Manufacturer:	**Jakob Hatteland Display AS**
Product:	**Maritime Stand-alone Computer**
Type:	**HT B04xx-STD-yz** (xx=processor board, y=processor speed, z=AC or DC)

Last Revised:	**05 Apr 2006**
Revision#:	**17**

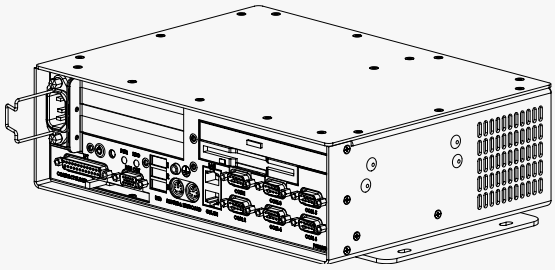
Maritime Stand-alone Computer

Overview:

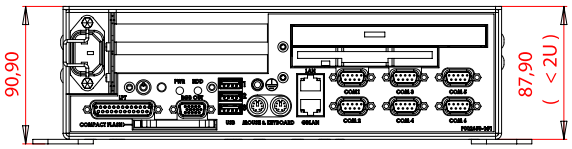
The **HT B04xx STD** is a powerful ultra compact industrial computer with most computer functions built into a form factor that can be placed virtually anywhere. This unit can be equipped with different processor types and speeds from; Pentium M (**HT B04PM STD**) or Celeron M (**HT B04CM STD**). An ideal and robust unit for mobile, marine and automation systems. Useable for TFT, CRT and Plasma.

Global Computer Specification: (Applies for all models)

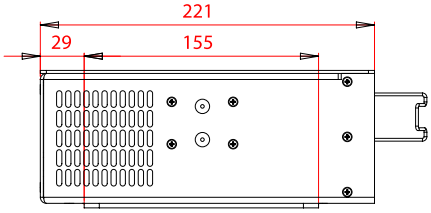
- 1 x Automotive 30GB 2,5" HDD (Removable)
- 1 x Compact Flash Reader
- 1 x SLIM 24x CD-ROM
- 1 x 1.44MB Floppy Drive
- 1 x 10/100Mbps and 1 x 10/100/1000Mbps Gigabit Lan
- 6 x RS-232/422/485 Serial Ports (fully isolated RS422/485)
- 1 x Parallel port
- 3 x USB ports
- Amount of RAM from 256MB to 1GB
- Standard PS/2 for keyboard and mouse.
- Dimensions 290 (W) x 88 (H) x 221 (D) mm
- 115/230V or 24VDC - 100W Power supply
- See page 2 for complete specifications and options



FRONT VIEW

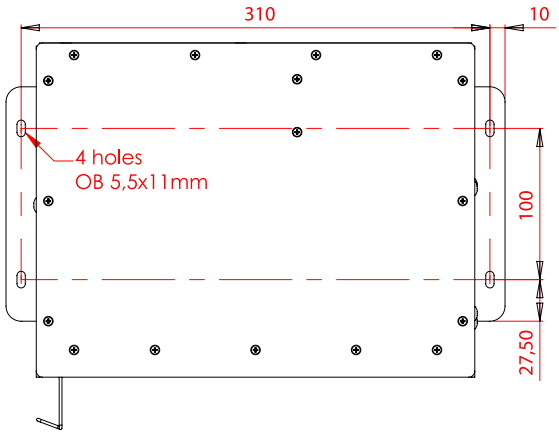


SIDE VIEW

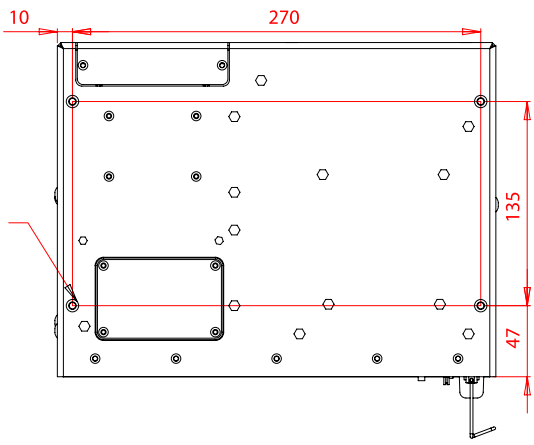


Due to dimensions without decimals, the tolerance on drawings is +/- 1mm (For accurate measurements, measure in AutoCAD)

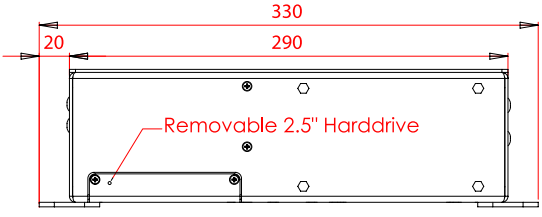
TOP VIEW



BOTTOM VIEW



BACK VIEW



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PRODUCT SPECIFICATIONS - HT B04xx STD

HATTELAND™

Note: All specifications are subject to change without prior notice!

