



**Atacama
Large
Millimeter /
submillimeter
Array**

**ALMA Phasing Project
TTL Level Converter PCB Files
and
Specification for Fabrication**

ALMA-05.11.35.11-0002-A-DWG

2014-09-30

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Change Record

Version	Date	Affected section(s)	Reason/Initiation/Remarks
A	2014-09-30	All	Initial draft

Table of Contents

1. File Description and Specification for PCB Fabrication	3
2. TLC PCB Assembly.....	4
3. Drills.....	5



1. File Description and Specification for PCB Fabrication

[ALMA-05.11.35.11-0002-A-DWG.zip](#)

TTL-LVDS Level Converter PCB Artwork, compressed archive

This package includes the following files:

[2014Mar21 ALMA-05.11.35.11-0002-A-DWG.TXT](#)

describes the set of files associated with fabrication of the TTL-LVDS LEVEL CONVERTER Board

Gerber

- [2014Mar21 ALMA-05.11.35.11-0002-A-DWG.cmp_top signal layer](#)
- [2014Mar21 ALMA-05.11.35.11-0002-A-DWG.sol_bottom signal layer](#)
- [2014Mar21 ALMA-05.11.35.11-0002-A-DWG.plc_silkscreen, top](#)
- [2014Mar21 ALMA-05.11.35.11-0002-A-DWG.stc_solder mask, top](#)
- [2014Mar21 ALMA-05.11.35.11-0002-A-DWG.sts_solder mask, bottom](#)
- [2014Mar21 ALMA-05.11.35.11-0002-A-DWG.gpi_d-code table](#)

Drill

- [2014Mar21 ALMA-05.11.35.11-0002-A-DWG.drd Excellon drill file](#)
- [2014Mar21 ALMA-05.11.35.11-0002-A-DWG.drl_drill rack \(metric\)](#)
- [2014Mar21 ALMA-05.11.35.11-0002-A-DWG.dri_drill information](#)

Other

- [2014Mar21 ALMA-05.11.35.11-0002-A-DWG.TXT](#)
- [2014Mar21 ALMA-05.11.35.11-0002-A-DWG.ipc_netlist](#)
- [2014Mar21 ALMA-05.11.35.11-0001-A-DWG.sch Schematic \(Eagle Ver 6.5.0\)](#)
- [2014Mar21 ALMA-05.11.35.11-0001-A-DWG.brd Board file \(Eagle Ver 6.5.0\)](#)

Drawing: TTL-LVDS Level Converter Artwork ALMA-05.11.35.11-0002-A-DWG

Board size: 69.85mm X 60.96mm +/- .127mm

Layers: 2, mixed power and signal

Trace/Space: 0.4mm/0.3mm

Material: FR4, 1.0 Oz Cu (minimum)

Thickness: 1.575mm +/- 10%

Silkscreen: top side, white

Soldermask: SMOBC, green

Finish: HASL

Holes: ~100 Ranging from 0.60mm to 3.00mm

Use IPC Class 2, level B tolerances for all holes except where noted

File Format: Gerber files were created in extended Gerber format (RS274X)

with absolute data coordinates, 3.4 notation, and leading zero suppression.

