

REVISIONS	
REV	DESCRIPTION
G	RELEASE/CHANGE PER EC125244

SOFTWARE REFERENCE DRAWING

PB560 CPU

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1.0 REVISION HISTORY

Revision	Author	Change Description
A		Production release of LX010100.
B		Production release of LX010101.
C		Production release of LX010102.
D		Production release of LX010103.
E		Production release of LX010104.
F		Production release of LX010105.
G		Production release of LX010106.

2.0 INTRODUCTION

2.1 Objective

This document provides the software reference for the PB560 CPU Board feature release software.

2.2 Scope

This software reference describes the configuration of the software and the development tools used.

2.3 Reference Documents

Ref	Part Number	Document Title
R1	10035480	Product Requirements Document, PB560-520
R2	10037183	System Risk Assessment, PB560-520
R3	10037185	CPU Software Requirement Specifications, PB 560
R4	RE00213912	Design Verification Test Summary Report, CDP-0018505, PB560
R5	CDP-0018505	LEVEL 2B: PB560 update to address the following bug: - Fluctuating Low and Empty Battery Alarm (SCR258)
R6	10059515	Puritan Bennett 500 Series Ventilator Test Software (PB500VTS)

3.0 SOFTWARE REFERENCE

1. Release File:

ROM Name	ROM CRC	Md5 Signature	Patient Management	Version	Build Date	Board Loc.	Archive Label
LX010106.h86	N/A	ef322c2355 e91a968fc7 f6bc93cd48 fc	Yes	LX010106	07-09-2019	CPU	LX010106_Final_Release

The LX010106.md5 file is the software checksum that can be used to check the h86 file integrity.

The LX010106.ini file has to be used with OpenVent.

It must manually merge the contents of LX010106.ini to the 40966.ini located in the Testventil folder of the OpenVent installation directory.

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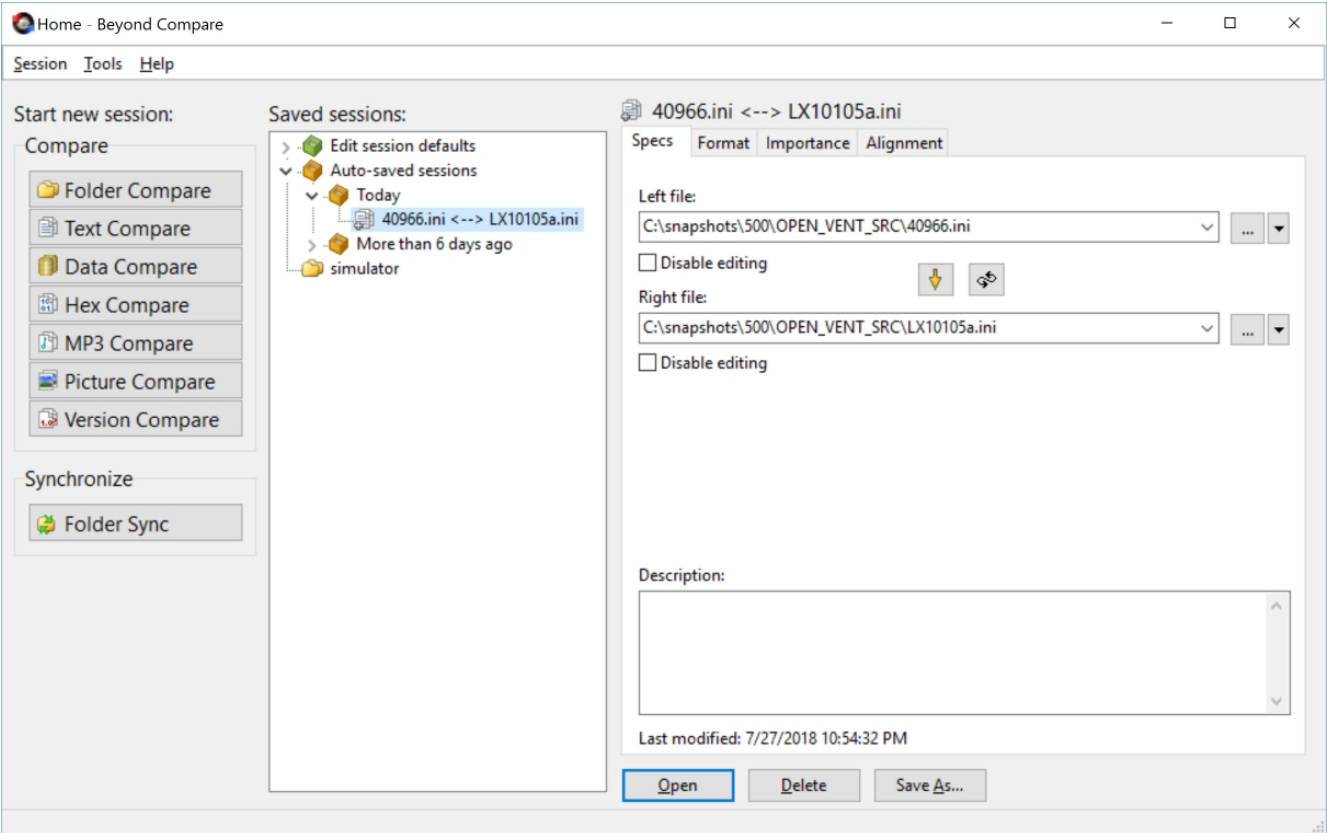
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To manually merge the contents of LX010106.ini to 40966.ini use Beyond Compare version 3. First provide the “Left file” full path to the location of the 40966.ini. To browse for a file, click on the “...” button. Second, provide the “Right file” full path to the location of the LX010106.ini. See screen shot as an example below. Then click on the Open button below.



