What firmware changes have taken place on the Maretron IPG100 ?

515 Ron De Pastino August 1, 2024 IPG100, IPG100 0 8.52K

What firmware changes have taken place on the Maretron IPG100 network gateway?

You can update the IPG100 using the N2KAnalyzer software tool.

Manually recovery/update instructions for the IPG100 can be located here
https://www.maretron.com/files/IPG100/IPG100 Recovery Instructions.pdf

IPG100 Firmware Versions

4.2.0.1 (2024-06-20)

- Fix IPG losing connectivity to cloud server issue (Bug #CVPIT-20)

4.1.10.1 (2023-06-08)

- Fix some bugs which could cause NULL pointer exceptions and out-of-memory errors in DedicatedHostingServiceConnection and SSL_Connection

4.1.9.1 (2022-03-01)

- Auto reboot the unit after detect file descriptor built up over 256
- Properly create and remove socket when USB dongle without cloud service account plugged-in and cloud service feature was enabled

4.1.8.2 (2020-12-21)

- Fix N2KView configuration transferring issue

4.1.7.2 (2020-09-15)

- Fix DNS compatible issue (4649)
- Support high latency network such as VPN connection.

4.1.6.9 (2020-08-24)

- Support testmode “can txt ” command which forward text command to usbcan_socket to USBCAN.
- For MCU_AT91SAM9G20 platform, update expected ifconfig output to allow DHCP/CZIP to be recovered
- Correct filter for 127751
- Add filter for Thruster, Windlass, Elevator, and Nautical Leeway Angle PGNS
- Support OS 3.6.9 (ADC disabled) same as VDR100. This seems to fix the CAN port issue found on the new PCBA with some lot of MCP2515.

4.1.6.6 (2020-08-03)

- Support OS 3.6.9 (ADC disabled)
- Unload Reload CAN and GPIO module on enter and exit (allow to exit the elf for debugging)
- New routine to check USB dongle to support both kernel 2.6.30 and 3.6.9 . This also fix the reboot issue when plug-in non-license dongle to the USB port (2324)
- Fix the reboot issue when using USB Flash Drive for recovering (2324)

4.1.4.6 (2018-07-31)

- Support TSM810C serial number programming

4.1.4.5 (2018-07-03)

- Support TSM810C and TSM1210C (Only for x86 platform)
- Correct repeated PGN list issue (4465)
- Notify N2KView if IPG Device Instance changed
- Force all IPG on the same machine (such as CAN1 and CAN2) to have the same device instance (Only for x86 platform) (4471)
- Increase N2KServer transmit buffer from 256 to 8K message and throttled transmission rate to be with in maximum CAN frame rate
- Allow kv stack to receive AC with identical name to the device itself (similar to VDR100). This

will fix the node address change issue found in TSM.

4.1.4.5 (2018-07-03)

- Improve telnet support (Only for ARM platform)
- Correct repeated PGN list issue (4465)
- Notify N2KView if IPG Device Instance changed
- Increase N2KServer transmit buffer from 256 to 8K message and throttled transmission rate to be with in maximum CAN frame rate (- Allow kv stack to receive AC with identical name to the device itself (similar to VDR100). This will fix the node address change issue found in TSM.

4.1.3.3 (2018-01-24)

- Added support for the latest NMEA2000 PGN (4431)
- Added support for the NMEA 2000 Heartbeat Message (PGN 126993) (4436)
- Added ability to notify N2KView when IPG100's node address changed (4434)

4.1.3.1 (2017-12-01)

- Replace gettimeofday with clock_gettime in timer routine

4.1.2.7 (2017-10-24)

- Verify USBCAN SN, if it is invalid, replace with the valid one from IPG EEPROM if it is valid. Verify USBCAN on start IPG program and every 10 minutes after that.
- Add function can_get_sn and improve get_SN on init
- Support TSM810C and TSM1210C using product code from mt_dev_info
- Support USBCAN testmode forwarding
- Fix DSM410 flashing issue when using IPG100 (4371)
- Support command line option: model
- Support USBCAN port error detection and recover
- Correctly identify TSM800C
- Work with zero SN

4.1.2.7 (2017-10-24)

- Support Heartbeat PGN (126993) (4436)
- Comply with NMEA2000 version 2.100 certification
- Change NMEA Certification Level to 2 (As of February 2015 and Version 2.000 of the NMEA 2000 Main Document, Certification Level Field (7) shall be set to 2 meaning “Not Applicable”)

4.0.7.6 (2016-08-08)

- Run udhcpc and zcip as daemon when DHCP option is ON (1958)
- Pass along ISO ACK messages to application (2600)

4.0.3.4 (2015-09-01)

- Support flashing device with multi-block flash (3449)

4.0.2.0 (2014-08-19)

- If the DNS Server Address on the network resulted in the DNS Server Address being to 0.0.0.0, the IPG100 would crash, and then cycle to crash again. Now we detect the 0.0.0.0 address and change it to a known good value, 8.8.8.8 which is the default Google DNS Server (3210).

