

12.1-Inch WXGA Rugged Resistive Touch Display Module

The KIPL 26-6434 12.1-Inch Rugged Resistive Touch Display Module is a high-brightness smart display designed for reliable operation in demanding and harsh environments. It features a 12.1-inch TFT LCD with 1280 × 800 WXGA resolution, 16.7M true 8-bit colours, 800 cd/m² brightness and a 1000:1 contrast ratio.

The display incorporates a 5-wire resistive touchscreen, strengthened glass with AG/AR/AF coating, optical bonding and an EMI protective mesh with provision for 360-degree electrical grounding. Its compact, low-weight and fanless design supports easy mounting and reduced maintenance.

The integrated computer platform uses an Intel® Quad Core™ i7-6822EQ processor, Intel® HD Graphics 530, 16 GB DDR4 RAM and a 256 GB SSD. Multiple serial, CAN, USB, Ethernet and video interfaces provide connectivity for integrated system applications.

The rugged system is designed for demanding environmental conditions, with MIL-STD-461E/F EMI/EMC, IP67 ingress protection, MIL-STD-810G environmental design requirements, vibration and shock requirements, and operation up to 40,000 ft altitude. A rugged option with heater supports operation from -40°C to +65°C.

Key Features :

- 12.1-inch WXGA rugged display with 1280 × 800 resolution, 800 cd/m² brightness and 16.7M true 8-bit colours.
- 5-wire resistive touchscreen with strengthened >6H glass, AG/AR/AF coating and optical bonding.
- Integrated computing platform with Intel® Quad Core™ i7-6822EQ, 16 GB DDR4 RAM, 256 GB SSD and multiple system I/O interfaces.
- Rugged environmental design with IP67 protection, MIL-STD-461E/F EMI/EMC, MIL-STD-810G requirements and operation up to 40,000 ft.

Technical Specifications :

Product Code	KIPL 26-6434
Display Type	12.1-Inch Rugged TFT LCD
Resolution	1280 × 800 pixels (WXGA)
Display Colours	16.7M (True 8 Bit)
Brightness	800 cd/m^2
Contrast Ratio	1000:1
Viewing Angle	±88° Horizontal and Vertical
Aspect Ratio	16:10
Response Time	20 ms (Typical On/Off)
Active Area	261.12(H) × 163.2(V) mm
Touchscreen Type	5-Wire Resistive Touch
Touch Glass	Strengthened Glass >6H with AG/AR/AF Coating
Optical Bonding	Yes
EMI Mesh	EMI protective mesh with provision for 360° electrical grounding
System Processor	Intel® Quad Core™ i7-6822EQ, 4 × 2.0 GHz, 8 MB Smart Cache
Graphics	Intel® HD Graphics 530
RAM	16 GB, 1 × 16 GB DDR4 SODIMM, 2133 MT/s
Storage	256 GB SSD, 6 Gb/s SATA Interface
Operating System	BSP for CentOS, Windows, Linux
Power Consumption	41 W typical, <200 W maximum while heating
Module Dimensions	334.0(H) × 254.0(V) × 68.4(D) mm ±0.5 mm
Bezel Keypad	32-Key Illuminated Keypad, Green Colour
Control Keys	4 × control keys for Day/Night mode, TS On/Off, Brightness and Power
Function Keys	28 × function keys with dimmable green backlight
LED Indicators	Power, Fault, Day/Night Mode and TS On/Off
Serial Ports	4 × RS-232/422/485
CAN Bus	2 × CAN Bus
General Purpose I/O	8 × General Purpose Inputs, 3 × General Purpose Outputs

Video Output	1 × VGA
USB	4 × USB 2.0
Ethernet	2 × Gigabit Ethernet
Video Inputs	4 × RS-170, PAL/NTSC
Push-to-Talk	1 × Push-to-Talk
Audio Interfaces	1 × Audio Line In, 1 × Microphone In, 1 × Audio Line Out
Input Voltage	28 VDC Nominal
Connectors	MIL-DTL-38999/3
Power Compliance	Designed to meet MIL-STD-1275E
Cooling	Passive
Standard Operating Temperature	-20°C to +65°C
Standard Storage Temperature	-30°C to +70°C
Rugged Operating Temperature	-40°C to +65°C with Heater
Rugged Storage Temperature	-40°C to +70°C with Heater
Humidity	10–90%, Non-Condensing
Vibration	Designed to meet MIL-STD-810G; Random vibration (tracked vehicle) - AECTP400
Shock	Designed to meet MIL-STD-810G, 40 g, 23 ms, 6 shocks/axis
EMI/EMC	Designed to meet MIL-STD-461E/F
Ingress Protection	Ip67, IEC 60529; designed to meet MIL-STD-810G
Altitude	Up to 40,000 ft operating
Sand & Dust / Salt Fog	Designed to meet MIL-STD-810G
Environmental Test	Designed to meet JSS 55555-2012 or later