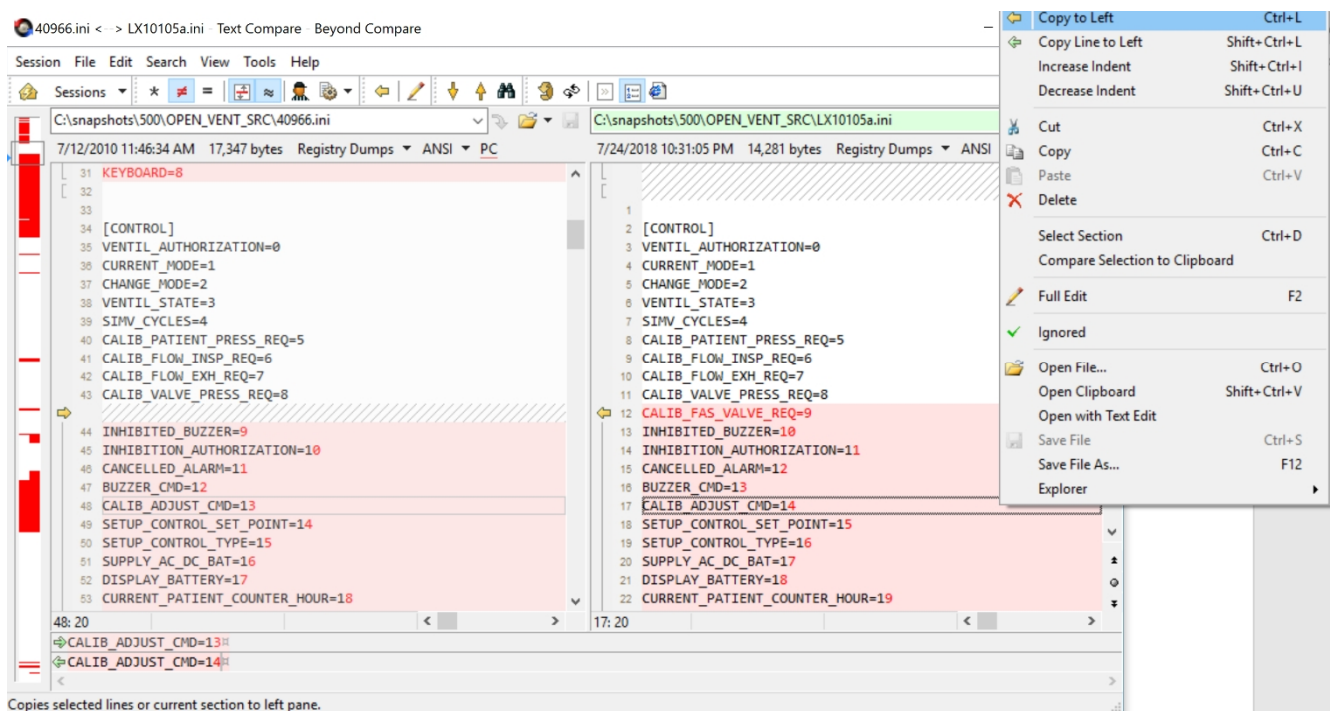
Once they are compared, you can manually merge contents from LX010106.ini to 40966.ini. To do this, find the first difference after the keyword “[control] as shown in the picture below. Right click on the light red highlighted text on the right window and select “Copy to Left” as shown in the picture below. If done correctly, both sides of the screen will remove the light red highlighted text. Then scroll down and continue to do a “copy to Left” till all of the light red highlighted text are removed.

