SPECIFICATION

Product Model: TF01MTK9700_R01

Release date: Sep.14,2024

PREPARED BY	CHECKED BY	APPROVED BY
WUF		

Record of revision

Revision No.	Revision	Revision Date	Description	Writer
1	R01	Sep.14,2024	Approved	WUF

CONTENT

1. INTRODUCTION

Thank you for purchasing the company's drive board products, with the LCD screen, please confirm that all accessories are consistent with the accessories.

This driver board is mainly used to support TFT LCD screen, driver board with 1 channel DP and 1 channel HDMI, support LVDS and eDP output interface. MTK signal processing chip is adopted in the motherboard, which has powerful processing functions and can support various standard and non-standard signals. The use of high - specification devices, with good performance.

Key features:

*** Working temperature: -30 ~ 80℃**

*** Light sensor (optional)**

*** LVDS output resolution up to 1920x1200**

*** Support IR function**

*** The basic resolution is up to 85Hz (if the LCD screen can work at 85Hz)**

*** Support LVDS and eDp interfaces**

*** The audio amplifier supports 2x10W at most**

*** Support serial port protocol control**

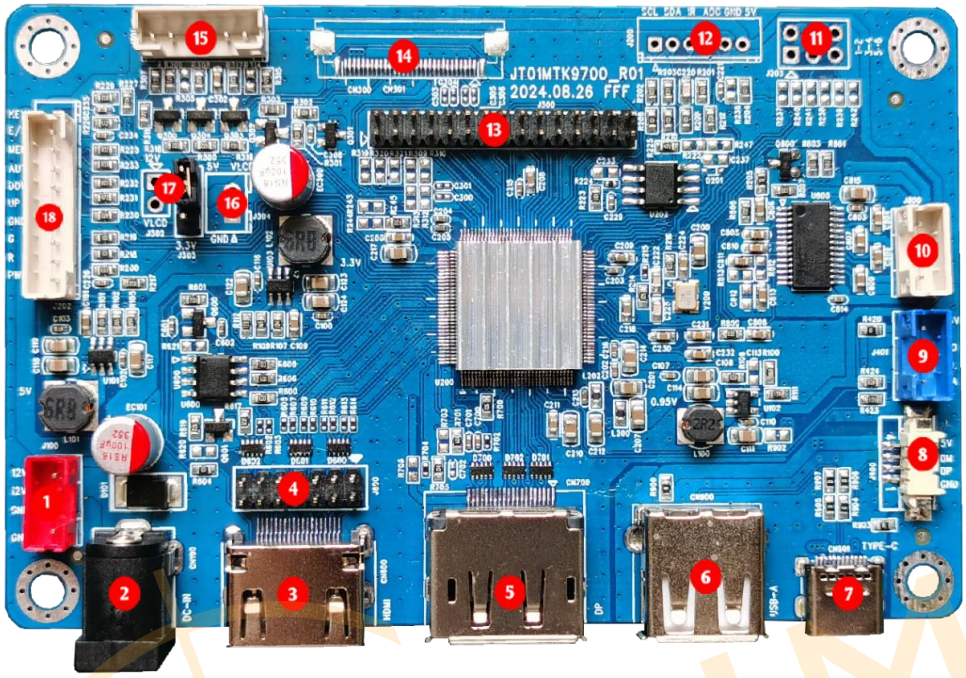
2. GENERAL SPECIFICATION

Output signal	Max resolution	1920x1200
	Output	Single/Dual LVDS、eDP
Signal Input	HDMI	Up To 1920x1200@60Hz HDMI 2.0
	DP	Up To 1920x1200@60Hz DP 1.2
	Horizontal Freq	30-75KHz
	Vertical Freq	50-75Hz
Voice Output	Max Power	2 X 10W @ 8Ω
POWER	Working Voltage	12V
	Drive-screen Voltage	3.3V/5V12V
	Stand-by	< 0.5W(just for motherboard)

Note1: Max power is depending on the subject display to be used.

