



Specification

Customer: _____

Model Name: Startek-KD05050

SPEC NO.: _____

Date: 2010.02.01

CUSTOMER APPROVAL	
Please return to us one copy of “SPECIFICATION” with your approved signatures	

Approved By:		Chop and Signatures
Date:		

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Detailed Description

1, General Description

Version	Date	Amendment	New Version
Startek-KD05050			

2, Summerize

The standard is applicable to the test of KD050C-1/KD050C-1-TP , the driving board Startek-KD05050 from . Startek Company.

3, The Scope of Application

Industrial Contral, Visual Intercom, Instrument and Meter, Medical Equipment, Safety Monitor, GPS display, Bank notes acceptance of equipment, POS and so on

4, Features

4.1,Support CVBS , VGA(640*480,800*480,800*600) S-Vedio input

4.2,Input Voltage :DC +12V

4.3,Mutil functional OSD operation

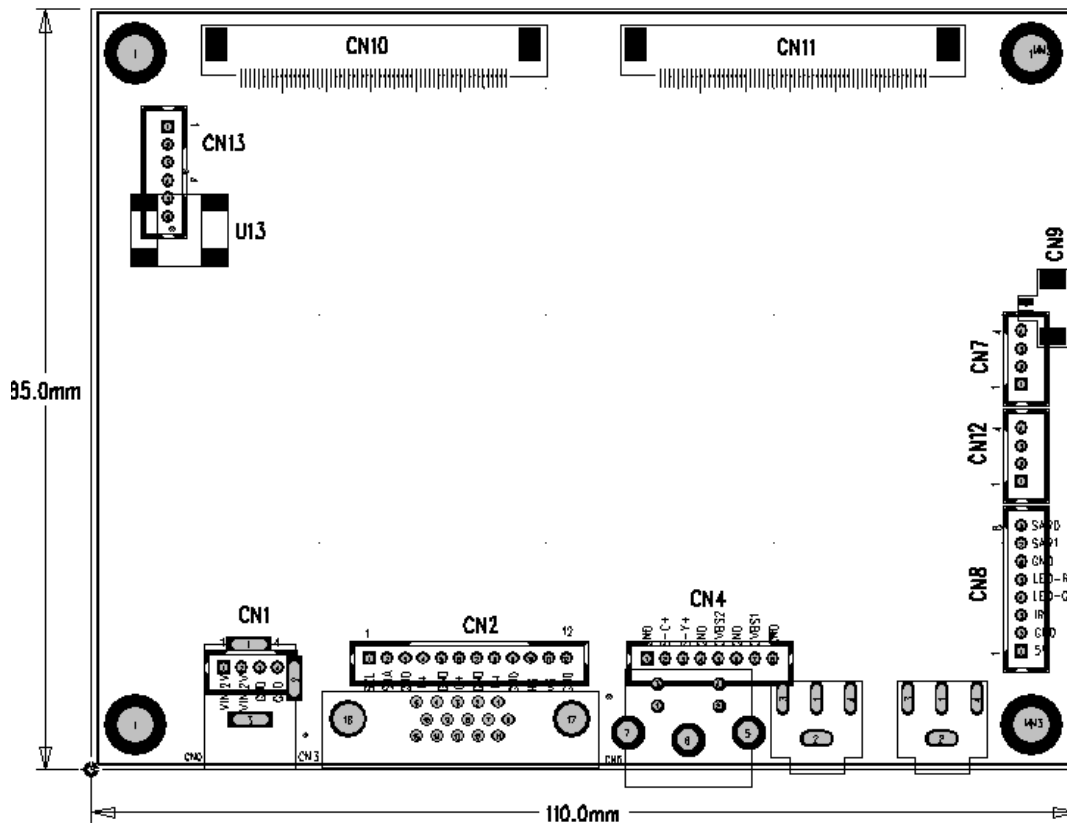
4.4,Equipment remote function

4.5,Off and on situation of the pilot lamp (green means on, red means off)



