Software Name: Firmware for MGate MB3180

Version No.	Build Date No./ Release Date	Supported OS	Apply to Models	New Features/ Enhancements	Bugs Fixed/Changes	Note
v2.1	Build 18113012	N/A	MGate MB3180	**New Features:** N/A **Enhancements:** 1. Enhanced cybersecurity features, including account management, password protection enhancement, SNMPv3, and configuration encryption. 2. Accessible IP List supports denying Web/Telnet console access. 3. Enhanced the complexity of token generation to protect against CSRF attacks. 4. Enhanced the complexity of the key for password encryption in the web console login process. 5. Hides sensitive information for the web login page. 6. Encrypts sensitive information in exported configuration files.	**Bugs Fixed:** 1. MGate crash caused by exporting the configuration through DSU. 2. Stack-based buffer overflow issue in the web console which may cause web service corruption. 3. Not forwarding a response after receiving a broadcast response. **Changes:** N/A	N/A
v2.0	Build 17030713	N/A	MGate MB3180	**New Features:** N/A **Enhancements:** 1. Enabled a default password.	**Bugs Fixed:** 1. The user's password and SNMP community name may be exposed by a buffer overflow issue. **Changes:** N/A	N/A
v1.8	Build 16053118	N/A	MGate MB3180	**New Features:** N/A **Enhancements:** 1. Enhanced the strength of parameters used in the web console to avoid unauthorized access.	**Bugs Fixed:** N/A **Changes:** N/A	N/A

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v1.7	Build 16012810	N/A	MGate MB3180	**New Features:** 1. Added web console. **Enhancements:** N/A	**Bugs Fixed:** 1. Serial communication problems when the baudrate is low. 2. If a Modbus TCP slave divides the TCP response to two packets, MGate could not support it. 3. When configured by SNMP, the system name, location, and contact information could not be saved. 4. Slave id mapping info for the serial port would be cleared to zero when changing the Modbus mode. **Changes:** N/A	N/A
v1.6	Build 15062414	N/A	MGate MB3180	**New Features:** 1. Supports Modbus routing by multi-range slave ID. **Enhancements:** N/A	**Bugs Fixed:** N/A **Changes:** N/A	N/A
v1.4	Build 14060915	N/A	MGate MB3180	**New Features:** N/A **Enhancements:** N/A	**Bugs Fixed:** 1. MGate may not boot up when serial port 1 connects to an RS-485 or RS-422 device. 2. MGate stops forwarding requests after receiving broadcast requests. 3. Sometimes TCP PUSH packets will be immediately retransmitted due to imperfections in the retransmission timeout algorithm. **Changes:** N/A	N/A

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v1.3	Build 13042214	N/A	MGate MB3180	**New Features:** 1. Added RTS toggle flow control. 2. Modbus supports adjustable inter-character timeout and inter-frame delay. 3. Added SNMP. **Enhancements:** 1. 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. 2. 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:** 1. MGate could not drop unnecessary RTU bytes when MB3000 retried to receive multiple times. 2. 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). 3. If auto detection is executed and cancelled before it finishes, and repeated many times, the result would show the wrong information. 4. When running in Modbus ASCII master mode and the serial of Tx and Rx short-circuits, the system may restart. **Changes:** N/A	N/A

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v1.2	Build 09101913	N/A	MGate MB3180	**New Features:** 1. Added IP filter for 24 accessible IPs. 2. Sends gratuitous ARP when link goes down and then up again to check if there is an IP conflict. 3. Remote slave TCP port can be changed. **Enhancements:** 1. 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. 2. 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. 3. In ASCII mode, ignores data received after line feed (LF) because this could be an illegal packet generated by certain devices. 4. In ASCII mode, checks CR instead of LF to verify the packet format is correct. 5. Sends FIN instead of RST, as remote devices send FIN to close a connection.	**Bugs Fixed:** 1. When traffic is heavy, MGate may lose some packets. 2. 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. 3. According to RFC 1542, minimal BOOTP (the UDP data field) should be 300 octets, so it is now padded to 300 bytes. 4. 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. 5. Firmware version was inconsistent between the telnet console and utility. 6. Slave TCP port would be set as 0 after a first time firmware upgrade (above v1.1.5). 7. 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. 8. 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. 9. If there is a slave that does not exist, the current Modbus transmission is held up. 10. 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. 11. Minimum data length of Modbus request/response was set to zero instead of 1 byte. 12. Continuously sent more than one reply to the serial master due to queuing requests from the disconnected	N/A

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					connection and sending it after re-establishing the connection. 13. With two TCP client/slaves, connection status of the second one would be affected by disconnection of the first one. 14. Set user-defined TCP response timeout instead of default TCP response timeout (1000 ms). **Changes:** N/A	
v1.1	Build 07041216	N/A	MGate MB3180	**New Features:** N/A **Enhancements:** 1. 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:** 1. Some devices would reset continuously after upgrading the firmware. 2. Dsc_GetKernelInfo of MGCI returns the wrong firmware version. **Changes:** N/A	N/A
v1.0	Build 07032618	N/A	MGate MB3180	**New Features:** 1. First release. **Enhancements:** N/A	**Bugs Fixed:** N/A **Changes:** N/A	N/A