Note2: Standby power consumption is affected by the testing instrument and testing environment, and there may be some error.

3. CONTROLLER PICTURE

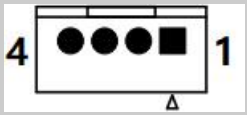


Note：The figure above is for reference only , the bulk goods shall prevail in kind.

Revision No	Tag	Function
1	J100	INPUT PIN POWER Connector
2	CN100	INPUT DC POWER Connector
3	CN600	HDMI
4	J600	HDMI PIN Connector
5	CN700	DP
6	CN900	USB
7	CN901	TYPE-C
8	J900	INPUT PIN USB Connector
9	J401	Serial and upgrade port
10	J800	Speaker
11	J203	Multi-screen parameter Connector
12	J200	Light Sensor & IR & I2C
13	J300	LVDS
14	CN300&CN301	eDP
15	J301	Backlight
16	J304	External Screen voltage selection
17	J302&J303	Screen voltage selection
18	J202	Keypad

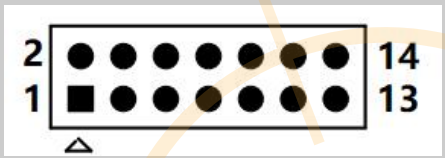
4. CONNECTOR, PINOUT

❖J100(4PIN/2.0mm)：INPUT PIN POWER Connector



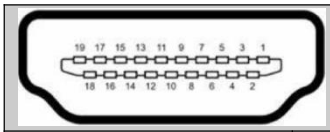
Pin No	Function	Description
1	GND	Ground
2	GND	Ground
3	VCC	12V Power
4	VCC	12V Power

❖J600(2 X 7PIN/2.0mm)：HDMI PIN Connector



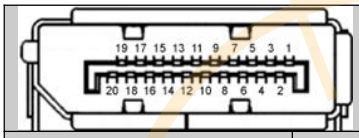
Pin No	Function	Description
1	GND	Ground
2	DAT2+	HDMI Data2+
3	DAT2-	HDMI DAT2-
4	DAT1+	HDMI Data1+
5	DAT1-	HDMI Data1-
6	DAT0+	HDMI Data0+
7	DAT0-	HDMI Data0-
8	DCLK+	HDMI Clock+
9	DCLK-	HDMI Clock-
10	GND	Ground
11	SCL	SCL
12	SDA	SDA
13	5V	HDMI 5V
14	HPD	Hot Plug Detect

❖CN600 ： HDMI



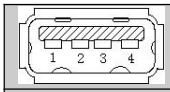
Pin No.	Function	Pin No.	Function
1	TMDS Data2+	2	GND
3	TMDS Data2-	4	TMDS Data1+
5	GND	6	TMDS Data1-
7	TDMS Data0+	8	GND
9	TMDS Data0-	10	TMDS Clock+
11	GND	12	TMDS Clock-
13	CEC	14	NC
15	SCL	16	SDA
17	GND	18	+5V Power
19	Hot Plug Detect		

❖CN700 ： DP



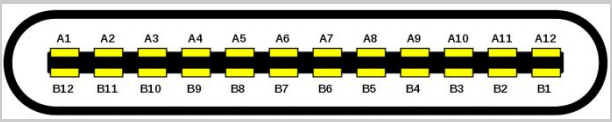
Pin No.	Function	Pin No.	Function
1	ML_LANE3_N	11	GND
2	GND	12	ML_LANE0_P
3	ML_LANE3_P	13	GND
4	ML_LANE2_N	14	GND
5	GND	15	AUX_CH_P
6	ML_LANE2_P	16	GND
7	ML_LANE1_N	17	AUX_CH_N
8	GND	18	HPD
9	ML_LANE1_P	19	GND
10	ML_LANE0_N	20	DP3.3V

