

## pMCS portable PXIe Measurement & Control System

### HW-19183

Compliant with PXIe/PXI bus standard specifications  
HW-19183(G3) and HW-19183(G2) are available for selection

#### HW-19183(G3)

Built-in HOUWU® PXIe-9180 controller  
Built-in HOUWU® 3U 18-slot PXIe high-speed backplane  
Backplane based on PCIe Gen3.0 technology  
One 3U PXIe system slot and seventeen 3U PXIe/PXI hybrid expansion slots  
System slot bandwidth 24GB/s, each expansion slot has a dedicated bandwidth 8GB/s  
Built-in 1300W high-power industrial power supply  
PXIe cage without retraction design

#### HW-19183(G2)

Built-in HOUWU® PXIe-9170 controller  
Built-in HOUWU® 3U 18-slot PXIe backplane  
One 3U PXIe system slot and seventeen 3U PXIe/PXI hybrid expansion slots  
PXIe cage retracted 145mm design  
Supports NI PXIe SC module and TB terminal block built-in installation  
Flexibly customizable IO interface with aviation connector

Compatible with PXIe/PXI modules such as data acquisition, modular instrumentation, aviation bus, FPGA, etc.  
All aluminium-magnesium alloy reinforced compact design  
Special impact resistant corners and reinforced silicone handles design  
18.5" high-definition industrial display 1920x1080 resolution  
Multi-point capacitive touch screen or industrial resistive touch screen  
Industrial touch pad and waterproof silicone keyboard  
AC power input with aviation connector design



### The industry's first high-performance 3U 18-slot PXIe ruggedized portable computer

HW-19183 is the industry's first 18.5" ruggedized portable computer with built-in embedded PXIe controller, PXIe backplane, high-definition industrial displays and ruggedized chassis. This platform adopts professional industrial appearance design, all aluminium-magnesium alloy structural reinforcement compact design, integrates 18.5" high-definition industrial display, multi-point capacitive touch screen or industrial resistive touch screen, industrial touch pad, waterproof silicone keyboard and industrial power supply. 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-19183(G3)

Built-in HOUWU® Intel® Xeon® eight-core, sixteen-thread CPU embedded PXIe controller, 3U 18-slot PXIe backplane, based on PCIe Gen3.0 technology, compliant with PXIe/PXI bus standard specifications, with one 3U PXIe system slot and seventeen PXIe/PXI hybrid expansion slots (compatible with PXIe and PXI modules), The system slot bandwidth is 24GB/s, each expansion slot has a dedicated bandwidth 8GB/s.

#### HW-19183(G2)

Built-in HOUWU® Intel® Core™ 6<sup>th</sup> or 9<sup>th</sup> or 11<sup>th</sup> Gen i7 Quad-core eight-thread or six-core twelve-thread or eight-core sixteen-thread CPU embedded PXIe controller, 3U 18-slot PXIe backplane, based on PCIe Gen2.0 technology, compliant with the PXIe/PXI bus standard specification, with one 3U PXIe system slot and seventeen PXIe/PXI hybrid expansion slots.

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HW-19183 is compatible with PXIe/PXI modules such as high-speed data acquisition, high-speed digitizer, digital multimeter, aviation bus, FPGA, RF and switch modules. This PXIe portable computer supports PWM fan speed control, according to the internal temperature of the chassis fan adaptive speed adjustment to the controller and module cooling.

HW-19183 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 portable computer can be built with various PXIe/PXI modules to realize the test and measurement of microwave, radio frequency, high-speed digital, signal simulation, prototype verification, 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.

