WOODWARD

MicroNet™ Plus / MicroNet TMR® CPU / RTN 5200 Redundant using HDDIO Modules

Coder 5.04-2 and 6.00-5 update to improve system performance when removing an HDDIO module

MicroNet™ Plus / MicroNet TMR® CPU / RTN 5200 Redundant using HDDIO Modules

Introduction

Removing a High Density Discrete I/O (HDDIO) module from an operating redundant MicroNet™ Plus system may cause the backup CPU/RTN to trigger a WDOG fault.

This will not interfere with operation of the SYSCON CPU or primary RTN, and it will not affect operation of the turbine. A reset of the backup CPU/RTN will resynchronize the backup CPU or RTN with the SYSCON CPU.

Description

GAP™/Coder updates have been released to improve the backup CPU Module (CPU) and Remote Real-Time Network (RTN) module functionality in the MicroNet Plus chassis when used with the HDDIO module. This update only applies to systems configured with redundant CPU or redundant RTN modules and using the High Density Discrete I/O (HDDIO) module. (This update does not apply to MicroNet or MicroNet Plus chassis configured for simplex CPU, simplex RTN applications, or to single-chassis MicroNet TMR® systems.)

The MicroNet Plus control system may be configured for simplex (single CPU/RTN) or redundant (two CPU/RTN) operation. Redundant operation is accomplished by adding a second CPU or RTN to each MicroNet Plus main/expansion chassis and properly configuring the GAP application software for redundant fail-over operation. The backup CPU/RTN is only used for control when the main SYSCON CPU/RTN requests a fail-over to backup.

Applications that have experienced backup CPU/RTN dropout when an HDDIO module is removed from a running system (as indicated by a WDOG LED fault on the backup CPU/RTN) may benefit from this GAP/Coder update.

Affected Products

The following Woodward items/revisions are affected by this application note:

Hardware: MicroNet Plus/MicroNet TMR systems configured for redundant CPU/RTN operation only.

High Density Discrete I/O (HDDIO) Module Item Numbers:
    5466-1050 all revisions
    5466-1051 all revisions

Software: MicroNet Plus GAP/Coder Versions 5.04-1, 6.00-4, and earlier.

Affected Configurations

- MicroNet Plus/Redundant CPU/HDDIO in main chassis (backup CPU may be affected during HDDIO removal)

- MicroNet Plus/Redundant CPU in main chassis
  and
  Expansion Chassis/Redundant RTN/ HDDIO (backup RTN may be affected during HDDIO removal)

- MicroNet TMR main chassis
  and
  Expansion Chassis/Redundant RTN/HDDIO (backup RTN may be affected during HDDIO removal)

Updated Products

The following Woodward items/revisions have the updated functionality:

- **Software**—MicroNet Plus GAP/Coder Versions 5.04-2, 6.00-5 (anticipated release TBD, 2014) and later
- **Hardware**—No changes were necessary for the HDDIO modules.

Customer Action

No action is recommended for MicroNet or MicroNet Plus systems configured with simplex CPU/RTN modules. The Coder improvements do not change the operation of systems using single CPU/RTN modules. No action is recommended for single-chassis MicroNet TMR systems. The Coder improvements do not change the operation of triplex CPU modules configured in standard MicroNet TMR system applications.

Users of MicroNet Plus systems configured with redundant CPUs and/or redundant RTN modules, who have experienced backup CPU/RTN drop-outs when an HDDIO module is removed during operation, should consider updating their software and firmware per this Application Note. This update can be implemented in the field and involves re-building the GAP software using the appropriate updated GAP/Coder.

For additional information and support, please select any of the following:
- Please contact your local Woodward representative and/or turbine OEM for further help and assistance.
- GAP/Coder updates may be downloaded at www.woodward.com/software.
- Woodward contact and business partner information can be obtained at www.woodward.com.
  o Download publication 25225 for a global directory
  o Download publication 51438 for a map and directory of North American business partners
- Technical assistance can be obtained by:
  o Searching for a local contact at www.woodward.com/directory
  o Call or email the Woodward Turbine Help Desk
  o +1 (970) 498-3095
  o TurbineHelpDesk@woodward.com

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