

Manufacturer: **Hatteland Technology AS**  
 Product: **Compact Computer (Standard Models)**

Type: **HT C02Hx STC-yzz-wzzz**  
 where x=CPU type, y=OS, w=Power Input, z=configuration

Last Revised: **31 Jan 2020**  
 Revision#: **24**

## Compact Computer (Standard Models)

### Features:

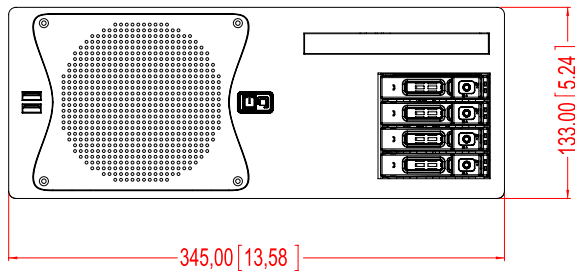
The HT C02Hx model is the successor to the best in class and highly successful HT C01 computer. The new model incorporates latest processor technologies and enhanced feature sets, thus providing greater versatility for high-end maritime system applications.

The HT C02Hx models are the Mid-level and high-end platforms with an enhanced chassis that includes a DVD drive and 4 external disc bays at the front. The i5 or i7 processor options ensure state of the art computing performance is delivered; while the extensive feature sets of the HT C02Hx allows for the computer to be built up to a quasi-Server capability.

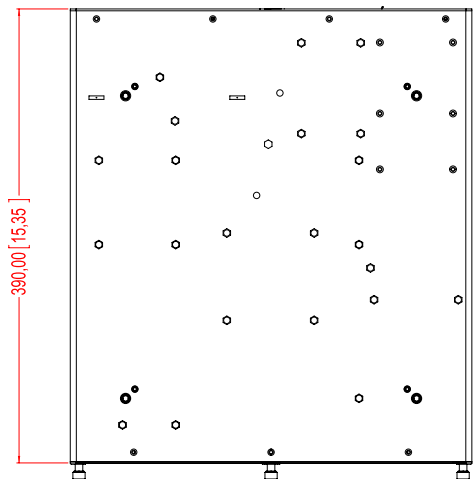
4 removable front side disc bays, onboard raid, 4 PCI slots, memory up to 16GB RAM, RS232, 422, 485 support, 6 USB, 4 LAN ports, 2 DVI-I plus 1 Display port and more, making the HT C02Hx the most versatile rugged PC solution for the professional maritime segment.



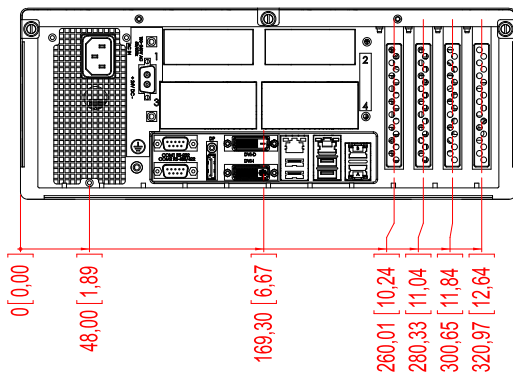
FRONT VIEW



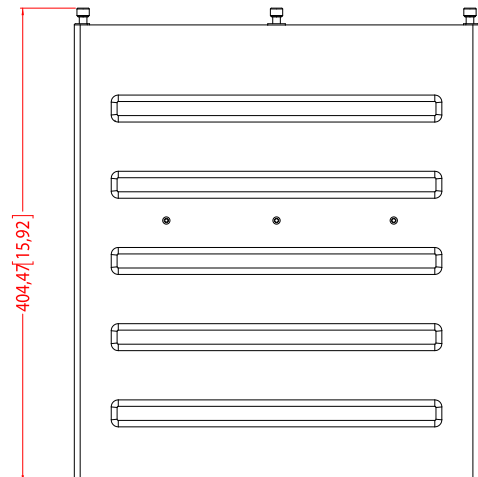
BOTTOM VIEW



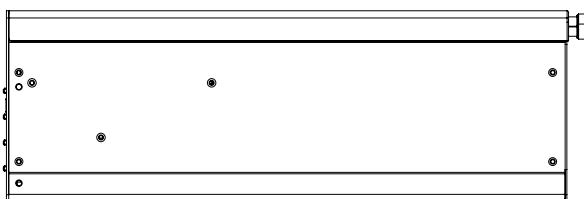
BACK VIEW



TOP VIEW



SIDE 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: (Standard model)

