

[TGU3A]

[User's Manual]



六联智能
SIXUNITED

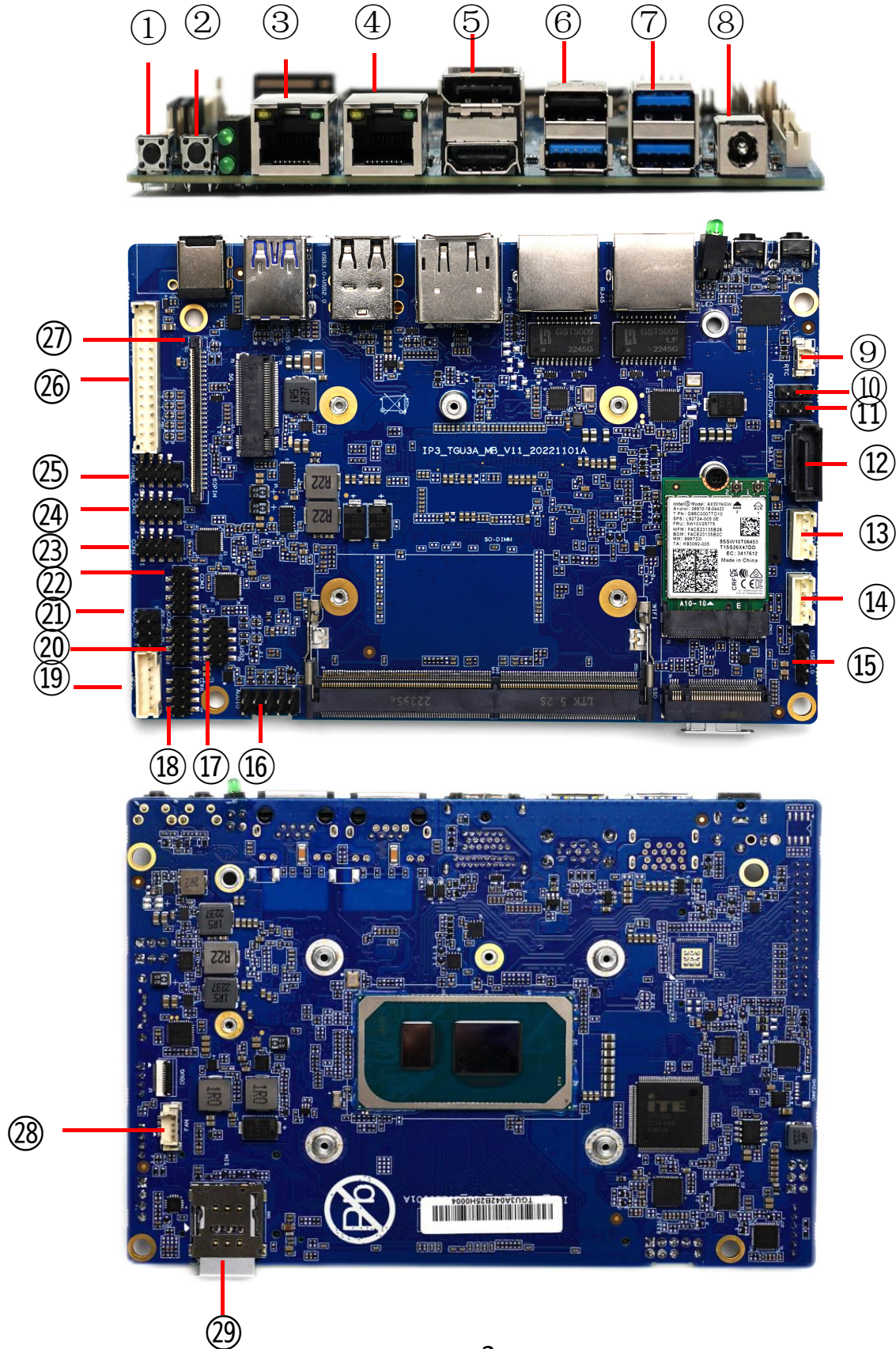
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1. Specifications

