

KS-KH Series

CM238

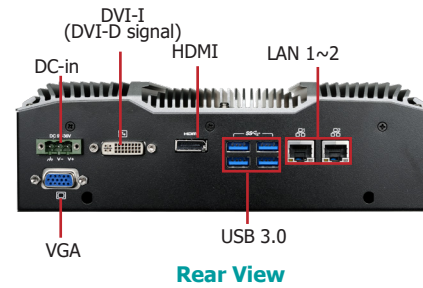
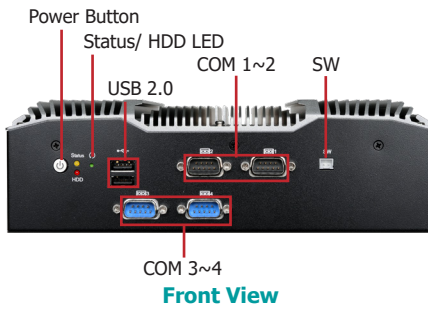


► Features

- Support Adaptive Display Platform
- Multiple Panel Sizes with Resistive/P-Capacitive Touch Screen
- Intel® Core™ Processor with Fanless Design
- Supports 9~36V Power Input
- IP65 Front panel Protection
- Operating Temperature: -20 to 50°C



► System



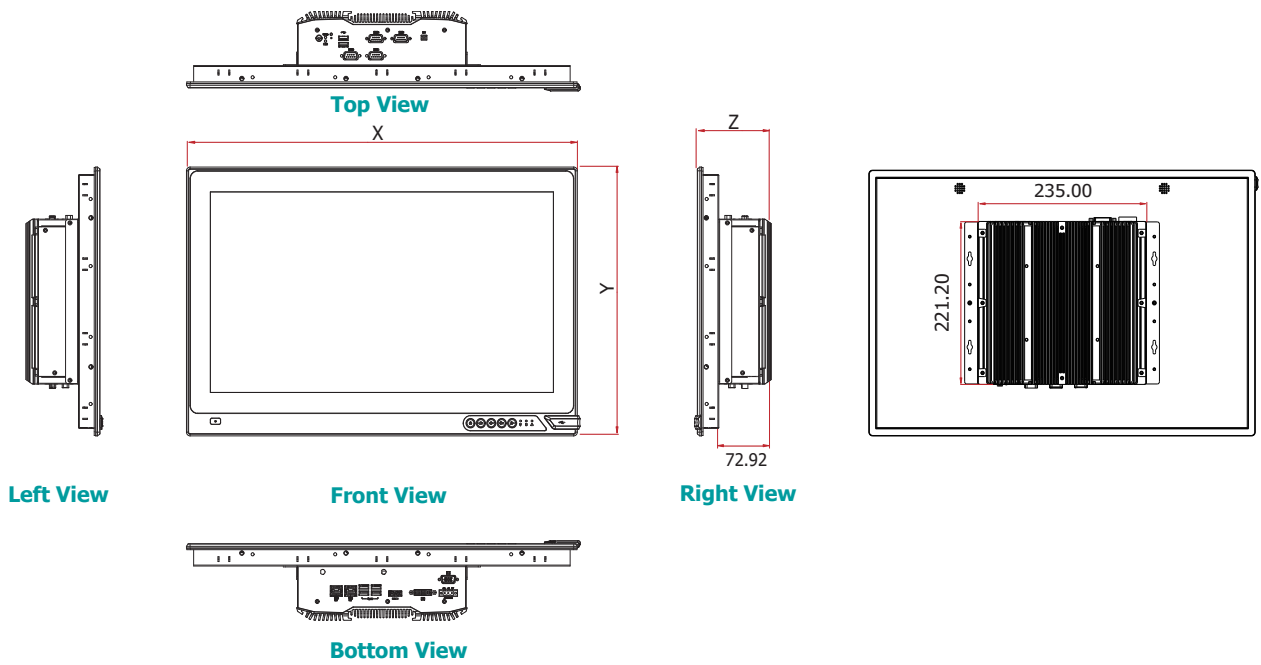
► Panel Specifications

| Model Name | | KS150-KH | KS190-KH | KS215-KH |
|-----------------------------------|--------------------------------------|--|---|---|
| Display & Touch Screen | Display Type | 15" TFT LCD Panel | 19" TFT LCD Panel | 21.5" TFT LCD Panel |
| | Max. Resolution | 1024 x 768 | 1280 x 1024 | 1920 x 1080 |
| | Brightness (cd/m²) | 300 | 350 | 250 |
| | Touch Type | Projected Capacitive / 5-wire Resistive | Projected Capacitive / 5-wire Resistive | Projected Capacitive / 5-wire Resistive |
| | Backlight Lifetime (hours) | 70,000 | 70,000 | 30,000 |
| Front I/O | USB (Optional) | 1 x USB 2.0 | | |
| | OSD (Optional) | Backlight On-Off / Brightness Up / Brightness Down / Audio Up / Audio Down | | |
| | LED Indicators (Optional) | Power LED / HDD LED / Alarm LED | | |
| Others | Auto Dimming (Optional) | Light Sensor | | |
| Environment | Operating Temperature | -20 to 50°C | | |
| | Storage Temperature | -30 to 70°C | -30 to 70°C | -30 to 70°C |
| | Relative Humidity | 5 to 90% RH (non-condensing) | | |

System Specifications

| | | | |
|-------------------------------------|-------------------------------|--|--|
| SYSTEM | Processor | 7th Generation Intel® Core™ Processors, BGA 1440 Intel® Xeon® Processor E3-1535M v6, Quad Core, 8M Cache, 3.1GHz (4.2GHz), 45W Intel® Core™ i7-7820EQ Processor, Quad Core, 8M Cache, 3.0GHz (3.7GHz), 45W Intel® Core™ i5-7440EQ Processor, Quad Core, 6M Cache, 2.9GHz (3.6GHz), 45W Intel® Core™ i5-7442EQ Processor, Quad Core, 6M Cache, 2.1GHz (2.9GHz), 25W Intel® Core™ i3-7100E Processor, Dual Core, 3M Cache, 2.9GHz, 35W Intel® Core™ i3-7102E Processor, Dual Core, 3M Cache, 2.1GHz, 25W | |
| | Chipset | Intel® CM238 Chipset Intel® QM175 Chipset | |
| | Memory | Two 260-pin SODIMM up to 32GB (CM238 supports ECC) Dual Channel DDR4 2400MHz | |
| | BIOS | Insyde SPI 128Mbit | |
| GRAPHICS | Controller | Intel® HD Graphics | |