<b>Operating System</b>	Windows® 7 Windows® 10
<b>CPU</b>	<b>HW-19183(G3)</b> Intel® Xeon® Processor D-1548 2.0GHz (12M Cache, up to 2.6 GHz) Octa-Core Sixteen-Threads  <b>HW-19183(G2)</b> Intel® Core™ 6 <sup>th</sup> Gen i7-6822EQ 2.0GHz (8MB Cache, up to 2.8GHz) Quad-Core Eight-Thread (Option 1) Intel® Core™ 6 <sup>th</sup> Gen i7-6820EQ 2.8GHz (8MB Cache, up to 3.5GHz) Quad-Core Eight-Thread (Option 2) Intel® Core™ 9 <sup>th</sup> Gen i7-9850HL 1.9GHz (9MB Cache, up to 4.1GHz) Six-Core, Twelve-Thread (Option 3) Intel® Core™ 9 <sup>th</sup> Gen i7-9850HE 2.7GHz (9MB Cache, up to 4.4GHz) Six-Core, Twelve-Thread (Option 4) Intel® Core™ 11 <sup>th</sup> Gen i7-11850HE 2.6GHz (24MB Cache, up to 4.7GHz) Octa-Core Sixteen-Thread (Option 5)
<b>RAM</b>	<b>HW-19183(G3)</b> 16GB DDR4 (upgradeable to 32GB/48GB)  <b>HW-19183(G2)</b> 16GB DDR4 (upgradeable to 32GB/64GB)
<b>Storage</b>	<b>HW-19183 (G3)</b> SATA3.0 1TB SSD x1 (upgradeable to 2TB)  <b>HW-19183(G2)</b> Original dual solid state drive SSD design: 1, NVMe 250GB SSD x1 (system disk) (upgradeable to 1TB/2TB/4TB) 2, SATA3.0 1TB SSD x1 (data disk) (upgradeable to 2TB/4TB/8TB)
<b>Link Configuration</b>	<b>HW-19183(G3) with PXIe-9180 Controller</b> PCIe Gen3.0 Specification 2 Link Mode: PCIe3.0 x16 + PCIe3.0 x8  <b>HW-19183(G2) with PXIe-9170 Controller</b> PCIe Gen3.0 Specification 4 Link mode: 4 x PCIe3.0 x4
<b>LCD</b>	18.5" high-definition industrial display with 1920x1080 resolution
<b>Touch Screen</b>	Multi-point capacitive touch screen / Industrial resistive touch screen(optional)
<b>Backplane</b>	<b>HW-19183(G3)</b> 3U 18-slot PXIe backplane based on PCIe Gen3.0 technology 1 PXIe system slot and 17 PXIe/PXI hybrid expansion slots System slot bandwidth 24GB/s, each expansion slot has a dedicated bandwidth 8GB/s  <b>HW-19183(G2)</b> 3U 18-slot PXIe backplane based on PCIe Gen2.0 technology 1 PXIe system slot and 17 PXIe/PXI hybrid expansion slots

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IO	<b>HW-19183(G3)</b> LAN x2, USB3.0 x4, USB2.0 x2, RS232 x2, DP x2, SMB x1, LED x2 PXIe cage without inward retraction
	<b>HW-19183(G2)</b> LAN x2, USB3.0 x4, USB2.0 x2, RS232 x1, DP x2, VGA x1, SMB x1, RESET x1, LED x4  The PXIe cage retracts 145mm and the aviation connector IO adapter panel area is 432mm x 159mm, flexibly customizable IO interface with aviation connector
Key board	Waterproof silicone keyboard / Mechanical keyboard (optional)
Aviation Connector	<b>HW-19183 (G3)</b> Users can flexibly customize IO interfaces with aviation connectors for PXIe/PXI modules (The interface panel needs to be convex)
	<b>HW-19183(G2)</b> Users can flexibly customize IO interfaces with aviation connectors for PXIe/PXI modules(The interface panel does not needs to be convex)
Heat Dissipation	The fan supports PWM operation mode, adaptive speed regulation, active heat dissipation, and complies with PXIe/PXI bus standard specifications
Power Supply	<b>HW-19183 (G3)</b> 1300W, industrial grade, AC input, 90VAC~264VAC, 47Hz~63Hz, aviation connector design
	<b>HW-19183(G2)</b> 500W, industrial grade, AC input, 90VAC~264VAC, 47Hz~63Hz, aviation connector design
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	496 x 430 x 256 mm (excluding corners and handles)
Weight	<b>HW-19183 (G3)</b> 22.8KG (including HOUWU® PXIe-9180 controller)
	<b>HW-19183(G2)</b> 19.6KG (including HOUWU® PXIe-9170 controller)
Packaging	Customized aviation trolley case
Category	pMCS, portable 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.**