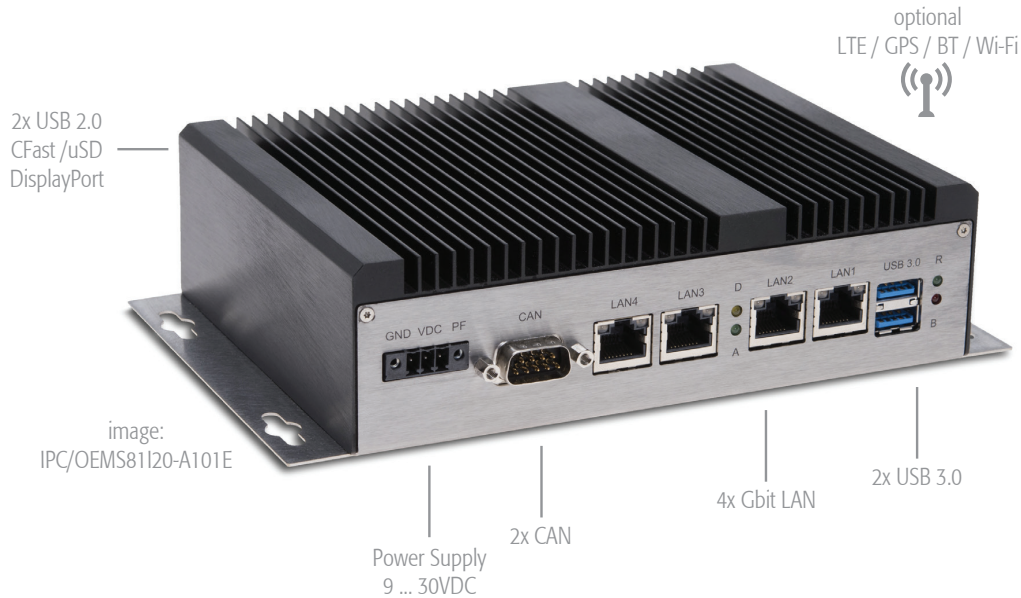


Embedded Box PCs

**COMPACT-S OEM Series**

Industrial compact PC with Intel® Atom™ E3900 processor | Celeron™ or Pentium® (Apollo Lake)



**IPC/COMPACT81-OEM**

This fanless COMPACT81-S OEM generation is based on the latest Intel® Atom™ E3900 (Apollo Lake) processor technology and offers a wide range of interface options. The robust and uncompromising industrial design allows the implementation in the most demanding applications and guarantees long term availability with Win10 IoT or Linux support.

- Multi-core 64-bit Intel® Atom™ processor
- 24/7 continuous operation
- No moving parts
- Product lifecycle management
- Long term availability with fixed BOM



**Product Highlights**

Hardware Watchdog  
Temperature supervision  
Real time clock  
Persistent Flash BIOS  
ESD- protection on all interfaces  
Aluminum housing  
No active cooling required  
Cable- and fanless design

**Product Feature**

Intel® Atom™ E3900 Series  
Intel® Celeron™ or Pentium®  
up to 2.0GHz, up to 4 Cores  
RAM soldered on board up to 8GB  
Socket for C/Fast  
DisplayPort, Ethernet, USB3, CAN, Mini PCIe  
Up to 4K resolution

**Industries / Applications**

Industrial Automation  
Traffic control  
AGV (Automated Guided Vehicle)  
Cleantech