5,Product conformation photograph

5. 1Driver board

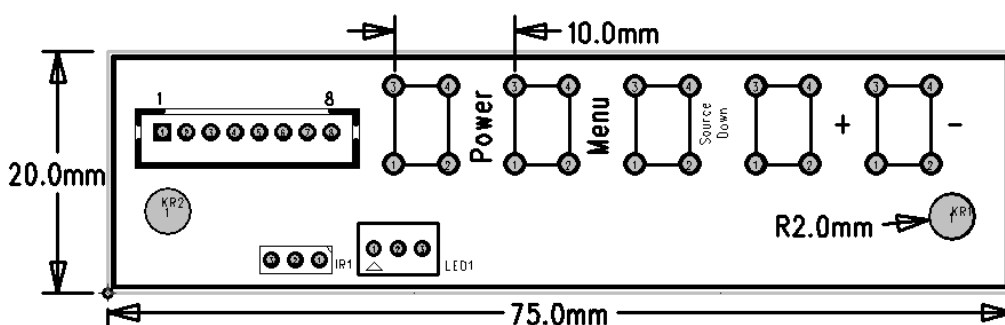


Length: 101mm

Width: 56mm

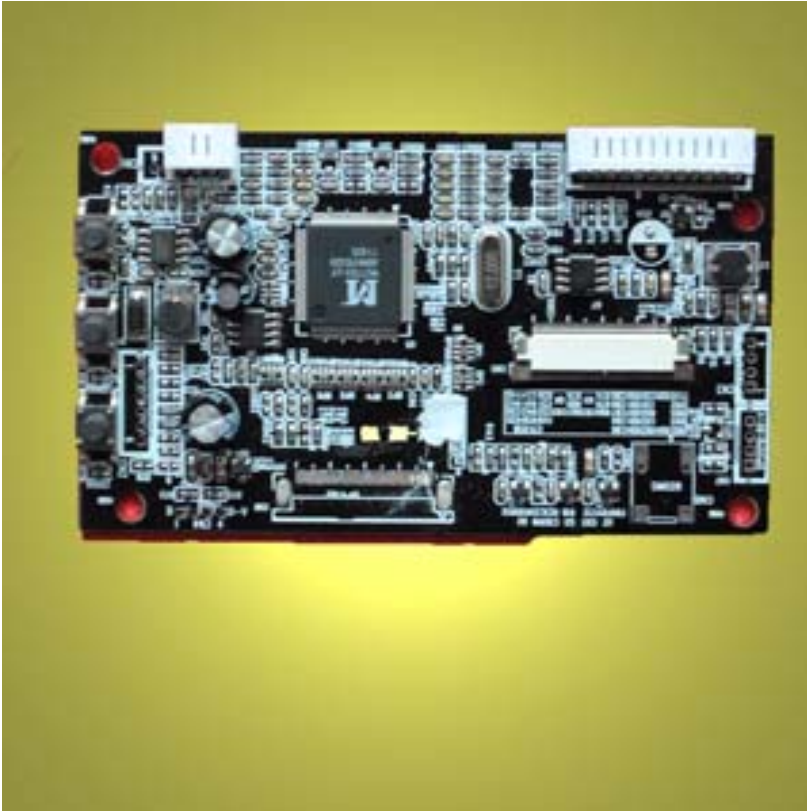
Hight: 10mm (componet and PCB board)

