

Edge Controller, KGEC Series

KGEC-6301

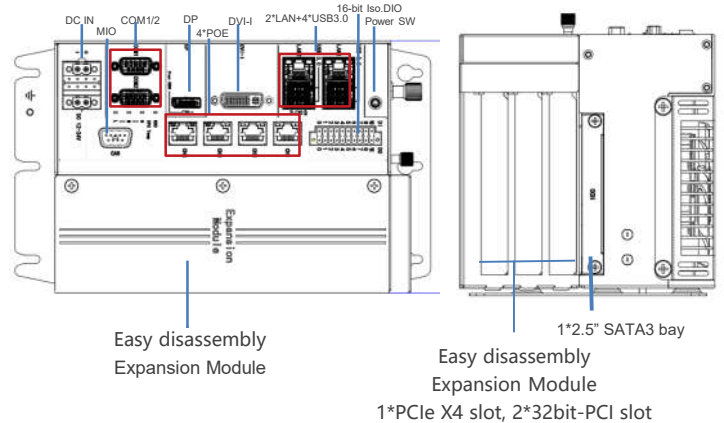
Intel® Skylake-S/Kabylake-S CPU, 2*LAN, 4*POE, 4*USB3.0, DP, DVI-I, 2*COM, 16-bit Iso. DIO, Modularization, RTOS, TSN



KGEC-6301 is a newly edge motion controller, It powered by Intel® Skylake-S / Kabylake-S CPU, H110 Chipset, 1*DDR4 2133/2400MHz, up to 16GB. Rich IO interface ,DP+ DVI-I, 2*LAN, 4*POE, all use Intel I210AT, optional support for EtherCAT protocol and CanOpen protocol ,4*USB3.0, 2*COM, 1*MIO, 1*PCIe X4 slot, 2*32bit-PCI slot,1*Mini PCIe, support 4G/Wifi/BT. 1*mSATA, 1*2.5"SATA3.0 used for storage. DC 12~24V wide power input ,support wall mounting and Din-Rail mounting. Adopt active and passive cooling design, fan wind speed can be intelligently controlled. BIOS optimized and support real-time system, Ubuntu Preemt-RT, optional support Intime. The extension module and the host are designed with easy disassembly, and the extension quantity is flexible. Different extension modules can be selected for different application scenarios, which are very suitable for Machine Vision, CNC control, Motion control and so on.

Key Features

- Intel® Kabylake-S/Skylake-S CPU, up to 65W
- CPU active and passive cooling design
- Intelligent temperature control fan, silent and dustproof
- DVI-I/DP the display signal can be extended without attenuation
- Dual I210 AT network chips, Optional support for a variety of real-time industrial Ethernet protocols
- BIOS optimization and support high real-time system
- 4*I210 AT chip POE camera interface and 16-bit iso. DIO
- 1*PCIe X4 slot, 2*32bit-PCI slot
- Support software development platform (optional)
- DC 12~24V, Wide power supply
- Support wall mounting and Din-Rail mounting



SPEC.