<ul style="list-style-type: none"> <li>Operating System Support : None, customized image or see table below.</li> <li>Storage Devices : 4 x Removable SSD/HDD tray in front, see table below</li> <li>Media Drive : 1 x DVD-RW/CD-RW Dual Recorder/Player</li> <li>Processor : 1 x Intel® Core™ i5-4570S Quad Core Processor 2.9GHz, 6MB Cache or see table below.</li> <li>Memory/RAM : Max 16GB possible (Dual Channel DDR3 1600 204pin SO-DIMM), see table below</li> <li>Graphics : Intel HD Graphics 4600 integrated</li> <li>Graphics Capabilities : DirectX Support 11.2/12, Shader Model 5.0, OpenCL 1.2, OpenGL Support 4.3 / 4.5/linux), Graphics Video Max Memory 2GB</li> <li>Max Graphics Resolution : Max 1920 x 1200 @ 60Hz for DVI-I/VGA/DVI-D. Max 3840 x 2160 (4K UHD) @ 60Hz for DP (DisplayPort)</li> <li>System Chipset : Intel® Q87</li> <li>BIOS : AMI BIOS</li> <li>PCI Slots : 1 x PCI v2.3, 32-bit/33MHz, 3V and 5V Interface, Full Height &amp; Length</li> <li>PCIe Slots : 1 x PCI Express x16 + 1 x PCI Express x4 + 1 x PCI Express x1, all Full Height &amp; Length</li> <li>Ethernet #1 : 2 x 10/100/1000Mbps, Intel® I217/I210 Gigabit LAN supports Intel® Teaming</li> <li>Ethernet #2 : 2 x 10/100/1000Mbps, Realtek 8111E Gigabit LAN</li> <li>Serial Port #1 : 1 x RS-232 Baud Rate: Max 128kbps</li> <li>Serial Port #2 : 1 x RS-422/RS-485 Baud Rate: Max 256kbps</li> <li>USB Ports #1 : 2 x USB2.0 (&lt;5m) ports in front</li> <li>USB Ports #2 : 1 x USB2.0 (&lt;5m) + 1 x USB1.1 (&lt;10m) / USB2.0 (&lt;5m) ports in rear*</li> <li>USB Ports #3 : 2 x USB3.0 (&lt;3m) ports in rear</li> <li>PC-Speaker : Yes, onboard</li> <li>Audio : Realtek ALC892-CG HD Audio supports 5.1 channel (Note: for sound outputs, hardware option VSD100897-1 is required)</li> <li>Power Manager : ACPI</li> <li>Watchdog Timer : Reset: 1 sec.~255 min. and 1 sec. or 1 min./step</li> <li>H/W Status Monitor : Temperatures, voltages &amp; cooling fan status. Auto throttling control if CPU overheats</li> <li>Other Features : LAN Wakeup, USB Boot, Wakeup, Intel® Management Engine. True power on after power fail.</li> </ul>	<p>External Connector Type:</p> <ul style="list-style-type: none"> <li>1 x DVI-I + 1 x DVI-D + 1 x DP</li> <li>2 x RJ-45</li> <li>2 x RJ-45</li> <li>1 x DB9M</li> <li>1 x DB9M</li> <li>2 x USB Type A</li> <li>2 x USB Type A</li> <li>2 x USB Type A</li> </ul>
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### Power Supply Options:

<ul style="list-style-type: none"> <li>100-240V AC - 50/60Hz</li> <li>24 VDC</li> </ul>	<ul style="list-style-type: none"> <li>Power Consumption - Operating: 70W typical (AC and DC models)</li> <li>Model HT C02Hx STC-xxx-Axxx (PSU MAX AC 330W)</li> <li>Model HT C02Hx STC-xxx-Dxxx (PSU MAX DC 220W)</li> </ul>	<p>External Connector Type:</p> <ul style="list-style-type: none"> <li>STD IEC</li> <li>1 x 2p D-SUB (male) Amphenol FCC17</li> </ul>
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### Available Computer Configurations:

\*USB1.1/2.0 Combo port is by factory default set to USB2.0 mode. To force USB1.1 mode, change in BIOS.

Type	Description	Size/Specification
CPU	1 x Intel® Core™ i5-4570S or 1 x Intel® Core™ i7-4770S	- Quad Core 2.9GHz, 6MB Cache - Quad Core 3.1GHz, 8MB Cache
Memory	DDR3 SO-DIMM 204-pin	- Uses 2 slots, available sizes are 2x2GB, 2x4GB, 2x8GB
Storage	2.5" SSD SATA	- 240GB (599TBW),480GB (945TBW),960GB (1750TBW)
Storage	2.5" HDD SATA	- 1TB
OS	Embedded Enterprise (WEE): Microsoft® Windows® 7 Professional SP1 32/64bit, Microsoft® Windows® 7 Ultimate SP1 32/64bit, Microsoft®, Microsoft® Windows® Server 2008R2 64bit, Microsoft® Windows® Server 2012 64bit, Microsoft® Windows® Server 2012R2 64bit, Windows® 10 IoT Enterprise 2019 LTSC (64bit). Linux: openSUSE® 11.4, Fedora™ 15, Ubuntu® 10.04 LTS, Ubuntu® 12.04 LTS.	
Notes	Review "SSD Selection Guide" in manual. 32bit or 64bit versions available where applicable.	