❖CN900 ： USB



Pin No.	Function	Pin No.	Function
1	5V_IN	2	DM
3	DP	4	GND

❖**CN700 ： Type-C**

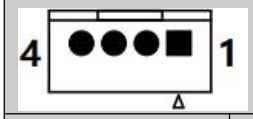


Pin No.	Function	Pin No.	Function
A1	GND	B1	GND
A2	TX1+	B2	TX2+
A3	TX1-	B3	TX2-
A4	VBUS	B4	VBUS
A5	CC1	B5	CC2
A6	D+	B6	D+
A7	D-	B7	D-
A8	SBU1	B8	SBU2
A9	VBUS	B9	VBUS
A10	RX2-	B10	RX1-
A11	RX2+	B11	RX1+
A12	GND	B12	GND

❖**J900(4PIN/1.25mm)：INPUT PIN USB Connector**

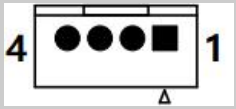
Pin No	Function	Description
1	GND	Ground
2	DP	USB+
3	DM	USB-
4	5V	USB 5V

J401(4PIN/2.0mm)：Serial and upgrade port



Pin No	Function	Description
1	3.3V	3.3V Power
2	GND	Ground
3	RX	UART TTL RX/ IIC-SCL
4	TX	UART TTL TX/IIC-SDA

❖**J800(4PIN/2.0mm)： Speaker Connector**



Pin No	Function	Description
1	L+	Speaker left channel output
2	L-	Speaker left channel output
3	R-	Speaker right channel output
4	R+	Speaker right channel output

❖**J300 (2 X 15PIN/2.0mm)：LVDS/eDP**

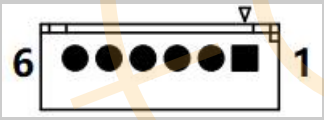
Pin No.	Function	Pin No.	Function
1	VCC	2	VCC
3	VCC	4	AUX_CH_P
5	AUX_CH_N	6	GND
7	RXO0-	8	RXO0+/eDP_HPD
9	RXO1-/ LANE0_N	10	RXO1+/LANE0_P
11	RXO2-/ LANE1_N	12	RXO2+/ LANE1_P
13	GND	14	GND
15	RXOC-	16	RXOC+
17	RXO3-	18	RXO3+
19	RXE0-	20	RXE0+
21	RXE1-	22	RXE1+
23	RXE2-	24	RXE2+
25	GND	26	GND
27	RXEC-	28	RXEC+
29	RXE3-	30	RXE3+

Note：1.When connecting a single LVDS panel, please connect the one near the power pin.
2. The ones in red are eDP definitions non-standard definition

❖CN300&CN301(30PIN/0.5mm)：eDP FPC&IPEX

Pin No.	Function	Pin No.	Function
1	NC	16	GND
2	GND	17	eDP_HPD
3	LANE1_N	18	GND
4	LANE1_P	19	GND
5	GND	20	GND
6	LANE0_N	21	GND
7	LANE0_P	22	EN
8	GND	23	ADJ
9	AUX_CH_P	24	NC
10	AUX_CH_N	25	NC
11	GND	26	+12V
12	VLCD	27	+12V
13	VLCD	28	+12V
14	NC	29	+12V
15	GND	30	NC

❖J200(6PIN/2.0mm)：Light Sensor & IR & I2C



Pin No	Function	Description
1	SCL	I2C clock signal
2	SDA	I2C data signa
3	IR	remote control
4	ADC	ADC
5	GND	Ground
6	+5V	5V Power

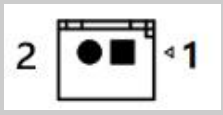
❖**J303 ： Screen voltage selection**

Pin No.	Function	Pin No.	Function
1	5V	2	PVCC
3	3.3V		

❖**J302 ： Screen voltage selection**

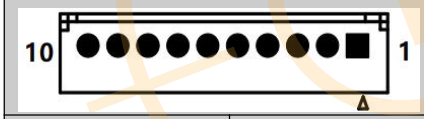
Pin No.	Function	Pin No.	Function
1	12V	2	PVCC

