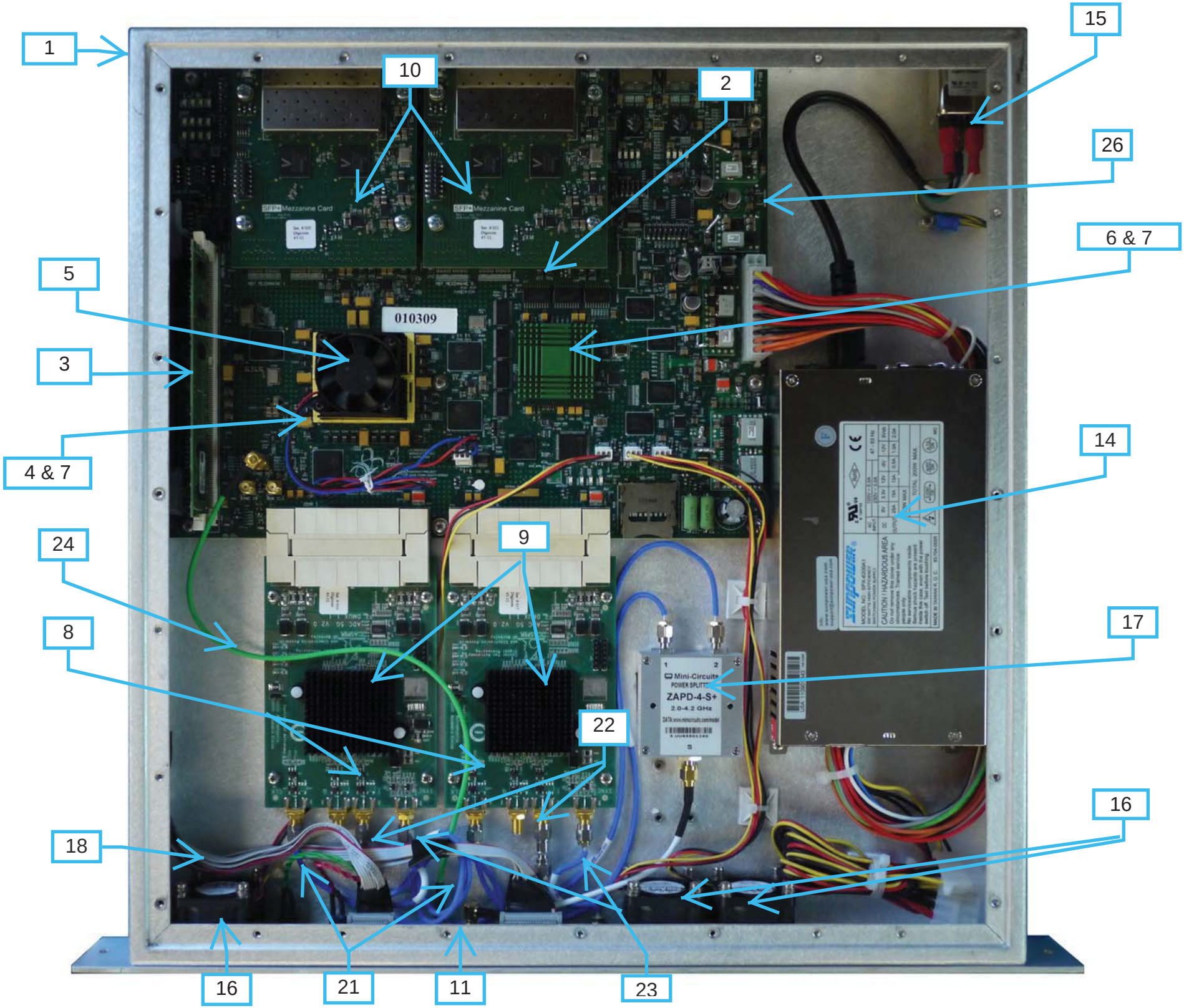
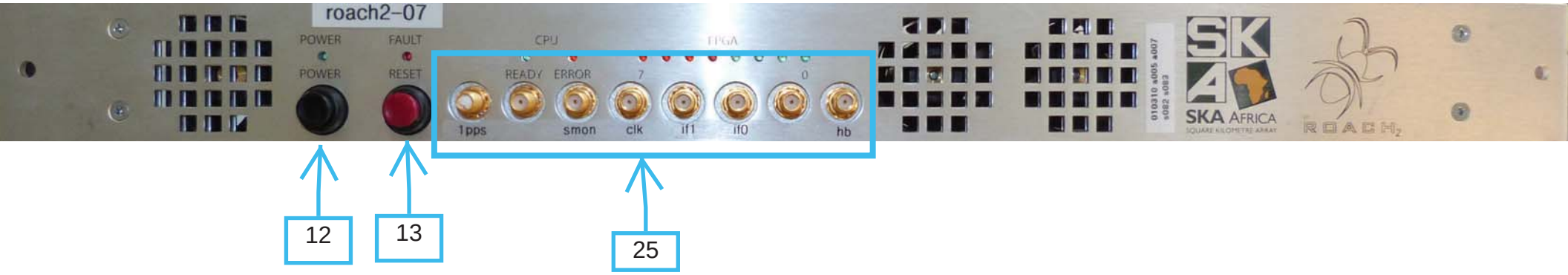
