

Cinterion[®] ELS61-USA HW&SW Delta Description

Description of HW&SW differences from ELS61-US B2 to ELS61-USA B1 revisions

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1 Introduction

This document describes the differences and changes of Boxwood ELS61-USA HW B1 version from ELS61-US HW B2 PCB(A) design.

1.1 Related Documents

- [1] Title
- [2] Title

2 Hardware differences and changes from ELS61-US B2 to ELS61-USA

2.1 Overview

The major difference and change between ELS61-US B2 and ELS61-USA B1 PCB design is only the HWID resistor to identify different products.

2.2 Schematic Changes

Details of schematic change shown as below:

| Function | Page No. | BOXWOOD ELS61-US B2 | BOXWOOD ELS61-USA B1 |
|----------|----------|---------------------|----------------------|
| HWID5 | 1 | | |

2.3 PCB Placement Changes

Acturally there is no PCB layout change, and only the assembly parts is different for HWID resistors R114 & R119 shown as below:

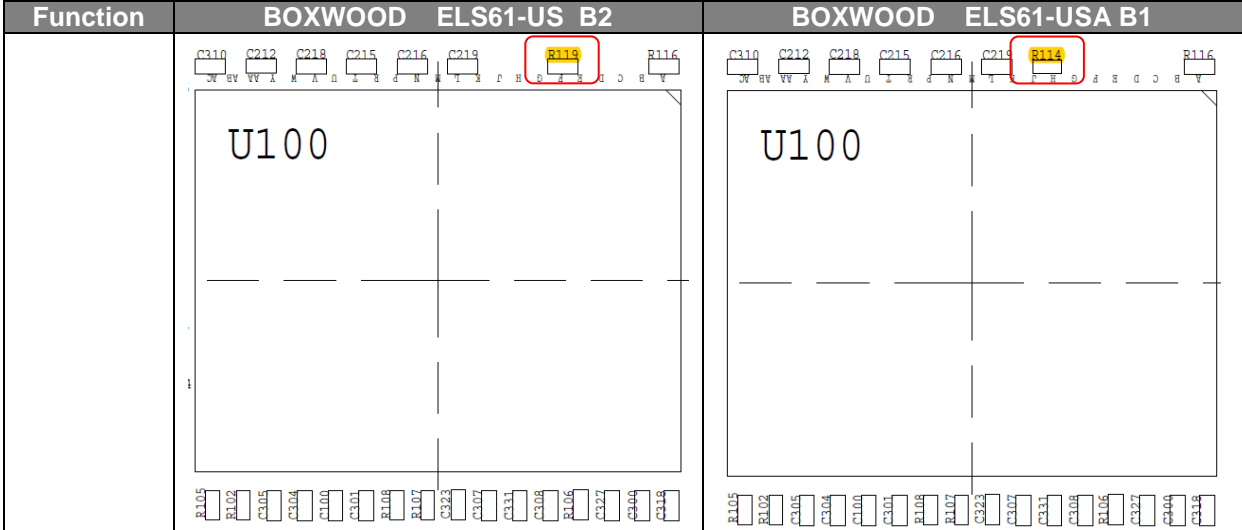


Figure 1: ELS61-USA B1 faceplan assembly parts top view

2.4 Comparison of PCB Layout, Layer by Layer

ELS61-USA shares the same PCB of ELS61-US.

2.5 BOM Changes

Details of BOM change shown as below:

| Ref | BOXWOOD ELS61-US B2 | | BOXWOOD ELS61-USA B1 | |
|------|---------------------|------------------|----------------------|------------------|
| | SAP Part No. | Part Description | SAP Part No. | Part Description |
| R114 | N.A. | | V24842-C472-J | RES 0201 4K7 5% |
| R119 | V24842-C472-J | RES 0201 4K7 5% | N.A. | |

3 Software differences and changes from ELS61-US B2 to ELS61-USA

1. VoLTE
 - VoLTE Implementation according to AT&T requirement
2. CSFB
 - Basic Implementation of CSFB (circuit-switched fallback)
 - CSFB Enhancements as requested by AT&T
3. 3G Voice Call/CSD
4. DTMF
 - Sending DTMF during Voice Call
 - Support of DTMF Control Digits Separator
5. Supplementary Service
 - Call Barring/Call Forwarding/Call Waiting/Call Hold and so on
6. TTY
7. BIP
 - Add the Default (Network) Bearer Support for BIP

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