

Human Machine Interface

PROTOUCH-8 Series (Build-in)

Projected capacitive touch panel computer with Intel® Atom™ E3800 processor



optional
LTE / GPS / Wi-Fi / BT



IP65 front

HMI and Displays

TFT/HB101PU8

A robust industrial touch panel PC with a 10.1 inch clear bright display with projected capacitive touch and chemical resistant front. This version comes with Intel® Atom™ E3800 (formerly Bay Trail) CPU 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
- 24/7 continuous operation
- No moving parts, maintenance free
- Long term availability with fixed BOM

24 VDC CAN 2x RS232 2x LAN 4x USB
RS485/422

Windows Embedded
Standard 7

Windows IoT



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™ E3800 Series
10.1inch display
Wear free projected capacitive touch technology
Soldered RAM
Socket for CFast Card
Ethernet, USB3, RS232, Mini PCIe
optional RS422/485 and isolated CAN
Brightness control (Software)

Markets / Applications

Industrial Automation
Transportation and vehicle construction
PLC replacement
Cleantech/SMART Energy

Order Code TFT/HB101PU8G13-N122E¹ TFT/HB101PU8H19-N122E¹

Processor / Performance		
Intel® Atom™ E3825 1.33GHz 64-bit - Dual Core	•	
Intel® Atom™ E3845 1.91GHz 64-bit - Quad Core		•
Memory		
L2 cache	1MB	2MB
DDR3 RAM	2GB	4GB
8GB DDR3 RAM ¹	optional	optional
TFT Display		
Screen size [inch]	10.1w	10.1w
Resolution [pixel]	1280 x 800	1280 x 800
Brightness [cd/m²]	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	•	•
Hardware Watchdog & Temperature supervisor	•	•
Intelligent power management (Ignition controller)	•	•
TPM2.0 (SLB9665)	optional	optional
Interfaces		
Socket for CFAST	1	1
Socket for microSD Card	1	1
USB version 3.0 (Type A)	1	1
USB version 2.0 (Type A)	3	3
Ethernet 10/100/1000 Mbit (I210-IT) (RJ45)	2	2
RS232 ESD protected (DSUB9)	1	1
RS232 ESD protected ²	1	1
RS422/485 ESD protected (DSUB9)	optional	optional
CAN (PEAK, SJA1000 compatible) ESD protected, isolated (DSUB9)	1	1
Full size mPCIe socket ²	1	1
Mini SIM socket (to mPCIe socket)	•	•
I2C bus ² HD Audio / Buzzer ²	•	•
Technical Data		
Dimensions W x H x D [mm]	274 x 193 x 52	274 x 193 x 52
Net weight [gram]	~2100	~2100
Front cutout dimensions [mm]	259 x 178	259 x 178
Wall thickness [mm]	1 to 5	1 to 5
Input Voltage 9...30VDC non-isolated	•	•
Power consumption typ. in Watt @ 24V (100% Backlight no Add-ons)	~15	~20
Environmental Conditions		
Operating temperature	-30°C to +65°C ³	-30°C to +65°C ³
Operating temperature (cold start up) -20°C to +65°C ³	•	•
Storage temperature -30°C to +80°C	•	•
Humidity 20 to 90% non condensing (less than 133.8g/m³ above +60°C)	•	•
Protection standard IP65 front IP20 rear	•	•
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 IEC 62368-1	•	•
UL certification ¹	optional	optional
MTBF ~ 200 000h (22.8 years) ² excluding display, excluding battery	•	•
Optional enhancement cards		
Wireless Module (LTE / GPS / WiFi / BT) ¹	optional	optional

¹ Please contact factory for minimum order quantities

² on internal header

³ Depending on installation situation and use case. Please see user documentation for further information.

Order Code TFT/HB101PU8G13-N102E¹ TFT/HB101PU8H19-N102E¹

Processor / Performance		
Intel® Atom™ E3825 1.33GHz 64-bit - Dual Core	•	
Intel® Atom™ E3845 1.91GHz 64-bit - Quad Core		•
Memory		
L2 cache	1MB	2MB
DDR3 RAM	2GB	4GB
8GB DDR3 RAM ¹	optional	optional
TFT Display		
Screen size [inch]	10.1w	10.1w
Resolution [pixel]	1280 x 800	1280 x 800
Brightness [cd/m²]	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	•	•
Hardware Watchdog & Temperature supervisor	•	•
Intelligent power management (Ignition controller)	•	•
TPM2.0 (SLB9665)	optional	optional
Interfaces		
Socket for CFast	1	1
Socket for SD Card	1	1
USB version 3.0 (Type A)	1	1
USB version 2.0 (Type A)	3	3
Ethernet 10/100/1000 Mbit (I210-IT) (RJ45)	2	2
RS232 ESD protected (DSUB9)	2	2
RS232 ESD protected ²	2	2
Mini PCIe socket ²	1	1
I2C bus ² HD Audio / Buzzer ²	•	•
Technical Data		
Dimensions W x H x D [mm]	274 x 193 x 52	274 x 193 x 52
Net weight [gram]	~2100	~2100
Front cutout dimensions [mm]	259 x 178	259 x 178
Wall thickness [mm]	1 to 5	1 to 5
Input Voltage 9...30VDC non-isolated	•	•
Power consumption typ. in Watt @ 24V (100% Backlight no Add-ons)	~15	~20
Environmental Conditions		
Operating temperature	-30°C to +65°C ³	-30°C to +65°C ³
Operating temperature (cold start up) -20°C to +65°C ³	•	•
Storage temperature -30°C to +80°C	•	•
Humidity 20 to 90% non condensing (less than 133.8g/m³ above +60°C)	•	•
Protection standard IP65 front IP20 rear	•	•
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 IEC 60950-1	•	•
UL certification ¹	optional	optional
MTBF ~200 000h (22.8 years) excluding display, excluding battery	•	•
Optional enhancement cards		
Wireless Module (LTE / GPS / WiFi / BT) ¹	optional	optional

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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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