PowerLogic™ HDPM6000

Firmware Release Notes

ZL0193-0J
11/2024

HDPM6000 Public Firmware Releases

Summary of Firmware Releases (Public) for PowerLogic™ HDPM6000 Head Unit, HDPM6000R Retrofit Module, HDPM6000S 21ckt Strip Modules, HDPM6000S24 24ckt Strip Module, HDPM6000B Busway Modules, HDPM6000I/O I/O Module, HDPM6000 Expanded Input Module (EIM 2.0), and HDPM Environmental Sensor Hub

Firmware Bundle Version	Date	HDPM6000 Head unit		HDPM6000R	HDPM6000S	HDPM6000S24	HDPM6000B	HDPM6IO	HDPM6DI	HDPM6ENV
		System	3-Phase Meter							
62.11	18-Nov-2024	v0.62.11	v1.42.6	v1.30.4	v1.30.4	v1.30.4	v0.20.4	v1.8.0	v1.6.0	v1.12.0
62.10	07-Oct-2024	v0.62.10	v1.42.4	v1.30.2	v1.30.2	v1.30.2	v0.20.2	v1.8.0	v1.6.0	v1.12.0
62.7	08-Dec-2023	v0.62.7	v1.42.3	v1.30.0	v1.30.0	v1.30.0	v0.20.0	v1.8.0	v1.6.0	v1.12.0
58.7	14-Feb-2023	v0.58.7	v1.38.4	v1.28.3	v1.28.3	v1.28.3	v0.16.2	v1.6.0	v1.6.0	N/A
58.4	09-Feb-2022	v0.58.4	v1.38.3	v1.28.3	v1.28.3	v1.28.3	v0.16.2	v1.6.0	v1.6.0	N/A
56.6	11-Mar-2021	v0.56.6	v1.36.1	v1.26.3	v1.26.3	N/A	v1.14.3	v1.6.0	v1.4.0	N/A

The latest firmware bundle for HDPM range of products can be found at the below link:
https://www.se.com/us/en/product-range/8297113-powerlogic-hdpm6000/#software-and-firmware

HDPM Firmware Version 62.11 Bundle

New Feature

- None

Fixed Defect / Improvement

- [V62.10 only] Incorrect reporting of large energy values

Firmware Update Instructions

- See the HDPM6000 Installation Guide, Firmware Updates section for specific information on how to update the firmware on your HDPM6000 head unit and attached branch modules. The installation guide is located here.
- If updating using the HDPM6000 Manager, use version 2.0.3 or higher of the program

