

nMCS notebook PXIe Measurement & Control System

HW-1663

Built-in ultra-long-life smart lithium battery
Optional high-capacity external smart lithium battery to realize long-term operation of equipment
Compliant with PXIe/PXI bus standard specifications
HW-1663(G3) and HW-1663(G2) are available for selection
Built-in HOUWU® PXIe-9170 controller

HW-1663(G3)

Built-in HOUWU® 3U 6-slot PXIe Gen3.0 high-speed backplane
One 3U PXIe system slot and five 3U PXIe/PXI hybrid expansion slots
System slot bandwidth 16GB/s
Each expansion slot has a dedicated bandwidth 8GB/s

HW-1663(G2)

Built-in HOUWU® 3U 6-slot PXIe backplane
One 3U PXIe system slot and five 3U PXIe/PXI hybrid expansion slots
System slot bandwidth 16GB/s

Compatible with PXIe/PXI modules such as data acquisition, modular instruments, aviation bus, FPGA, etc.

Built-in system status monitoring and management software HMCSP
Built-in smart lithium battery monitoring and management software HBSSM
All aluminum-magnesium alloy reinforced compact design
Special impact resistant corners and reinforced silicone handle design
15.6" high-definition industrial display with 1920x1080 resolution
Multi-point capacitive touch screen or industrial resistive touch screen
Industrial touch pad and waterproof silicone keyboard
9V~32V DC power supply wide voltage input (with dedicated 24V power adapter)
Power input with aviation connector design
PXIe cage retracted 45mm design
Flexibly customizable IO interface with aviation connector



HW-1663方案

The industry's first high-performance 3U 6-slot PXIe ruggedized notebook

HW-1663 is the industry's first 15.6" PXIe ruggedized notebook with built-in Intel® Core™ 6th or 9th or 11th Gen i7 Quad-core eight-thread, six-core twelve-thread or eight-core sixteen-thread CPU, embedded PXIe controller, PXIe backplane, smart lithium battery, high-definition industrial display and ruggedized chassis. This PXIe notebook adopts professional industrial appearance design, all aluminum-magnesium alloy structure reinforced compact design, integrated 15.6" high-definition industrial display, multi-point capacitive touch screen or resistive touch screen, industrial touch pad, waterproof silicone keyboard and smart lithium battery, etc. It has the characteristics of high integration, robustness, portability, and is suitable for various harsh indoor and outdoor environments or complex working conditions where test equipment needs to be portable and mobile.

HW-1663(G3)

Built in high-performance HOUWU® 3U 6-slot PXIe high-speed backplane, based on PCIe Gen3.0 technology, in compliant with PXIe/PXI bus standard specifications, with one 3U PXIe system slot and five 3U PXIe/PXI hybrid expansion slots (compatible with PXIe and PXI modules). The system slot bandwidth is 16GB/s, each expansion slot has a dedicated bandwidth 8GB/s.

HW-1663(G2)

Built in high-performance HOUWU® 3U 6-slot PXIe backplane, based on PCIe Gen2.0 technology, in compliant with PXIe/PXI bus standard specifications, with one 3U PXIe system slot and five 3U PXIe/PXI hybrid expansion slots (compatible with PXIe and PXI modules), slot 2 bandwidth 4GB/s, slot 3 bandwidth 4GB/s, slot 4 bandwidth 4GB/s, slot 5 bandwidth 2GB/s, slot 6 bandwidth 2GB/s, resulting in a total system slot bandwidth 16GB/s.

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HW-1663 is compatible with PXIe/PXI modules such as high-speed data acquisition, high-speed digitizer, digital multimeter, aviation bus, FPGA, RF and switch modules. The machine has built-in system status monitoring and management software HMCSP, which can monitor the voltage of each power supply, chassis internal temperature and fan speed in real time, and supports PWM fan speed control. According to the high and low temperature inside the chassis, the fan speed is adaptively adjusted to dissipate heat for the controller and modules. The machine has built-in smart lithium battery monitoring and management software HBSSM, which can monitor all status parameters of the smart lithium battery in real time, including battery voltage, charging and discharging current, real-time power, battery life, charging and discharging times, etc.

HW-1663 makes full use of the characteristics of PXIe/PXI bus, such as stability, reliability, good compatibility, solid structure, large data throughput, high performance. According to the different project applications, this PXIe notebook can be built with various PXIe/PXI modules to realize the test and measurement of microwave, radio frequency, high-speed digital, signal simulation, prototype validation, voltage, current, temperature, frequency, stress, strain, vibration, shock, audio, video and various aviation bus, etc. Users can quickly build various measurement, test and control system on this portable measurement & control platform, which is suitable for military defense, aerospace, weapons, electronics, ships and other field actual combat applications and scientific experimental research occasions.

