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## MicroNet GAP Programmer 1.01-2 Release Notes

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May 10, 2019

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### DESCRIPTION:

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Version MicroNet 1.01-2 is a Scheduled maintenance GAP Programmer release containing general bug fixes and new feature requests. This is derived from Micronet 1.01-1 coder. It is only for the MicroNet Plus platform supporting 5200 and 1020 CPU's.

Micronet 5418-6771 Rev D for 5200 CPU's was also released with this coder. There is no software compatibility break but we recommend to use RevD. This release notes will also list the issues fixed in 5418-6771 Rev D

Micronet 5418-7033 Rev E for 1020 CPU's was also released with this coder. There is no software compatibility break but we recommend to use RevE. This release notes will also list the issues fixed in 5418-7033 Rev E

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### COMPATIBILITY:

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- To use this version of GAP/Coder, you must use GAP Editor 4.01 or higher.
- To use this version of GAP/Coder, you must use SOS 4.07 or higher.
- To use this version of GAP/Coder, you must use AppManager 3.13 or higher.
- To use this version of GAP/Coder, you must use Control Assistant 4.08b or higher.
- To use this version of GAP/Coder, you must use Toolkit 4.7.2 or higher.
- For On-Line change capability see the GAP Block Help for [On-Line Changes Hardware / Software Requirements](#)
- **CPU\_MP1020:** Footprint 5418-7033 revision D or later must be used with this Coder version. Service Pack 9927-2659 - may be used to update the Footprint. However we recommend **5418-7033 RevE (ServicePack 9927-2720 -)** since additional critical bugfix was made in that release.
- **CPU\_MC5200:** Footprint 5418-6771 revision C or later must be used with this Coder version. Service Pack 9927-2658 - may be used to update the Footprint. However we recommend **5418-6771 RevD (ServicePack 9927-2721 -)** since additional bugfixes and feature enhancements were made in that release.

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### NEW FEATURES / PROJECT CHANGES:

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- Bug Fixes : General Bug fixes for existing functionality
- Enhancements: Feature requests as reported in the knowledgebase

This version of the Coder / Template is dedicated to the MicroNet platform only. The Product Release Strategy has evolved so that other platforms such as AtlasII, 2301, and LECM each have their own dedicated Coder and Template versions. Common GAP blocks that all platforms use are included in this Coder / Template version. However, platform specific blocks from other platforms are not included..

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### ISSUES/FEATURES ADDRESSSED IN MN1.01-2 CODER RELEASE

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No.	Issue no. #	Description	Solution
1	Bug #69604	GAP installer change for GAP3 and GAP4 folders: Fix in MN 1.0X .	Edited the installer kit to put the template in both the folders.
2	Bug #69337	LAG Block Derivative Not Tracking in Backup CPU: Fix in MN 1.0X.	Fixed the block so that the calculations are done on the syscon and sent over to the backup. Backup will always be 1 RG behind the syscon.
3	Bug #66628	Modbus behaves different between Micronet 1.00 and Micronet 1.01: Fix in MN1.0X .	Fixed the individual link error detection mechanism for repeats on modbus Master
4	Bug #70019	Memory corruption in StatusSIO() : Fix in MN1.0x .	Removed the obsolete code which was writing to uninitialized memory.
5	Bug #69978	Data Corruption in InitRedundant () : Fix in MN1.0x .	Fixed the code that was writing to uninitialized pointer
6	Bug #69338	No Decimal Places Backup CPU Actuator Controller Calibrated Max Voltages: Fix in MN1.0X .	Fixed the redundant moves so that the states are sent as float instead of ints
7	Bug #69986	Memory leak in SIO init: Fix in MN1.X .	Fixed the memory leak which was consuming 400 bytes per SIO module reinitialization
8	Bug #67357	{PID#17787}RTCNet on CPU CAN ports may cause rg slip: Fix in Micronet Plus - Coder.	Throttled the SDO's per tick to make the initialization without slipping RG's
9	Bug #64728	{PID#18737}MODBUS_M Slave RPT timeout issue: Fix in MN1.0X.	The change made in Bug#66628 will eliminate the need for multiple timers and fix the issue with individual link errors

