



CANplus RT™ Software Release Notes

Version 1.04

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1 Introduction

This document describes the new features and changes available with version 1.04 software. This document describes changes to the following products:

- CP640
- CP800
- CP800M
- CP900
- CP1000
- LC45
- LC40
- CANplus Customizer

2 Linux OS Bundle

New Part Number	004_V3_OS_01685
New Part Description	Firmware, Linux OS Bundle, Filesystem: 139, Kernel: 3.14.23-168
Filename	004_V3_OS_01685.zip
LOFA Product Application	CP640, CP800, CP900

2.1 New Features

This section describes the new features that have been added to the firmware.

2.1.1 USBUpdate Script Update

- Updated hotplug script so that it will immediately unmount after it finished its operations.
- Updated recovery.sh to turn off buzzer at user update prompt.

3 Internal IO Board

New Part Number	004-01672
New Part Description	Firmware, Internal IO Board, Version 66
Filename	004-01672.s19
LOFA Product Application	CP640, CP800, CP900

3.1 New Features

This section describes the new features that have been added to the firmware.

3.1.1 Safety Output Mechanism

Added safety mechanism so that outputs would turn off automatically should the IOB not receive a valid message within 500ms while the panel is awake. This was added should the panel restart due to a low voltage condition and the IOB remains active.

3.2 Bug Fixes

Various bugs have been fixed.

4 Base Rotary Board

New Part Number	004-01614
New Part Description	Firmware, Base Rotary Board, Version 2.05
Filename	004-01614.lfu
LOFA Product Application	CP640

4.1 Changes

This section describes the changes that have been introduced to the firmware.

- CAN Termination Support for the Termination Resistor Menu where the CAN Resistor is by default "On" and can be switched off but required a power cycle if board can't see any CAN traffic.
- Added beacon message.

4.2 Bug Fixes

Various bugs have been fixed.

5 Mechanical Rotary Board

New Part Number	004-01601
New Part Description	Firmware, Mechanical Rotary Board, Version 2.05
Filename	004-01601.lfu
LOFA Product Application	CP800, CP900

5.1 Changes

This section describes the changes that have been introduced to the firmware.

- CAN Termination Support for the Termination Resistor Menu where the CAN Resistor is by default "On" and can be switched off but required a power cycle if board can't see any CAN traffic.
- Added beacon message.

5.2 Bug Fixes

Various bugs have been fixed.

6 CP640

New Part Number	004_V3_APP_01627
New Part Description	Firmware, CP640, Version 1.04
Filename	004_V3_APP_01627.tar.gz
LOFA Product Application	CP640

6.1 Engine Specific Changes

This section describes the any changes that affect specific engine templates.

- Volvo T5.
 - Added.
- Scania T5.
 - Added.
- Kohler KDI T5
 - Added.
- Cummins T4F
 - Added support for SPN 5282 (DRIVER WARNING SYSTEM STATUS)
 - Updated SCRSC decode to meet Cummins requirements.
- Isuzu T4
 - Added support for DM27 - Pending Faults in faults page.

6.2 HMI Changes

This section describes the any changes that affect the User Interface.

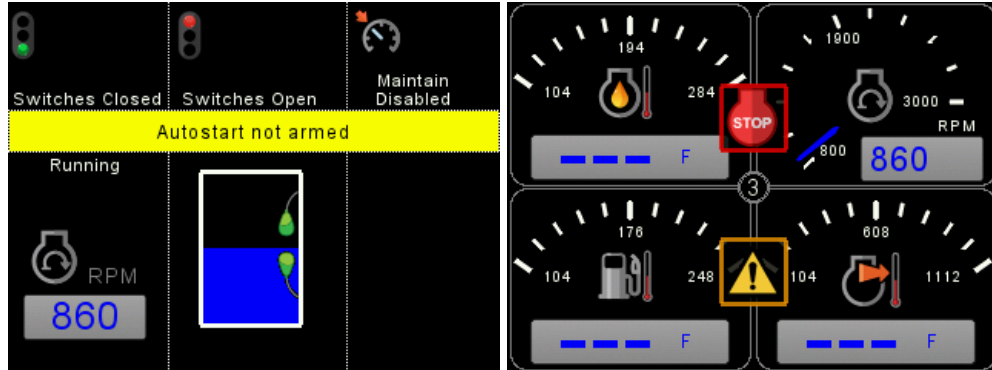
- Language
 - Italian added.
- Menu
 - Added Output Events Menu which is housing Alarm Output Menu and At Speed Menu
 - Aux inputs/outputs menu now available via display.
 - Removed "DB Viewer" from menu, now only accessible by buttonbar in gauge pages.
 - Renamed "Low side output" to "Aux Out 1"

