

Electrical and Mechanical Application Information

10/27/2011

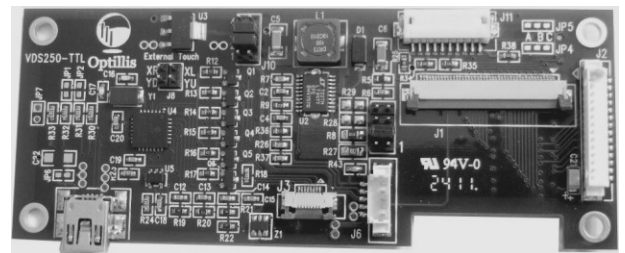
The Optillis **VDS250** converts LVDS to CMOS signals and includes onboard 4 wire touch and LED back Light control. The **VDS250** supports several CMOS display sizes with dual output connectors. The DF9-31S1V found on standard VGA displays and a flex connection for Optrex's 5.0" WVGA TFT's .

Features and Advantages

- ✓ Direct connection to multiple displays (see below)
- ✓ Mounts to rear of the display
- ✓ Powered by USB connector.
- ✓ LED backlight driver and 4 wire USB touch controller
- ✓ Support for various LED backlight brightness's
- ✓ One Year Warranty

ClearClass LVDS to TTL with LED Driver & Touch

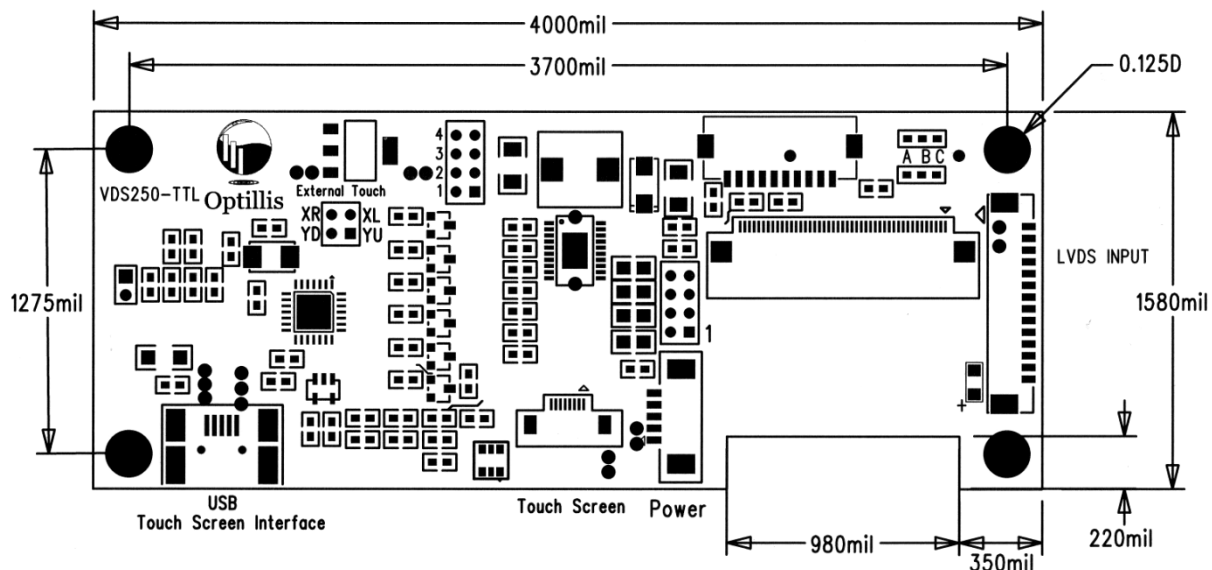
VDS250-TTL-Xxx



Part Number Variations

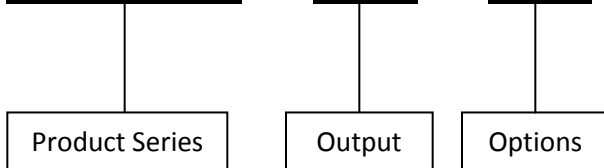
VDS250-TTL-1	5.0"	Optrex TFT	w/o TS
VDS250-TTL-1TS	5.0"	Optrex TFT	w/TS
VDS250-TTL-2	6.5"	51750 TFT	w/o TS
VDS250-TTL-2TS	6.5"	51750 TFT	w/TS
VDS250-TTL-3	VGA	6.5-10.4"	w/o TS
VDS250-TTL-3TS	VGA	6.5-10.4"	w/TS

See specification for full description



Ordering Information:

VDS250 – TTL – Xxx



Option	Panel Support
-1	Optrex 5.0" T-(55382/55423)GD050J-LW-AAN Note: W/O Touch Controller Installed
-1TS	Optrex 5.0" T-(55382/55423)GD050J-LW-ABN Note: W/Touch Controller Installed
-2	Optrex 6.5" T-51750GD065J-LW-ADN, -ANN Note: W/O Touch Cntl & Separate LED Conn
-2TS	Optrex 6.5" T-51750GD065J-LW-AQN Note: W/Touch Cntl & Separate LED Conn
-3	Optrex VGA Panels *See List Below Note: W/O Touch Controller Installed
-3TS	Optrex VGA Panels *See List Below Note: W/Touch Controller Installed

-3 Panel Support (Series)		
6.5 " 55465 –AAN, ABN	8.4" 55467-AAN	10.4" 55532-ADN-ACN
-3TS Panel Support (Series)		
6.5" Consult Factory	8.4" Consult Factory	10.4" Consult Factory

J1. Optrex T-55382/55423 LCD Interface

1. Gnd	24. B3
2. Gnd	25. B4
3. 3.3 Volt supply	26. B5
4. 3.3 Volt supply	27. B6
5. R0, connected to ground	28. B7
6. R1, connected to ground	29. Gnd
7. R2	30. DCLK
8. R3	31. DISP, Connected to 3.3 volt supply
9. R4	32. HD
10. R5	33. VD
11. R6	34. DENA
12. R7	35. AVdd, Connected to 5 volt supply
13. GO, connected to ground	36. AVdd, Connected to 5 volt supply
14. G1, connected to ground	37. NC
15. G2	38. NC
16. G3	39. SC, Connected to JP3-B
17. G4	40. Gnd
18. G5	41. Gnd
19. G6	42. LED, Cathode 1
20. G7	43. LED, Anode 1
21. B0, connected to ground	44. LED, Cathode 2
22. B1, connected to ground	45. LED, Anode 2
23. B2	

J2. LVDS Interface

Mating connector: Molex 51021-1400, Contact: 50058-8100

1. 3.3 Volt supply input
2. 3.3 Volt supply input
3. Gnd
4. NC
5. RxIN0-
6. RxIN0+
7. RxIN1-
8. RxIN1+
9. RxIN2-
10. RxIN2+
11. RxCLK IN-
12. RxCLK IN+
13. Gnd
14. Gnd

J3. T-55382/55423 Touch Screen Interface

- 1, 2. XL
- 3, 4. XR
- 5, 6. YU
- 7, 8. XL

J4. Backlight Current Jumper Selection

1. Optrex T-51750 4 led rails, 35ma/rail
2. Optrex T-55382/55423GD050JU-LW 2 led rails, 15ma/rail
- 3.
- 4.

Caution: Before applying power be sure the backlight current jumper is set correctly. Permanent damage may occur to the LED string if the current is set to high.

J5. Touch Screen USB Connection

1. 5 Volt Input
2. D-
3. D+
4. NC
5. Gnd

J6. External Power Connector

Mating connector: Molex 51021-0500, Contact: 50058-8100

1. Ground
2. 5 Volt Input
3. Backlight Supply
4. Backlight On/Off, ground- backlight off, 5 volts or open-backlight on
5. Backlight Brightness Adjust

To adjust the backlight brightness a 0-5 volt level 0= max dim, 5 volt= max brightness. A PWM signal may also be used. Jumper R43 must be opened to use the brightness feature.

Note: It is recommended if using the Optrex F-51750 display that 12 volt external power to the backlight be used.

J7. LCD Interface

1. Gnd	17. G4
2. DCLK	18. G5
3. HD	19. Gnd
4. VD	20. B0
5. Gnd	21. B1
6. R0	22. B2
7. R1	23. B3
8. R2	24. B4
9. R3	25. B5
10. R4	26. Gnd
11. R5	27. DENA
12. Gnd	28. +3.3 Volts
13. G0	29. +3.3 Volts
14. G1	30. Jumper JP-4 B
15. G2	31. Jumper JP-5 B
16. G3	

J8, External Touch Screen

J8 is used to connect an external 4 wire resistive touch screen to the controller.

1. YU
2. YD
3. XL
4. XR

J9, 12

T-51750 LED connection located on backside of board.

J10 Operating Voltage Selection

J10 selects the source of the operating voltage for the backlight circuit and LVDS interface.

Jumper:

1. Backlight power source from external power connector J6.
2. Backlight power source from USB port.
3. LVDS power source from USB port.
4. LVDS power source from LVDS connector J2.

