GE VERNOVA

Grid Automation
Protection Automation Control

Firmware/Software Release Note

Date: **August 2026** Distribution: **Public** Reference: **P540D-RN-EN-ABF-1**

MiCOM P40 Agile 5th Generation P44, P54, P84

Firmware Version AB, Minor Version F

Overview

- This document contains the Release Notes for Firmware Version ABF for MiCOM P40 Line Differential and Distance Relays
- Applicable to products: P44 (P443, P446), P54 (P543, P546), and P84 (P841A, P841B)
- Firmware Version ABF is a minor release that succeeds Firmware Version ABE
- Firmware Version ABF supports Edition 2 and 2.1 of IEC 61850
- Firmware Version ABF supports both CIT and NCIT inputs

Key Updates

- Firmware Version ABF reinstates the NCIT (Sampled Values) variant option for all models, in addition to the CIT variant.
- Firmware Version ABF is a quality release focused to resolve high priority issues reported from the field
- Bug fixes of P54 error code occurrences under specific conditions
- Bug fixes of platform issues

Scope of the Release

The scope of this release covers models and protocols as indicated in the table below:

Model	Protocol					
	Courier (1)	Modbus (2)	IEC 60870-5-103 (3)	DNP3 (4)	IEC 61850 (6)	IEC 61850 + 103 (7)
P443	☑	☐	☑	☑	☑	☑
P446	☑	☐	☑	☑	☑	☑
P543	☑	☐	☑	☑	☑	☑
P546	☑	☐	☑	☑	☑	☑
P841A	☑	☐	☑	☑	☑	☑
P841B	☑	☐	☑	☑	☑	☑

GE VERNOVA

GEV, the GE Vernova monogram and any items marked with an * are trademarks of GE Vernova.
Copyright 2026, GE Vernova. All Rights Reserved.

Key bug fixes in this firmware version

Code	Change ID	Description	Effect
C	PX40PL-1040	Negative real & reactive power reporting as zero in IEC 103	IEC 103 master incorrectly reads Real power & Reactive power (ASDU Type 9) as Zero when the value is negative. Only positive values are read correctly.
B	PX40PL-1039	IED occasionally reboots with error code 0x78040001 when extracting DR from IEC 103	Protection unavailable while IED reboots
B	PX40PL-1032	IED reboots with error 0x71020242 when DR extract attempted from IEC 103 after earlier DR were deleted	Protection unavailable while IED reboots
C	PX40PL-982	COMTRADE file Saved Date for IEC 61850 MMS file transfer shows Previous Year's Date	Possible customer confusion. No functional impact. The actual file name itself contains the correct date, and the COMTRADE data is correct.
D	PX40PL-978	'C Diff Failure' and 'C Diff Inhibited' alarm indications are not reset after IED is restarted	'C Diff Failure' and 'C Diff Inhibited' alarms are incorrectly shown after IED reboot and have to be manually reset.
C	PX40PL-965	IEC 61850: LTMS.TmSrc needs update to match TISSUE 1846	No functional impact. LTMS.TmSrc text not matching format per TISSUE 1846.
C	PX40PL-962	Syslog: Messages sent to unexpected Destination Port (only for ZN0098 Ethernet Board)	syslog messages are not received by the syslog server
D	PX40PL-957	IED front panel keys sometimes stop responding if a Read Only cell is repeatedly attempted to be set	Front panel user interface unusable. IED must be rebooted to restore normal operation.
R	PX40PL-938	Security events not logged in non-Ethernet relays	Security events which are expected to be created after device power on are not present in the extracted Security Events file.
B	PX40PL-937	IED with ABE firmware and no Ethernet board has error code 0x78040002 and reboots when settings are sent to it from S1 Agile	Protection unavailable while IED reboots
C	PX40PL-934	Syslog message format compliance with RFC 5424	Minor message format non-compliance with RFC 5424. No functional impact.
C	PX40PL-912	Some MMXU measurements shown as infinite	Some IEC 61850 measurements values are inaccurate
R	PX40PL-873	Disabling NP1 does not disable NP1 Link Report Alarm/Event	NP1 Link Report Alarm/Event incorrectly logged for loss of link when alarm disabled
R	PX40PL-871	DR Trigger position percentage setting is not respected	The pre–trigger and post–trigger timings are not as expected by the configuration
R	PX40PL-869	Clear Disturbance Records function does not work from HMI when the IED is Bypassed	User cannot clear the disturbance records stored in the IED

GE VERNOVA

GEV, the GE Vernova monogram and any items marked with an * are trademarks of GE Vernova.
Copyright 2026, GE Vernova. All Rights Reserved.