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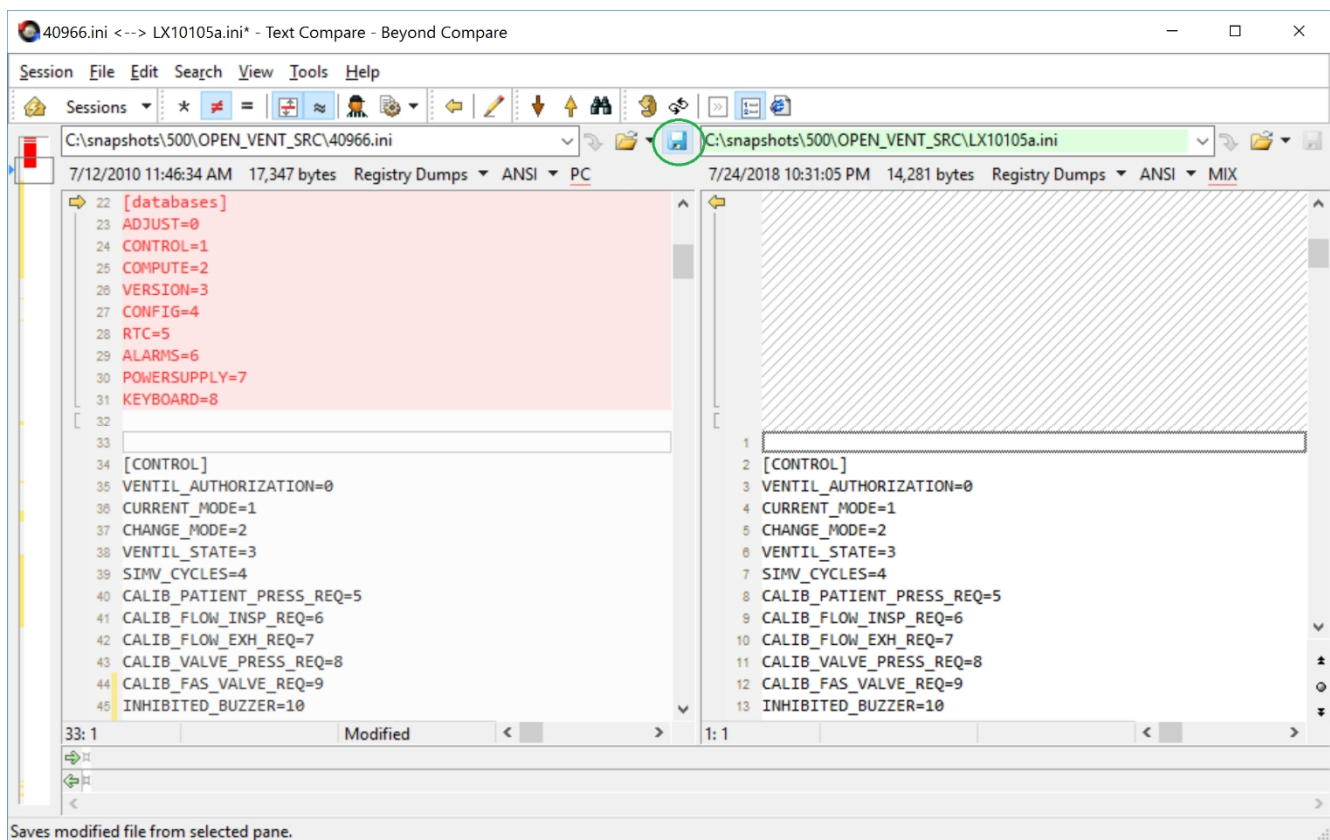
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The last step is to click on the save button. See picture below for details:



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2. Software Location:

a. Product Software Archives:

http://tupau1-sbe.thcg.net/svn/Legendair/LEGENDAIR_XL2/ETUDE_SOFT/Sources/CPU/tags/LX010106_Final_Release

http://tupau1-sbe.thcg.net/svn/Legendair/LEGENDAIR_XL2/ETUDE_SOFT/Sources/CPU/executables/LX010106.H86

http://tupau1-sbe.thcg.net/svn/Legendair/LEGENDAIR_XL2/ETUDE_SOFT/Sources/CPU/executables/LX010106.md5

http://tupau1-sbe.thcg.net/svn/Legendair/LEGENDAIR_XL2/ETUDE_SOFT/Sources/CPU/executables/LX010106.ini

b. Product Software Location (Controlled):

\\tacarl-fs01v\Software_Library\Product\Maslib\Airox\PB560\10096556\LX010106\LX010106.h86