- Buttonbar



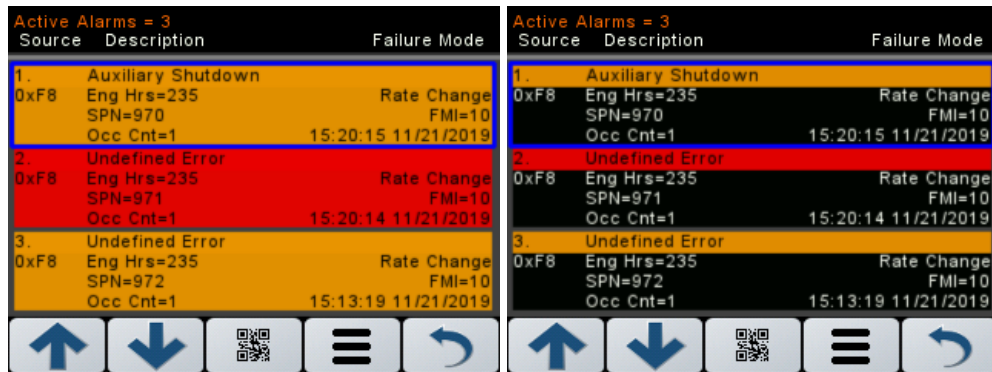
- Changed button 2 behavior: press button 2 Auto Dashboard. Hold button 2 for DB Viewer.
- Updated icons.

- Gauge Pages



- Implemented STOP/WARNING overlay icons which indicate the active RED/AMBER status. Icons will not show up when alarm banner is present.

- Alarm Page



- Now sorting faults based on timestamp.
- Faults now indicate severity level.
- Added support for DM27 - Pending Fault menu list.

- Alarm Banner



- Will now present most recent and highest severity fault.
- Now indicate the fault severity level.
- Indicator Icons



- Updated icons, now centered and share the same 42 px border for uniformity.
- Will now shift indicator icons above the fault banner when fault banner is present.

6.3 Panel Core Logic Changes

This section describes the any changes that affect panel, engine, or I/O control.

- Added 2/3 state throttle support.
- Added support for "DPF Cooldown" state. It will lock the RPM at a specified RPM if we would enter COOLDOWN while the engine was active.
- Restructured Red/Amber LED control code so that the highest severity LED is always shown when there is contention between the internal/external faults LED handler and Direct Lamp Control(DLCC1).

6.4 Bug Fixes

Various bugs have been fixed.

7 CP800

New Part Number	004_V3_APP_01630
New Part Description	Firmware, CP800, Version 1.04
Filename	004_V3_APP_01630.tar.gz
LOFA Product Application	CP800

7.1 Engine Specific Changes

This section describes the any changes that affect specific engine templates.

- Volvo T5.
 - Added.
- Scania T5.
 - Added.
- Kohler KDI T5
 - Added.
- Cummins T4F
 - Added support for SPN 5282 (DRIVER WARNING SYSTEM STATUS)
 - Updated SCRSC decode to meet Cummins requirements.
- Isuzu T4
 - Added support for DM27 - Pending Faults in faults page.

7.2 HMI Changes

This section describes the any changes that affect the User Interface.

- Language
 - Italian added.
- Menu
 - Added Output Events Menu which is housing Alarm Output Menu and At Speed Menu
 - Aux inputs/outputs menu now available via display.
 - Removed "DB Viewer" from menu, now only accessible by buttonbar in gauge pages.
 - Renamed "Low side output" to "Aux Out 1"

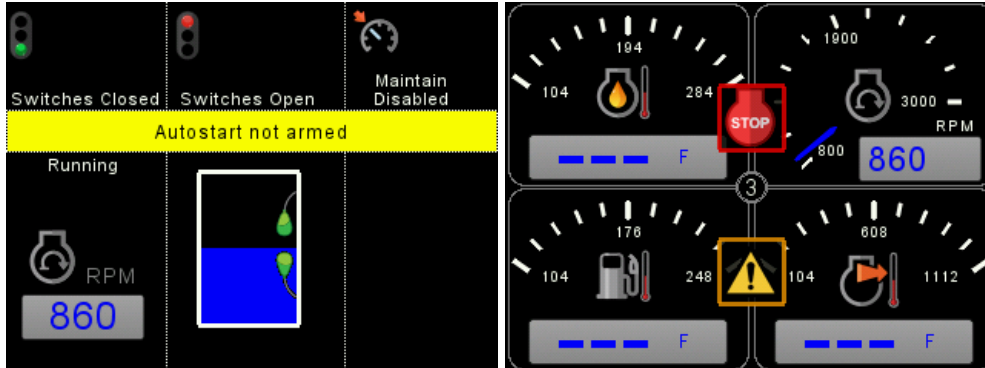
7. CP800

- Buttonbar



- Changed button 2 behavior: press button 2 Auto Dashboard. Hold button 2 for DB Viewer.
- Updated icons.

