

Manufacturer: **Hatteland Technology AS**
 Product: **Compact Computer (Standard Models)**
 Type: **HTC03-xx-AC yzzzzzz**
 where xx=CPU type (i3,i5,i7), y=manufacturing site,
 zz=configuration

Last Revised: **17 Feb 2025**
 Revision#: **26**

Compact Computer (Standard Models)

Features:

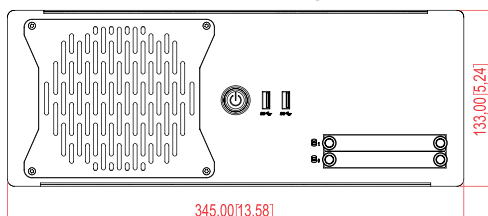
The HTC03 model is the successor to the best in class and highly successful HT C02 computer. The new model incorporates latest processor technologies and enhanced feature sets, thus providing greater versatility for high-end maritime system applications.

The HTC03 models are high-end platforms with an enhanced chassis that includes external disc bays at the front. The i3, i5 or i7 processor options ensure state of the art computing performance is delivered; while the extensive feature options allows for the HTC03 to be built up to a quasi-Server capability.

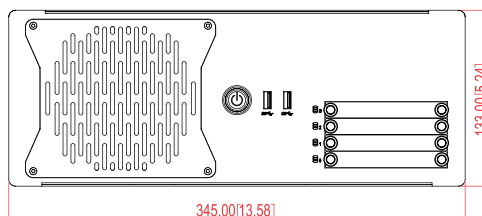
By default equipped with 2 x front side bays for 2 x SSDs with the option of 4 x removable front side disc bays, onboard raid, M.2, 4 x PCI-e slots, memory up to 64GB RAM, 6 x USB, 4 x LAN ports, 3 x Signal outputs (2 x DP+ and 1 x USB-C) and more, making the HTC03 the most versatile rugged PC solution for the professional maritime segment.



FRONT VIEW (2-bay model)

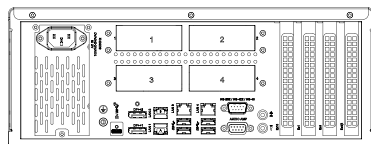


FRONT VIEW (4-bay model)

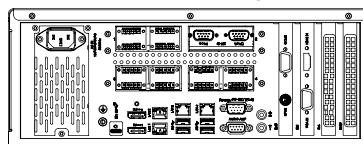


For 4-bay model: Contact your sales representative at Hatteland Technology for details.

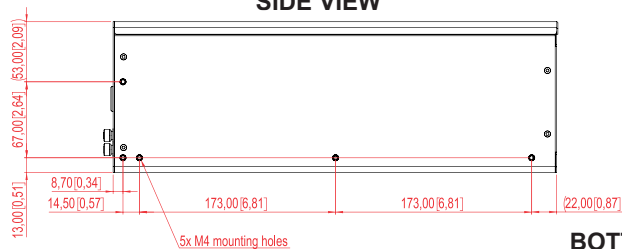
BACK VIEW



BACK VIEW w/factory options

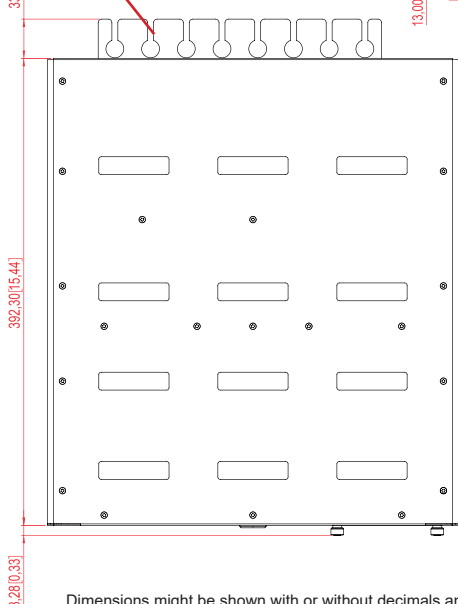


SIDE VIEW

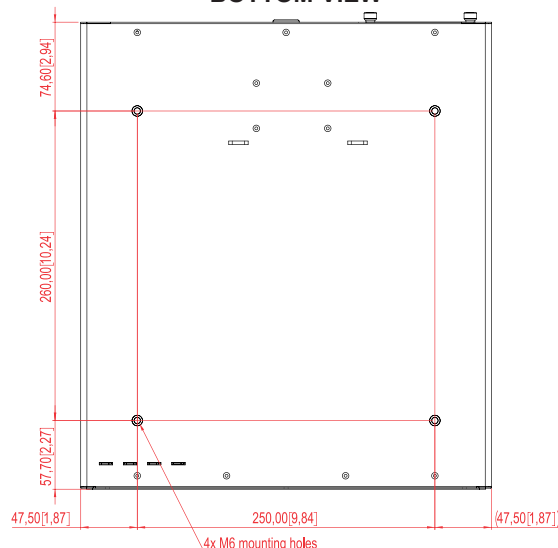


Cable/Retainer Kit

TOP VIEW



BOTTOM VIEW



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.