\\tacarl-fs01v\Software_Library\Product\Maslib\Airox\PB560\10096556\LX010106\LX010106.md5

\\tacarl-fs01v\Software_Library\Product\Maslib\Airox\PB560\10096556\LX010106\LX010106.ini

Another copy of the product software is located in Agile, PN: 10096556G00.zip

c. Tools Archives: Configuration Management

- SVN 1.6.6 (r40053)
- Development
 - MD5 GUI V99g
 - Keil IDE-Version µVision V4.22.0.0
 - EC++ Compiler: EC166.Exe V1.09d
 - C Compiler: C166.Exe V7.05
 - Assembler: A166.Exe V5.34
 - Linker/Locator: L166.Exe V5.25
 - Librarian: LIB166.Exe V4.29
 - Hex Converter: OH166.Exe V4.7a
 - CPU DLL: S166.DLL V3.80.0.0
 - Dialog DLL: D167.DLL V2.53
 - Toolchain:
 - PK166 Prof. Developers Kit Version: 7.05
 - Toolchain Path:
 - C:\Keil\C166\BIN\

d. Tracker Database:

PVCS Tracker: Version 7.1.00sp3 (Build 638.1)

Project: PB_560

Server: SQA_WW01

e. Build Instructions:

To build all the software, using the  IDE Version UVision compiler, open the file

http://tupau1-sbe.thcg.net/svn/Legendair/LEGENDAIR_XL2/ETUDE

SOFT/Sources/CPU/tags/LX010106_Final_Release\ConfigKeil\XL2-PB560\RB0505Keil.uvproj

and double click on the Rebuild all target files shown below.

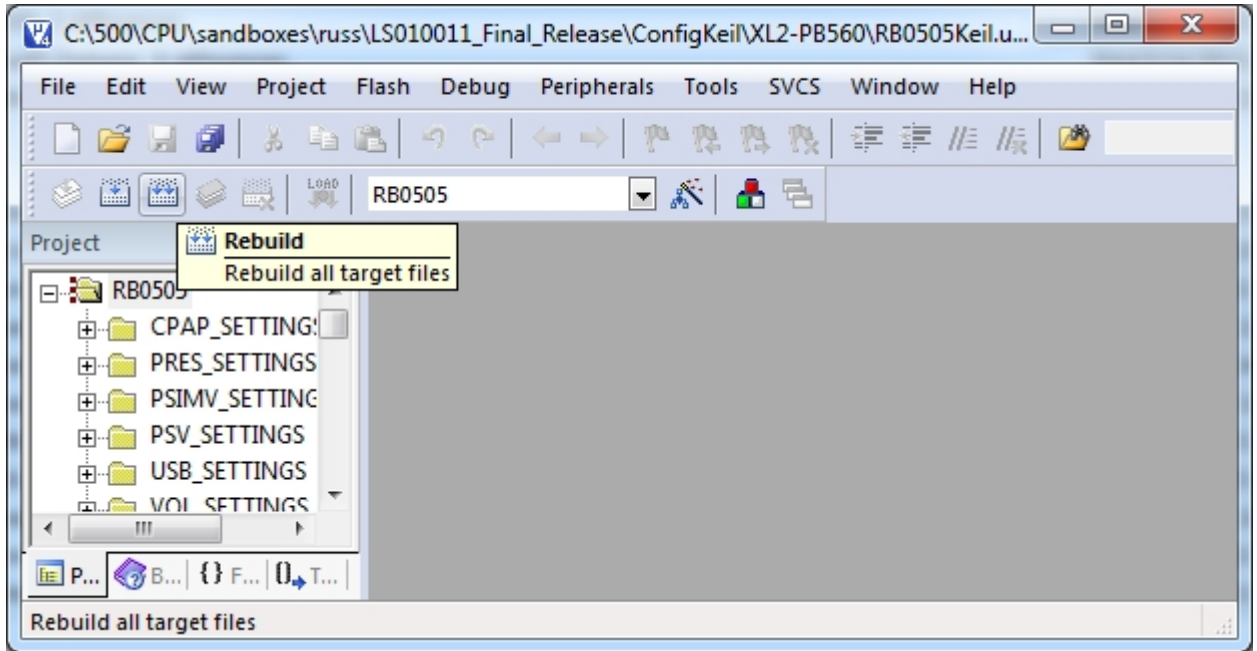
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All software files should be compiled and new executables created.