- Gauge Pages



- Added the Autostart Dashboard
- Implemented STOP/WARNING overlay icons which indicate the active RED/AMBER status. Icons will not show up when alarm banner is present.

- Alarm Page

Active Alarms = 3			Active Alarms = 3		
Source	Description	Failure Mode	Source	Description	Failure Mode
1.	Auxiliary Shutdown		1.	Auxiliary Shutdown	
0xF8	Eng Hrs=235	Rate Change	0xF8	Eng Hrs=235	Rate Change
	SPN=970	FMI=10		SPN=970	FMI=10
	Occ Cnt=1	15:20:15 11/21/2019		Occ Cnt=1	15:20:15 11/21/2019
2.	Undefined Error		2.	Undefined Error	
0xF8	Eng Hrs=235	Rate Change	0xF8	Eng Hrs=235	Rate Change
	SPN=971	FMI=10		SPN=971	FMI=10
	Occ Cnt=1	15:20:14 11/21/2019		Occ Cnt=1	15:20:14 11/21/2019
3.	Undefined Error		3.	Undefined Error	
0xF8	Eng Hrs=235	Rate Change	0xF8	Eng Hrs=235	Rate Change
	SPN=972	FMI=10		SPN=972	FMI=10
	Occ Cnt=1	15:13:19 11/21/2019		Occ Cnt=1	15:13:19 11/21/2019

- Now sorting faults based on timestamp.
- Faults now indicate severity level.
- Added support for DM27 - Pending Fault menu list.

- Alarm Banner



- Will now present most recent and highest severity fault.
- Now indicate the fault severity level.
- System Banner
 - Added "OUTSIDE ALLOWED TIMES" banner
- Indicator Icons



- Updated icons, now centered and share the same 42 px border for uniformity.
- Will now shift indicator icons above the fault banner when fault banner is present.

7.3 Panel Core Logic Changes

This section describes the any changes that affect panel, engine, or I/O control.

- Added 2/3 state throttle support.
- Added support for "DPF Cooldown" state. It will lock the RPM at a specified RPM if we would enter COOLDOWN while the engine was active.
- Restructured Red/Amber LED control code so that the highest severity LED is always shown when there is contention between the internal/external faults LED handler and Direct Lamp Control(DLCC1).
- Improved Autostart control logic for Scheduler and Timed Run.

7.4 Bug Fixes

Various bugs have been fixed.

8 CP800M

8.1 Superseded

This product has been superseded by CP900.

9 CP900

New Part Number	004_V3_APP_01643
New Part Description	Firmware, CP900, Version 1.04
Filename	004_V3_APP_01643.tar.gz
LOFA Product Application	CP900

9.1 Engine Specific Changes

This section describes the any changes that affect specific engine templates.

- Volvo T5.
 - Added.
- Scania T5.
 - Added.
- Kohler KDI T5
 - Added.
- Cummins T4F
 - Added support for SPN 5282 (DRIVER WARNING SYSTEM STATUS)
 - Updated SCRSC decode to meet Cummins requirements.
- Isuzu T4
 - Added support for DM27 - Pending Faults in faults page.

9.2 HMI Changes

This section describes the any changes that affect the User Interface.

- Language
 - Italian added.
- Menu
 - Added Actuator Setup Wizard for Mechanical engines.Added Output Events Menu which is housing Alarm Output Menu and At Speed Menu
 - Aux inputs/outputs menu now available via display.
 - Removed "DB Viewer" from menu, now only accessible by buttonbar in gauge pages.