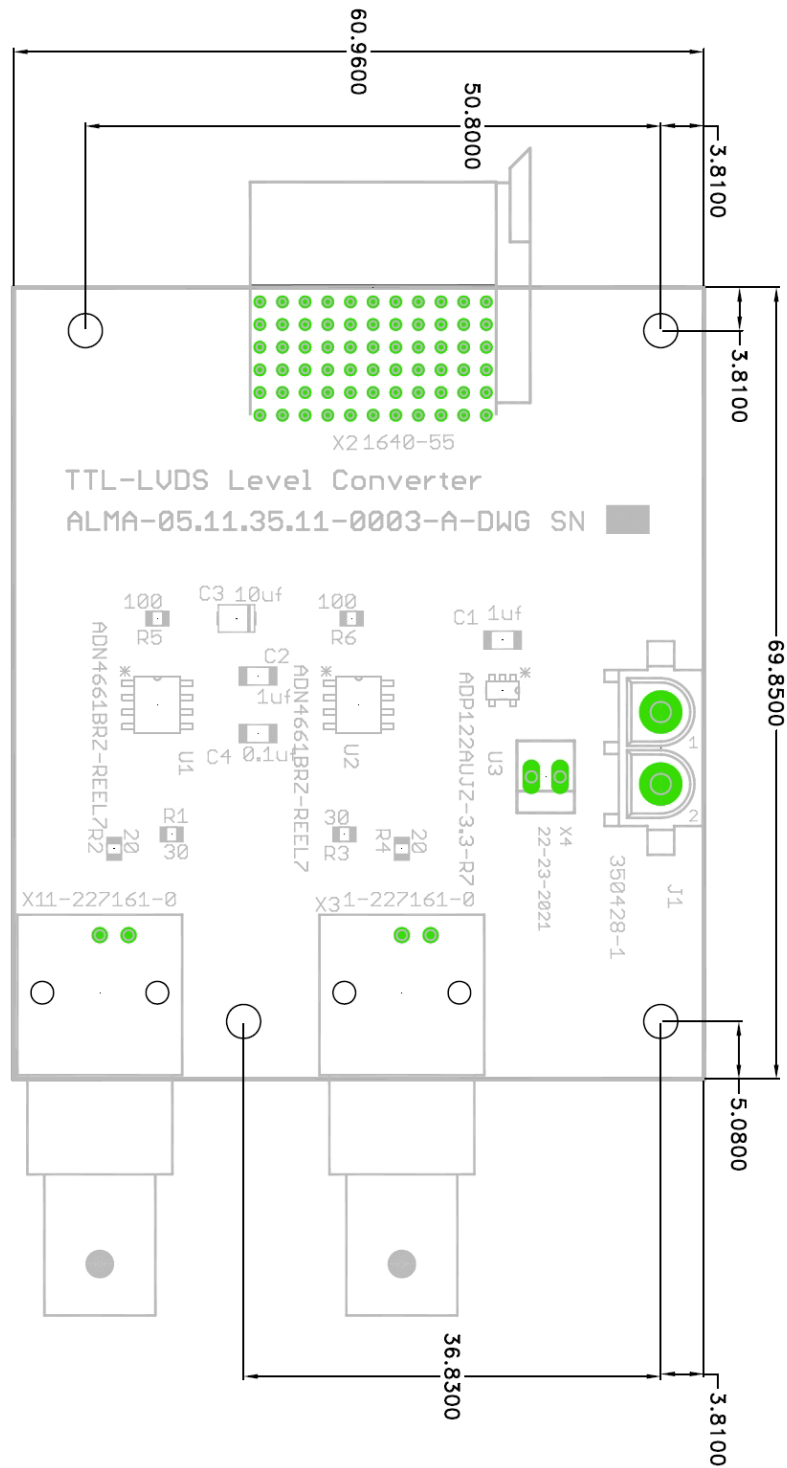
SMD PADs: ~35

Pitch: 1.27mm

IPC Compliance: Performance Class 2, per IPC A-600, 6011/6012 acceptance parameters

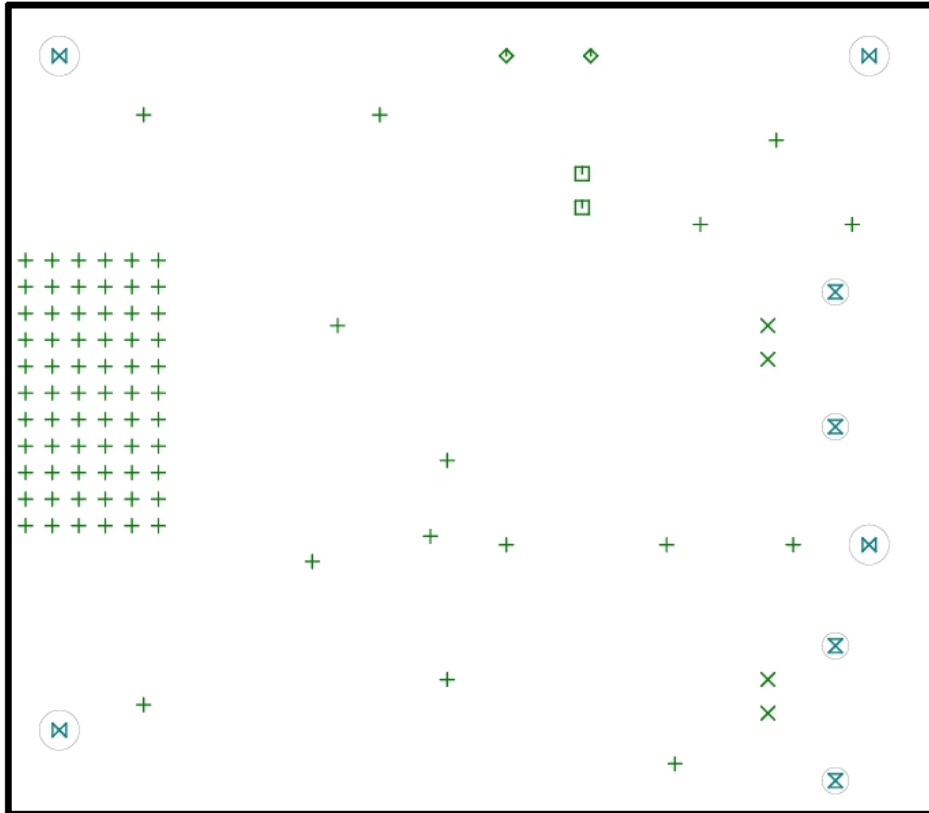


2. TLC PCB Assembly





3. Drills



Sym	Nº	Mils	MM	Qty	Plated
+	1	24	0.60	81	YES
x	2	35	0.90	4	YES
▣	3	39	1.00	2	YES
◇	4	71	1.80	2	YES
⊗	5	79	2.00	4	NOT
⊗	6	118	3.00	4	NOT