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Previous Firmware Releases

Firmware Bundle Version	Description of Changes
62.10	**Security Updates** Cybersecurity improvements are included in this release. It is important for customers to upgrade to the latest firmware as soon as possible. **New Feature** • Potential Transformer Ratio now supports a value in the range of 1.000 to 13.000 **Fixed Defect / Improvement** • IPv6 SLAAC enabled when “IPv6 Autoconfiguration” is selected • 2-pole circuits support line-to-neutral and mixed loads without the addition of a neutral to the circuit • Miscellaneous cyber security improvements **Firmware Update Instructions** • See the HDPM6000 Installation Guide, Firmware Updates section for specific information on how to update the firmware on your HDPM6000 head unit and attached branch modules. The installation guide is located here. • If updating using the HDPM6000 Manager, use version 2.0.3 or higher of the program
62.7	**Security Updates** Cybersecurity improvements are included in this release. It is important for customers to upgrade to the latest firmware as soon as possible. **New Feature** • Firmware files are now digitally signed by Schneider Electric. To upgrade from an unsigned version to a signed version (version 60 or above), use HDPM6000 Manager version 2.0.3 or later rather than the web interface. After upgrading to firmware version 62.7 or higher, the firmware cannot be downgraded to lower than version 60. • Added HTTPS and related functionality (Head Unit now connects via TLS 1.2 / WebSocket) • Manual IPv6 gateway on primary interface • MAC Address and full serial number can now be read via Modbus • New log templates added • Maximum concurrent Modbus TCP connection limit increased from 10 to 25 • Added support for current imbalance measurements on branch module circuits • Expanded demand for the Busway modules now includes apparent and reactive power. This is only available when a single Busway module is connected to the HDPM6000 bus. • Measurements refreshed at a 1 sec interval from a single HDPM6000B Busway Module **Fixed Defect / Improvement** • Incorrect reporting of power utilized (“Total Power Used %”) reading when “Total Power Limit” is configured as zero • Incorrect reporting of “Total Remaining Power” when “Total Power Used %” is greater than 100% • Changing circuit configuration via config file upload may not result in expected configuration of power alarms • Channel Name and Rack ID order with respect to ANSI vs IEC channel numbering mode • Compatibility improvement with Chromium based browsers • Global power alarms that would not clear • Accumulated Energy that could not be reset • Displacement Power Factor is now disabled in Delta supply mode • Only one Rack ID is now shown for a circuit, rather than one for each channel • BACnet Analog Inputs 4007-4078 returning VAR for incorrect channels • Incorrect Circuit naming read via protocol • Batch Busway module firmware upload would not complete • Time zone now applied to kW Max and Demand timestamps • Branch circuit Total VAR is now summed from separate phases instead of calculated from Total Watts and Total VA • Total VA for 2-phase branch circuits • Unused CTs reporting incorrect polarity • Power Factor sign now matches the IEEE power factor sign convention • Demand values being reported incorrectly via BACnet when in High Power or Custom mode • Branch circuit Total VA and Average Power Factor in Delta mode • Circuit grouping in Delta mode • Broken waveform downloads via Modbus • When current is zero, kVA Demand reports small value • When in Delta supply mode, kW Max does not show correctly • Displacement Power Factor (DPF) sign now matches Power Factor in 2nd & 3rd Quadrants • Stability of readings from sensors connected to the Environmental Sensor Hub • Incorrect detection of Environmental Sensor Hubs for firmware upgrade • Unsuccessful Environmental Sensor Hub firmware upgrade • Waveform downloads now restored when the Head Unit is reset but the meter modules are not • Unsuccessful configuration file upload when the second Ethernet port (Eth1) functionality is being modified • Only allow setting second Ethernet port (Eth1) functionality to HMI when IPv4 DHCP is disabled • Board time shown on the web interface now correctly handles time zones • Changing channel order with no branch modules attached is now allowed • Serial communication at 9600 baud • Configuration files downloaded while no SD card is present contain invalid log entries • Other metering, stability, and UI/UX improvements