Code	Change ID	Description	Effect
R	PX40PL-865	Unnecessary security event for SLD loading logged at every power on	Possible user confusion
D	PX40PL-858	Rename 'Nic Mismatch' to 'NIC Mismatch' for consistency	Meaning of "Nic" may not be clear to user
B	PX40PL-747	During tests with repeated shots, the relay eventually enters faulty state, resulting in error codes, 'NIC No Response' alarms, and rebooting	Protection unavailable while IED reboots
R	PX40PL-603	Lack of security events for user action of extracting system events (IEEE 1686)	May not meet customer cyber spec
C	PX40PL-602	IEC 61850: IED can incorrectly switch to duplicate GOOSE for some stNum	Subscriber IED can incorrectly switch to duplicate GOOSE message (that is not marked as Simulated). Unlikely to occur intentionally, but maybe by operator error or maliciously. Similarly, when the duplicate GOOSE publishing was stopped, the subscriber IED incorrectly does not immediately switch back to the process GOOSE.
C	PX40PL-570	User Authentication Lock out period does not apply as intended for RADIUS Users	Account does not lock out for the period set which is a potential vulnerability
C	PX40PL-328	Second GOOSE message with previous datavalue is incorrectly generated at datachange	Increased Ethernet network traffic. No significant functional impact.
E	P540D-1153	Increase sensitivity of Distance Zones from 2 p.u. to 5 p.u. to cater for converter-based generation.	Insufficient sensitivity range for Distance Zones in some renewables applications.
D	P540D-1213	Mismatch between few DDB signals in the Look & Feel spec and PSL	Inconsistency. No functional impact observed.
U	P540D-1225	Error code 0xE0200050 and lockout when 'Loopback Mode' DDB is used in PSL and is active	Protection unavailable while IED reboots. Will occur again using the same PSL and Commissioning Tests.
P	P540D-1233	VT switching does not function	Customer cannot use the provided VT switching function for Sampled Value (9-2) IED
D	P540D-1241	P543 Relay output contact 15 label setting incorrectly locked (not editable) in settings file	Customer cannot edit RL15 label from default text except by HMI
U	P540D-1251	Current Differential "Delta Isef" starter might prevent Current Diff tripping/operation for single phase faults	If the Current Differential "Delta Isef" starter is enabled, it might prevent Current Diff tripping/operation for single phase faults.
E	P540D-1252	'CS103 PhysLink', 'Link Report', 'PTP Domain' settings not editable in settings file	Customer cannot configure these settings except by HMI

GEV, the GE Vernova monogram and any items marked with an * are trademarks of GE Vernova.
Copyright 2026, GE Vernova. All Rights Reserved.

Code	Change ID	Description	Effect
D	P540D-1254	CB Open Echo and CB Open Echo Dly settings are not visible when the relevant Aid selection options are enabled	User cannot configure some CB Open Echo and CB Open Echo Dly settings by settings file, only by HMI.
H	P540D-1273	During an evolving phase-to-ground to multi-phase fault, the Zone 2 start element momentarily drops and re-asserts, causing the Zone 2 timer to reset and preventing Zone 2 tripping.	IED might not issue a Zone 2 tripping during evolving fault
M	P540D-1309	Sampled Values current and voltage values incorrectly displayed if received with 'Test' flag while IED Mode is 'On'	User will see measurement values that are not true process values
D	P540D-1312	“C-Diff Failure” alarm appears spuriously during the relay startup/reboot sequence	'C Diff Failure' and 'C Diff Inhibited' alarms incorrectly shown after IED reboot, and must be manually reset
D	P540D-1406	Some NP1 and NP2 settings incorrectly locked in settings file when 'IP Source' set as "Settings"	User cannot configure some NP1 and NP2 settings by settings file, only by MCL file or HMI.
U	P540D-869	Starter Settings for Differential Protection are working only if the user Enables, then Disables, then Enables the Starter Settings.	The IED might not trip for a fault if the Starter Settings are enabled for Differential Protection unless the user follows the process of Enabling, then Disabling, then Enabling the Starter Settings.
F	P540D-910	Distance element can potentially lead to a 3 pole trip for a single phase to ground fault in the 5 cycle state as the phase distance elements are not supervised	The IED's distance element can potentially lead to a 3 pole trip for a single phase to ground fault in the 5 cycle state as the phase distance elements are not supervised.