TECHNICAL DESCRIPTION

Computer Specifications:

- Operating System Support : See table below for options
- Supported Storage : 2 or 4 x SATA 3.0 (6GB/s) in Removable SSD tray in front (2.5" size). See table below for options
- Processor : 1 x Intel® Core™ i5-9500E, 6-Core 4.20GHz, 9MB Cache - See table below for options
- Memory/RAM : 1 x 8GB (single channel) installed - Max 64GB possible - Dual Channel available - See table below for options
- Graphics : Intel® UHD 630
- Graphics Capabilities : DirectX Support 12.0, Shader Model 6.4, OpenCL 2.1, OpenGL Support 4.5/linux, Vulkan 1.1.97
- Max Graphics Resolution : Max 3840 x 2160 (4K UHD) @ 60Hz for DP (DisplayPort)
- System Chipset : Intel® Q370
- BIOS : UEFI, ACPI support
- PCIe Slots : 1 x PCIe 3.0 x16 (reserved for additional Graphics Card, See Factory Mounted options below)
1 x PCIe 3.0 x4 (x8 socket) + 1 x PCIe 3.0 x4 + 1 x PCIe 3.0 x1
- M.2 Storage (PCIe options) : 1 x M.2 2280 M-key (one SATA + NVMe4)
1 x M.2 2230 E-Key (PCIe + USB for WiFi)
2 x LAN 10/100/1000Mbps, Intel®, Intel 210IT Support for Intel® Teaming
2 x LAN 10/100/1000Mbps Realtek RTL8111H
2 x USB 3.1 (<3m) ports in front
4 x USB 3.1 (<3m) ports in rear
1 x USB-C (DisplayPort - Power Distribution enabled, 60W) in rear
1 x RS-232/RS-422/RS-485 un-isolated Baud Rate: Max 115.2Kbps
Realtek HD Audio supports 2.0 channel, Mic. in, Line out
2W, Stereo/Mono supported
ACPI
Reset: 1 sec.~255 min. and 1 sec. or 1 min./step
Temperatures, voltages & cooling fan status. Auto throttling control if CPU overheats
LAN Wakeup, USB Boot, TPM2.0, Firmware Raid, Intel® Management Engine. True power on after power fail.

External Connector Type:

1 x USB-C + 2 x DisplayPort 1.2
(2 x Display clone + 1 extended)

2 x RJ45 Teaming
2 x RJ45
2 x USB Type A
4 x USB Type A
1 x USB-C
1 x DB9M
2 x 3.5mm Audio Jack
1 x DB9F

Power Supply:

100-240VAC 50/60Hz

Power Consumption: Operating: 70W typical - 240W max

External Connector Type:

Std IEC

Available Computer Configurations:

Type	Description	Size/Specification
CPU	1 x Intel® Core™ i3-9100E 1 x Intel® Core™ i5-9500E 1 x Intel® Core™ i7-9700E	4-Core 3.10GHz - 3.70GHz, 6MB Cache 6-Core 3.00GHz - 4.20GHz, 9MB Cache 8-Core 2.60GHz - 4.40GHz, 12MB Cache
Memory	DDR4 SO-DIMM 260-pin	- Uses 2 slots, Single or Dual Channel (where applicable), available sizes are: Single Channel: 1x8GB (2400MHz) Dual Channel: 2x8GB (2400MHz), 2x16GB (2400MHz), 2x32GB (2666MHz)
Storage	2.5"/M.2 SSD SATA	- 240GB (0.9PBW), 480GB (1.2PBW), 960GB (3.4PBW), 1.9TB (7.1PBW)
OS Option	Microsoft® Windows® Server 2016/2019 64bit, Windows® 10 IoT Enterprise 2019 LTSC (64bit), Win10 2021. Linux: Kernel 4.1x or later version	

Factory Mounted Options:

- PNY NVIDIA T400 4GB PCIe 3.0 x16, LP, 3x mDP
- PNY NVIDIA T1000 8GB PCIe x16, 4x mDP 1.4
- CP-114EL-I ELEK KIT: 4xCOM,PCIe x1,1xDB44F to 4xDB9M isolated, RS-232/422/485)
- X710T2L / X710T2LBLK: Intel® Network Adapter (10GbE), 2 x RJ45
- I350T4V2 / I350T4V2BLK: Intel® Network Adapter (1GbE), 4 x RJ45
- X710DA2 / X710DA2BLK: Intel® Fiber Network Adapter (10GbE), 2 x SFP+**
- HT LAN-F INT: 2x SFP-1000BaseLX-RGD-C**
- PCA100297-1: Digital IO Isolated, 4 IN + 4 OUT*
- PCA100298-1: LAN 10/100Mbps, 2 ports (RJ45) module*
- PCA100309-1: Dual Isolated RS-232, 2xDB9 module*
- PCA200828-1: COM RS-422/485 isolated NMEA 4 channel, 5-pin T. Block 3.81*
- PCA200898-1: NMEA Kit (4xRS422/RS485 isolated) SW Configurable PENDING
- HTA2020002-SLCAN: Socket CAN isolated, 2 channel module*
- HTA2020002-AD1033: CAN isolated, 2 channel module*
- HT EPB STD-A4: REMOTE ON/OFF Module
- HD550N1 HDV M2: Frame grabber HDMI / RGB
- HD550N1 SDI M2: Frame grabber SDI-HD