| | Feature | OpenGL up to 5.0, DirectX 11, OpenCL 2.1 HW Decode: HEVC/H.265, H.264, M/JPEG, MPEG2, VC1/WMV9, VP8 (8-bit), VP9 (10-bit) HW Encode: HEVC/H.265, M/JPEG, MPEG2, VP8 | |
| | Display | 1 x VGA 1 x HDMI/DVI (DVI-D signal) (DVI available upon request) 1 x HDMI/DP++ (DP++ available upon request) | VGA: resolution up to 1920x1200 @ 60Hz DVI: resolution up to 2560x1600 @ 60Hz HDMI: resolution up to 4096x2160 @ 24Hz DP++: resolution up to 4096x2304 @ 60Hz |
| | Triple Displays | VGA + HDMI/DVI (DVI-D signal) + HDMI/DP++ | |
| STORAGE | Internal | 1 x 2.5" SATA 3.0 Drive Bay (RAID) | |
| EXPANSION | Interface | 1 x Full-size Mini PCIe with micro SIM socket (PCIe/USB) 1 x Full-size Mini PCIe with micro SIM socket (USB) 1 x M.2 M Key 2280 (PCIe x4) | |
| | ETHERNET | Controller 1 x Intel® I211AT PCIe (10/100/1000Mbps) 1 x Intel® I219LM with iAMT11.0 PCIe (10/100/1000Mbps) (only Core i7/i5 supports iAMT) | |
| LED | Indicators | 1 x Power LED 1 x Status LED 1 x HDD LED | |
| FRONT I/O | Serial | 2 x RS-232/422/485 (DB-9) (RS-232 with power) 2 x RS-232/422/485 (DB-9) | |
| | USB | 2 x USB 2.0 (type A) | |
| | Buttons | 1 x Power Button 1 x Reset Button | |
| | Wi-Fi Antenna | 2 x Wi-Fi Module Antenna Hole | |
| REAR I/O | Ethernet | 2 x GbE (RJ-45) | |
| | USB | 4 x USB 3.0 (type A) | |
| | Display | 1 x VGA 1 x HDMI/DVI (DVI-D signal) (DVI available upon request) 1 x HDMI/DP++ (DP++ available upon request) | |
| | Audio | 1 x Line-out 1 x Mic-in (available upon request) | |
| WATCHDOG TIMER | Output & Interval | System Reset, Programmable via Software from 1 to 255 Seconds | |
| SECURITY | TPM | TPM 2.0 | |
| POWER | Type | Wide Range 9~36V | |
| | Connector | 3-pole Terminal Block 2-pin Power Extension Switch Connector | |
| OS SUPPORT | | Windows 10 IoT Enterprise LTSB 64 Bit Linux (available upon request) | |
| MECHANISM | Construction | Metal + Aluminum | |
| | Mounting | Panel/VESA Mount | |
| | Dimensions (W x H x D) | KS150-KH: 403 x 330 x 102.32mm KS190-KH: 484 x 412 x 102.32mm KS215-KH: 553.4 x 365.2 x 102.72mm | |
| | Weight | TBD | |
| ENVIRONMENT | Operating Temperature | -20 to 50°C (SSD or mSATA-mini or CFast card, with 0.7m/s air flow) | |
| | Storage Temperature | -30 to 70°C | |
| | Relative Humidity | 5 to 95% RH (non-condensing) | |
| STANDARDS AND CERTIFICATIONS | Shock | Half sine wave 3G, 11ms, 3 shock per axis | |
| | Vibration | IEC68-2-64 | |
| | Certification | CE, FCC | |