Hardware Compatibility

Firmware ABF runs on Hardware Suffix Q.

Issues Affecting Customer Upgrade/Backwards Compatibility

Concerning backward compatibility of Firmware Version ABF with files from previous Firmware Version, see the following:

S1 Data Models		
	New/Updated	Backwards Compatible
Setting	Yes	No
DNP3	Yes	No
PSL	Yes	No
Language	Yes	No
ICD Ed2 *	Yes	No
ICD Ed2.1 *	Yes	No

GE VERNOVA

GEV, the GE Vernova monogram and any items marked with an * are trademarks of GE Vernova.
Copyright 2026, GE Vernova. All Rights Reserved.

S1 Data Models		
	New/Updated	Backwards Compatible
RDF	Yes	No
DBF	No	Yes
Cell List	No	Yes
SLD	No	Yes

* Use 'IED Configurator' to convert ICD template file of existing MCL file

Support Software Compatibility

Requires MiCOM S1 Agile Version 3.2.1 (or later).
For the configuration of NCIT variants, requires MiCOM S1 Agile Version 4.0.1 (or later).

Categories

This document uses the following categories to classify changes:

Code	Category	Description
N	New feature	A separate feature added to the relay. Changes to existing features even if they significantly expand the functionality are not in this category.
G	Change	A neutral change that does not add new value and is not correcting any known problem.
E	Enhancement	Modification of an existing feature bringing extra value to the application.
D	Changed, incomplete, or false faceplate indications	Changes to, or problems with text messages, LEDs, and user pushbuttons.
R	Changed, incomplete, or false relay records	Changes to, or problems with relay records (oscillography, demand, fault reports, and so on).
C	Protocols and communications	Changes to, or problems with protocols or communication features.
M	Metering	Metering out of specification or other metering problems.
P	Protection out of specification	Protection operates correctly but does not meet published specifications (example: delayed trip).
U	Unavailability of protection	Protection not available in a self-demonstrating way so that corrective actions can be taken immediately.
H	Hidden failure to trip	Protection does not operate when appropriate.
F	False trip	Protection operates when it is not appropriate.
B	Unexpected restart	Relay restarts unexpectedly.

GEV, the GE Vernova monogram and any items marked with an * are trademarks of GE Vernova.
Copyright 2026, GE Vernova. All Rights Reserved.

For Further Assistance

For questions or further product support, please contact the GE Vernova support teams using:

Region	E-mail	Telephone
Global Contact Centre	GA.support@gevernova.com	+44 1785 250070
Central, East Asia, Pacific	GA.supportCEAP@gevernova.com	+65 6749 0777
India	GA.supportIND@gevernova.com	N/A
Middle East, North Africa, Turkey	GA.supportMENAT@gevernova.com	+971 4 375 6950
Europe, Russia, CIS, Sub-Saharan Africa	GA.supportERCIS@gevernova.com	+34 94 4858854
North America	GA.supportNAM@gevernova.com	+1-877-605-6777 (Global toll-free) +1-800-547-8629 (NAM toll-free) +1-678-844-6777 (Direct)
Latin America	GA.supportLAM@gevernova.com	+55 48 2108 0300

GE VERNOVA

GEV, the GE Vernova monogram and any items marked with an * are trademarks of GE Vernova.
Copyright 2026, GE Vernova. All Rights Reserved.