TECHNICAL DESCRIPTION

Global/Standard Computer Specifications:

		Connector Type:
• IDE HDD	: 1 x Automotive Removable 30GB 2.5", 4200 RPM, 2MB Buffer	
• CD-ROM / RW	: 1 x 24x SLIM CD-R	
• Floppy FDD	: 1 x 1.44 MB 3.5" SLIM	
• VGA OUT	: 1 x DSUB 15P (Spec: See Processor Board Options)	DB15F
• Compact Flash	: 1 x CompactFlash Reader Type I/II with eject button	
• Parallel Port (LPT)	: 1 x Bi-Directional Centronics with SPP/EPP/ECP mode	DB25F
• Serial Ports	: 6 x RS-232/422/485 (fully isolated in RS422/485 mode)	DB9M
• 1st Ethernet	: 1 x 10/100 Mbps	RJ-45
• 2nd Ethernet	: 1 x 10/100/1000 Mbps Intel 82541GI Giga Lan	RJ-45
• Keyboard Port	: 1 x Standard PS/2 mini DIN connector	PS/2
• Mouse Port	: 1 x Standard PS/2 mini DIN connector	PS/2
• Power Manager	: APM Ver 1.2 and ACPI 1.0a	
• Monitoring	: Power supply, fan and temperature supervision (Also see Processor Board Options)	

Power Specifications:

		Connector Type:
Power Supply Options:		
• 115VAC/60Hz or 230VAC/50Hz	: Model HT B04xx STD x1 (100W)	STD IEC
• 24 VDC	: Model HT B04xx STD x2 (100W)	Screw Terminal
• Power Consumption - Operating	: TBD (MAX)	

Processor Board Options:

A1, B1, C1 = Standard Version AC Power - **A2, B2, C2** = Standard Version DC Power

HT B04PM STD-Ax:

- Processor : Intel Pentium M 1.1GHz Low Voltage, 1MB L2 Cache
- Front Side Bus : 400Mhz
- Chipset : Intel 82855GME
- VGA : Intel Extreme Graphics2 with 2D/3D Graphics Capabilities
- BIOS : Phoenix 2Mbit Flash BIOS
- RAM : 1 x SODIMM slot, 256MB->1GB, DDR200/266/333 MHz
- IDE Interface : Enhanced IDE UDMA 33/66/100
- USB Ports : 3 x USB2.0 - 480Mbps

HT B04CM STD-Ax:

- Processor : Intel CeleronM 600MHz, ULV, Zero-Cache
- Front Side Bus : 400MHz
- Chipset : Intel 852GM
- VGA : Intel Extreme Graphics2 with 2D/3D Graphics Capabilities
- BIOS : Phoenix 2Mbit Flash BIOS
- RAM : 1 x SODIMM slot, 256MB->1GB, DDR200/266/333 MHz
- IDE Interface : Enhanced IDE supports UDMA 33/66/100
- USB Ports : 3 x USB2.0 - 480Mbps

HT B04PM STD-Bx / Cx

- Processor (-Bx) : Intel Pentium M 725 "Dothan" - 1.6GHz, 2MB L2 Cache
- Processor (-Cx) : Intel Pentium M 755 "Dothan" - 2.0GHz, 2MB L2 Cache
- Front Side Bus : 400Mhz
- Chipset : Intel 82855GME
- VGA : Intel Extreme Graphics2 with 2D/3D Graphics Capabilities
- BIOS : Phoenix 2Mbit Flash BIOS
- RAM : 1 x SODIMM slot, 256MB->1GB, DDR200/266/333 MHz
- IDE Interface : Enhanced IDE UDMA 33/66/100
- USB Ports : 3 x USB2.0 - 480Mbps

Available Component Options:

- IDE HDD : Upgradable to max 80GB, 2.5", 5400RPM, 2MB Buffer (This HDD is not type approved)
- CD-ROM : Upgradeable to 24x10x24 SLIM CD-R/W
- I/O Slots : 2 x PCI Slots or 1 x PC104 & 1 x PCI Slots or 2 x PC104 Slots - (PCI slots fully support half length cards)
- Audio : AC-97 2.2 compliant, 6 channel, 5.1 speaker with LINE IN, LINE OUT, MIC IN 3.5mm jacks

Note: These options are factory installed.

Compass Safe Distance:			
	HT B04PM STD	Standard: 75cm	Steering: 55cm
	HT B04CM STD	Standard: 75cm*	Steering: 55cm*

**Not tested, but expected to be the same as corresponding model.*

MECHANICAL DESCRIPTION

Physical Specifications:

- 290 (W) x 88 (H) x 221 (D) mm
- Weight: 3 kg (approx)
- Aluminium Chassis
- Removeable hatch for accessing removable HD (back)
- Removeable hatch for accessing serial config (bottom)

Environmental Considerations:

Safety Considerations:

Even although 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:

B04PM-Ax: **EN60945 4th (IEC945 4th), IACS E10, DNV** - Det Norske Veritas, **LRS** - Lloyd's Register of Shipping
B04CM-Ax: **EN60945 4th (IEC945 4th), IACS E10, DNV** - Det Norske Veritas, **LRS** - Lloyd's Register of Shipping