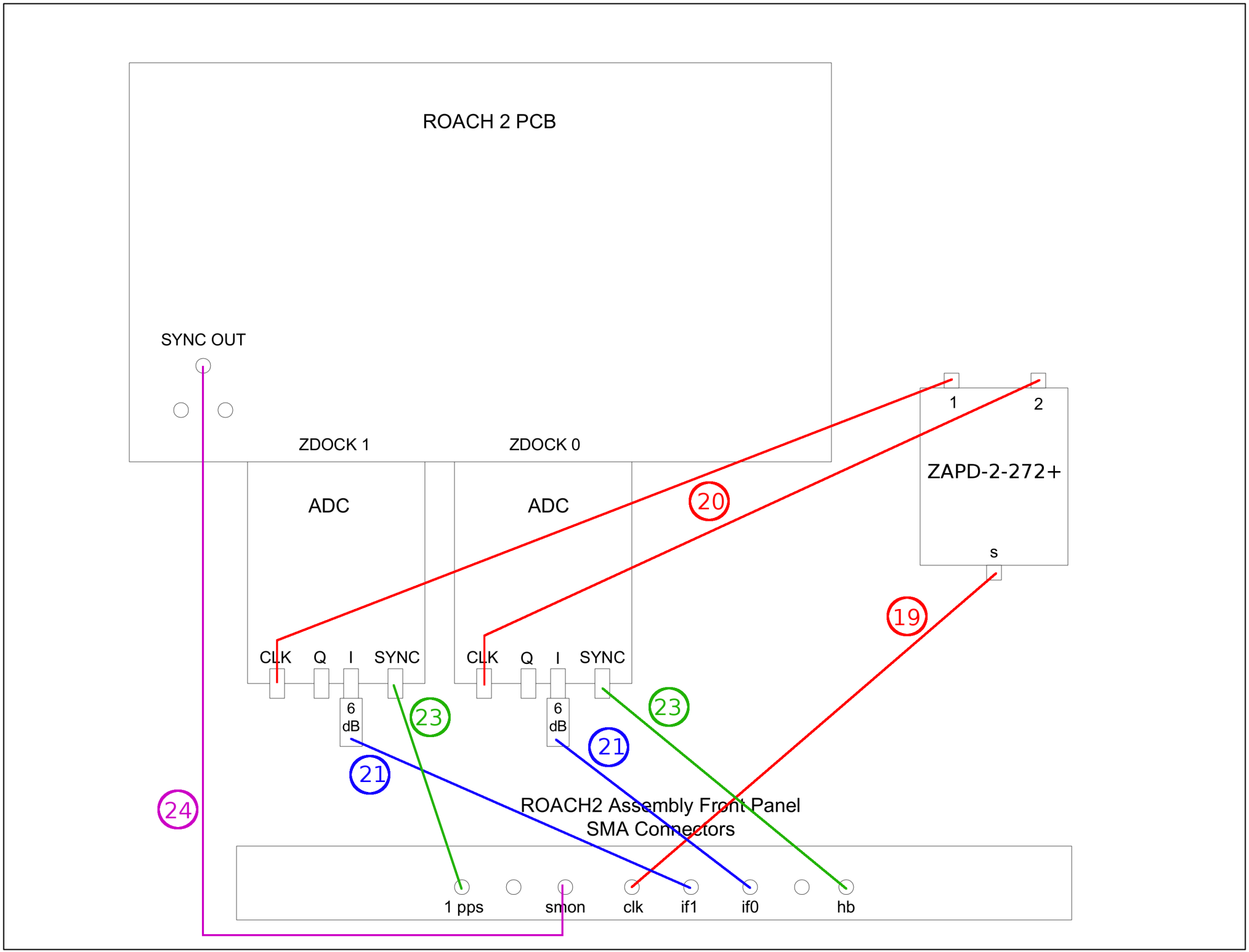