❖**J304(2PIN/2.0mm)：External Screen voltage**



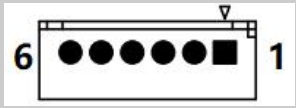
Pin No	Function	Description
1	VLCD	LCD Power
2	GND	Ground

❖**J202 (10PIN/2.0mm)：Keypad Connector**



Pin No	Function	Description
1	POWER	Power key
2	LED_R	Red indicator light
3	LED_G	Green indicator light
4	GND	Ground
5	UP	Add key
6	DOWN	Minus key
7	AUTO	Left key
8	MENU	Menu key
9	E/S	Exit key
10	KEY	Right key

❖**J301(6PIN/2.0mm)：Backlight Connector**

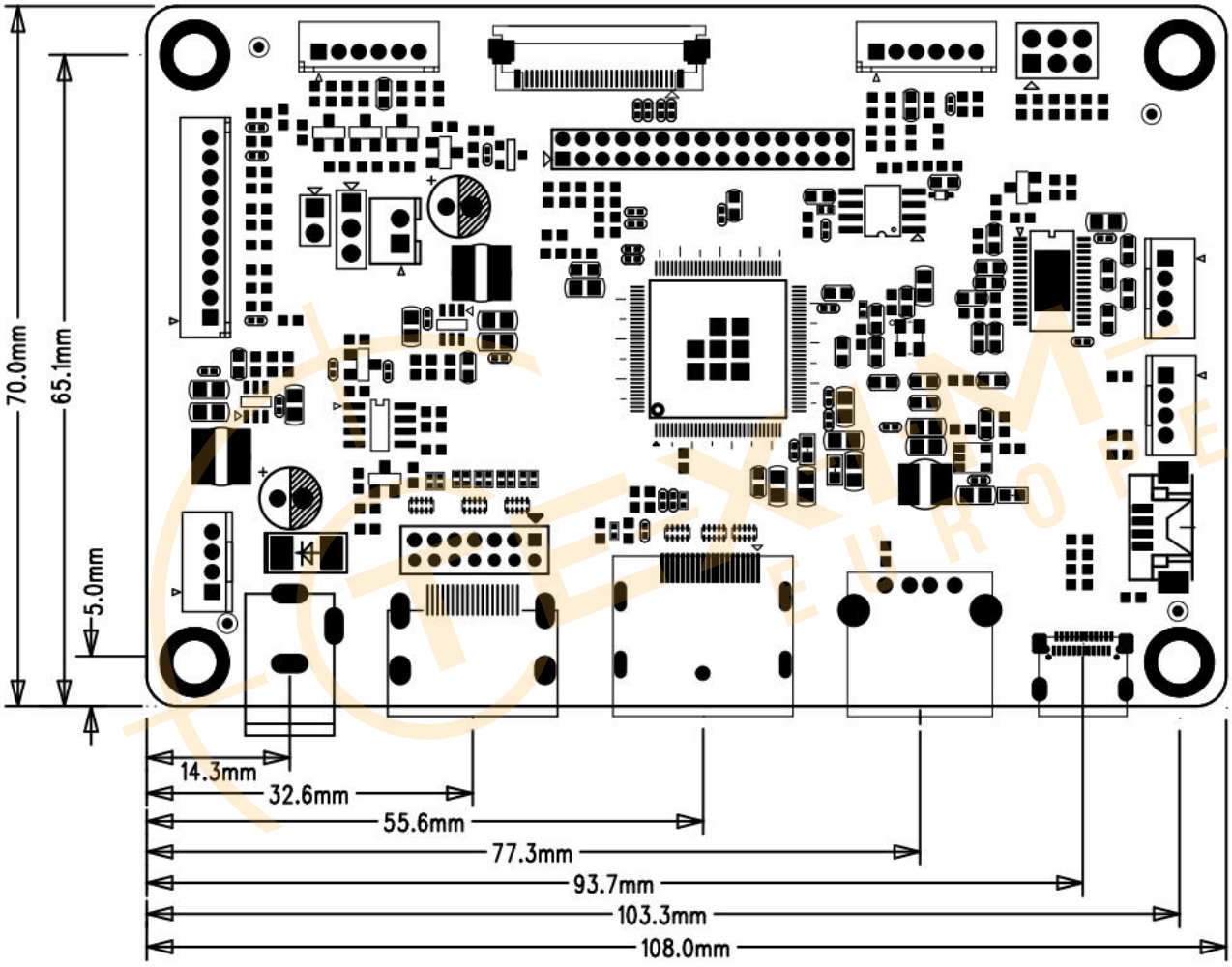


Pin No	Function	Description
1	12V	12V Power
2	12V	12V Power
3	EN	Backlight switch control
4	ADJ	Brightness adjustment
5	GND	Ground
6	GND	Ground

Note: ADJ supports both voltage and PWM to adjust brightness. When connecting the screen with the built-in backlight constant current source, please connect this pin to the 'PWM' of the LCD screen, and then choose our program with the PWM identification.

5. CONTROLLER DIMENSIONS

PCB Thickness：1.6mm
Length and width：108.0x70.0mm
Total height：15.00mm
Bore Diameter： Φ3.5mm



6. OSD Keypad

❖5-Key Function

5 Keys	Menu	Shortcut Keys
POWER	Power key	Power key
MENU	‘Enter	Turn on’ main Menu
E/S	‘Exit	‘Select input source
UP	Add/Up	Brightness increase
DOWN	Minus/Down	Brightness decrease

❖6-Key Function

6 Keys	Menu	Shortcut Keys
POWER	Power key	Power key
MENU	‘Enter	Turn on’ main Menu
E/S	‘Exit	‘Select input source
UP	Add/Up	Brightness increase
DOWN	Minus/Down	Brightness decrease
LEFT	None	None

❖7-Key Function

7 Keys	Menu	Shortcut Keys
POWER	Power key	Power key
MENU	‘Enter	Turn on’ main Menu
E/S	‘Exit	‘Select input source
UP	UP	Brightness increase
DOWN	DOWN	Brightness decrease
LEFT	Minus	Contrast decrease
RIGHT	Add	Contrast increase

* If you need more key function, please contact us.