► Dimensions



| | System Dimensions | | |
|---------------|-------------------|--------|--------|
| Display Type | X1 | Y1 | Z1 |
| 15" XGA LCD | 387 | 320 | 102.32 |
| 19" SXGA LCD | 467 | 400 | 102.32 |
| 21.5" FHD LCD | 544.2 | 360.63 | 102.72 |

► Optional Items

| Optional Items | Part Number | Description |
|----------------------|-----------------|---|
| Memory | 138-540002-100G | 4GB DDR4 SODIMM RAM |
| | 138-580002-100G | 8GB DDR4 SODIMM RAM |
| | 138-5G0161-100G | 16GB DDR4 SODIMM RAM |
| HDD/SSD | 635-550092-050G | 2.5" SATA HDD, 500GB, RoHS |
| | 635-500100-200G | 2.5" SATA HDD, 1TB, RoHS |
| | 635-610002-110G | 2.5" SATA SSD, 1TB MLC, RoHS |
| | 635-605122-110G | 2.5" SATA SSD, 512GB MLC, RoHS |
| | 635-602562-120G | 2.5" SATA SSD, 256GB MLC, RoHS |
| | 635-601282-190G | 2.5" SATA SSD, 128GB MLC, RoHS |
| | 635-600642-150G | 2.5" SATA SSD, 064GB MLC, RoHS |
| Wi-Fi | 761-110091-000G | Wi-Fi Kit, SparkLAN, WPEA-121N, w/IPX cable & antenna |
| | 612-110050-300G | Wi-Fi module, SparkLAN, WPEA-252NI |
| Power Cord | 785-PWRD | Power Cord, Standards (USA/EUR/CH), 1.8m, RoHS |
| Power Adapter | 671-116001-000G | Power Adapter 160W , 19V/8.4A Level 5, RoHS |
| | 671-116003-000G | Power Adapter 160W , 19V/8.4A Level 6, RoHS |

785-XXX is a group number instead of a unique part number. Please contact your regional sales representative if you need more information.

► Packing List

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|---|
| • 1 Single Box |
| • 1 3 pin Terminal Block Connector |
| • 2 Mini PCIe Screw |
| • 1 SATA Screw |
| • Panel Mount kit: 10pcs(KS150) / 12pcs(KS190) / 18pcs(KS215) |