/Yegao/alternative
9		63.4K	PR6	0603	1	Samsung/Yegao/alternative
10		1M	AR10 UR8 UR208	0603	3	Samsung/Yegao/alternative
11		5.1K	AR12 UR26 UR218	0603	3	Samsung/Yegao/alternative
12		33R	AR11 AR13	0603	2	Samsung/Yegao/alternative
13		100K	UR214 UR215 UR228 UR231 UR15 UR16 UR24 UR28 AR20 PR13 PR14 PR16 SR16 SR17	0603	14	Samsung/Yegao/alternative
14		68K	UR229 UR230 UR232 UR25 UR29 UR18	0603	6	Samsung/Yegao/alternative
15		10K	UR213 UR17 AR21 SR13 PR15 PR22 PR27 AR21 SR1	0603	9	Samsung/Yegao/alternative
16		4.7K	BR3 BR4 BR5 SR15	0603	4	Samsung/Yegao/alternative
17		680R	UR7 UR207	0603	2	Samsung/Yegao/alternative
18		39R	AR2 AR3	0603	2	Samsung/Yegao/alternative
19		12K	AR4 AR14	0603	2	Samsung/Yegao/alternative
20		1.5K	AR1	0603	1	Samsung/Yegao/alternative
21		300R	AR15	0603	1	Samsung/Yegao/alternative
22		8.6K or 8.66K 1%	SR12 SR5	0603	2	Samsung/Yegao/alternative
23		2K	SR10 SR11 SR4	0603	3	Samsung/Yegao/alternative
24		2K	SR9 SR9 SR2 SR3	0805	4	Samsung/Yegao/alternative
26		49.9R	AR16 - AR19	0603	4	Samsung/Yegao/alternative
27		75R	RX1 - RX4	0603	4	Samsung/Yegao/alternative
28		0.015R	PR9 PR10	0603	2	Samsung/Yegao/alternative
29		10R	PR25	0603	1	Samsung/Yegao/alternative
30		100K +/-1%	PR2	0603	1	Samsung/Yegao/alternative
31		Voltage regulator	XC6201VR25(2.5V)/SOT-89	AU3	SOT-89	1
32		2N5551/SOT-23	SO8 SO9	SOT-23	2	Philips/alternative
33	Filter	LF8505	AT1	SMD-16PIN	1	Delta or alternative
34	Diode	CMP5H-3A	D1	SOT-23	1	Fairchild/alternative
35		MMBT5401	SO5 SO7	SOT-23	2	Onsemi/alternative
36	Zener diode	5.2V	VD13VD9 SD1	0805 lead	10	Fairchild/alternative
37	Chip resistor	0 ohm	PD5 PD6	1812	2	Vishay/alternative
38	Diode	MBRM140T3	PD3 PD4	1206	2	Onsemi/alternative
39		IN4148 Glass packaging	PD1 PD2	Glass pack	2	Fairchild/alternative
40		6.3A	PF1	1808 (4.5*2.0)	1	KOA
41	Fuse	FUSE2 (MINSMDC11DF-2)	UF1 UF2 UF3	5*3*1	3	Tyco/alternative
42		1A, SA1D0805P100TF	F1	0805	1	Polytronics/Tyco/alternative
43	Inductor coil	10uH	PL1 PL2	10*10*4	2	Kemet/alternative
44		47UF16V or 6.3V	AC39 UC16 UC17 UC18 UC19	AB	5	Kemet/AVX/alternative
45	Tan. Capacitor	10UF16V or 10V	AC1 AC2 AC4 AC20 AC21 AC23	AB	6	Kemet/AVX/alternative



Type RAM TOUGH-DOCK-PAN4

Page 10 of 12

Shenzhen Jieruijia Technology Co., Ltd.
Information folder No. : Jieruijia-RAM TOUGH-DOCK-PAN4-00