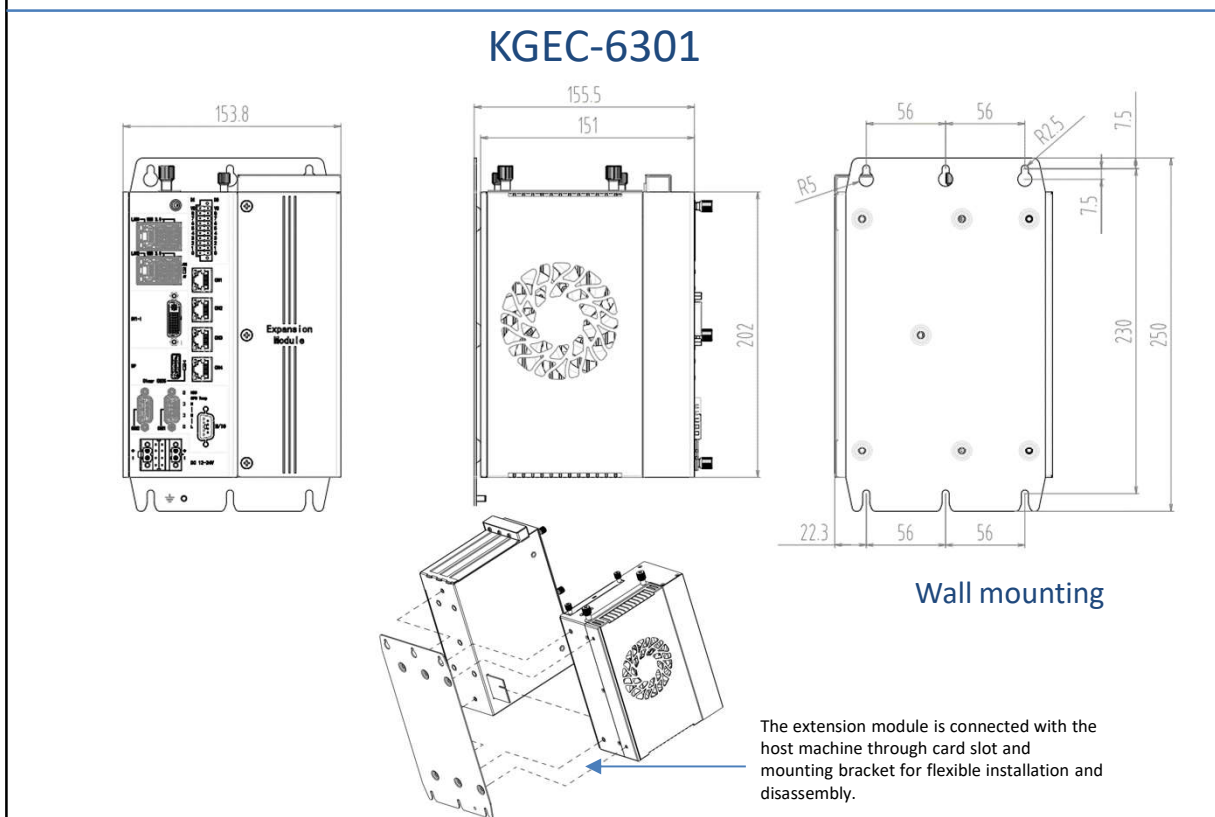
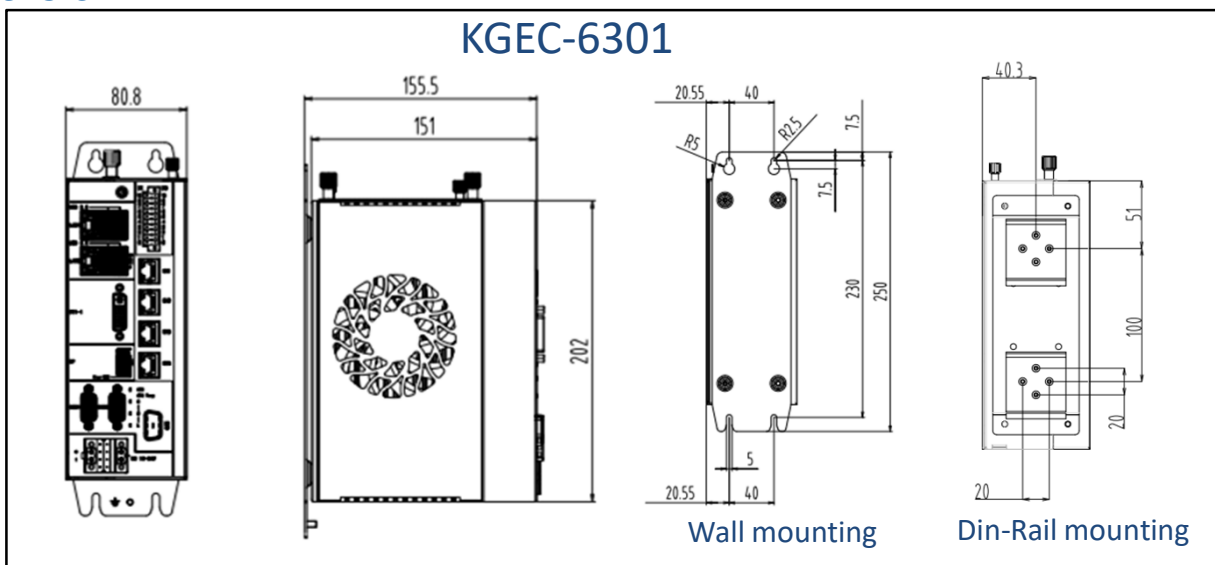
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|------------|----------------|---|
| System | CPU | Gen.6th Intel® Skylake-S/gen.7th Intel® Kabylake-S Pentium/Core I3/I5/I7 CPU, LGA 1151 socket |
| | Chipset | Intel® H110 |
| | System Memory | 1*260-Pin SODIMM, DDR4 2400/2133MHz, up to 16GB |
| | Expansion | 1*full size Mini PCIe (PCIe X1+ USB) with SIM slot,support 4G/Wifi/BT/CAN module 1*PCIe X4 slot with PCIe X1 2*32bit-PCI support motion control card, acceleration card and other functions of the expansion card |
| | Intel Graphics | Intel Gen. 9 HD Graphics,HEVC/H265 HW HD en/decoder DP max. res. 4096*2304@60Hz DVI-I(DVI-D+ VGA) DVI-D max. res. 1920*1200@60Hz, VGA max. res. 2560*1600@60Hz |
| | LAN | 2*Intel I210AT PCIe Gig. Ethernet, 10/100/1000Mbps ; 4*Intel I210AT PCIe Gig. Ethernet with POE function, 802.3af(15.4W) |
| | Storage | 1*2.5" SATA3.0 HDD/SSD 1*mSATA full size(SATA & USB2.0) |
| | DIO | 16-bit DIO(20-pin phoenix) 8-bit Iso. DI(High:5-24V,Low:0-1.5V) and 8-bit Iso. DO(200mA) |
| | I/O ports | 2*Gig-LAN(RJ45), 4*POE (RJ45) 4*USB3.0(Type A) 1*MIO with CAN, Uart signal (DB9) 2*RS232/422/485 with TVS Iso. (DB9) 1*DP+ 1*DVI-I |
| | LED | 1*Power LED, 1*HDD LED, 3*CPU temp. LED (Red is warning , Yellow is high, Green is normal) |
| | Control SW | 1*Power button, 1*AT/ATX Select SW, 1*Clear CMOS Select SW |
| | Power Supply | DC 12~24V Input, 2*2-pin ter. Connector,TDP: S001(12V/4.1A I7-6700T 4GB) , add expansion card (12V/4.4A I7-6700T 4GB) |
| | Watchdog Timer | Watchdog timeout programmable via software 1 to 255 second |
| | OS Support | RTOS: Intime, EC-Win, RTX-2014/2016和Ubuntu Preempt-RT Windows 7, Windows 10, Linux Fedora Ubuntu (Note: Gen.7th Intel® Kabylake-S processors don't support Windows 7) |
| Mechanical | Structure | Aluminum chassis, SGCC frame |
| | Color | Silk grey |
| | Mounting | Wall-mounting, Din-Rail mounting |
| | Dimension | (W*H*D) : S001(202*151*80.8mm),add expansion card (202*151*151mm) |
| | Net weight | S001: 3KG, add expansion card : 4.4KG |