5. 2 Keyboard

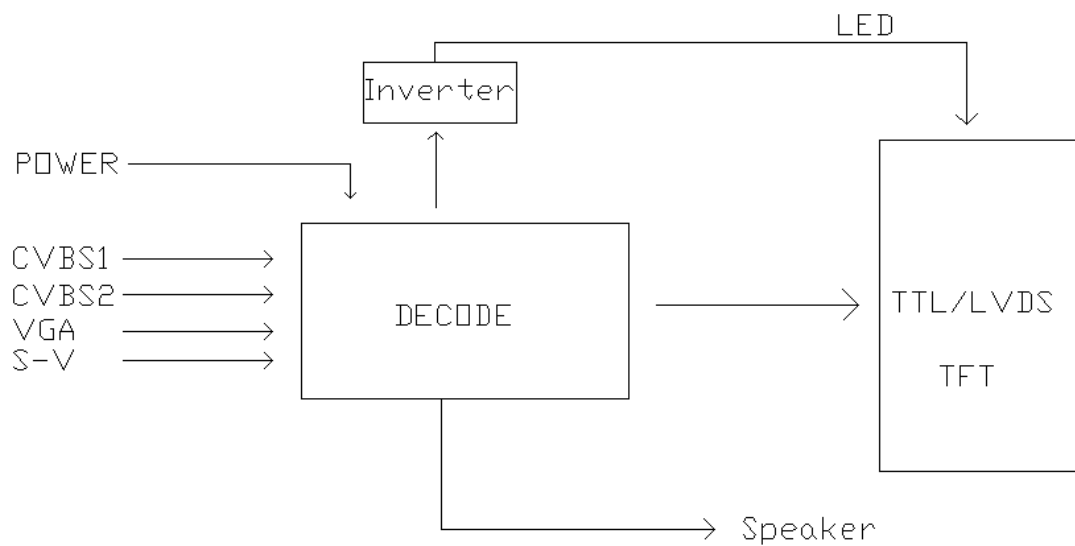




6, product photo



7, Electrical loop



8. Infrface definition

PowerCN1

Pin No.	definition	Description
1	+12V	power
2	+12V	power
3	GND	ground
4	GND	ground

VGA interface CN2

Foot No.	definition	description
1	SCL	I2C
2	SDA	I2C
3	GND	ground
4	B+	Blue signal+



5	GND	ground
6	G+	Green signal+
7	GND	ground
8	R+	Red signal+
9	GND	ground
10	HS	Horizontal synchronizing signal
11	VS	Field synchronizing signal
12	GND	ground

Signal input CN4

Foot No.	definition	description
1	GND	S-V
2	C+	ground
3	Y+	S-V
4	GND	ground
5	CVBS2	AV2 input
6	GND	ground
7	CVBS1	AV1 input



8	GND	ground
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Keyboard definition CN8

Foot No.	definition	description
1	VCC +5V	Keyboard power
2	GND	ground
3	IR INT	Infrared receiver
4	LED GREEN	LED green
5	LED RED	LED red
6	GND	ground
7	SAR1	Keyboard AD interface
8	SAR0	Keyboard AD interface

External control signal interface CN12

Pin no.	definition	description
1	+12V	External control signal
2	+12V	External control signal
3	GND	ground
4	GND	ground



Debug CN7

Pin no.	definition	description
1	+5V	Debug power
2	GND	ground
3	TX	Serial output
4	RX	Serial input

LCD line definition CN10/CN11



Pin no	Symbol	I/O	Description	Remark
1	AGND	P	Analog Ground	
2	AVDD	P	Analog Power	
3	VCC	P	Digital Power	
4	R0	I	Data input (LSB)	
5	R1	I	Data input	
6	R2	I	Data input	
7	R3	I	Data input	
8	R4	I	Data input	
9	R5	I	Data input	
10	R6	I	Data input	
11	R7	I	Data input (MSB)	
12	G0	I	Data input (LSB)	
13	G1	I	Data input	
14	G2	I	Data input	
15	G3	I	Data input	
16	G4	I	Data input	
17	G5	I	Data input	
18	G6	I	Data input	
19	G7	I	Data input (MSB)	
20	B0	I	Data input (LSB)	
21	B1	I	Data input	
22	B2	I	Data input	
23	B3	I	Data input	
24	B4	I	Data input	
25	B5	I	Data input	
26	B6	I	Data input	
27	B7	I	Data input (MSB)	
28	DCLK	I	Clock input	
29	DE	I	Data enable signal	
30	HSYNC	I	Horizontal sync input. Negative polarity	
31	VSYNC	I	Vertical sync input. Negative polarity	
32	SCL	I	Serial communication clock input	
33	SDA	I	Serial communication data input	
34	CSB	I	Serial communication chip select	
35	FBA	-	For test, do not connect (Please leave it open)	
59	GND	P	Digital Ground	
60	CAP	C	Connected to a capacitor	



