DATASHEET

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Manufacturer: Product: Type: Description: Hatteland Technology AS Compact Fanless Computer HTB40G-xx-xx yzzzzz (Long model) (where xx-xx=CPU type + Power Input, y=manufacturing site, z=configuration)



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Compact Fanless Computer

Overview:

The HTB40 range is based on the latest Intel chipset and Alderlake processor platform, delivering even more power for maritime technology developers to design and build high-end vessel control and monitoring solutions that enable safer and more effecient maritime operations.

HTB40 computers are available in two new form factors, short depth and long depth, allowing for flexible installation options including 3U rack mounting in pairs. Using the same system architecture as our new, second generation Series X Panel Computers, the HTB40 range offers significant processing speed and graphical performance improvements, which when combined with multiple-drive solid state storage and silent, fanless operation, positioning it among the most advanced computing platforms for maritime applications.

HTB40 computers can be delivered with a choice of Intel® Core[™] / Celeron® processors, up to i7. Graphical output is handled by 2 x Display Port 1.4a and 2x USB-C ALT mode. While standard interfaces include 4 x Ethernet Ports, 2 x USB-C, 6 x USB2.0 and 2 x USB3.2. The HTB40 platform also supports a wide range of interface modules such as CAN/NMEA COM/COM and DIO, ensuring it is ready off-the-shelf for all maritime applications. In addition, HTB40 range of computers features a lightweight, fully enclosed aluminium chassis and comes with either MultiPower (AC+DC) or single AC input.





Dimensions might be shown with or without decimals and indicated as mm [inches]. Tolerance on drawings is +/- 1mm. For accurate measurements, check relevant DWG file.

SPECIFICATIONS

Note: All specifications are subject to change without prior notice! Please visit www.hattelandtechnology.com for the latest electronic version.