4.0.1.0 (2014-03-17)

- Users logging in with a CONNECT message and supplying an instance number were being disconnected immediately and then the IPG100 was crashing with a segmentation fault (2993).

4.0.0 (2014-01-03)

- Allow users to log on with a CONNECT_FILE message, which enables connections that do not transfer PGNs, but do allow files to be transferred without requiring a license. IPG100 will respond with a CONNECTED_FILE message.
- Allow users to log on with a CONNECT message, which enables data flow without taking a license from the IPG100. The IPG100 will respond with a CONNECTED message. This will be used with N2KView Mobile and N2KView PC when the license is obtained from a local key.

3.6.3 (2013-08-29)

- Remove Ethernet socket read wait time and reduce write wait time. Improve performance on SF responds including flashing process.
- Move N2KServer process into main loop
- Share project and compiler with MBB and TSM

3.6.2 (2013-06-19)

- Added Boot Version 1.0.5
- Recycle USB power in BOOT when startup (2567)
- Recycle USB power by N2KServer when lost USB key (2568)
- Change NMEA 2000 Database Version to 2.000 (2619)

3.6.1 (2013-05-01)

- Support UDP local communication (multiple process on the same PC can talk with each other)
- Stability improvements to connection from an iPad when the iPad suspends operation while running N2KView. This drop in connection was not be detected by the IPG100, and when the iPad is turned back on, the double connection caused the IPG100 to reset.

3.6.0 (2012-11-01)

- Added functions for Sending Files to Clients
- Added support for Receiving Files from clients; this includes support for the APPEND_FILE message and breaking up large files
- Handle background files as part of the Configuration. Configurations are now stored in directories with their backgrounds.
- Handle messages where the header is broken by fragmentation
- If the password changes, inform the Cloud Server that the password has changed.

3.4.14 (2012-08-08)

- Support Maretron VDR Status PGN 130833
- Detect when VDR is stuck is the WAITING FOR READ state, and restart the connection to prevent a lock-up.

3.4.13 (2012-04-05)

- Support Maretron Fluid Flow Rate and Fluid Volume PGN
- Added Definitions for Maretron PGNs 65286 to 65291
- Removed Debug Statements that may have been slowing the system down
- Increased the number of calls to ProcessCriticalFunctions() to prevent the NMEA2000 buffer from overflowing and losing data. Calls to previously just reset the watchdog were changed to ProcessCriticalFunctions()
- Removed an unused Semaphore to improve processing
- Replaced the call to read the USB devices with an internal System Call. Previously it was spawning a new task to read the list of USB devices (keys)
- When license checks failed, multiple calls to close the connection were removed; only one call is now made.
- Discard Messages with zero data bytes. Previously these were being sent to N2KView, using bandwidth.

3.4.8 (2011-11-29)

- Fix basic license issue

3.4.7 (2011-10-31)

- Fix an issue of debug message interfere with production process

3.4.6 (2011-10-25)

- Improve buffer for slow connection

3.4.5 (2011-10-18)

- Support cloud services
- Support binary mode
- Support DHS status

3.4.1 (2011-08-22)

- Change SW version from 1.0.4 to 3.4.1

1.0.4 (2011-08-02)

- Support U-BOOT 1.0.2 and IPG100 memory v2
- Support telnet
- Set gain for 0.0dB of insertion loss
- In N2KView, report firmware version of IPG100 instead of N2KServer

1.0.3 (2011-06-23)

- Support DHCP mode while there is no DHCP server (replace dhcpcd with udhcpc and zcip)
- Transmit list of protocol PGN when requested (126464)
- N2KServer v3.2.20110620

1.0.2 (2011-03-03)

- Change LEN to 3
- Check and correct load_option in env:flash
- Restart application if CAN idle longer than 1 minute
- N2KServer v3.2.20110228

1.0.1 (2011-02-11)

- BOOT 1.0.1
- OS 1.0.1
- RFS 1.0.1
- Original release

Online URL: https://maretron.com/wp-content/phpkbv96/article.php?id=515