



**7.0" PCAP Solution
12019265**

Date: 2/12/2019

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1 Scope

DATA MODUL's PCAP solution 12019265 consists of a 7.0" 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 and Cover Glass

2.1 Technical Parameters

Screen size	7.0 inch /17.8 cm
Format	Wide
Composite	Film / Film
Outline dimensions	169.5 x 101.2 x 0.6 mm (WxHxT)
Active area	157.6 x 93.7 mm (WxH)
Bending radius of tail	R = 5 mm recommended
Transmissivity	85% (min.)
Haze	3% (max.)
Operating temperature and humidity	-20°C+70°C ,20 % RH- 25 % RH
Storage temperature and humidity	-40°C+80°C, 10 % RH- 90 % RH
Tail connector	OMRON XF2M-1015-1A

* Note 1: When the ambient temperature is above 65°C, the humidity has to be below 50%RH

2.2 Reliability Tests

Low Temperature Storage Test	-30°C for 72h
High Temperature Storage Test	70°C for 72h
High Temperature / High Humidity Test	60°C, 85% RH for 250h
Cycle test	-20°C / 60°C, 2 h / cycle, 36 cycles

3 Touch Controller (640T I2C)

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

3.1 Electrical specification

Power supply	3.3V ± 5%
Vin ripple	40 mV peak-peak max.
On board voltage	3.3 and 6.6V max. (subject to configuration)
Power consumption	40 mW max. (subject to configuration)

3.2 Interface specification

Protocol	I ² C version 6.0	
Touch report	16 fingers simultaneously max.	
Resolution	4096 x 4096 (x/y)	
I ² C address	0x4A or 0x4B	
HID-I ² C vendor ID / product ID	0x03EB (Atmel) / 0x214D (mXT640T)	
Bus speed	3.4 MHz max. (subject to configuration)	
Required pull-up resistance	Standard mode (100 kHz)	1k to 10k
	Fast mode (400 kHz)	1k to 3k
	Fast+ mode (1 MHz)	0.7k max.
	High-Speed mode (3.4 MHz)	0.5k to 0.75k
Low input logic level	SDA, SCL	-0.3V to 0.3x VddIO
	RES, GPIO	
High input logic level	SDA, SCL	0.7 x VddIO to VddIO
	RES, GPIO	0.85 VddIO to VddIO
Low output logic level	CHG, GPIO	0V to 0.2 x VddIO
High output logic level	CHG, GPIO	0.8 x VddIO to VddIO

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
- Don't 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

- The flex tail in general can be bent with a min. radius of about 1mm
- 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

Date	Author	Changes
11/21/2017	Graf	initial version
2/14/2018	Lübke	structure: drawing and appendix
2/12/2019	T. Golling	structure: controller informations

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