### Factory Mounted Options:

\*If 1600x1200 resolution is used, DVI signals must be set to CVT-RB mode manually. Max Resolution: 2048x1536

<ul style="list-style-type: none"> <li>M9140-E512LAF: Matrox®9140 LP Graphics Card,PCIe x16,4xDVI-I,512MB*</li> <li>C680-E4GBF: Matrox®C680 FH/HL, PCIe x16, 6xDP, 4GB****</li> <li>CP114EL-I: 4 Ports COM Card, PCIe x1, 1xDB44F to 4xDB9M isolated, RS-232/422/485)</li> <li>VSD100897-1: Audio 2W Amplified (1xDB9F+3x3.5mm Jack) Line-in,Line-Out,Mic**</li> <li>i350F2BLK: Intel® Ethernet Server Adapter I350-F2, FiberLAN (2 x LC Fiber Optic)</li> <li>i350F4BLK: Intel® Ethernet Server Adapter I350-F4, FiberLAN (4 x LC Fiber Optic)</li> <li>SX-118A: 1xParallel Port LPT, DB25F, Bi-Dir. ECP/EPP, PCIe x1 card</li> </ul>	<ul style="list-style-type: none"> <li>PCA100294-1: COM un-isolated RS-232 via DB9M, 4 channel*</li> <li>PCA100298-1: LAN 10/100Mbps, 2 ports (RJ45)*</li> <li>PCA100297-1: Digital IO Isolated, 4 IN + 4 OUT**</li> <li>ZIA0001310-B: CAN isolated, 2 channel**</li> <li>PCA100293-1: COM RS-422/485 isolated NMEA 4 channel**</li> <li>VSD100896-1: 2 x PS/2 5pin mini (Keyboard + Mouse inputs)**</li> <li>VSD100898-1: Additional USB ports: 2 x USB3.0+2 x USB2.0**</li> <li>PCA100309-1: Dual Isolated RS-232, 2xDB9 module</li> <li>Variations of Storage, RAM Memory and Operating System</li> </ul>
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\*\*For all Factory Mounted Options, review User Manual for possible HW combinations.

### Available Accessories:

\*\*\*\* miniDP to DP adapter not included. See accessories below.

<ul style="list-style-type: none"> <li>HT 00225 OPT-A1: 2 x 26" ball bearing sliding rail &amp; mounting kit for 19" Rack</li> <li>HT 00224 OPT-A1: 2 x 20" ball bearing sliding rail &amp; mounting kit for 19" Rack</li> <li>HT 00223 OPT-A1: 1 x 4U 19" Rack Case Kit(compatible with HT00224/00225)</li> <li>HT 00226 OPT-A1: 2 x Mounting Bracket, 4mm SECC+Zinc Plating, RAL9011</li> <li>JH C01MF A-A: 1 x USB Cable 1m, Type A-Chassis mount receptacle</li> <li>HT 00300 MSOS: OS options -&gt; <a href="http://www.hatteland-display.com/os">http://www.hatteland-display.com/os</a></li> <li>H733S30Q20-SP000-0: 1 x Replacement Front Air Filter w/4 screws</li> <li>HT 00273 OPT-A1: 4 x Digital IN/OUT isolated, USB ext. module</li> <li>Delock 62638: 1 x miniDP to DP adapter for C680-E2GBF</li> </ul>	<ul style="list-style-type: none"> <li>HT 00262 OPT-A1: 4 x RS-422/RS-485 isolated, USB ext. module</li> <li>HT 00263 OPT-A1: 4 x RS-232 COM non-isolated, USB ext. module</li> <li>HT 00264 OPT-A1: 1 x CAN isolated, 2 channel, USB ext. module</li> <li>HT 00274 OPT-A1: 2 x LAN 10/100Mbps, RJ45, USB ext. module</li> <li>HT 00275 OPT-A1: 1 x PCI Mount Kit EN60945, Low Profile (LP, any len.)</li> <li>HT 00229 OPT-A1: 1 x PCI Mount Kit,Half Height to Full Height (any len.)</li> <li>HD 000TR SX1-A1: 1 x Removable Front Tray 2.5" Empty</li> <li>HD xxxxy SX1-z1: 1 x Removable Front Tray 2.5" w/Storage Device*</li> </ul>
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\*Where xxx=Size of device. yy=GB,TB. z=S (SSD), z=H (HDD) - Choose Storage Device from table above.

## MECHANICAL DESCRIPTION

### Physical Specifications:

- W:345.00 [13.58"] x H:133.00 [5.24"] x D:390.00 [15.35"] mm [inch]
- Weight: Approx 9.0 kg / 19.8lbs
- 4 x Removable SSD/HDD tray in front (2.5" size)
- Power button, power led, reset button and SSD/HDD Led in front
- Easy Removable Front Air Filter (spare part accessory available)
- Includes Mounting Brackets (HT 00226 OPT-A1)
- 1 x Internal Cooling fan in front (120x120mm)

Compass Safe Distance: Standard: 140cm - Steering: 90cm

### Environmental Considerations:

- Operating : Temperature -15 to +55°C - Humidity up to 95%
- Storage : Temperature -20 to +60°C - Humidity up to 95%

### 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

These products have been tested / type approved by the following classification societies:

IEC 60945 4th (EN 60945:2002)  
CCS - China Classification Society

IACS E10

EN61162

EU RO MR - Mutual Recognition

ClassNK - Nippon Kaiji Kyokai