T650QVR03.0 One Page Spec

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Product Specification

Item	T650QVR03.0
Resolution	3840x2160
Aspect Ratio	16:9
Pixel Size	0.372* 0.372mm
Brightness	350nit (typ)
Contrast Ratio	4000:1 (typ)
Display Color	10 bit
Frame Rate	120Hz
Interface	16 lanes, V by one, 12V
Surface Treatment	AG, Haze 2%
Gamma	2.2
Color Gamut	72%
Module Chromaticity (X,Y)	(0.280, 0.290)
B/L Power	172.8W
View Angle	89/89/89/89
BLU	E-LED
Outline (mm)	1452.9 (H) *826.3 (V)
Thickness	TBD
Weight	~ 25 kg

- *Product Feature*
  - Wide Panel: *16 : 9*
  - Curve Application: 6600
  - With Driver Board

- *Schedule*
  - ES: 1/E'15
  - CS: 2/E'15
  - MP: 3/E'15

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V-by-1 Interface- 51 Pin

PIN	Symbol	Description	Note	PIN	Symbol	Description	Note
1	VDD	12V_PW		26	LOOKN	LOCK detect	
2	VDD	12V_PW		27	GND	GND	
3	VDD	12V_PW		28	RxN0	Vx1 lane 0	
4	VDD	12V_PW		29	RxP0	Vx1 lane 0	
5	VDD	12V_PW		30	GND	Ground	
6	VDD	12V_PW		31	RxN1	Vx1 lane 1	
7	VDD	12V_PW		32	RxP1	Vx1 lane 1	
8	VDD	12V_PW		33	GND	Ground	
9	NC	No connection	2	34	RxN2	Vx1 lane 2	
10	NC	No connection	2	35	RxP2	Vx1 lane2	
11	NC	No connection	2	36	GND	Ground	
12	GND	GND		37	RxN3	Vx1 lane 3	
13	GND	GND		38	RxP3	Vx1 lane 3	
14	GND	GND		39	GND	Ground	
15	LR_OUT	LR_OUT	4	40	RxN4	Vx1 lane 4	
16	3D_SYNC_IN	3D_SYNC_IN	4	41	RxP4	Vx1 lane 4	
17	3DEN	3D Function Enable	3.4	42	GND	Ground	
18	NC	No connection	2	43	RxN5	Vx1 lane 5	
19	NC	No connection	2	44	RxP5	Vx1 lane 5	
20	NC	No connection	2	45	GND	Ground	
21	NC	No connection	2	46	RxN6	Vx1 lane 6	
22	NC	No connection	2	47	RxP6	Vx1 lane 6	
23	NC	No connection	2	48	GND	Ground	
24	GND	GND		49	RxN7	Vx1 lane 7	
25	HTPDN	HTPDN		50	RxP7	Vx1 lane 7	
				51	GND	GND	

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V-by-1 Interface- 41 Pin

PIN	Symbol	Description	Note	PIN	Symbol	Description	Note
1	GND	Ground		21	Rx14p	Vx1 lane14	
2	Rx8n	Vx1 lane8		22	GND	Ground	
3	Rx8p	Vx1 lane 8		23	RxN15	Vx1 lane15	
4	GND	Ground		24	RxP15	Vx1 lane15	
5	Rx9n	Vx1 lane9		25	GND	Ground	
6	Rx9p	Vx1 lane9		26	NC	No connection	2
7	GND	Ground		27	NC	No connection	2
8	Rx10n	Vx1 lane10		28	NC	No connection	2
9	Rx10p	Vx1 lane10		29	NC	No connection	2
10	GND	Ground		30	NC	No connection	2
11	Rx11n	Vx1 lane11		31	NC	No connection	2
12	Rx11p	Vx1 lane11		32	PWM_OUT	3D PWM Signal	4
13	GND	Ground		33	Boost_EN	Boost enable High for Enable Low for Disable	
14	Rx12n	Vx1 lane12		34	GND	GND	
15	Rx12p	Vx1 lane12		35	NC	No connection	2
16	GND	Ground		36	NC	No connection	2
17	Rx13n	Vx1 lane13		37	NC	No connection	2
18	Rx13p	Vx1 lane13		38	NC	No connection	2
19	GND	Ground		39	NC	No connection	2
20	Rx14n	Vx1 lane14		40	NC	No connection	2
				41	NC	No connection	2

