# Firmware for MGate MB3180 Release Notes

| Version: v2.4 | Build: 23053016 |
| --- | --- |
| Release Date: Jun 05, 2023 | |

## Applicable Products

MGate MB3180

## Supported Operating Systems

N/A

## New Features

N/A

## Enhancements

N/A

## Bugs Fixed

- An issue of Port routing by IP not working.
- Modbus routing fails if the Slave ID Offset is not equal to 0.
- An issue where the Modbus frame is dropped if the function code is not recognized by MGate.
- An issue of Auto Detection not working.

## Changes

N/A

## Notes

N/A

| Version: v2.3 | Build: 22032816 |
| --- | --- |
| Release Date: May 03, 2022 | |

## Applicable Products

MGate MB3180 Series

## Supported Operating Systems

N/A

## New Features

• Supports the optional configuration feature "Accept Arbitrary Host Header".

## Enhancements

• Supports an "ARP probe" in RFC5227. The MGate will respond to an ARP request with the sender IP address 0.0.0.0.
• Enhanced the Modbus RTU communication mechanism under RTU Master mode.

## Bugs Fixed

• Fixed the unstable TCP connection as the SYN packet could not be sent out by the switch port.

## Changes

N/A

## Notes

N/A

| Version: v2.2 | Build: 20090212 |
| --- | --- |
| Release Date: Sep 29, 2020 | |

## Applicable Products

N/A

## Supported Operating Systems

N/A

## New Features

N/A

## Enhancements

- Vulnerability issues (higher level or above) have been fixed, following a Nessus and Defensics scan.
- Supports MXconfig v2.6 and MXview v3.1.8.
- Enhanced the System Log display.
- Strengthened the TLS cipher suite for security enhancement.
- Enhanced MOXA commands under the account login process.
- Adjusted Telnet default settings from enable to disable.
- Disabled unsecure TLS 1.0 and TLS 1.1.
- Enhanced Accessible IP List feature.

## Bugs Fixed

- Added CSRF attack protection for the login webpage.
- Serial parameters might have been incorrect when switching between ASCII and RTU modes.
- Fixed the incomplete display in the web console.
- Fixed SNMPv3 issues.
- Fixed the MGate's failure to get an IP address under DHCP mode.
- Fixed https connections that might have caused the web service to stop working.

## Changes

N/A

## Notes

N/A

| Version: V2.1 | Build: N/A |
| --- | --- |
| Release Date: Dec 24, 2018 | |

## Applicable Products

N/A

## Supported Operating Systems

N/A

## New Features

N/A

## Enhancements

• Enhance cybersecurity features, including account management, password protection enhancement, SNMPv3, and configuration encryption.
• Accessible IP List supports denying Web/Telnet console access.
• Enhance the complexity of token generation for the protection of CSRF attack.
• Enhance the complexity of the key for password encryption in web console login process.
• Hide sensitive information on web login page.
• Encrypting sensitive information when exporting configuration file.

## Bugs Fixed

• Fixed the crashing of the MGate Series caused by exporting configuration through DSU.
• Solved the stack-based buffer overflow issue in web console, which might cause web service's corruption through DSU.
• Fixed the forwarding of the response after receiving broadcast response.

## Changes

N/A

## Notes

N/A

| Version: v2.0 | Build: Build 17030713 |
| --- | --- |
| Release Date: Apr 25, 2017 | |

## Applicable Products

MGate MB3180

## Supported Operating Systems

N/A

## New Features

N/A

## Enhancements

• Enabled a default password.

## Bugs Fixed

• The user's password and SNMP community name may be exposed by a buffer overflow issue.

## Changes

N/A

## Notes

N/A

| Version: v1.8 | Build: Build 16053118 |
| --- | --- |
| Release Date: N/A | |

## Applicable Products

MGate MB3180

## Supported Operating Systems

N/A

## New Features

N/A

## Enhancements

• Enhanced the strength of parameters used in the web console to avoid unauthorized access.

## Bugs Fixed

N/A

## Changes

N/A

## Notes

N/A

| Version: v1.7 | Build: Build 16012810 |
| --- | --- |
| Release Date: N/A | |

## Applicable Products

MGate MB3180

## Supported Operating Systems

N/A

## New Features

• Added web console.

## Enhancements

N/A

## Bugs Fixed

• Serial communication problems when the baudrate is low.
• If a Modbus TCP slave divides the TCP response to two packets, MGate could not support it.
• When configured by SNMP, the system name, location, and contact information could not be saved.
• Slave id mapping info for the serial port would be cleared to zero when changing the Modbus mode.

## Changes

N/A

## Notes

N/A

| Version: v1.6 | Build: Build 15062414 |
| --- | --- |
| Release Date: N/A | |

## Applicable Products

MGate MB3180

## Supported Operating Systems

N/A

## New Features

• Supports Modbus routing by multi-range slave ID.