7. MISC

- Our remote control style.
- If you need the remote control, please contact the business.
- Pressing the '+' and '-' buttons on the keypad simultaneously can enter the factory menu and start the aging mode.

Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Texim Europe B.V. its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Texim”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Texim makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product.

It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts.

Please contact us if you have any questions about the contents of the datasheet.

This may not be the latest version of the datasheet. Please check with us if a later version is available.

Texim Europe - contact details

Headquarters & Warehouse

Elektrostraat 17
NL-7483 PG Haaksbergen
The Netherlands

T: +31 (0)53 573 33 33
E: info@texim-europe.com
Homepage: www.texim-europe.com

The Netherlands

Elektrostraat 17
NL-7483 PG Haaksbergen

T: +31 (0)53 573 33 33
E: nl@texim-europe.com

Belgium

Zuiderlaan 14, box 10
B-1731 Zellik

T: +32 (0)2 462 01 00
E: belgium@texim-europe.com

UK & Ireland

St Mary's House, Church Lane
Carlton Le Moorland
Lincoln LN5 9HS

T: +44 (0)1522 789 555
E: uk@texim-europe.com

Germany - North

Bahnhofstrasse 92
D-25451 Quickborn

T: +49 (0)4106 627 07-0
E: germany@texim-europe.com

Germany - South

Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
E: muenchen@texim-europe.com

Austria

Warwitzstrasse 9
A-5020 Salzburg

T: +43 (0)662 216 026
E: austria@texim-europe.com

Nordic

Stockholmsgade 45
2100 Copenhagen

T: +45 88 20 26 30
E: nordic@texim-europe.com

Italy

Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
E: italy@texim-europe.com