No.	Issue no. #	Description	Solution
10	Bug #64853	{PID#18110}AI_PRESS Fault Different in Backup CPU: fix in MN1.0X .	Fixed the state transfer issue for HI_LATCH and LO_LATCH in: <ul style="list-style-type: none"> <li>▪ AI_TC_L</li> <li>▪ AI_RTD_L</li> <li>▪ AI_CJ_L</li> <li>▪ AI_420_L</li> <li>▪ AI_MPU</li> <li>▪ AI_PRESS</li> <li>▪ AI_4_20</li> <li>▪ AI_420_HD</li> <li>▪ AI_CJ</li> <li>▪ AI_CJ_HD</li> <li>▪ AI_COMBO</li> <li>▪ AI_RTD</li> <li>▪ AI_RTD_HD</li> <li>▪ AI_TC</li> <li>▪ AI_TC_HD</li> <li>▪ DERIV_IN_4_20</li> <li>▪ SS_COMBO</li> <li>▪ VI_0_10</li> <li>▪ VI_0_5</li> <li>▪ LN_RTD</li> <li>▪ LN_TC</li> <li>▪ LN_AI</li> <li>▪ AI_SS</li> </ul>
11	Bug #67579	OLC Reset alarm always logged even when no alarms present: Fix in MN10X .	Fixed the logic so that message will be logged only when there was an error/alarm.
12	Bug #67927	{PID#17298}Failure to initialize SIO module: Fix in MN 1.X .	Fixed the code which was causing SIO to not initialize if it was the last entry in the devTab
13	Bug #65051	EXP_DBG not working if expansion chassis doesnt have CAN defined: Fix in MN1.0X .	Fixed the code to generate the freerun task which can send this data upstream for RTN cpu's
14	Bug #69341	In some configurations the last SIO_PORT in the SIO Module may not work: Fix in MN 1.0X .	Fixed the code which was causing SIO to not initialize if it was the last entry in the devTab
15	Bug #64715	{PID#18786}Daylight Savings Time (DST) Option on RTC Block Nonfunctional in MicroNet CDR 1: Fix in MN1.0X.	Added code to support DST on P1020 CPU. Because of the hardware limitation added coder exit for 5200 CPU.

No.	Issue no. #	Description	Solution
16	Bug #64873	{PID#18280}DATA_LOG_M states not changing on the backup CPU: Fix in MN1.0X .	Added code to send BUF_FULL, COLLECTING, PRINTING, P_ERROR over to the backup when PRT_BCKP is FALSE. Modified the block help to explain this behaviour as well.
17	Bug #67461	{PID#16613}FPGA watchdog timeout not recognized by application: Fix in Micronet Plus - Coder.	Added code in watchdog failure detection mechanism to set the CPU to inactive properly.
18	Bug #64766	Linknet HT nodes not initializing: Fix in MN1.0X.	Fixed the code which was previously not recognizing the correct copen ntw block
19	Bug #64875	{PID#17802}Latch block not responding: Fix in MN1.X .	Fixed the code to generate the states for constant inputs
20	Bug #67782	{PID#16952}generate a warning if RCV_BUF_SZ may be set to low on COPEN_NTW: Fix in Micronet Plus - Coder .	Added code to the copen block fifo calculation to compute the minimum buffer size required. If the user has set the RCV_BUF_SIZE less than the required then coder will generate a warning
21	Bug #69995	LinkNet HT - Reset Node when inputs connected to other blocks: Fix in MN1.X .	Fixed the code to set the node id's properly after initialization
22	Bug #64739	{PID#18693}New old MATLAB Block: Fix in MN1.0X.	the template change made for MN1.01-0 fixes this issue by adding MATLAB_LINK block.
23	Bug #67302	{PID#18562}buffered CAN messages get transmitted by backup CPU when the cable is reconnected: Fix in Micronet Plus - Coder.	Added code to clear these messages on the backup after the failover.
24	Bug #66555	{PID#18733}Songas_U5: Backup CPU dropout: Fix in MN1.0X .	Added code in redundant message send functions between the CPU's to only process valid vme reads. Reading and indexing invalid reads was previously causing the vme bus timeout
25	Bug #59238	{PID#18694}Watchdog issue JFE UbeKosan .	This was a timing issue for appstarts on both the cpu's. This was fixed in MN1.01-0
26	Feature #67215	Micronet : Log the cpu slot number in log.txt: Fix in Micronet Plus - Coder.	Added code to log the cpu slot number in log.txt
27	Bug #64701	CO_DVP slow message timeout doesnt monitor all slow messages: Fix in MN1.0X.	Fixed the code to compare the slow message receive status against the correct bit pattern
28	Bug #67547	{PID#14356}BIO_I_B1,2,3 MicroNet VME module: Fix in Micronet Plus - Coder.	Fixed the vme module detection mechanism logic for HDDIO and BI48-BO24. All new smart modules will also inherit this logic.
29	Bug #67288	{PID#18614}add resource file to the coder project for versioning coder.exe: Fix in Micronet Plus - Coder .	The resource file was added in MN1.01-0. This will enable the properties of coder.exe to show the major and the minor version of the coder.