Issuing date: April 14, 2011

Docking station BOM

Item	Name	Value	Location	Packaging	Usage	Manufacturer
46	Tan. Capacitor	100UF/16V or 10V	PC11 PC12 UC26 UC28 UC29 UC30 UC31	D#	7	Kemet/AVX/alternative
47	Chip ferrite	60 OHM/100M	VL1 VL7 FB9 L1 L2 L3 BL1 BL8 AFB3 AFB4 AFB5 AFB1 AFB2 AFB6 AFB8	0603	26	Kemet/alternative
48		60 OHM/100M	ULB9 ULB11 ULB5 ULB6 ULB7 ULB8 ULB10 ULB201 ULB202 ULB1 ULB2 ULB3 AFB7 ULB12	0805	14	Kemet/alternative
49	Ferrite bead	220ohm/1MHz	PL3	1812	1	Kemet/alternative
50	Chip capacitor	100PF/25V	VC1 VC2 VC3 VC4 C3 C4 C1 C2 BC8 BC9 BC10 BC11 BC12 BC13 BC14 BC15	0603	16	Kemet/alternative
51		20PF/25V	AC34 AC35 AC36 AC37 UC201 UC202 UC1 UC2	0603	8	Kemet/alternative
52		102 /25V	PC17 PC19 AC3 AC27 AC40 AC5	0603	6	Kemet/alternative
53		220PF/25V	PC1 PC2	0603	2	Kemet/alternative
54		27PF/25V	PC16 PC18	0603	2	Kemet/alternative
55		33PF/25V	PC20 PC21	0603	2	Kemet/alternative
56		104 /25V	PC4 PC5 PC8 AC38 UC35 UC33 UC20 UC11 UC12 UC13 UC14 UC15 UC4 UC5 UC9 UC10 UC7 UC8 UC204 UC213 AC24 AC8 AC7 AC8 AC10 AC11 AC25 AC20 AC12 AC16 AC17 AC18 AC13 AC14 AC15 AC9 AC19 AC22 SC1 SC3 PC22 UC22 UC23 UC24 UC25 UC6 AC31 PC15 VC6	0603	60	Kemet/alternative
57		153 /25V	PC3	0603	1	Kemet/alternative
58	105 /25V	BC4 BC5 BC6 BC7 AC32 AC33 UC34 UC203 UC32 BC1 BC2 BC3 UC3	0603	13	Kemet/alternative	
59	104 /25V	UC36 UC37 UC38, Cn	0805	4	Kemet/alternative	
60	105 /50V	PC9 PC10	1206	2	Kemet/alternative	
61	10UF/25V	SC2	0805	1	Kemet/alternative	
62	4.7UF /50V	PC6 PC7	0805	2	Kemet/alternative	
63	2.2NF /50V	PC13 PC14	0603	2	Kemet/alternative	
64	18PF /25V	AC28 AC29	0603	2	Kemet/alternative	
65	103 /25V	AC30	0603	1	Kemet/alternative	
66	102 /2KV	CX1	1206	1	Kemet/alternative	
67	IC	LTC3728LXCUH	PU1	QFN-32	1	Linear
68		MCS7830CV-DA	AU1	QFP-80	1	Microchip
69		93C46	AU2	SOP-8	1	Atmel
70		GL850G	UU1 UU2	QFP-48	2	Gene Sys
71		CP2102	BU1	SOIC-28	1	Silicon Labs
72	ADM211ARS	BU2	SSOP-28	1	Analog Devices	
73	Mosfet	SH914	PO1 PO2	SOP-8	2	Vishay
74	IC	TPC8107	PO3 PO4	SOP-8	2	Toshiba
75		LM393	PU2	SOP-8	1	Fairchild/alternative
76		UA18K1	SO3 SO4	SOT-363	2	Fairchild/alternative
77	PCB	170*65*1.6mm , FR-4, yellow Solder mask, white silkscreen , copper 1OZ			1	Mantay
78	USB socket	USB, double stack	USB2 USB3		2	Tong Tat
79		USB, Single stack	USB1		1	Tong Tat
80	RJ45 socket	RJ45	RJ45		1	Tong Tat
81	Audio jack	Audio jack, 8PIN	AUDIO		1	Tong Tat
82	DB9	DB9	RS232		1	Tong Tat
83	DB15	DB15	VGA port		1	Tong Tat
84	Resonator	12M	Y1 Y2 Y3		3	Alternative
85		25M	Y4		1	Alternative
86		6.3MM			3	Tong Tat
87	Power spade	4.8MM			2	Tong Tat
88	Connector	1.0mm , single row, 14PIN	CNX2		1	Tong Tat
89	Connector	1.0mm , single row, 9PIN	VGA		1	Tong Tat



Shenzhen Jieruijia Technology Co., Ltd.
Information folder No. : Jieruijia-RAM TOUGH-DOCK-PAN4-00

Issuing date: April 14, 2011

Dock connector for TR7

98	Pogo pin	7.5mm high, gold plated			32	Toplink
99	Plastic block	LCP, TR7			1	Wing Sing
100	Dock PCB	TR7 dock				Manley
101	Connector	30P, dual row, 1.0mm pitch			1	Tong Tat
102	Resistor	100R, 0402		0402	3	Samsung/Yegao/alternative
103	Resistor	10K, 0402		0402	2	Samsung/Yegao/alternative
104	Wire	AWG 28, 200mm long	Both end grimped with terminal 1.0mm		26	Yun Xin
105	Plug A	1.0mm, single row, 14 pin			1	Tong Tat
106	Plug B	1.0mm, single row, 9 pin			1	Tong Tat
107	Plug C	1.0mm, single row, 16 pin			1	Tong Tat

Dock connector for MOT10

108	Dock connector	OL0050L-D24B01-4F_353-0000-1030_D (for MOT10)			1	Foxconn
109	PCB	MOT10 dock			1	Manley
110	Connector	30P, dual row, 1.0mm pitch			1	Tong Tat
111	IC	TDA2622M		SOP8	1	Fairchild
112	Resistor	10K, 0805	R13, R16	0805	2	Samsung/Yegao/alternative
113	Resistor	78.7K	R14, R15	0805	2	Samsung/Yegao/alternative
114	Resistor	68R	R17, R18	0805	2	Samsung/Yegao/alternative
115	Resistor	100R	R10, R11, R12	0805	3	Samsung/Yegao/alternative
116	Capacitor	C1, C2, C11, C12	0.1uF	0805	4	Kemet/alternative
117	Capacitor	C7, C9	1uF	0805	2	Kemet/alternative
118	Capacitor	C8, C10	10uF	0805	2	Kemet/alternative
119	Wire	AWG 28, 200mm long	Both end grimped with terminal 1.0mm		26	Yun Xin
120	Plug A	1.0mm, single row, 14 pin			1	Tong Tat
121	Plug B	1.0mm, single row, 9 pin			1	Tong Tat
122	Plug C	1.0mm, single row, 16 pin			1	Tong Tat

Dock connector for PAN4 or PAN5

123	Spring	1.3mm width, gold plated			19	Wing Sing
124	Plastic block	PA66, PAN4/5			1	Wing Sing
125	PCB	PAN4/5 dock			1	Manley
126	Connector	20P, single row, 1.25mm			1	Tong Tat
127	Wire	AWG 28, 200mm long	Both end grimped with terminal 1.0mm		15	Yun Xin
128	Wire	USB 2.0 AWG30, 200mm long	Both end grimped with terminal 1.0mm		1	Yun Xin
129	Plug B	1.0mm, single row, 9 pin			1	Tong Tat
130	Plug C	1.0mm, single row, 16 pin			1	Tong Tat