Model	TGU3A
CPU	Support Intel Tiger Lake-UP3 /TGL-H35 CPU TGU3A-SKU#3: i5-1135G7/4C/8T/Max Turbo Freq 4.2 Ghz/TDP up to 28W/LVDS/SATA SSD/HP Port TGU3A-SKU#4: i5-1135G7/4C/8T/Max Turbo Freq 4.2 Ghz/TDP up to 28W/EDP/PCIE 4.0 SSD/5525Port
Memory	1*DDR4 SO-DIMM, Single Channel, Up to 32GB
Graphics	1*HDMI 2.0b, Maximum resolution 3840x2160@60Hz 1*DP 1.4, Maximum resolution 3840x2160@60Hz 1*LVDS, Maximum resolution 1920x1080@60Hz or EDP, Maximum resolution 3840x2160@60Hz
Storage	1*M.2 M Key 2280 PCIeX4 or SATA 1*SATA3.0
LAN	1*Realtek 1000M LAN 1*Realtek 2500M LAN
Serial Port	COM1~COM2 RS232, BIOS RS232/R485/RS422 optional, COM3~COM5 RS232 Expandable to 6COM via 60PIN FPC
USB	3*USB3.2 Gen1, 5*USB2.0 (60PIN FPC contains 1)
Rear IO	1*12V/19V(Default)colay DC_IN (HP Port or 5525Port) 1*HDMI 2.0_OUT 1*DP 1.4 1*2 layer USB 3.2 Gen1 1*2 layer USB 3.2 Gen1+USB2.0 2*RJ45
Front I/O	NA
Internal I/O	1*M.2 M Key 2280 for SSD (PCIeX4 or SATA) 1*M.2 E Key 2230 for WIFI (PCIe&USB&CNVI) 1*M.2 B Key 3042 for 4G LTE 6*COM 1*SATA 1*SATA POWER 1*5V CPU FAN 1*Auto Power On/OFF Jumper 1*Clear CMOS 1* 2x5 USB2.0 Header 1* 1x4 USB2.0 Header 1*F PANEL 1*F AUDIO 1*INVERTER 1*LVDS_PWR Jumper 1*Internal Stereo Speaker (3W) 1*LVDS/EDP 1*60PIN (1*UART, 1*USB2.0, 8*GPIO, 1*I2C, 1*PCIE, 1*PS/2)
Size	146mm*102mm
Temperature	Operation: -10~60°C, Storage: -40~85°C
Relative Humidity	Operation: 10~90%, Storage: 5~95%
Power Input	DC 12V/19V (Default) Colay


2. Locations



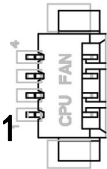
Locations	
1	Power Button
2	Reset Button
3	LAN1
4	LAN2
5	DP+HDMI
6	USB2.0+USB3.0
7	USB3.0*2
8	DC_IN
9	RTC
10	CMOS
11	AUTO PWRON
12	SATA
13	HDD_PWR
14	SPK
15	USB2.0
16	AUDIO
17	F_USB
18	COM1
19	BKL
20	COM2
21	LCD_VDD
22	COM3
23	COM4
24	COM5
25	F_PANEL
26	LVDS/EDP
27	FPC (1*UART, 1*USB2.0, 8*GPIO, 1*I2C, 1*PCIE, 1*PS/2)
28	FAN
29	SIM

3. Connector and Jumper Setting


1) CLEAR CMOS

Graphic	Setting	Function
	1-2 (Default)	CLEAR CMOS
	2-3	Normal


2) CPU FAN

Graphic	PIN	Define
	1	+5VS
	2	FANO_PWMCTRL
	3	GND
	4	FANO_TACH

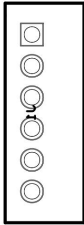
3) RTC CON

Graphic	PIN	Define
	1	VRTC_BAT
	2	GND

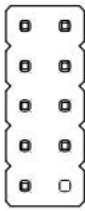
4) AUTO PWRON

Graphic	Setting	Function
	1-2 (Default)	AT Mode
	2-3	ATX Mode


5) BKL

Graphic	PIN	Define
	1	LCD_BKLT
	2	LCD_BKLT
	3	BKL_EN
	4	BKL_PWM
	5	GND
	6	GND

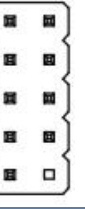
6) FPANEL

Graphic	PIN	Define	PIN	Define
1 	1	V3.3S	2	V3P3A
	3	SATA_LED#	4	PWR_LED_GREEN
	5	GND	6	SIO_PWRBTN_IN_N
	7	PM_SYSRST_N	8	GND
	9	GND		

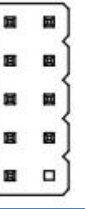
7) COM1~2

Graphic	PIN	Define	PIN	Define
1 	1	DCD1/ RS485 D-/ RS422 TX-	2	RXD1/ RS485 D+/ RS422 TX+
	3	TX1/ RS422 RX+	4	DTR1/ RS422 RX-
	5	GND	6	DSR1
	7	RTS1	8	CTS1
	9	RI1		


8) COM3~5

Graphic	PIN	Define	PIN	Define
1 	1	DCD3	2	RXD3
	3	TX3	4	DTR3
	5	GND	6	DSR3
	7	RTS3	8	CTS3
	9	RI3		


9) F_USB

Graphic	PIN	Define	PIN	Define
1 	1	V5P0A_USB2	2	V5P0A_USB2
	3	USB2_P5_DN	4	USB2_P6_DN
	5	USB2_P5_DP	6	USB2_P6_DP
	7	GND	8	GND
	9	GND		