No.	Issue no. #	Description	Solution
30	Bug #64706	Coder deletes .sid-files from other applications if start of name is shared: Fix in MN1.0X.	Fixed coder to delete the proper sid files.
31	Bug #64708	GAP4.00 Compile for Simulation Deletes .out and .r#: Fix in MN1.0X.	Fixed coder to delete the existing .out and .r* files only when compiling for controls
32	Bug #70016	I_TO_STR with > 254 repeats won't code for simulation with VS2015 or greater: Fix in MN 1.X.	Changed to coder so that this block generates a switch-case statement instead of the if-else ladder
33	Bug #64725	{PID#16894}EGD Broadcast Address Help: Fix in MN1.0X.	modified the block help
34	Bug #68258	{PID#18555} QUICKCONF Help file has broken Link: Fix in Micronet Plus - Coder	modified the block help
35	Bug #67295	{PID#18566}LN_RTD Field Help wrong: Fix in Micronet Plus - Coder	modified the block help
36	Bug #68272	{PID#18554} UD_COUNTER Help: Fix in Micronet Plus - Coder	modified the block help
37	Bug #68500	{PID#17116}B_ACTION help improvement opportunity: Fix in Micronet Plus - Coder	modified the block help
38	Bug #67093	{PID#17980}A_2_RM Help Update: Fix Help in MN 1.0X	modified the block help
39	Bug #64712	LN_CJ is missing in GAP help: Fix in MN1.0X	modified the block help
40	Bug #64988	{PID#18708} DATALOG_M help note for ZMINUS1-blocks is inaccurate: Fix in MN1.0X.	modified the block help
41	Bug #64722	{PID#18732}EGD Consumer TIME_OUT: Fix in MN1.0X	modified the block help
42	Bug #67510	{PID#15913}ACCUM help is wrong: Fix in Micronet Plus - Coder	modified the block help
43	Bug #64852	{PID#18609}Actuator Controller GAP Help: Fix in MN1.0X	modified the block help