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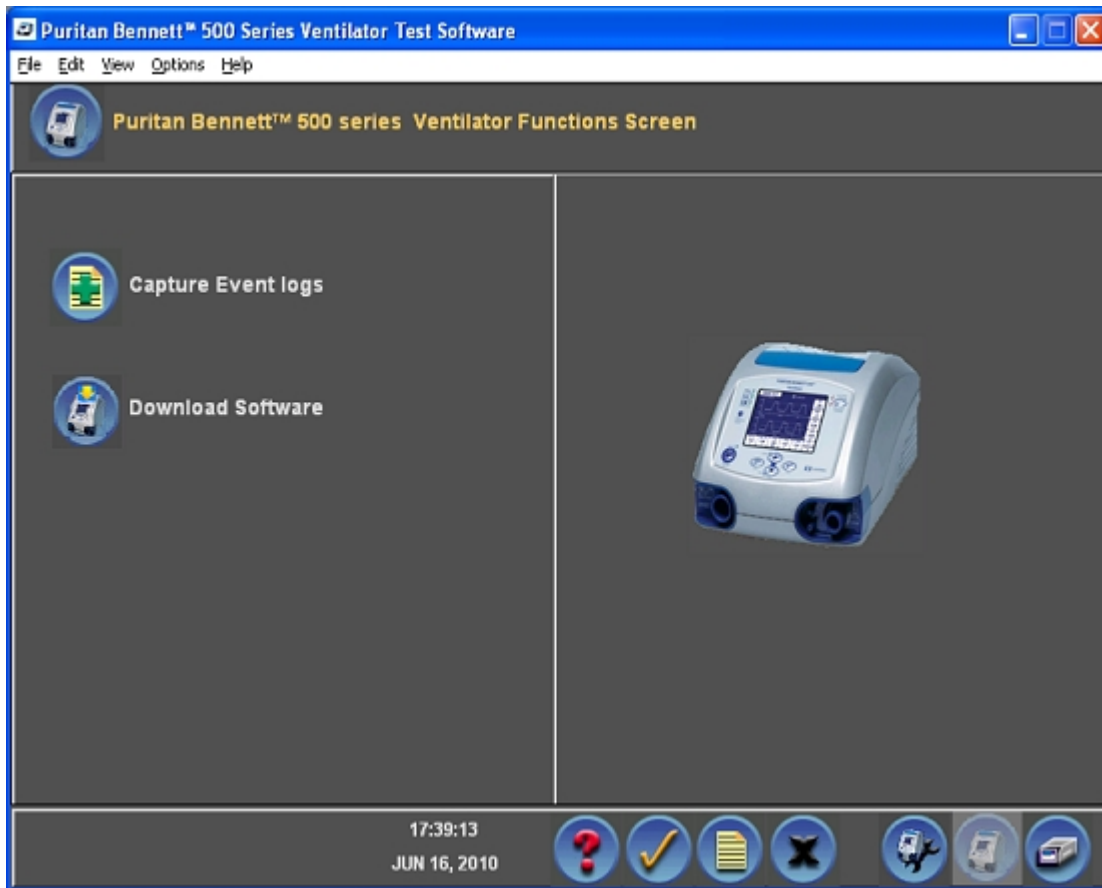
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How to Download Software

- a. Install Puritan Bennett 500 Series Ventilator Test Software [R6] and download the three files mentioned in section 2C.
- b. Click the **VENTILATOR FUNCTIONS** button to display the Puritan Bennett™ 500 Series Ventilator Functions Screen.



- c. Click the **Download Software** button to display the “Software Download” Screen. The Serial Number and Machine Hours are read automatically from the ventilator system.

Note: Software identifies the Power Supply and CPU ports. Ports only up to COM10 are supported.

If the ports are incorrectly identified, the user can change the ports manually.

- d. Specify the location of the software file names mention from section 2C for the CPU by clicking the **Browse** button.

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Software Download Tools

CPU Change

Serial Number: 40971C0196

Machine Hours: 25

Caution: the hour meter will be updated only if you download new CPU software

Port Selection

Power Supply COM Port: COM8 CPU COM Port: COM9

File Names

Power Management: [] Browse

CPU: [] Browse

Program... Close

Program Download

[]

e. Click **Program**. Progress is displayed as the download takes place.

Note: Power Supply software is downloaded first when both Power Supply and CPU software are provided.

f. Click the **ACCEPT** button when the download is complete.

4. Software Change Description:

Official release of the PB560 CPU board feature software for the formal P4 build.

The following change request have been fixed from the last production release LX010105:

SCR	Description
258	Fluctuating Low and Empty Battery Alarms

Refer to CDP [R5] and V&V Report [R4], PB560 for additional information.

5. Intended Use Statement:

This version of software has completed software verification testing. The software is being released to production. The software is intended for patient management.

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