SP-AL Series

Intel Atom® Processor-based Fanless 7"/10.1"/12.1"/15.6"/18.5"/21.5" Panel Computer

Features

- Intel Atom® x5-E3930/x7-E3950 processor
- 5 points capacitive or 1 point 5-wire resistive touch screen
- External I/O:
  - 1x DisplayPort, 1x USB 2.0, 1x USB 3.0, 2x GbE ports
  - 2x COM port(RS232/422/485)
- Internal I/O:
  - 1x mPCIe slots, 1x USIM slot, 1x USB 2.0, 2x I^2C, 1x 8 GPIO
  - 1x keypad port to support 32 physical keys
  - 1x port for volume and display backlight adjustment
- Expansion I/O:
  - Customized specifically by FM board
- Storage options: 1x eMMC, 1x SATA, 1x M.2
- Built-in ADLINK SEMA management solution
- 2x 2W speaker, 1x Mic in/Line out
- Front side IP65 protection

Introduction

The ADLINK Smart Panel is an embedded open frame panel computer able to integrate into a wide variety of form factors and configurations. The Smart Panel provides an exceptional range of available display sizes, touch types, DC inputs, and I/O, able to fulfill a diversity of vertical requirements. Function modules can expand I/O irrespective of type or quantity.

Software Support

- **Windows® 10, Linux and Android***

Application

- **Health Care**
- **Machine Automation**
- **Factory Automation**
- **Testing Instrumentation**
- **Transportation**
- **Gaming and Retail**

Starter Kit

10.1"/15.6" Smart Panel, 2GB DDR3L, 32GB SSD, function module board, internal cable set, and holders

Ordering Information

- **SP-07WP-AL Series**
  7" smart panel computer
- **SP-10WP(R)-AL Series**
  10.1" smart panel computer
- **SP-12WP(R)-AL Series**
  12.1" smart panel computer
- **SP-15WP(R)-AL Series**
  15.6" smart panel computer
- **SP-18WP(R)-AL Series**
  18.5" smart panel computer
- **SP-21WP-AL Series**
  21.5" smart panel computer

Optional Accessories

- **Memory**
  Upgrade to 2/4/8GB DDR3L memory
- **Storage**
  eMMC, 2.5" HDD/SSD, M.2 SSD
- **Adapter**
  12V 60W, 12V 84W power adapter
- **I/O Cables**
  Keypad, power reset, audio, and USB cables
- **Wireless Communication Kit**
  Wi-Fi/BT/4G LTE wireless kit

Specifications

Model Name	Smart Panel - AL Series					
	SP-07WP-AL Series	SP-10WP(R)-AL Series	SP-12WP(R)-AL Series	SP-15WP(R)-AL Series	SP-18WP(R)-AL Series	SP-21WP-AL Series

System						
Processor	Intel Atom® x5-E3930 (1.3/1.9GHz)/ x7-E3950 (1.6/2.0 GHz)					
Memory	1x SODIMM socket, DDR3L 1600MHz (Up to 8GB), supports rugged SODIMM					
Storage	1x SATA header for 2.5" SSD or HDD, 1x M.2 slot, type 2280 eMMC 5.0, up to 64GB (Optional)					
External I/O**						
Ethernet	2x GbE (Standard: Intel® I211-AT, Option: Intel® I210IT), RJ-45, WOL					
Serial Port	2x RS-232/422/485 programmable, support 9 bit mode and auto flow					
USB 2.0	1x USB 2.0, Type A, OCP, 1000mA					
USB 3.0	1x USB 3.0, Type A, OCP, 1600mA					
DisplayPort	1x DP, DP++, supports resolutions up to 4096 x 2160					
Internal I/O						
Mini PCIe	1x full size mPCIe, integrated PCIe and USB interface					
USIM	1x SIM slot for 3G/4G communication					
USB	1x wafer for USB 2.0 clients					
I²C	1x wafer, supports IoT sensors (not including algorithm), 1x wafers for I²C clients					
Audio	1x wafer, supports 2x 2W stereo speaker, built-in amplifier, 1x wafer, Mic-in, mono, Line-out					
Keys	1 box header, supports physical key x 32 for data input (Optional) 1 wafer, supports LCD bcklight up/down, volume up/down (Optional)					
GPIO	1x wafer, supports 8-pin GPI/O					
Power						
Connector	1x 4 circuit mini fit					
DC Input	AT/ATX 12V ± 5% / 9-36V, both with OVP/UVP protection					
Power/Fail Reset	1x wafer, supports system reset & power button and power LED					
Backup Battery	1x wafer for UPS kit to backup data when AC shuts down (Optional)					
Notification						
Thermal Sensor	1x CPU Tj, 2 x PCBA top & bottom-mounted thermal sensors (Optional)					
TPM	TPM 2.0 (Optional)					
LED Indicator	1 wafer for 10 LED indicators (4x COM Tx & Rx, 1x WDT, 3x user-defined)					
Debug port	1x 40-pin multipurpose flat cable connector for use in combination with DB-40 debug port					
Mechanical Bracket						
IP Grade	IP65 for front					
Material	SGCC					
Display Component Specification						
	7"	10.1"	12.1"	15.6"	18.5"	21.5"
Display Ratio	16:9	16:10		16:9		
Display Resolution	1024 x 600	1280 x 800		1366 x 768		1920 x 1080
Display View Angle	85/85/85/85		89/89/89/89	85/85/80/80		60/60/70/70
Luminance (Nits)	600 cd/m²	500 nits (typ)	400 nits (typ)		450 nits (typ)	400 nits (typ)
Touch Screen	5 points capacitive touch screen or 1 point 5 wire resistive touch screen, full-flat					
Environmental						
Operating Temperature	-20 to 60°C		-20 to 70°C	0 to 50°C		0 to 40°C
Storage Temperature	-20 to 70°C			-20 to 60°C		
Operating Humidity	10-90% RH operating, non-condensing, 5-95% RH storage					
Vibration	OP 5 Grms, 5-500Hz (with SSD), EN61373 Class 1B (Railway reliability), ISO 7637-2					
ESD	Air: ±15kV, Contact: ±8kV					
Software						
SEMA	SEMA 3.5					
WDT	Watch Dog Timer supported					
Operating System	Windows® 10 64-bit, Linux Ubuntu 16.04 LTS, QT compatible, 64-bit					

** External I/O can be opted out for FM boards.