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TECHNICAL DESCRIPTION **Computer Specifications: (Standard model)** External Connector Type: Operating System Processor None or Customized image - See table below 1 x Intel[®] CoreTM - See table below Memory/RAM 2 x SO-DIMM SLOT DDR5-4800, Max 2x32GB - See table below Storage internal Graphics 2 x 2.5' SSD Intel® Iris® Xe Graphics eligible OpenGL 4.6, DirectX 12.1, OpenCL 3.0 4 independent displays (valid combinations: ref Intel datasheet) DP = 7680 x 4320 @ 60Hz Max Integrated in 12th Generation Intel® Core™ U-series processor 2 x DP++ 1.4a Graphics Res. System Chipset BIOS : ACPI support : ACPI support: $1 \times 10/100/1000$ Mbps, Realtek RTL8119I Gigabit LAN : $1 \times 10/100/1000$ Mbps, Realtek 8119I Gigabit LAN : $1 \times 10/100/1000$ Mbps, Intel® i226IT Gigabit LAN : $1 \times 10/100/1000$ Mbps, Intel® i226IT Gigabit LAN 1 x RJ-45, Teaming 1 x RJ-45, Teaming 1 x RJ-45, Teaming 1 x RJ-45, Teaming 6 x USB Type A Ethernet #1 Ethernet #2 Ethernet #3 1 x 10/100/1000Mpps, Intel® i22611 Gg 1 x 10/100/1000Mbps, Intel® i219V LAN 6 x USB2.0 (<5m) 2 x USB3.2 (<3m) 2 x USB3.2 (<3m) DP1.4a ALT mode ACPI S3/S4 256 Segments, 0, 1, 2...255 sec/min 0 5c/day** Ethernet #4 USB Ports #1 USB Ports #2 USB Ports #3 2 x USB Type A 2 x USB-C RTC H/W Status Mont. 0.5s/day** H/W Status Mont. H/W Status Mont. TPM2.0, Firmware Raid, Temperatures, voltages, Battery load status Alarm, cooling fan status*. Auto throttling control if CPU overheats Normal operational conditions: life time >5 year, worst case conditions(@70C, 24/7): life time >2 year * Cooling FAN status, not applicable for system without CPU/system FAN. **Power Specifications: Power Supply options:** • Multi Power: 100-240VAC 50/60Hz + 24VDC - 60W PSU 1 x STD IEC + 1 x 2-pin T-Block 5.08 1 x STD IEC Single AC Input: 100-240VAC 50/60Hz - 300W PSU Power Consumption** Operating AC+DC: 52W TBD (typ, at 25% load. Max Allowed External USB load = 10W.) - 75W (max) Power Consumption Operating AC: 52W TBD (typ, at 25% load. Max Allowed External USB load = 10W.) - 336W (max) Note: You may connect either AC power or DC power or both. In case both sources are connected, power will be sourced from the AC input. If AC input is lost, there will be a uninterrupted switch-over to DC input. Available Computer Configurations: Size/Specification Туре Description 1 x Intel® Core[™] i7-1265UE (10 physical core / 12 thread) or Intel® Core[™] i5-1245UE (10 physical core / 12 thread) or Intel® Core[™] i3-1215UE (6 physical core / 8 thread) or Intel® Core[™] Celeron 7305E (5 physical core / 5 thread) - 3.5GHz / 4.7GHz @15W, Chipset: Intel® Iris® Xe Graphics eligible - 3.3GHz / 4.4GHz @15W, Chipset: Intel® Iris® Xe Graphics eligible - 3.3GHz / 4.4GHz @15W, Chipset: Intel® UHD Graphics for 12th Gen Intel® - 1.0 GHz @15W, Chipset: Intel® UHD Graphics for 12th Gen Intel® CPU Dual Channel, DDR5 SO-DIMM, 2 slots available Memory 2x8GB (Standard), 2x16GB, 2x32GB (Max). 1x8 GB RAM (*Intel Iris Graphics requires 2x**GBRAM) 240GB (599TBW),480GB (945TBW),960GB (1750TBW), 1.9TB (8.8PBW). Review "SSD Selection Guide" in User Manual 2 x SSD 2.5' Storage OS Option Windows 10 2021 IoT Enterprise LTSC - Product Distribution End Date January 2029. Windows 11 2024 IoT Enterprise LTSC 32/64bit where Linux Kernel xx TBD applicable Available Accessories: • HT 00262 OPT-A1/B1: 4 x RS-422/RS-485 isolated, USB ext. module • HT 00263 OPT-A1/B1: 4 x RS-232 COM non-isolated, USB ext. module • HT 00264 OPT-A1/B1: 1 x CAN isolated, 2 channel, USB ext. module • HT 00274 OPT-A2/B2: 1 x SLCAN isolated, 2 channel, USB ext. module • HT 00273 OPT-A1/B1: 4 x Digital IN/OUT isolated, USB ext. module • HT 00274 OPT-A1/B1: 1 x LAN 10/100Mbps, R145, USB ext. module • HT 00277 OPT-B1: 2 x LAN 10/100Mbps, R145, USB ext. module • HT 00278 OPT-A1: 1 x Mounting Plate with cable relief, RAL9011 • HT MBK STD-A1: 1 x Mounting Bracket Kit** • HT RET STD-A1: 1 x Cable Retainer/Relief Kit** • HT RET STD-A1: 1 x 20 kack Mount Kit RAL9011 • HT RMK STD-A1: 1 x 20 kack Mount Kit WHandles, RAL9011 • HT RMK STD-A1: 1 x 20 lack Mount Kit (For 1 or 2 x HTB40) • SF-41-20: 2 x 20" ball bearing sliding rail kit for 19" Rack* • SF-41-26: 2 x 20" ball bearing sliding rail kit for 19" Rack* • JH COIMF AA: 1 x USB Cable 1m, Type A to Chassis mount receptacle • HT 00300 MSOS: OS options: https://www.hattelandtechnology.com/os • HT DPM2DVI-DF-A1: 1 x DV to DVI adapter • SFP-100Base-TX-C: SFP to 10/100/1000Base-T Copper Interface • VSD203400-1: External Power Button Cable 2m • VSD203700-2: External Power Button Cable 4.6m (no power button included) * Must be combined with HT SRK STD-A2 ** Included with delivery **Available Accessories: Factory Mounted Options:** • 1, 2 or 3 x PCA200828-1 (4 x COM RS-422/485 isolated NMEA 4 channel) module* • 1 x HTA2020002-AD1033: CAN isolated, 2 channel module* • 1 x HTA2020002-SLCAN: Socket CAN isolated, 2 channel module* • 1 x PCA100297-1 (4 x Digital Input/Output isolated) module* • 1 x PCA100298-1 (LAN 10/100Mbps, 2 ports (RJ45) module* • 1 x VSD203134-1 (2W Amplified Audio out via DB9F)* - Pending EN60945 • 1, 2 or 3 x PCA100309-1: Dual Isolated RS-232, 2xDB9M module* 1 x PCBAA21001: LAN 1Gbps, 2 x SFP module* • 1 x PCA200827-1: 2 x RJ-45, PoE 12V 5,5A receiver module* • 1 x PCA200898-1: NMEA Kit (4xRS422/RS485 isolated) SW Configurable Pending • 1 x HT EPB STD-A5: Remote-ON/OFF KIT • Variations of Storage Devices, RAM Memory and Operating System * Contact us for possible combinations. Review separate datasheet for more info. ^[13] Note: Due to driver limitations, only 1 instance of this module can be connected to the same Computer/Panel Computer unit. If Computer/Panel Computer already has SLCAN functionality builtin, connecting this external module will always fail ** Included with delivery MECHANICAL DESCRIPTION **Physical Specifications: Environmental Considerations:** • W:220.00 [8.66"] x H:89.00 [3.50"] x D:300.00 [11.81"] mm [inch] Temperature -15°C to +55°C Temperature -20°C to +60°C Operating • Weight: 3.7kg / 8.1lbs Storage Up to 95% (Operating / Storage) Humidity Aluminium Cooling Chassis Shock - Vibration • Includes: Mounting Bracket Kit, USB + DP/HDMI Retainers, Cable Relief Retainer Power (or Reset=optional model) Button, Power LED, Activity LED SSD **Power Consumption: Numbers are specified as the unit is delivered from factory. All (Bonded) additional installed equipment like USB, PCIe and similar loads have to be added to power Compass Safe Distance : Standard: 30cm - Steering: 20cm consumption. Note that total extra load have to be multiplied by 1.5 to compensate for Lifetime Considerations: efficiency in internal power converters. Typical power consumption varies a lot with computer Even though the test conditions for bridge units provide for a maximum load. We measure with 25% of max computer load. operating temperature of 55°C, continuous operation of all electronic components should, if possible, take place at ambient temperatures of only 25°C. This is a necessary prerequisite for long life and low service costs. PPROVAL 8 CER FICAT S Т ES

IEC 60945 4th (EN 60945:2002)* ClassNK - Nippon Kaiji Kyokai*

IACS E10* EN55024* CCS - China Classification Society*

These products have been tested / type approved by the following classification societies: EN55022, Class A* ABS - American Bureau of Shipping*

^k=pending EU RO MR - Mutual Recognition* **BV** - Bureau Veritas*