Operating System	Windows® 7 (Option 1, Option 2) Windows® 10 (Option 1, Option 2, Option 3, Option 4, Option 5)
CPU	Intel® Core™ 6 th Gen i7-6822EQ 2.0GHz (8MB Cache, up to 2.8GHz) Quad-Core, Eight-Thread (Option 1) Intel® Core™ 6 th Gen i7-6820EQ 2.8GHz (8MB Cache, up to 3.5GHz) Quad-Core, Eight-Thread (Option 2) Intel® Core™ 9 th Gen i7-9850HL 1.9GHz (9MB Cache, up to 4.1GHz) Six-Core, Twelve-Thread (Option 3) Intel® Core™ 9 th Gen i7-9850HE 2.7GHz (9MB Cache, up to 4.4GHz) Six-Core, Twelve-Thread (Option 4) Intel® Core™ 11 th Gen i7-11850HE 2.6GHz (24MB Cache, up to 4.7GHz) Octa-Core Sixteen-Thread (Option 5)
RAM	16GB DDR4 (upgradeable to 32GB/64GB)
Storage	Original dual solid state drive SSD design: 1, NVMe 500GB SSD x1 (system disk) (upgradeable to 1TB/2TB/4TB) 2, 2.5" SATA3.0 1TB SSD x1 (data disk) (upgradeable to 2TB/4TB/8TB)
Link Configuration	HW-1663(G3) with PXIe-9170 Controller PCIe Gen3.0 Specification 2 Link: PCIe3.0 x8 + PCIe3.0 x8 HW-1663(G2) with PXIe-9170 Controller PCIe Gen3.0 Specification 4 Link: 4 x PCIe3.0 x4
LCD	15.6" high-definition industrial display with 1920x1080 resolution
Touch Screen	Multi-point capacitive touch screen / Industrial resistive touch screen (optional)
Backplane	HW-1663(G3) 3U 6-slot PXIe backplane based on PCIe Gen3.0 technology 1 PXIe system slot and 5 PXIe/PXI hybrid expansion slots System slot bandwidth 16GB/s, each expansion slot has a dedicated bandwidth 8GB/s HW-1663(G2) 3U 6-slot PXIe backplane based on PCIe Gen2.0 technology 1 PXIe system slot and 5 PXIe/PXI hybrid expansion slots System slot bandwidth 16GB/s, slot 2 bandwidth 4GB/s, slot 3 bandwidth 4GB/s, slot 4 bandwidth 4GB/s, slot 5 bandwidth 2GB/s, slot 6 bandwidth 2GB/s
IO	LAN x2, USB3.0 x4, USB2.0 x2, RS232 x1, DP x2, VGA x1, SMB x1, RESET x1, LED x4 PXIe cage retracts 45mm and the aviation connector IO adapter panel area is 285mm x 86mm.
Keyboard	Waterproof silicone keyboard
Aviation Connector	Users can flexibly customize IO interfaces with aviation connectors for PXIe/PXI modules



Heat Dissipation	The fan supports PWM operation mode, adaptive speed regulation, active heat dissipation, and complies with PXIe/PXI bus standard specifications.
Internal Battery	Smart lithium battery 150WH (default)
External Battery	Smart lithium battery 300WH (optional)
Power Supply	9V~32V DC wide voltage input, aviation connector design With dedicated power adapter 330W: input AC 100V~240V, output DC 24V / 13.75A Rated load power 200W
Environment	Operating temperature: 0°C ~ 50°C (Commercial Grade) Operating temperature: -20°C ~ 60°C (Industrial Grade) Storage temperature: -40°C ~ 70°C Relative humidity: 5% ~ 95% (No Condensation)
Shock Resistance	30G peak, half-sine, 11ms pulse
Vibration Resistance	2.4Grms@5~500Hz (1 hour each in X, Y, Z directions)
Dimension	395 x 308 x 148 mm (excluding corners and handles)
Weight	HW-1663(G3) 11.7KG (including HOUWU® PXIe-9170 controller, 150WH smart lithium battery) HW-1663(G2) 10.9KG (including HOUWU® PXIe-9170 controller, 150WH smart lithium battery)
Packaging	Customized aviation trolley case
Category	nMCS, notebook PXIe Measurement & Control System

[Note: Due to regular product upgrades, for more updated and accurate specifications and configuration information, please contact HOUWU TECHNOLOGY at +86-755-29982022.](#)