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	Removed Items • HTTP • VScale configuration from the web interface and Modbus **Firmware Update Instructions** • See the HDPM6000 Installation Guide, Firmware Updates section for specific information on how to update the firmware on your HDPM6000 head unit and attached branch modules. The installation guide is located here. • If updating using the HDPM6000 Manager, use version 2.0.3 or higher of the program
58.7	**Security Updates** Cybersecurity vulnerabilities have been addressed in this release. It is important for customers to upgrade to the latest firmware as soon as possible. **Fixed Defect / Improvement** • Specific Modbus registers not correctly handling more than 4 concurrent Modbus TCP connections (now supports the 10 allowed concurrent connections). Affected registers are Circuit Names and Rack IDs, Logging Configuration, CT Type Names and Load Type Names • Circuit name mapping incorrect via protocol access • Circuit name mapping in internal configuration on upgrade from v0.56.x to v0.58.7 • KVA total reporting incorrect value when less than three phases are active, or a voltage or current unbalance exists • Condition for systems with 192 branch channels where the CT selection for the 3 Phase Meter on the Channel Cfg tab of the meter web interface would not apply to all three phases • Removed limitation where last circuit in a 192 channel system could not be configured as a 3-phase delta circuit • Channel order of reactive power reported over BACnet corrected for channels over 120 • Locked-up readings from environment sensor hub • Condition where the meter would incorrectly continue to report zero volts after input voltage drops to zero and is restored at a specific time in relation to the last meter reboot or zero volts state (within the second 25 days of a ~50 day interval, e.g. between 25-50 days or 75-100 days or 125-150 days, etc.) • Voltage incorrectly reported as zero when mains CTs are set to "unused" • Current THD values are now set to zero when the corresponding channel's current reading is zero • PME logs 10-17 are now available as templates in the dropdown box on the Logging tab of the meter web interface. The registers logged by default template "Power Factor 1-120" have also been changed to better align with PME (26800-26919 changed to 13600-13719; these registers are aliases for each other and will not change the data logged) **Removed Items** • No functionality/features removed **Firmware Update Instructions** • See the HDPM6000 Installation Guide, Firmware Updates section for specific information on how to update the firmware on your HDPM6000 head unit and attached branch modules. The installation guide is located here. • If updating using the HDPM Manager, use version 1.21.1.2 or higher of the program
58.4	**New Feature** • A new data collection option is available in which the head unit instantaneous values (Voltage, current, power, PF) are updated every 200ms. This mode is available when using the Adaptive Speed Data Collection mode and the system has less than 84 retrofit or strip circuits • Voltage interval data is now available. Minimum, maximum and average (demand) values over the last demand interval are available on the device webpage and through the device protocols (Modbus, SNMP, BACnet) • Displacement Power Factor is now available for the head unit. This value represents the correlation between the fundamental voltage and current waveforms and doesn't take into account harmonics • A single EIM 2.0 can now be auto discovered without a serial number • The number of concurrent Modbus TCP connections has been increased from 4 to 10 • The new HDPM6000S24 24-circuit strip module is supported • The Modbus Configuration Lock feature has been added - Modbus writes to core configuration registers can be disabled once the meter has been configured **Fixed Defect** • Various Cyber Security Fixes • Data collection mode moved from super-user to admin level (except 'Fast, Reduced Dataset') so that it can be set through a configuration file upload • Demand not reporting for delta circuits • Load Type indices incorrect in BACnet • CTs set to "Unused" will now report zero current and power • Improvements to Chromium based (Chrome/Edge) connections in certain circumstances • Remedied spurious webpage logouts • Various Bug fixes **Removed Items** • No functionality/features removed **Firmware Update Instructions** • See the HDPM6000 Installation Guide, Firmware Updates section for specific information on how to update the firmware on your HDPM6000 head unit and attached branch modules.
56.6	**New Feature** • The Expanded Input Module (EIM 2.0) is now supported, adding 24 dry contact inputs per module to any HDPM6000 system • The head unit will now calculate, and report accumulated apparent energy (kVAh) for the head unit main inputs • Adaptive Speed has been added as an optional data collection mode. This mode calculates data (power, energy, etc.) at a one second interval on supported systems, while maintaining the default calculation interval (2 seconds) on all other systems. Supported systems include head unit only, retrofit with less than 84 branch circuits and strip module systems with less than 84 branch circuits.

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	• The demand functionality has been expanded - Real power demand is now available on branch circuits - Subintervals (rolling block demand) are now supported - Daily peak and historical peak real power demand are now calculated on both head unit and branch circuits - Head unit demand is calculated for reactive power (kVAR) • The power quality metrics available from the head unit have been expanded to include Total Demand Distortion (TDD), voltage unbalance, and current unbalance Increased the range of valid energy scale values to better support accuracy testing • Added the ability for the second Ethernet port to be disabled in firmware • Voltage disturbance events now have a second entry in the log for when the disturbance has ended • Circuits can each be assigned two 40-character alphanumeric designators, Circuit Name and Rack ID • Added support to dedicate the second Ethernet port on the head unit to an Ethernet HMI **Fixed Defect** • Modbus reads returning zero during bootup before initial values are calculated • Configuration page occasionally unable to save configuration changes but reporting success • Meter not responding to BACnet Who-Is broadcasts • Security improvements to the BACnet stack • Web interface references to 'group' removed • “Dry Contact” web interface tab renamed to “I/O” to better align with module naming as the Digital Input tab has been created for the EIM 2.0 • Modbus Read File Record (0x14) requests now return the number of bytes requested (if returned data is shorter than the request, zeros will be added to pad the result). • Stability improvements for TCP connections **Removed Items** • No functionality/features removed **Firmware Update Instructions** • See the HDPM6000 Installation Guide, Firmware Updates section for specific information on how to update the firmware on your HDPM6000 head unit and attached branch modules.