|  | Order Code | IPC/OEMS81I20-A101E | IPC/OEMS81I20-A102E <sup>1</sup> | IPC/OEMS81I20-A103E |
|--|------------|---------------------|----------------------------------|---------------------|
| <b>Processor / Performance</b>   |            |                     |                                  |                     |
| Intel® Atom™ x5-E3930 1.80GHz (Burst)   1.3GHz Clock - Dual Core   2GB RAM                           |            | optional            | optional                         | optional            |
| Intel® Atom™ x5-E3940 1.80GHz (Burst)   1.6GHz Clock - Quad Core   4GB RAM                           |            | optional            | optional                         | optional            |
| Intel® Atom™ x7-E3950 2.00GHz (Burst)   1.6GHz Clock - Quad Core   8GB RAM                           |            | •                   | •                                | •                   |
| Intel® Celeron® N3350 2.4GHz (Burst)   1.1GHz Clock - Dual Core                                      |            | on request          | on request                       | on request          |
| Intel® Pentium® N4200 2.5GHz (Burst)   1.1GHz Clock - Quad Core                                      |            | on request          | on request                       | on request          |
| <b>Memory / Storage</b>  |            |                     |                                  |                     |
| L2 cache   |            | 2MB                 | 2MB                              | 2MB                 |
| DDR3-1867 RAM with ECC   |            | 8GB                 | 8GB                              | 8GB                 |
| CFast socket   |            | 1                   | 1                                | 1                   |
| microSD card socket  |            | 1                   | 1                                | 1                   |
| <b>Features</b>  |            |                     |                                  |                     |
| Real time clock (RTC) with battery backup  |            | •                   | •                                | •                   |
| Multistage Watchdog  |            | •                   | •                                | •                   |
| Temperature supervisor   |            | •                   | •                                | •                   |
| TPM2.0 (Infineon SLB9665)  |            | •                   | •                                | •                   |
| <b>Communication Interfaces</b>  |            |                     |                                  |                     |
| DisplayPort 1.2 (DDI) up to 4096x2160@60Hz (4K)  |            | 1                   | 1                                | 1                   |
| USB version 3.0 (front) (Type A)   |            | 2                   | 2                                | 2                   |
| USB version 2.0 (back) (Type A)  |            | 2                   | none                             | none                |
| USB version 2.0 <sup>2</sup> (shared with mPCIe)   |            | 2                   | none                             | 2                   |
| Ethernet 10/100/1000 Mbit with Intel I210 (RJ45)   |            | 4                   | 2                                | 4                   |
| RS232 Serial Interface (RX, TX, RTS, CTS) <sup>2</sup>   |            | 1                   | none                             | 1                   |
| CAN (PEAK, SJA1000 compatible) isolated (1x DSUB9)   |            | 2                   | none                             | none                |
| CAN (SJA1000 compatible) (1x DSUB9)  |            | none                | none                             | 1                   |
| Mini PCIe socket with miniSIM <sup>2</sup>   |            | 1                   | 1                                | 1                   |
| <b>Technical Data</b>  |            |                     |                                  |                     |
| Dimensions w174 x h50 x d127 mm (housing without mounting bracket)                                   |            | •                   | •                                | •                   |
| Wall or DIN Rail mounting  |            | •                   | •                                | •                   |
| Net weight [gram]  |            | ~950                | ~950                             | ~950                |
| Input voltage 9 ... 30VDC non-isolated   |            | •                   | •                                | •                   |
| Current consumption typ. [mA] @ 24V without Add-Ins  |            | 625                 | 625                              | 625                 |
| Power consumption typ. [Watt] @ 24V without Add-Ins  |            | 15                  | 15                               | 15                  |
| <b>Environmental Conditions</b>  |            |                     |                                  |                     |
| Operating temperature (ambient) <sup>3</sup>   |            | -40°C ... +70°C     | -40°C ... +70°C                  | -40°C ... +70°C     |
| Storage temperature  |            | -40°C ... +85°C     | -40°C ... +85°C                  | -40°C ... +85°C     |
| Protection standard  |            | IP40                | IP40                             | IP40                |
| Conformal coating <sup>4</sup>   |            | optional            | optional                         | optional            |
| Shock: designed to meet EN60068-2-27   |            | •                   | •                                | •                   |
| Vibration: designed to meet EN60068-2-6  |            | •                   | •                                | •                   |
| EMC according to EN-55032/55035  |            | •                   | •                                | •                   |
| Safety designed to meet IEC/EN62368  |            | •                   | •                                | •                   |
| Radio and Telecommunication: Designed to meet RED  |            | •                   | •                                | •                   |
| MTBF ~550 000h @ 25°C ambient <sup>acc. to Telcordia SR-332, Environment GB, excluding battery</sup> |            | •                   | •                                | •                   |
| UL / CSA certification <sup>1</sup>  |            | on request          | on request                       | on request          |
| <b>Optional enhancement cards</b>  |            |                     |                                  |                     |
| Wireless Module (LTE / GSM / GPS / BT / WiFi) <sup>1</sup>   |            | optional            | optional                         | optional            |

<sup>1</sup>Please contact factory for minimum order quantities, IPC/OEMS81I20-A102E is only produced in larger quantities

<sup>2</sup>Internal connector

<sup>3</sup> Depending on installation situation and interface connection. Please see user documentation.

<sup>4</sup> on all possible components (excl. Connectors 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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## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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