J11 External LED Connection

Mating connector: Hirose DF13-10S-1.25C, Contact: DF13-2630SCF

1. NC
2. NC
3. Anode
4. Cathode
5. Anode
6. Cathode

VDS250-TTL-Xxx

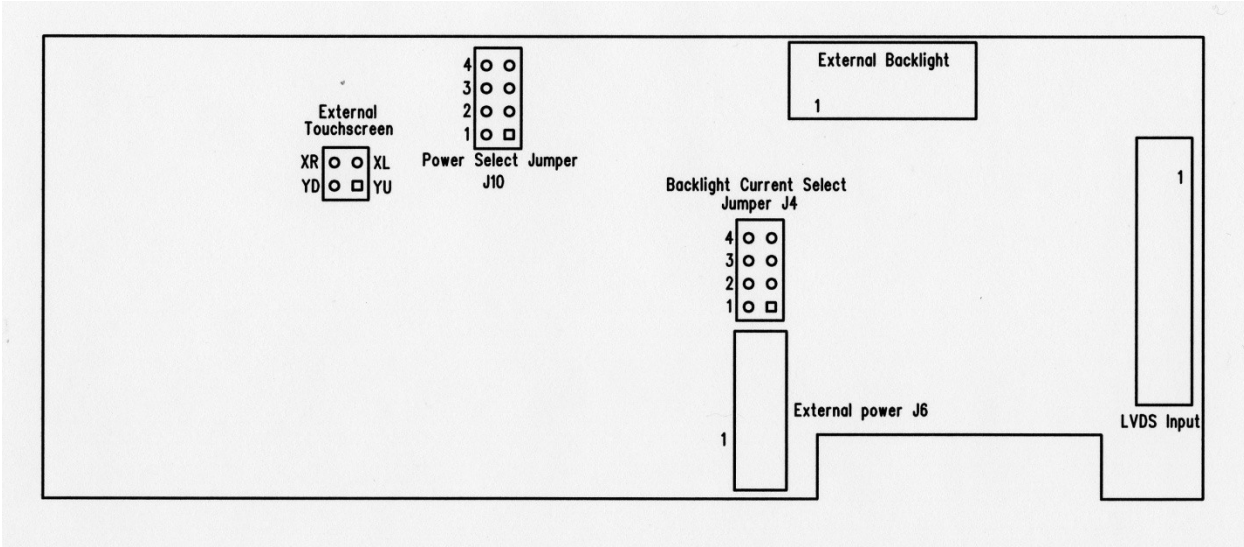


Figure 1

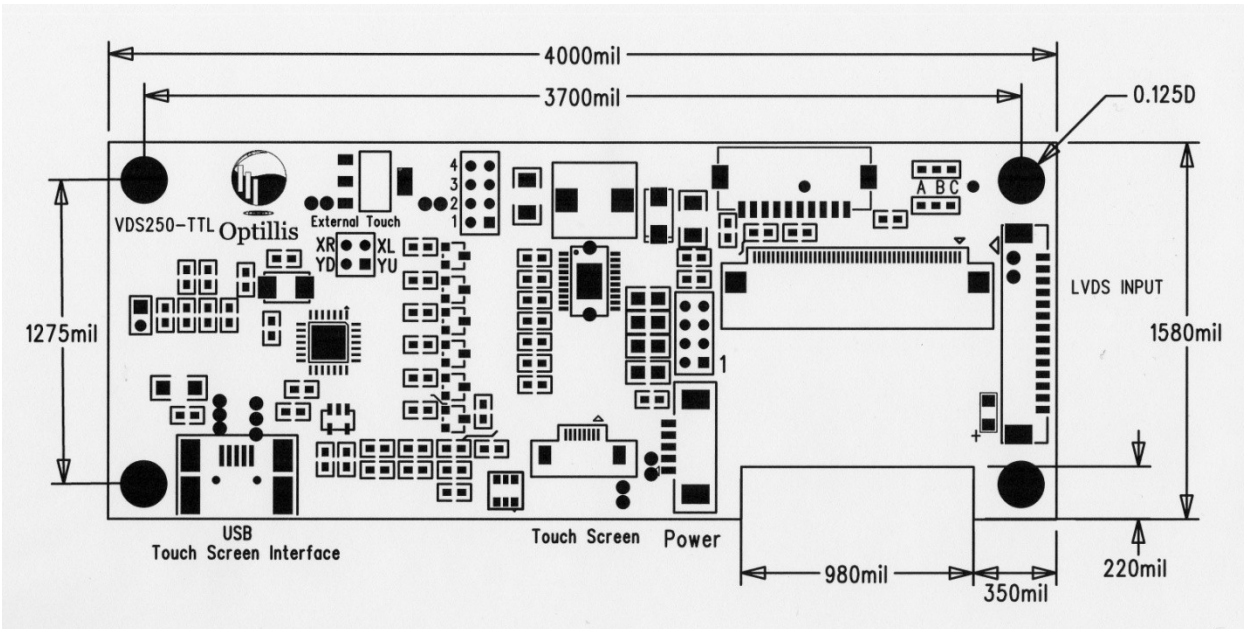


Figure 2