Firmware for MGate MB3480 Release Notes

Version: v4.4	Build: 24061210
Release Date: Jun 28, 2024	

Applicable Products

MGate MB3480

Supported Operating Systems

N/A

New Features

N/A

Enhancements

• Updates mbedtls version to 2.28.8.

Bugs Fixed

• An issue of the MGate restarting after executing SNMP commands.
• An issue of Modbus TCP communication timeouts.

Changes

N/A

Notes

N/A

Version: v4.3	Build: 23111511
Release Date: Nov 30, 2023	

Applicable Products

MGate MB3480

Supported Operating Systems

N/A

New Features

N/A

Enhancements

N/A

Bugs Fixed

• An issue of the Modbus TCP communication freezing during Modbus operations.
• An issue of unstable Modbus TCP communication with MGates when TCP responses are split into multiple packets.
• An issue in the Modbus routing when an offset is used in the RTU/ASCII master mode.

Changes

N/A

Notes

N/A

Version: v4.2	Build: 23053016
Release Date: Jun 05, 2023	

Applicable Products

MGate MB3480

Supported Operating Systems

N/A

New Features

N/A

Enhancements

• Upgrades mbedtls version to 2.28.3.

Bugs Fixed

• An issue of Port routing by IP not working.
• Modbus routing fails if the Slave ID Offset does not equal to 0.
• An issue where the Modbus frame is dropped if the function code is not recognized by MGate.
• An issue where MGate restarts when port routing by IP connection is connected.
• An issue of MGate treating Modbus RTU responses using function code 43 as illegal packet(CRC).
• An issue of Auto Detection not working.

Changes

N/A

Notes

N/A

Version: v4.1	Build: 22032816
Release Date: May 03, 2022	

Applicable Products

MGate MB3480 Series

Supported Operating Systems

N/A

New Features

• Supports the HTTP Strict Transport Security (HSTS) header in the HTTPS console.
• Supports the optional configuration feature "Accept Arbitrary Host Header".
• Supports new hardware version v1.4.0

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: v3.2	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 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: V3.1	Build: Build 18113012
Release Date: Dec 24, 2018	

Applicable Products

MGate MB3480

Supported Operating Systems

N/A

New Features

• Supports security features based on IEC-62443.

Enhancements

• Accessible IP List supports denying Web/Telnet console access.
• Enhanced the complexity of token generation to protect against CSRF attacks.
• Enhanced the complexity of the key for password encryption in the web console login process.
• Hides sensitive information for the web login page.
• Encrypts sensitive information in exported configuration file.

Bugs Fixed

• MGate crash caused by exporting the configuration through DSU.
• Stack-based buffer overflow issue in the web console which may cause web service corruption.

Changes

N/A

Notes

N/A

Version: v3.0	Build: Build 17030713
Release Date: Apr 25, 2017	

Applicable Products

MGate MB3480

Supported Operating Systems

N/A

New Features

• Supports Auto Device Routing function.

Enhancements

• Supports multi-master in "routing by IP address" and "routing by TCP port" modes.
• 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: v2.6	Build: Build 16053118
Release Date: N/A	

Applicable Products

MGate MB3480

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: v2.5	Build: Build 16012810
Release Date: N/A	

Applicable Products

MGate MB3480

Supported Operating Systems

N/A

New Features

N/A

Enhancements

• Allows modification of the Modbus TCP port.

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: v2.4	Build: Build 14121610
Release Date: N/A	

Applicable Products

MGate MB3480

Supported Operating Systems

N/A

New Features

• Modbus routing by TCP port, IP address and multi-range slave ID.

Enhancements

N/A

Bugs Fixed

N/A

Changes

N/A

Notes

N/A

Version: v2.3	Build: Build 14060915
Release Date: N/A	

Applicable Products

MGate MB3480

Supported Operating Systems

N/A

New Features

N/A

Enhancements

• MGate supports the Auto Detection function through the web console.

Bugs Fixed

• MGate may not boot up when serial port 1 connects to an RS-485 or RS-422 device.
• Web page does not display correctly when text input field contains any of the four characters "'\>.
• MGate stops forwarding requests after receiving broadcast requests.

Changes

N/A

Notes

N/A

Version: v2.2	Build: Build 13062816
Release Date: N/A	

Applicable Products

MGate MB3480

Supported Operating Systems

N/A

New Features

N/A

Enhancements

N/A

Bugs Fixed

• MB3480 may not boot up properly sometimes.
• Sometimes TCP PUSH packets will be immediately retransmitted due to imperfections in the retransmission timeout algorithm.

Changes

N/A

Notes

N/A

Version: v2.1	Build: Build 13042214
Release Date: N/A	

Applicable Products

MGate MB3480

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: v2.0	Build: Build 09101913
Release Date: N/A	

Applicable Products

MGate MB3480

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.
• Added web console.

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 would be 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: v1.0	Build: Build 07032619
Release Date: N/A	

Applicable Products

MGate MB3480

Supported Operating Systems

N/A

New Features

• First release.

Enhancements

N/A

Bugs Fixed

N/A

Changes

N/A

Notes

N/A