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ISSUES/FEATURES ADDRESSED IN 5418-6771 REVD FOOTPRINT FOR CPU5200

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No.	Issue no. #	Description	Solution
1	Feature #64882	{PID#17532}MicroNet Plus EP/Cyber Service Pack on -1035 .	Added a new file called compatibility.txt. This will be installed by the servicepack and will be used by appmanager to determine the compatibility of this servicepack with the control its being loaded on. Appmanager 3.13 and higher is required for this feature
2	Bug #69981	windriver patch for vxWorks 6.8.3: Fix in 5200FP.	This patch fixes a windriver bug which can cause the CPU to take a machine check exception during a context switch.
3	Bug #64735	Appmanager Shows incorrect status : Fix for 5200.	Added code to keep the vx intercomm task from dying when it takes an exception.
4	Bug #69339	system log files with extensions .txt.old: Fix in FP 5200 .	Added code to remove this check in one process. previously two tasks were doing this checks and causing two different files. After this servicepack is applied only ".txt.old" will be the valid old file generated by the cpu upon rollover
5	Bug #67795	{PID#16893}logconfig caused EGD failure: Fix in Micronet Plus - Coder.	This newer footprint implements a PIPE feature to make the logging to system logfiles rategroup safe. The implementation of this mechanism fixes the race conditions caused by doing harddrive accesses from a real time task
6	Feature #71287	Add GUI storage view Micronet plus footprint. : Fix in 5200 Footprint .	This storage space will be mapped to HD1Flash area and can be used to store ".wgui" files. This file can be used by remote view tool in the future if needed be.
7	Feature #67208	{PID#18323}Option to save wv log to a custom path @ 6.8 FP: Fix in Micronet Plus - Footprint for MC5200 .	Added code to implement this feature. This allows for better field debugging capabilities.
8	Feature #67328	{PID#18269}TimeStamps in System log files for 5200 CPU: Fix in Micronet Plus - Footprint for MC5200 .	This was done in Rev B. This allows for better debugging capabilities.
9	Feature #65086	Added code to log application loads and unloads in log.txt	Added a new file called compatibility.txt. This will be installed by the servicepack and will be used by appmanager to determine the compatibility of this servicepack with the control its being loaded on. Appmanager 3.13 and higher is required for this feature
10	Bug #64737	{PID#18600}vxservice fix 5200 .	This fixes an issue with vxService amtcp server which was accepting connections even when the server slots were full.

No.	Issue no. #	Description	Solution
11	Bug #67868	{PID#18753}Check for available memory before an app start: Add to MN1.X .	Added code to check the contiguous memory before loading a new application. If the check fails the users will be notified through the appamanager screen on recommendations on how to resolve the errors.

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#### ISSUES/FEATURES ADDRESSED IN 5418-7033 REVE FOOTPRINT FOR CPU\_MP1020

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No.	Issue no. #	Description	Solution
1	Bug #71741	Rate group state block moves not working on MP1020 micronet plus .	FPGA code was fixed which was causing the block moves to not work under certain conditions.

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#### UNSUPPORTED BLOCKS:

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The following blocks may be available in the Template and GAP Editor, but are not supported for customer use in the MicroNet 1.01-1 release version of the Coder (compiler):

- AI\_MPU\_ENG
- J1939\_NTW
- RTN\_DIR
- I\_TO\_NAN
- VME\_DIRECT\_ACCESS
- VME\_DIRECT\_READ
- VME\_DIRECT\_WRITE
- VME\_PEEK VME\_POKE
- ANALOGLIST
- ANALOGMANAGER
- LOGICLIST
- LOGICMANAGER
- MICRO\_TMR
- MANCAL\_AO MANCAL\_AI

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#### PART NUMBERS:

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Version MicroNet 1.01-2

Gap/Coder Part Number: 10-006-645

Release Notes: 10-006-646

Can be found on [www.woodward.com](http://www.woodward.com)

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## MicroNet GAP Programmer 1.01-1 Release Notes

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August 06, 2018

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### DESCRIPTION:

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Version MicroNet 1.01-1 is a maintenance GAP Programmer release containing general bug fixes and new feature requests. This is derived from Micronet 1.01-0 coder. It is only for the MicroNet Plus platform supporting 5200 and 1020 CPU's.

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### COMPATIBILITY:

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- To use this version of GAP/Coder, you must use Footprint
- To use this version of GAP/Coder, you must use GAP Editor 3.13 or higher.
- To use this version of GAP/Coder, you must use SOS 4.07 or higher.
- To use this version of GAP/Coder, you must use AppManager 3.07a or higher.
- To use this version of GAP/Coder, you must use Control Assistant 4.08b or higher.
- To use this version of GAP/Coder, you must use Toolkit 4.7.2 or higher.
- For On-Line change capability see the GAP Block Help for **On-Line Changes Hardware / Software Requirements**
- **CPU\_MP1020**: Footprint 5418-7033 revision D or later must be used with this Coder version. Service Pack 9927-2659 - may be used to update the Footprint.
- **CPU\_MC5200**: Footprint 5418-6771 revision C or later must be used with this Coder version. Service Pack 9927-2658 - may be used to update the Footprint.