## Enhancements

N/A

## Bugs Fixed

N/A

## Changes

N/A

## Notes

N/A

| Version: v1.4 | Build: Build 14060915 |
| --- | --- |
| Release Date: N/A | |

## Applicable Products

MGate MB3180

## Supported Operating Systems

N/A

## New Features

N/A

## Enhancements

N/A

## Bugs Fixed

• MGate may not boot up when serial port 1 connects to an RS-485 or RS-422 device.
• MGate stops forwarding requests after receiving broadcast requests.
• Sometimes TCP PUSH packets will be immediately retransmitted due to imperfections in the retransmission timeout algorithm.

## Changes

N/A

## Notes

N/A

| Version: v1.3 | Build: Build 13042214 |
| --- | --- |
| Release Date: N/A | |

## Applicable Products

MGate MB3180

## Supported Operating Systems

N/A

## New Features

• Added RTS toggle flow control.
• Modbus supports adjustable inter-character timeout and inter-frame delay.
• Added SNMP.

## Enhancements

• If MGate receives an ARP request from another host for which an ARP entry already exists, the hardware address in the ARP entry is updated accordingly.
• For Modbus function codes 01 to 04, if the receiving bytes of the RTU frame exceed the byte count for Modbus, drop the unnecessary bytes.

## Bugs Fixed

• MGate could not drop unnecessary RTU bytes when MB3000 retried to receive multiple times.
• When an RTU slave replied with an exception with a Modbus function code from 01 to 04, MGate would treat this response as an illegal packet (CRC).
• If auto detection is executed and cancelled before it finishes, and repeated many times, the result would show the wrong information.
• When running in Modbus ASCII master mode and the serial of Tx and Rx short-circuits, the system may restart.

## Changes

N/A

## Notes

N/A

| Version: v1.2 | Build: Build 09101913 |
| --- | --- |
| Release Date: N/A | |

## Applicable Products

MGate MB3180

## Supported Operating Systems

N/A

## New Features

• Added IP filter for 24 accessible IPs.
• Sends gratuitous ARP when link goes down and then up again to check if there is an IP conflict.
• Remote slave TCP port can be changed.

## Enhancements

• When there is a TCP slave set that does not exist, MB3000 will only try to connect to this slave if there is a request for it. In the previous version, MB3000 would try to connect if it received a request/response from any master/slave.
• Set ON as the default states of DTR & RTS, since some devices would be blocked when DTR or RTS were OFF even when they didn't use flow control.
• In ASCII mode, ignores data received after line feed (LF) because this could be an illegal packet generated by certain devices.
• In ASCII mode, checks CR instead of LF to verify the packet format is correct.
• Sends FIN instead of RST, as remote devices send FIN to close a connection.

## Bugs Fixed

• When traffic is heavy, MGate may lose some packets.
• According to RFC 2132, the DHCP option field must end with an "End Option", but MB3000 did not follow this policy so it could not get an IP address from some DHCP servers.
• According to RFC 1542, minimal BOOTP (the UDP data field) should be 300 octets, so it is now padded to 300 bytes.
• MGate's BOOTP packet has no magic cookie in the vendor information field. According to RFC 1542, if a special vendor-specific magic cookie is not being used, a BOOTP client should use the dotted decimal value 99.130.83.99 as specified in RFC 1497. In this case, if the client has no vendor information to communicate to the server, the octet immediately following the magic cookie should be set to the "End" tag (255) and the remaining octets of the 'vend' field should be set to zero.
• Firmware version was inconsistent between the telnet console and utility.
• Slave TCP port would be set as 0 after a first time firmware upgrade (above v1.1.5).
• In RTU mode, MB3000 would sometimes divide a frame into two partial frames. This error happened because the CRC was correct when MB3000 received the first partial frame.
• In RTU mode, MB3000 would sometimes drop the last byte of packets when last 3 bytes were 00XX00. The error happened because the CRC was right even when MB3000 dropped the last byte.
• If there is a slave that does not exist, the current Modbus transmission is held up.
• When MB3000 received a request before establishing a connection to the target slave, the following requests would be blocked even after MB3000 finished establishing the connection.
• Minimum data length of Modbus request/response was set to zero instead of 1 byte.
• Continuously sent more than one reply to the serial master due to queuing requests from the disconnected connection and sending it after re-establishing the connection.
• With two TCP client/slaves, connection status of the second one would be affected by disconnection of the first one.
• Set user-defined TCP response timeout instead of default TCP response timeout (1000 ms).

## Changes

N/A

## Notes

N/A

| Version: v1.1 | Build: Build 07041216 |
| --- | --- |
| Release Date: N/A | |

## Applicable Products

MGate MB3180

## Supported Operating Systems

N/A

## New Features

N/A

## Enhancements

• Removed the "load factory default" function from telnet console to avoid an issue where connecting to the device would fail after setting the device to factory defaults.

## Bugs Fixed

• Some devices would reset continuously after upgrading the firmware.
• Dsc_GetKernelInfo of MGCI returns the wrong firmware version.

## Changes

N/A

## Notes

N/A

| Version: v1.0 | Build: Build 07032618 |
| --- | --- |
| Release Date: N/A | |

## Applicable Products

MGate MB3180

## Supported Operating Systems

N/A

## New Features

• First release.

## Enhancements

N/A

## Bugs Fixed

N/A

## Changes

N/A

## Notes

N/A