Public

HDPM6000 Manager

Summary of Releases (Public) for HDPM Manager Windows executable, for use with PowerLogic™ HDPM6000 Series products

HDPM Manager version	Date	Notes	Supported HDPM Firmware bundle version
2.0.3	08-Dec-2023	Initial revision control record	V62.10 and below

The latest HDPM6000 Manager can be found in the latest firmware bundle for HDPM range of products at the below link:
https://www.se.com/us/en/product-range/8297113-powerlogic-hdpm6000/#software-and-firmware

HDPM6000 Manager v2.0.3

New Feature

- Support for connecting to meters via HTTPS

Fixed Defect / Improvement

- General improvements in handling configuration file upload
- Warning message introduced if invalid log entries are found within the configuration file

Public

HDPM6000 Customer Specific Firmware Releases

Summary of Firmware Releases (Customer Specific) for PowerLogic™ HDPM6000 Head Unit, HDPM6000R Retrofit Module, HDPM6000S 21ckt Strip Modules, HDPM6000S24 24ckt Strip Module, HDPM6000B Busway Modules, HDPM6000I/O I/O Module & HDPM6000 Expanded Input Module (EIM 2.0)

Firmware Bundle Version	Date	HDPM6000 Head unit		HDPM6000R	HDPM6000S	HDPM6000S24	HDPM6000B	HDPM6IO	HDPM6DI
		System	3-Phase Meter						
60.6	07-Apr-2023	v0.60.6	V1.40.1	v1.28.3	v1.28.3	v1.28.3	v0.18.0	v1.8.0	v1.6.0
60.5	15-Dec-2022	V0.60.5	v1.40.0	v1.28.3	v1.28.3	v1.28.3	v0.18.0	v1.8.0	v1.6.0

HDPM Firmware Version 60.6 Bundle

[Customer-specific limited release, branch from V58.4]

NOTICE
INABILITY TO DOWNGRADE BELOW FIRMWARE VERSION 60 **Read instructions in the "Firmware Updates" section of the HDPM6000 Installation Guide (Z208128) before proceeding with the firmware upgrade.**

New Feature

- No functionality/features added

Fixed Defect / Improvement

- KVA Total reporting incorrect value when less than three phases are active, or a voltage or current unbalance exists
- Condition where the meter would incorrectly continue to report zero volts after input voltage drops to zero and is restored at a specific time in relation to the last meter reboot or zero volts state (within the second 25 days of a ~50 day interval, e.g. between 25-50 days or 75-100 days or 125-150 days, etc.)
- Incorrect reporting of power utilized (“Total Power Used %”) reading when “Total Power Limit” is configured as zero
- Incorrect reporting of “Total Remaining Power” when “Total Power Used %” is greater than 100%
- Current THD values are now set to zero when the corresponding channel’s current reading is zero
- Voltage incorrectly reported as zero when mains CTs are set to "unused"
- Changing circuit configuration via config file upload may not result in expected configuration of power alarms

Removed Items

- No functionality/features removed

Firmware Update Instructions

- See the HDPM6000 Installation Guide, Firmware Updates section for specific information on how to update the firmware on your HDPM6000 head unit and attached branch modules. The installation guide is located here.
- If updating using the HDPM Manager, use version 1.21.1.2 or higher of the program

Previous Firmware Releases

Firmware Bundle Version	Description of Changes
60.5	**New Feature** • Firmware files are now digitally signed by Schneider Electric. To upgrade from an unsigned version to a signed version (version 60 or above), use HDPM6000 Manager version 1.21.0.0 or later rather than the web interface. After upgrading to firmware version 60 or higher, the firmware cannot be downgraded to lower than version 60. • Expanded demand for the Busway modules now includes apparent and reactive power. This is only available when a single Busway module is attached. • Record measurements at 1 sec/reading from a single HDPM6000B Busway Module • RCM pass-through Modbus registers added **Fixed Defect / Improvement** • Channel Name and Rack ID order with respect to ANSI vs IEC channel numbering mode • Compatibility improvement with Chromium based browsers • Global power alarms that would not clear • Accumulated Energy that could not be reset • Displacement Power Factor is now disabled in Delta supply mode • Only one Rack ID is now shown for a circuit, rather than one for each channel • Fixed BACnet Analog Inputs 4007-4078 returning VAR for incorrect channels • Circuit naming can now be accessed via protocol • Batch Busway module firmware upload would not complete • Improved phase angle calibration on all meters • Specific Modbus registers not correctly handling more than 4 concurrent Modbus TCP connections (now supports the 10 allowed concurrent connections). Affected registers are Circuit Names and Rack IDs, Logging Configuration, CT Type Names and Load Type Names **Removed Items**

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	• No functionality/features removed **Firmware Update Instructions** • See the HDPM6000 Installation Guide, Firmware Updates section for specific information on how to update the firmware on your HDPM6000 head unit and attached branch modules. The installation guide is located here.

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