



Application Note 51587
(Revision -, 11/2017)
Original Instructions

MicroNet Plus - 5200 CPU

Live Removal/Insertion “Hot Swap” Capability

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MicroNet Plus - 5200 CPU Live Removal/Insertion Issue Capability

Product Change/Improvement

A code update was released to improve the MicroNet 5200 CPU Module (CPU) & Remote Real Time Network Module (RTN) capability for live removal/insertion (“hot swap”) in redundant MicroNet Plus systems.

Description

In MicroNet Plus systems configured for redundant operation, CPU and RTN modules can be removed/inserted in a MicroNet Plus chassis while the control is powered and operational to allow for continued turbine operation. Use this capability in the scenario where one of the redundant CPU or RTN modules experiences an error or fault.

In some hardware configurations, if users do not follow the proper CPU/RTN removal and installation procedures, one or more I/O modules located in the same chassis can experience a fault. If the faulted I/O is critical to turbine operation, a trip will occur.

The issue was identified during factory testing and as of the date of this publication, no reported occurrences are known to have affected turbine operation.

Note: Rarely are CPU and RTN modules in a redundant system removed and re-inserted on a running turbine. The 5200-based modules are extremely reliable with a MTBF of approximately 2 million hours. Additionally, in the unlikely event of a CPU or RTN module failure, most customers wait for a scheduled outage to swap modules.

Affected Units

See table below for Affected Units of the 5200 CPU, RTN Modules, and revision:

Module Item Number	Affected Revision
5466-1045	E or earlier
5466-1046	E or earlier
5466-1141	B or earlier
5466-1145	F or earlier
5466-1146	F or earlier
5466-1245	B or earlier
5466-1246	B or earlier

Corrective Action

Immediate Corrective Action:

Proper removal/insertion procedures are critical to minimize potential risk of I/O faults. See Customer Action below.

The CPU and RTN module FPGA Code has been updated in new production modules to improve the robustness of the live removal/insertion process.

Field Corrective Action:

See Customer Action below.

Customer Action

During any live removal/insertion of the 5200 CPU or RTN, customers must use the module extraction tabs and must follow the recommendations per manual 26166V2 section “Replacing a VME Module”. Following the proper procedures significantly reduces risk of this issue.

Customers with CPU or RTN numbers listed above who rely on live removal/insertion may return the CPUs and RTNs modules to Woodward at your convenience for the FPGA Code update. Woodward will perform this update at no charge.

Note: the customer/end user in the field cannot perform this update.

To return an Affected Unit to Woodward, please select one of the following options:

- Contact your Woodward customer service representative for a Return Authorization Number (RAN) and return the affected CPU modules(s) to Woodward.
- If a return is not feasible, contact your Woodward customer service representative to discuss the availability of replacement/exchange unit(s).

Please refer to this Application Note number 51587 when contacting Woodward.

We appreciate your comments about the content of our publications.

Send comments to: icinfo@woodward.com

Please reference publication **51587**.



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