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Signal Timing

Timing Table (DE only Mode)

Signal	Item	Symbol	Min.	Typ.	Max	Unit
Vertical Section	Period	Tv	2180	2250	2715	Th
	Active	Tdisp (v)	2160			
	Blanking	Tblk (v)	20	90	555	Th
Horizontal Section	Period	Th	270	275	300	Tclk
	Active	Tdisp (h)	240			
	Blanking	Tblk (h)	30	35	60	Tclk
Clock	Frequency	Fclk=1/Tclk	66	74.25	77	MHz
Vertical Frequency	Frequency	Fv	94	120	122	Hz
Horizontal Frequency	Frequency	Fh	240	270	278.4	KHz

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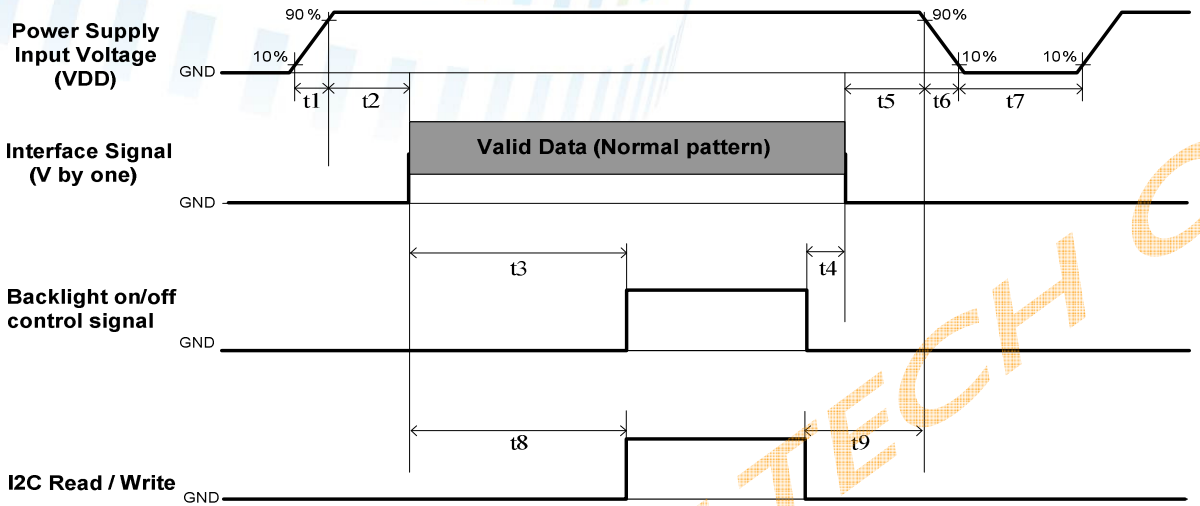
Power Sequence



Parameter	Values			Unit
	Min.	Type.	Max.	
t1	0.4	---	30	ms
t2-1	10	---	---*1	ms
t2-2	---	---	---*2	ms
t2-3	---	---	1	ms
t3	670	---	---	ms
t4	0*3	---	---	ms
t5	0	---	---	ms
t6	---	---	---*4	ms
t7	500	---	---	ms
t8	10*5	---	50	ms
t9	0	---	---	ms

Note:

(1) t2-1 : The maximum timing of VDD rising(90%) to HTPDN falling edge decided by customer system.
(2) t2-2 : V by One training time after power-on. The timing of HTPDN falling edge to LOCKN falling edge decided by customer system.

(3) t4=0 : concern for residual pattern before BLU turn off.

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