



**10.1" PCAP Solution  
12050157  
eTS101W1C7-S**

Revision: 000

Date: 2020-12-14

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## 1 Scope

DATA MODUL's PCAP solution 12050157 consists of a 10.1" capacitive touch screen. Please note that this is only a sub-assembly of the final product. The specification of the final end product might differ from this specification.

## 2 Touch Sensor

### 2.1 Technical Parameters

Screen size	10.1 inch / 12050157 cm
Format	wide
Composite	Film / Film with COF
Outline dimensions	228.80 x 151.00 x 0.475 mm (WxHxT)
Active area	220.97 x 141.65 mm (WxH)
Bending radius of tail	R = 2 mm recommended
Transmissivity	86% (min.)
Operating temperature and humidity	-20 ~70°C, ≤85% RH
Storage temperature and humidity	-30 to 80°C, ≤90% RH
Tail connector	JST SM05B-GHS-TB(LF)(SN)

### 2.2 Reliability Tests

Low Temperature Storage Test	-40°C / 240h
High Temperature Storage Test	80°C / 240h
High Temperature / High Humidity Test	60°C / 90% RH for 240h
Thermal Shock Test	-30°C / 80°C, 30 min / cycle, 100 cycles, (1 h recovery at room temperature)

## 3 Touch Controller - ILI2511

The touch controller IC is provided as a COF (chip on flex) assembly.

### 3.1 Electrical specification

Power supply	5V ± 5%
On board voltage	3.3V and 3.6V max. (subject to configuration)
Maximum power consumption	200 mA

### 3.2 Interface specification - USB

Protocol	USB 2.0 HID specification 1.1 with amendments for multitouch digitizer
Endpoint Address	0x81(Endpoint 1) 0x82(Endpoint 2) 0x83(Endpoint 3)
Touch report	10 fingers simultaneously max.
Resolution	16384 x 9600 (x/y)
vendor ID / product ID	0x222A / depend on Device
Bus speed	12 Mbps max. (subject to configuration)

### 3.3 Pin Configuration

Pin	Signal	Description
1	VDD	Power Supply (5V)
2	USB_DN	USB interface, D - signal.
3	USB_DP	USB interface, D + signal.
4	GND	Ground
5	Shield	for USB 2.0

## 4 Optical Inspection Criteria and Handling Recommendations

### 4.1 Optical Inspection Criteria

For details on the optical inspection criteria, please refer to DATA MODULs Outgoing Spec or ask your local DATA MODUL sales representative.

### 4.2 Handling Recommendations

Precautions for operation

- Do not put a heavy, hard or sharp object on the product
- Do not bend the product in order to assure the reliability
- Do not put one product on the other. Otherwise, it may cause the product to be scratched
- Do not use any organic solvent acid or alkali solution.

Precautions for mounting

- The panel should be mounted using a configuration that either holds the panel by all four corners or by all four sides
- The bezel edge must be positioned outside the active area. The bezel may cause false activation if the edge overlaps the active area
- Any mounting configuration should ensure that there is no twisting force applied to the panel
- 1mm distance between TFT screen and touch panel is recommended

Precautions for tail

- In order to avoid damaging and malfunction of the sensor, please don't bend the FPC area next to the panel
- Excess or repeated bending of the FPC connector should also be avoided



## 6 Revision History

Revision	Date	Author	Changes
000	2020-12-14	T. Golling	initial version
001	2024-06-04	PengY	Position of AA added

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