10) USB2.0

Graphic	PIN	Define
1 	1	V5P0A_USB2
	2	USB2_P7_DN
	3	USB2_P7_DP
	4	GND

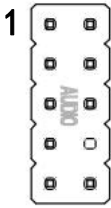
11) HDD_PWR

Graphic	PIN	Define
	1	V5S
	2	GND
	3	GND
	4	12V/V5S


12) SPK

Graphic	PIN	Define
	1	SPKR_RN
	2	SPKR_RP
	3	SPKR_LP
	4	SPKR_LN

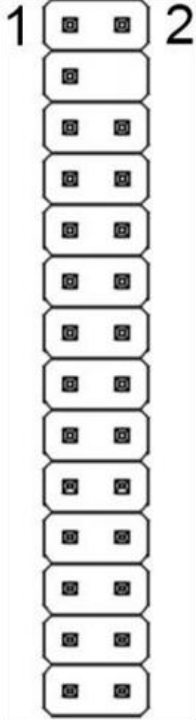
13) ADUIO

Graphic	PIN	Define	PIN	Define
	1	MIC_L	2	GND_AUD
	3	MIC_R	4	NC
	5	HP_OUT_R_C	6	MIC_DET_R
	7	GND_AUD	8	NA
	9	HP_OUT_L_C	10	HP_DET_FP_R

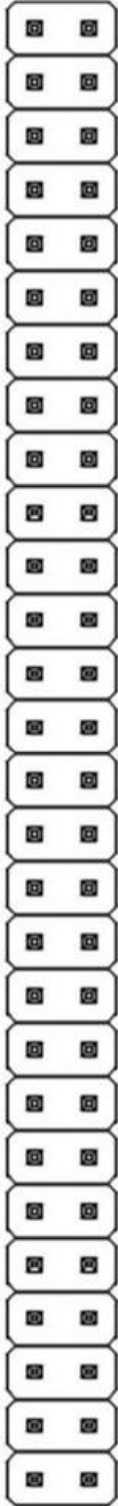
14) LCD_VDD

Graphic	Setting	Function
	1-2	LCD_VDD 3.3V
	3-4	LCD_VDD 5V
	5-6	LCD_VDD 12V

15) LVDS EDP

Graphic	PIN	Define	PIN	Define
	1	VDD	2	VDD
	3	VDD	4	
	5	EDP_HPD/ LVDS_HPD	6	EDP_HPD/ LVDS_HPD
	7	LVDS_A_DATA0-/ N/C	8	LVDS_A_DATA0+/ N/C
	9	LVDS_A_DATA1-/ N/C	10	LVDS_A_DATA1+/ N/C
	11	LVDS_A_DATA2-/ N/C	12	LVDS_A_DATA2+/ N/C
	13	GND	14	GND
	15	LVDS_A_CLK-/ N/C	16	LVDS_A_CLK+/ N/C
	17	LVDS_A_DATA3-/ N/C	18	LVDS_A_DATA3+/ N/C
	19	EDP1_TX0-/ LVDS_B_DATA0-	20	EDP1_TX0+/ LVDS_B_DATA0+
	21	EDP1_TX1-/ LVDS_B_DATA1-	22	EDP1_TX1+/ LVDS_B_DATA1+
	23	DDIO_TX2-/ LVDS_B_DATA2-	24	DDIO_TX2+/ LVDS_B_DATA2+
	25	GND	26	GND
	27	DDIO_TX3-/ LVDS_B_CLK-	28	DDIO_TX3+/ LVDS_B_CLK+
	29	EDP1_AUX-/ LVDS_B_DATA3-	30	EDP1_AUX+/ LVDS_B_DATA3+

16) 60PIN FPC

Graphic	PIN	Define
	1	V5P0A_USB
	2	V5P0A_USB
	3	V5P0A_USB
	4	GND
	5	V3P3A
	6	V3P3A
	7	V3P3A
	8	V3P3A
	9	GND
	10	SATA_DEVSLP_0
	11	PLT_RST_N
	12	WAKE_N
	13	PCIE_CLKREQ#
	14	GND
	15	MCLK_CON
	16	MDAT_CON
	17	GND
	18	THCO_SPI1_INT_N
	19	THCO_SPI1_RST_N_TCH_PNL
	20	GND
	21	I2C_SCL
	22	I2C_SDA
	23	GND
	24	KDAT_CON
	25	KCLK_CON
	26	GND
	27	CLK_PCIE_DP4
	28	CLK_PCIE_DN4
	29	GND
	30	PCIE8_RX_DN
	31	PCIE8_RX_DP
	32	GND
	33	PCIE8_TX_DP
	34	PCIE8_TX_DN
	35	GND
	36	GPIO8

	37	GPIO7
	38	GPIO6
	39	GPIO5
	40	GPIO4
	41	GPIO3
	42	GPIO2
	43	GPIO1
	44	GND
	45	RI6#
	46	CTS6#
	47	RTS6#
	48	DSR6#
	49	GND
	50	DTR6#
	51	SOUT6
	52	SIN6
	53	DCD6#
	54	GND
	55	USB2_P8_DP1
	56	USB2_P8_DN1
	57	GND
	58	V5P0A_USB
	59	V5P0A_USB
	60	V5P0A_USB