Available Accessories:

- HT 00225 OPT-A1: 2 x 26" ball bearing sliding rail & mounting kit for 19" Rack
- HT 00224 OPT-A1: 2 x 20" ball bearing sliding rail & mounting kit for 19" Rack
- HT 00223 OPT-A1: 1 x 4U 19" Rack Case Kit(compatible with HT00224/00225)
- HT 00226 OPT-A1: 2 x Mounting Bracket, 4mm SECC+Zinc Plating, RAL9011
- HT 00262 OPT-A1: 4 x RS-422/RS-485 isolated, USB ext. module
- HT 00263 OPT-A1: 4 x RS-232 COM non-isolated, USB ext. module
- HT 00264 OPT-A1: 1 x CAN isolated, 2 channel, USB ext. module
- HT 00264 OPT-A2: 1 x CAN isolated, 2 channel, socketCAN USB ext. module
- HT 00274 OPT-A1: 2 x LAN 10/100Mbps, RJ45, USB ext. module
- HT 00273 OPT-A1: 4 x Digital IN/OUT isolated, USB ext. module
- HT 00275 OPT-A1: 1 x PCI Mount Kit EN60945, Low Profile (LP, any len.)
- HT MBK STD-C1: Mounting Bracket Kit HTC03/HTC04 - L-Shaped
- HT RET STD-A3: 1 x Cable/Retainer Kit
- HT 00300 MSOS: OS options -> www.hattelandtechnology.com/os

* For all Factory Mounted Options, review User Manual for possible HW combinations.
**In combination with graphic-card, only USB 2.0 in front. Installed in x4 slot.

- JH C01MF A-A: 1 x USB Cable 1m, Type A-Chassis mount receptacle
- H733S30Q20-SP000-0: 1 x Replacement Front Air Filter w/4 screws
- HD 000TR SX2-A3: 1 x Removable Tray 2.5" w/4xM3x4mm Phillips Countersunk Screws
- 895-0492: USB-C cable, 2m
- VSD203404-1 R2 USB-C to DP Adapter
- VSDDPVGA340 / HT DPM2VGAF-A1: 1 x DP to VGA adapter
- RC3473 / HT DPM2DVI-Df-A1: 1 x DP to DVI adapter
- ZA-A391: mini DP to HDMI(female)
- ZA-A390: mini DP to DVI(female)
- VSD203733-1: External Power Button Cable 4.6m (no power button included)
- VSD203400-1: External Power Button Cable 2m
- VSD203400-2: External Power Button Cable 5m
- HD xxxxy SX1-z1: 1 x Removable Tray 2.5" w/Storage Device*

MECHANICAL DESCRIPTION

Physical Specifications:

- W:345.00 [13.58"] x H:133.00 [5.24"] x D:392.30 [15.44"] mm [inch]
- Weight: Approx 9.0kg / 19.8lbs
- 2 x Removable SSD tray in front (2.5" size)
- Power/Reset/Power LED Combined Function
- Easy Removable Front Air Filter (spare part accessory available)
- Includes Mounting Brackets (HT 00226 OPT-A1)
- 1 x Internal Cooling fan in front (120x120mm)
- Product Carton Size and Weight:**
 - L:560.00 [22.05"] x W:240.00 [9.45"] x H:480.00 [18.90"] mm [inch]
 - Approx. 12kg / 26.4lbs

Environmental Considerations:

Operating	Temperature -15°C to +55°C
Storage	Temperature -20°C to +70°C
Humidity	Up to 95% (Operating / Storage)
Shock - Vibration	5g/11ms - 0.7g (IEC 60945 / IACS E10)
Air Pressure Maximum Altitude	Operating: 4000m - Storage: 12912m
Air Pressure Maximum Altitude (Bonded)	Operating: 3000m - Storage: 3000m
Compass Safe Distance	Standard: 260cm - Steering: 170cm

Lifetime Considerations:

Even though the test conditions for bridge units provide for a maximum 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.

APPROVALS & CERTIFICATES

IEC 60945 4th (EN 60945:2002)
ABS - American Bureau of Shipping
LRS - Lloyd's Register of Shipping

These products have been tested / type approved by the following classification societies:
IACS E10 EN61162
CCS - China Classification Society

EU RO MR - Mutual Recognition by DNV
BV - Bureau Veritas

KR - Korean Register of Shipping
ClassNK - Nippon Kaiji Kyokai