

Human Machine Interface

## PROTOUCH-81 Series (VESA with M12)

Projected capacitive touch panel computer with Intel® Atom™ E3900 processor

optional  
LTE / GPS / Wi-Fi / BT



IP65 front

## TFT/HV101PR81

24 VDC    CAN    RS232    2x LAN    2x USB  
RS485/422

A robust industrial touch panel PC with a 10.1 inch clear bright display with projected capacitive touch and resistant glass front. Intel® Atom™ E3900 (formerly Apollo Lake) processor technology directly attached to the display housing. The fan less devices are well suited for heavy industrial use. Designed with IP65 protection at the front.

- **Build-in version**
- **Multi-core 64-bit Intel® Atom™ processor**
- **M12 connector for LAN and Power**
- **No moving parts, maintenance free**
- **Long term availability with fixed BOM**



### Product Highlights

Low Power  
Fan less design  
Hardware watchdog  
Temperature supervision  
Real Time Clock  
Persistent Flash BIOS  
ESD- protection on all interfaces  
Reverse polarity protection  
Long term availability  
Operable with thin gloves

### Product Feature

Intel® Atom™ E3900 Series  
10.1 inch display  
Wear free projected capacitive touch technology  
Soldered RAM  
Socket for CFast Card  
Ethernet, USB3, CAN, Mini PCIe  
optional RS232/422/485  
Brightness control (Software)

### Markets / Applications

Transportation and vehicle construction  
Automated Guided Vehicle (AGV)  
Automotive  
Traffic control

Processor / Performance		
Intel® Atom™ x5-E3940 1.80GHz (Burst)   1.6GHz Clock - Quad Core	•	
Intel® Atom™ x7-E3950 2.00GHz (Burst)   1.6GHz Clock - Quad Core		•
Memory		
L2 cache	2MB	2MB
DDR3 RAM	4GB	8GB
TFT Display		
Screen size [inch]	10.1w	10.1w
Resolution [pixel]	1280 x 800	1280 x 800
Brightness [cd/m <sup>2</sup> ]	850	850
Contrast ratio 800:1   Color performance 16.7M	•	•
Viewing angle	H-170° V-170°	H-170° V-170°
Touch Screen		
Projected capacitive technology with resistant front glass	•	•
Features		
Real time clock PC compatible	Goldcap	Goldcap
Hardware Watchdog & Temperature supervisor	•	•
Intelligent power management (Ignition controller)	•	•
TPM2.0 (SLB9665)	optional	optional
Interfaces		
microSD Card socket	1	1
CFast socket with retention frame <sup>2</sup>	1	1
SATA 2.0 standard interface <sup>2</sup>	optional	optional
USB version 3.0 (Type A)	1	1
USB version 2.0 (Type A)	1	1
USB version 2.0 (M12 female A-coded)	optional	optional
Ethernet 10/100 (I210-IT)	2	2
RS232 ESD protected <sup>2</sup>	2	2
RS422/485 ESD protected, isolated (DSUB9)	optional	optional
CAN (PEAK, SJA1000 compatible) ESD protected, isolated (DSUB9)	2	2
Mini PCIe socket with miniSIM <sup>2</sup>	1	1
I2C bus <sup>2</sup>	•	•
HD Audio / Speaker <sup>2</sup>	optional	optional
Buzzer	•	•
Technical Data		
Dimensions W x H x D [mm]	274 x 193 x 55	274 x 193 x 55
Net weight [gram]	~2100	~2100
VESA 100 Mounting [mm]	100 x 100	100 x 100
Input Voltage 9...30VDC non-isolated (M12 male A-coded)	•	•
Power consumption typ. in Watt @ 24V (100% Backlight no Add-ons)	~15	~20
Environmental Conditions		
Operating temperature	-30°C to +70°C <sup>3</sup>	-30°C to +65°C <sup>3</sup>
Operating temperature (cold start up) -20°C to +70°C <sup>3</sup>	•	•
Storage temperature -30°C to +80°C	•	•
Humidity 20 to 90% non condensing (less than 70g/m <sup>3</sup> above +70°C)	•	•
Protection standard IP65 front   IP20 rear	•	•
Conformal coating <sup>4</sup>	optional	optional
Shock: designed to meet EN60068-2-27	•	•
Vibration: designed to meet EN60068-2-6	•	•
EMI Conformity EN-55032/55024/61000-6-2/61000-6-4	•	•
Safety according to EN62368-1 <sup>1</sup>	•	•
MTBF ~200 000h (22.8 years) <sup>2</sup> excluding display, excluding battery	•	•
Optional enhancement cards		
Wireless Module (LTE / GPS / WiFi / BT) <sup>1</sup>	optional	optional

<sup>1</sup> Please contact factory for minimum order quantities<sup>2</sup> on internal header<sup>3</sup> Depending on installation situation and interface connection. Please see user documentation.<sup>4</sup> on all possible components (excl. connectors, display and wireless devices)

Product specifications subject to change without notice. | All data is for information purposes only and not guaranteed for legal purposes. Information in this data sheet has been carefully checked and is believed to be accurate. However, no responsibility is assumed for inaccuracies. Please refer to the user documentation for additional product specification.

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