*All specifications and photos are subject to change without notice.

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|---------------|-----------------------|--|
| Environmental | Operating temperature | -20°C~60°C, wide operating temp. SSD |
| | Storage Temperature | -40°C~85°C |
| | Storage Humidity | 10~90%@40°C, Non-condensing |
| | Vibration | 5grms/5~500Hz/random/in working(SSD); 1grms/5~500Hz/random/in working(HDD) |
| | Shock | 50g peak acceleration(11ms duration)(SSD); 20g peak acceleration(11ms duration)(HDD) |
| | Certification/EMC | CE/FCC Class B |

Dimension

Unit:mm



Ordering Info.

| Model No. | Introduction |
|----------------------------|--|
| KGEC-6301/S001 | Edge controller, Intel® Skylake-S/Kabylake-S LGA1151 CPU, H110 Chipset, 1*DDR4, 2*LAN, 4*POE, 4*USB3.0, 2*COM, 1*MIO, 1*Mini PCIe, 1*DVI-I, 1*DP, 16-bit Iso. DIO, 1*2.5" SATA bay, 1*mSATA, DC 12~24V |
| 3 slot expansion component | 1*PCIeX4slot (X1 signal) +2*PCI, 3 expansion slot |
| PA-120DC19 | AC/DC power adpter, DC19V/6.32A,120W |
| PA-220DC24 | AC/DC power adpter, DC24V@9.17A ,220W |

Support CPU List

| Series | Intel® Core™ | | | | | | Intel® Pentium® | | | |
|---------|--------------|-------|----------|-------|----------|-------|-----------------|-------|--------|-------|
| 7th Gen | I3-7100 | 2C/4T | I5-7500 | 4C/4T | I7-7700 | 4C/8T | G4600 | 2C/2T | G4600T | 2C/2T |
| | I3-7100T | 2C/4T | I5-7500T | 4C/4T | I7-7700T | 4C/8T | | | | |
| 6th Gen | I3-6100 | 2C/4T | I5-6500 | 4C/4T | I7-6700 | 4C/8T | G4400 | 2C/2T | G4400T | 2C/2T |
| | I3-6100T | 2C/4T | I5-6500T | 4C/4T | I7-6700T | 4C/8T | | | | |

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