36	VCC	P	Digital Power	
37	DRVA	-	For test, do not connect (Please leave it open)	
38	GND	P	Digital ground	
39	AGND	P	Analog ground	
40	AVDD	P	Analog Power	
41	VCOMin	I	For external VCOM DC input (Optional)	
42	DITH	I	Dithering setting DITH = "L" 6bit resolution(last 2 bits of input data turncated) DITH = "H" 8bit resolution(Default setting)	
43	NC	-	Not connect	
44	VCOM	O	connect a capacitor	
45	V10	P	Gamma correction voltage reference	
46	V9	P	Gamma correction voltage reference	
47	V8	P	Gamma correction voltage reference	
48	V7	P	Gamma correction voltage reference	
49	V6	P	Gamma correction voltage reference	
50	V5	P	Gamma correction voltage reference	
51	V4	P	Gamma correction voltage reference	
52	V3	P	Gamma correction voltage reference	
53	V2	P	Gamma correction voltage reference	
54	V1	P	Gamma correction voltage reference	
55	NC	-	Not connect	
56	VGH	P	Positive power for TFT	
57	VCC	P	Digital Power	
58	VGL	P	Negative power for TFT	



9. Reliaible test

Type	Test item	Test condition	Test qty	Standard
Save environment test	High temperature test	+70 96Hr	2	
	Low temperature test	-20 96Hr	2	
Working environment test	High temperature test	+60 96Hr	2	Normal working in process
	Low temperature test	-20 96Hr	2	
Cold start test	Cold start test	Start once after keeping it below -20℃for 40 minutes.Start 4 times after keeping it after 2 hours(once after 5 minutes). Start 4 times after keeping it after 4 hours(once after 5 minutes),check if it can work	2	
Heat cycle testing	Heat cycle testing	$-20^{\circ}\text{C} \xrightarrow{30\text{min}} 25^{\circ}\text{C} \xrightarrow{30\text{min}} 60^{\circ}\text{C}$ Continued working 30 cycles	2	
steady temperature damp test		+60℃ 90%RH continued working 96 hours	2	

Notes:

- 1、 Must be tested without dew;
- 2、 Must be put into the test box after tested,and get it after 24hours in normal temperatureandhumidity.



10.Bar Code description

definition Module Name	a	bbbb		cd	ef	gh	ijkl
AHX-PVI35-A	Company code	Product code	0254	year (00-99)	month (01-12)	date (01-31)	Product No.(0001-9999)/day

11, Service Promise

1.The company ensure that all the products are ok and agree to the clients test according to the specification. If any unqualified products(except the additional items) found, customers can return the same lot bad ones to us.

If the negative phenomena happens to the production line, we can accept the exchange within 30 days since the shipment date.

2.We supply one year warranty, the date from the products outcoming the factory. During the period, As for the non-human factor that lead to the defective products we can provide free repair or replacement(within 2 weeks after the date of reception).Beyond the warranty or the human factor lead to the badness, we company can offer appropriate maintenance at your discretion, and customers provide the maintenance materials and relevant fee.

12, Performance and Quality change notice

1.It is necessary to provide relevant documents if the performance and quality affected by the design or project, and reach an agreement before production. It is also need to attached the alteration to the specification and appending tags.

2. Notify the provider by the client when the client changes the design and process necessary for the required changes, and



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by mutual agreement before production to ensure that both parties (provider and client) to the stability of process engineering and product quality.

3. The use of different materials and specifications of the work.

Startek first requires the request and approval of the client to make the changes.

13. Statement (declaration)

22.1 This recognition of the interpretation Startek Electronic

22.2 Recognize the customer of a provider duplicate an effect, become the two sides confirmed the date of signature.

22.3 If there are updates, they should be resolved through consultation by both parties prior (before) to completion.