

Product Change Notification



Change Notification # 2019072501T

BIOS Update for PIP4x

Initial Release Date: 2019 July 25
Last Revision Date: 2023 April 26
Change Type: BIOS/Firmware Change
Affected Product Family: PIP (Packaged Industrial PC)
Reason for Change: BIOS Update to version 059
Anticipated impact on Form, Fit and Function: Minor impact anticipated
Anticipated impact on Quality or Reliability: Improved Quality and Reliability anticipated
Customer contact: info@mpl.ch

Detailed Description of Change

The affected products receive a new BIOS release (version 059). See the 'BIOS Release Notes' section below for a detailed overview of the changes.

Affected Products List

Sales Part#	MPL Manufacturing Part#	MPL Component Stock#	Replacement Part#
PIP4x	MED-10594-xxx	-	-

PCN Revision History

Revision	Date	Description
A	2019-07-25	Initial Release
B	2019-07-26	Reflect BIOS V0.41
C	2019-08-12	Reflect BIOS V0.42
D	2019-08-21	Reflect BIOS V0.43
E	2019-09-18	Reflect BIOS V0.44
F	2020-01-21	Reflect BIOS V0.45
G	2020-01-29	Reflect BIOS V0.46
H	2020-02-27	Reflect BIOS V0.47
I	2020-03-30	Reflect BIOS V0.48
J	2021-02-17	Reflect BIOS V0.49 and V050
K	2021-03-25	Reflect BIOS V051
L	2021-04-20	Reflect BIOS V052
M	2021-10-26	Reflect BIOS V053
N	2021-12-16	Reflect BIOS V053-BATDEMO2
O	2022-01-21	Reflect BIOS V054
P	2022-03-16	Reflect BIOS V055
Q	2022-03-22	Reflect BIOS V056
R	2022-12-13	Reflect BIOS V057
S	2023-03-17	Reflect BIOS V058
T	2023-04-26	Reflect BIOS V059

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BIOS Release Notes

BIOS Version: 059

Information:

- **Build date:** 04/26/23 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 017 (MEV-10142-001)

Features & Fixes:

- Change BIOS settings & default values handling
 - BIOS settings are retained if CMOS battery is low or missing
 - Add support for loading BIOS default values via BIOS_REC DIP switch
- Add ME firmware unconfiguration option

BIOS Version: 058

Information:

- **Build date:** 03/17/23 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 017 (MEV-10142-001)

Features & Fixes:

- Fix wrong display of certain Product and Base IDs (MED-xxxxx-xxx) in BIOS setup and SMBIOS tables
- Update EC firmware
 - Improve boot time
 - Add support for reading CMOS battery voltage

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BIOS Version: 057

Information:

- **Build date:** 12/13/22 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 016 (MEV-10142-001)

Features & Fixes:

- Add support for manually adding (and deleting) boot options
- Fix USB over-current pin configuration
- Limit C-state support to C9
- Fix system behavior with a large number of PCI-to-PCI bridges
- Fix GPIO configuration
- Update EC firmware
 - Add support for User LEDs

BIOS Version: 056

Information:

- **Build date:** 03/22/22 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 015 (MEV-10142-001)

Features & Fixes:

- Change RTC default value for year to build year
- Update EC firmware
 - Improve power failure behavior

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BIOS Version: 055

Information:

- **Build date:** 03/16/22 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 013 (MEV-10142-001)

Features & Fixes:

- Expand support for hardware-dependent BIOS configuration
- Update EC firmware
 - Improve emergency power down behavior

BIOS Version: 054

Information:

- **Build date:** 01/21/22 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 012 (MEV-10142-001)

Features & Fixes:

- Add support for hardware-dependent BIOS configuration
- Update EC firmware
 - Improve Smart Battery handling
 - Add support for hardware-dependent BIOS configuration
 - Add support for MEC1703-XY
 - Add support for additional BIOS call

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BIOS Version: 053-BATDEMO2 (beta release)

Information:

- **Build date:** 12/15/21 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** BATDEMO2 (MEV-10142-001)

Features & Fixes:

- Beta release
- Identical to 053, except for BATDEMO2 EC firmware

BIOS Version: 053

Information:

- **Build date:** 10/26/21 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 010 (MEV-10142-001)

Features & Fixes:

- Display board information in BIOS setup
- Add board information in SMBIOS data
- Enable Exar Watchdog device
- Update Secure Boot keys
- Various minor bugfixes & enhancements

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BIOS Version: 052

Information:

- **Build date:** 04/20/21 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 010 (MEV-10142-001)

Features & Fixes:

- Update EC firmware
 - Add support for PCB revision D
 - Fix ID EEPROM block access

BIOS Version: 051

Information:

- **Build date:** 03/25/21 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 009 (MEV-10142-001)

Features & Fixes:

- Add PEG Port Configuration menu
- Update EC firmware

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BIOS Version: 050

Information:

- **Build date:** 02/15/21 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 008 (MEV-10142-001)

NOTE: BIOS version numbering scheme loses the decimal point

Features & Fixes:

- Update EC firmware
- Enable support for DeepSx power state
- Enable support for Wake-On-LAN
- Improve reboot behavior
- Add SMBus EEPROM write protection option

BIOS Version: 0.49 (beta release)

Information:

- **Build date:** 10/02/20 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 007-BATDEMO (MEV-10142-001)

Features & Fixes:

- Clean up Setup Options
 - Remove unnecessary options
 - Enhance usability of Setup
- Add CPU Power Level configuration options
- Update Serial Redirection and improve usability
- Update CPU Microcode to revision 0xD6
- Set UUID to 0
- Add support for Smart Battery

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BIOS Version: 0.48

Information:

- **Build date:** 03/30/20 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 007 (MEV-10142-001)

Features & Fixes:

- Update EC firmware
 - Improve voltage measurements for PCB revision C

BIOS Version: 0.47

Information:

- **Build date:** 02/27/20 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1028
- **GOP Driver:** 9.0.1105
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 006 (MEV-10142-001)

Features & Fixes:

- Update EC firmware
 - Add support for PCB revision C
 - Improve power failure handling
 - Various minor bugfixes
- Update VGA BIOS
- Update GOP driver

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BIOS Version: 0.46

Information:

- **Build date:** 01/28/20 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1019
- **GOP Driver:** 9.0.1095
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 005 (MEV-10142-001)

Features & Fixes:

- Update EC firmware
 - Add support for LED indicators (SoundPAN Mk 2)
 - Add fan support

BIOS Version: 0.45

Information:

- **Build date:** 01/21/20 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1019
- **GOP Driver:** 9.0.1095
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 004 (MEV-10142-001)

Features & Fixes:

- Enable SATA activity LED
- Fix Serial Port IRQ issue
- Update EC firmware
 - Add support for Ignition pin
 - Improve power failure handling

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BIOS Version: 0.44

Information:

- **Build date:** 09/18/19 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1019
- **GOP Driver:** 9.0.1095
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 003 (MEV-10142-001)

Features & Fixes:

- Update EC firmware
- Update GOP driver
- Add MPL Splash Screen
- Change certain BIOS default values

BIOS Version: 0.43

Information:

- **Build date:** 08/21/19 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1019
- **GOP Driver:** 9.0.1085
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 002 (MEV-10142-001)

Features & Fixes:

- Add support for PCIe on M.2 socket J32 (PCB Rev. B and up)
- Remove unnecessary setup options

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BIOS Version: 0.42

Information:

- **Build date:** 08/12/19 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1019
- **GOP Driver:** 9.0.1085
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 002 (MEV-10142-001)

Features & Fixes:

- Update EC firmware
- Fix CSM keyboard support
- Remove unnecessary setup options
- Change certain BIOS default values

BIOS Version: 0.41

Information:

- **Build date:** 07/25/19 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1019
- **GOP Driver:** 9.0.1085
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055
- **EC Firmware:** 001 (MEV-10142-001)

Features & Fixes:

- Update EC firmware
- Fix Serial Port interrupt assignment

BIOS Version: 0.40

Information:

- **Build date:** 07/19/19 (mm/dd/yy)
- **BIOS No:** MEV-10140-001
- **Core BIOS:** American Megatrends® Aptio® V, 5.13, 1AUOK 048
- **VGA BIOS:** 1019
- **GOP Driver:** 9.0.1085
- **PXE Boot ROM:** Intel® Boot Agent CL v0.1.14
- **UEFI NIC Driver:** Intel® Gigabit 0.0.23
- **RAID Driver:** Intel® RST 17.5.0.4055

Features & Fixes:

- Initial BIOS release

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