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### NEW FEATURES / PROJECT CHANGES:

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- **CO\_SPC** is now supported on MicroNet Plus platform
- **ACT\_CTRL** block supports Weighted Average for position feedback calculation

This version of the Coder / Template is dedicated to the MicroNet platform only. The Product Release Strategy has evolved so that other platforms such as AtlasII, 2301, and LECM each have their own dedicated Coder and Template versions. Common GAP blocks that all platforms use are included in this Coder / Template version. However, platform specific blocks from other platforms are not included..

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### ISSUES/FEATURES ADDRESSED

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- Bug#65770 - RTCNet missing output messages at 50% load, no RG5 on 1020 cpu
- Bug#63488 - RTCNet Dropping out after some runtime with MN1.01-0
- Bug#56098 - Fix for AIO\_COMBO dropping out during a failover after syscon takes exception
- Bug#61247 - Weighted average support for 2 channel actuator card
- Bug#61246 - Fix for cleaning /RamLog directory in the applications folder on appstart
- Bug#62374 - Fix for Expansion debug slip counters corrupting mr\_i[1] and mr\_i[2] on the mainchassis
- Bug#63490 - ALM\_RST on ACT\_CTRL was not edge triggered on expansion chassis
- Bug#63503 - Modbus\_M link errors when saving ee
- Bug#63504 - EE file corruption when doing back to back saves from servlink
- Bug#63505 - Tunable upload taking more time in MN1.01
- Feature#63330 - Expansion debug slip counters are not logged into system logfile log.txt
- Feature#63488 - CO\_SPC support for turbine products

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## UNSUPPORTED BLOCKS:

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The following blocks may be available in the Template and GAP Editor, but are not supported for customer use in the MicroNet 1.01-1 release version of the Coder (compiler):

- AI\_MPU\_ENG
- J1939\_NTW
- RTN\_DIR
- I\_TO\_NAN
- VME\_DIRECT\_ACCESS
- VME\_DIRECT\_READ
- VME\_DIRECT\_WRITE
- VME\_PEEK VME\_POKE
- ANALOGLIST
- ANALOGMANAGER
- LOGICLIST
- LOGICMANAGER
- MICRO\_TMR
- MANCAL\_AO MANCAL\_AI

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## PART NUMBERS:

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Version MicroNet 1.01-1

Gap/Coder Part Number: 10-006-645

Release Notes: 10-006-646

Can be found on [www.woodward.com](http://www.woodward.com)

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## MicroNet GAP Programmer 1.01-0 Release Notes

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June 21, 2018

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## DESCRIPTION:

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MicroNet GAP Programmer 1.01-0 is a new release of the Coder / Operating System for Woodward MicroNet Plus controls. This version was created from the "Trunk". It will contain all changes from Coder MicroNet 1.00-2 and Coder MicroNet TMR 1.00-0 plus all changes described in this document.

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## COMPATIBILITY:

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- To use this version of GAP/Coder, you must use GAP Editor 3.14 or higher. (GAP 4.00 is required for on-line changes)
  - To use this version of GAP/Coder, you must use SOS 4.14 or higher.
  - To use this version of GAP/Coder, you must use AppManager 3.11 or higher.
  - To use this version of GAP/Coder, you must use Control Assistant 4.13-2 or higher.
  - To use this version of GAP/Coder, you must use Toolkit 5.6.2 or higher.
  - For On-Line change capability see the GAP Block Help for [On-Line Changes Hardware / Software Requirements](#)
  - **CPU\_MP1020: Footprint 5418-7033 revision D or later must be used with this Coder version. Service Pack 9927-2659 - may be used to update the Footprint.**
  - **CPU\_MC5200: Footprint 5418-6771 revision C or later must be used with this Coder version. Service Pack 9927-2658 - may be used to update the Footprint.**
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## NEW FEATURES / PROJECT CHANGES:

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- **On-Line Changes**
- New **OLC\_STAT** GAP Block
- Deleted EXACT from CHASS\_STAT and moved it to OLC\_STAT
- Deleted COMPATABLE from CHASS\_STAT and moved it to OLC\_STAT
- Added B\_ENABLE to EGD\_CON
- Added B\_ENABLE to EGD\_PROD
- Added B\_ENABLE to MODBUS\_M
- Added B\_ENABLE to MODBUS\_S
- Added B\_ENABLE to QSERV\_HDR
- Changes to support "Tuneable Log"
- Changed REQ\_FOEVER time in CHAS\_STAT from a max frequency of 2 seconds to 12 seconds
- Added Footprint Revision and Coder version to AppManager output on application start
- Added **MATLAB\_LINK** GAP Block
- RTCNet Robustnes: Improvements during CPU Failover for main CPU, RTNGateway, and RTN RTCNet ports.

This version of the Coder / Template is dedicated to the MicroNet platform only. The Product Release Strategy has evolved so that other platforms such as AtlasII, 2301, and LECM each have their own dedicated Coder and Template versions. Common GAP blocks that all platforms use are included in this Coder / Template version. However, platform specific blocks from other platforms are not included..

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## ISSUES ADDRESSED

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- KBA 18645 - Log file filling up control's hard drive (fixed in footprint)
  - KBA 18707 - Correct message is output
  - KBA 16288 - Redundant Not initializing properly
  - KBA 18417 - Coder corruption from large A\_CURVE3, CAL\_CURVE2, CAL\_CURVE3 tables
  - KBA 18205 - ACT\_CTRL Weighted Average block inputs / outputs
  - KBA 18611 - Ability to turn off slow PDOs on CO\_DVP
  - KBA 18697 - RTCNet Robustness when failover (cable pull, FOVER, SWOVER, CAN\_P\_STAT)
  - KBA 18736 - MODBUS\_M PORT\_2 not using the same timeout as PORT\_1
  - KBA 18741 - Exit the Coder if P\_ADDRESS if Tunable or CONST
  - KBA 18725 - Stack corruption when an application contains a SERVLINK block and the application name is longer than 19 characters
  - KBA 18468 - Enable apps to use part numbers for their curve files (digits, dash)
  - KBA 18700 - REQ\_FOVER would not work every other four month period
  - KBA 18644 - T\_3\_RM MAXDIFF\_X outputs not working
  - KBA 18742 - GAP write array function could cause rate group slip on 1020 cpu in coder 1.00 versions
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- Changed the L\_NW\_C\_FLT and R\_NW\_C\_FLT on CHASS\_STAT from show to hide.
  - Exit the Coder if CO\_SPC is in the application
  - Exit the Coder if RTN\_DIR is in the application
  - Allowed RATIO\_LIM2 block in MicroNet Plus P1020 and 5200
  - Changed REQ\_FOVER time in CHAS\_STAT from a max frequency of 2 seconds to 12 seconds
  - Fixed RET\_AO\_FLT for AO\_COMBO was not getting sent to the Backup CPU

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## UNSUPPORTED BLOCKS:

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The following blocks may be available in the Template and GAP Editor, but are not supported for customer use in the MicroNet 1.01-0 release version of the Coder (compiler):

- AI\_MPU\_ENG
- CO\_SPC
- J1939\_NTW
- RTN\_DIR
- I\_TO\_NAN
- VME\_DIRECT\_ACCESS
- VME\_DIRECT\_READ
- VME\_DIRECT\_WRITE

- VME\_PEEK VME\_POKE
- ANALOGLIST
- ANALOGMANAGER
- LOGICLIST
- LOGICMANAGER
- MICRO\_TMR
- MANCAL\_AO MANCAL\_AI

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## PART NUMBERS:

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Gap/Coder Part Number: 10-006-645

Release Notes: 10-006-646

Can be found on [www.woodward.com](http://www.woodward.com)