9. CP900

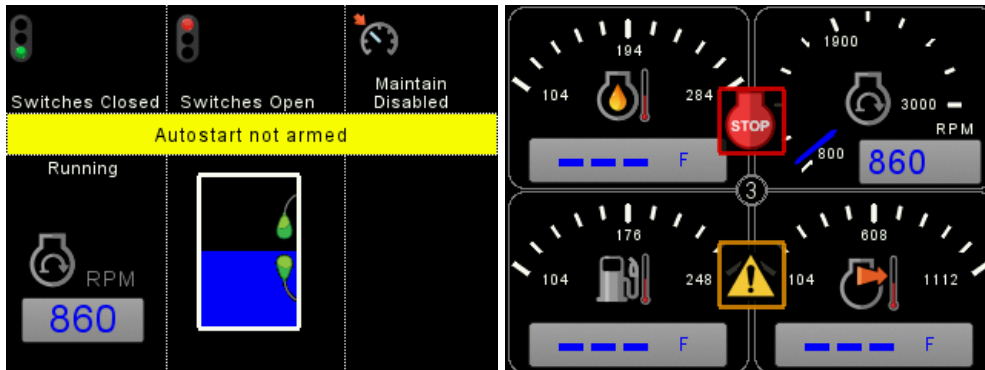
- Renamed "Low side output" to "Aux Out 1"

- Buttonbar



- Changed button 2 behavior: press button 2 Auto Dashboard. Hold button 2 for DB Viewer.
- Updated icons.

- Gauge Pages



- Added the Autostart Dashboard
- Implemented STOP/WARNING overlay icons which indicate the active RED/AMBER status. Icons will not show up when alarm banner is present.

- Alarm Page

Active Alarms = 3			
Source	Description	Failure Mode	
1. 0xF8	Auxiliary Shutdown Eng Hrs=235 SPN=970 Occ Cnt=1	Rate Change	FMI=10 15:20:15 11/21/2019
2. 0xF8	Undefined Error Eng Hrs=235 SPN=971 Occ Cnt=1	Rate Change	FMI=10 15:20:14 11/21/2019
3. 0xF8	Undefined Error Eng Hrs=235 SPN=972 Occ Cnt=1	Rate Change	FMI=10 15:13:19 11/21/2019

Active Alarms = 3			
Source	Description	Failure Mode	
1. 0xF8	Auxiliary Shutdown Eng Hrs=235 SPN=970 Occ Cnt=1	Rate Change	FMI=10 15:20:15 11/21/2019
2. 0xF8	Undefined Error Eng Hrs=235 SPN=971 Occ Cnt=1	Rate Change	FMI=10 15:20:14 11/21/2019
3. 0xF8	Undefined Error Eng Hrs=235 SPN=972 Occ Cnt=1	Rate Change	FMI=10 15:13:19 11/21/2019

- Now sorting faults based on timestamp.
- Faults now indicate severity level.
- Added support for DM27 - Pending Fault menu list.

- Alarm Banner



- Will now present most recent and highest severity fault.
- Now indicate the fault severity level.
- System Banner
 - Added "OUTSIDE ALLOWED TIMES" banner
- Indicator Icons



- Updated icons, now centered and share the same 42 px border for uniformity.
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9.3 Panel Core Logic Changes

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- Added 2/3 state throttle support.
- Added support for "DPF Cooldown" state. It will lock the RPM at a specified RPM if we would enter COOLDOWN while the engine was active.
- Restructured Red/Amber LED control code so that the highest severity LED is always shown when there is contention between the internal/external faults LED handler and Direct Lamp Control(DLCC1).
- Improved Autostart control logic for Scheduler and Timed Run.

9.4 Bug Fixes

Various bugs have been fixed.

10 CP1000 Bootloader

New Part Number	004-01496
New Part Description	Firmware, CP1000 Bootloader, Version 1.01
Filename	004-01496.lbb
LOFA Product Application	CP1000, LC45, LC40

10.1 Initial release

This is the first release for this product.

11 CP1000

New Part Number	004-01656
New Part Description	Firmware, CP1000, Version 1.04
Filename	004-01656.lfw
LOFA Product Application	CP1000

11.1 Initial release

This is the first release for this product.

12 LC45

New Part Number	004-01656
New Part Description	Firmware, LC45, Version 1.04
Filename	004-01656.lfw
LOFA Product Application	LC45

12.1 Initial release

This is the first release for this product.

13 LC40

New Part Number	004-01656
New Part Description	Firmware, LC40, Version 1.04
Filename	004-01656.lfw
LOFA Product Application	LC40

13.1 Initial release

This is the first release for this product.

14 CANplus Customizer

14.1 Backward Compatability

Customizer will NOT support previous versions. It is advised that customers use Customizer 1.04 for 1.04 products.

14.2 New Features

This section describes the new features that have been added to the CANplus Suite.

14.2.1 Support for new products

Added support for CP1000, LC45, and LC40.