1
10
2
15
26
6 & 7
5
3
4 & 7
14
24
9
8
17
22
18
16
16
21
11
23
010309
SFP+ Mezzanine Card
SFP+ Mezzanine Card
Mini-Circuits
POWER SPLITTER
ZAPD-4-S+
2.0-4.2 GHz
CAUTION ! HAZARDOUS AREA


roach2–07
POWER
POWER
FAULT
RESET
CPU
FPGA
READY
ERROR
7
0
1pps
smon
clk
if1
if0
hb
SKA AFRICA
12
13
25

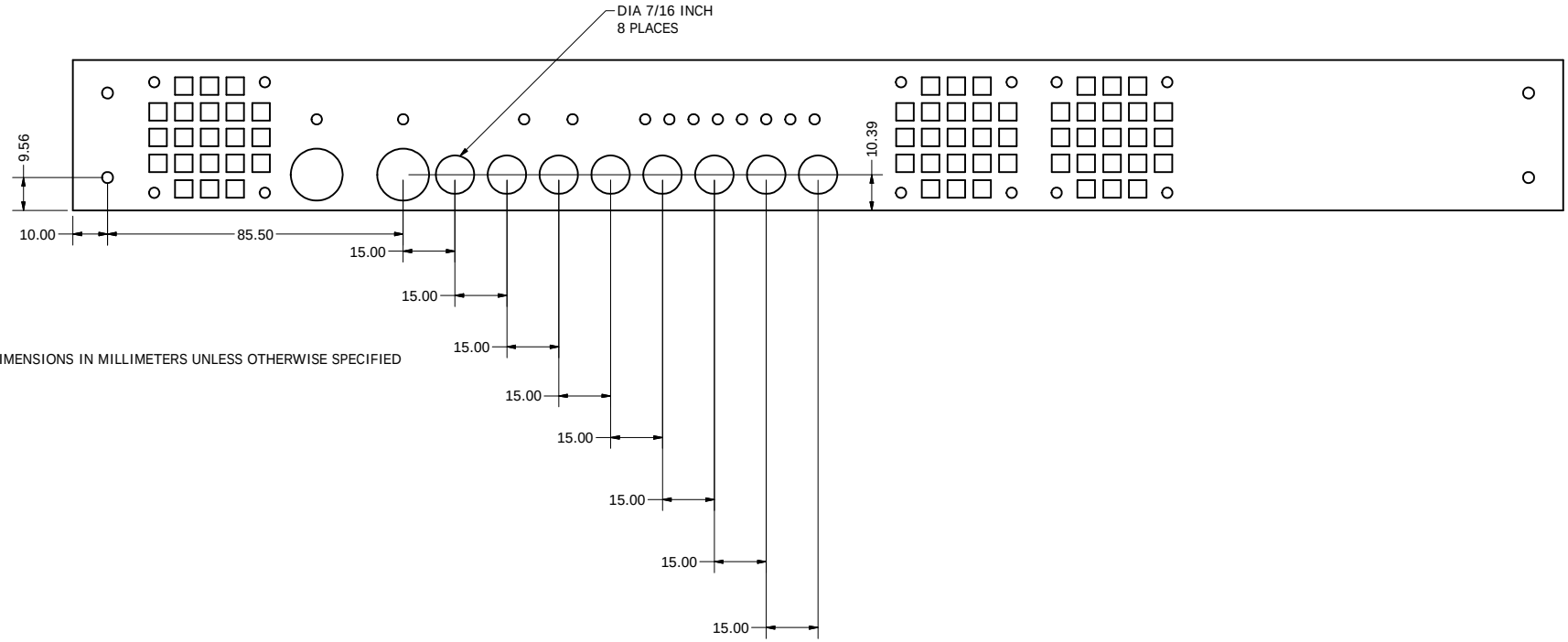

ROACH 2 PCB
SYNC OUT
ZDOCK 1
ZDOCK 0
ADC
ADC
CLK
Q
I
SYNC
CLK
Q
I
SYNC
6 dB
6 dB
1
2
ZAPD-2-272+
s
20
19
23
23
21
21
24
ROACH2 Assembly Front Panel
SMA Connectors
1 pps
smon
clk
if1
if0
hb

| Cable | FROM - Front Panel SMA Input | TO - Assembly Connection | Cable length - Connectors |
|---|---|---|---|
| 1 | 1pps | ADC ZDOCK 1 "SYNC" | 3"- RA/STR |
| 2 | smon | ROACH2 "SYNC OUT" | 12"- RA/STR |
| 3 | clk | ZAPD-2-272+ Port S | 6"- RA/STR |
| 4 | if1 | *ADC ZDOC 1 "I" | 6"- RA/STR |
| 5 | if0 | *ADC ZDOC 0 "I" | 6"- RA/STR |
| 6 | hb | ADC ZDOC 0 "SYNC" | 3"- RA/STR |
| | | | |
| Cable | FROM - ZAPD-2-272+ | TO - Assembly Connection | Cable length - Connectors |
| 7 | Port 1 | ADC ZDOCK 1 "CLK" | 14" - STR/STR |
| 8 | Port 2 | ADC ZDOCK 0 "CLK" | 14" - STR/STR |
| | | | |

*connected to 6dB fixed attenuator on "I" input to ADC

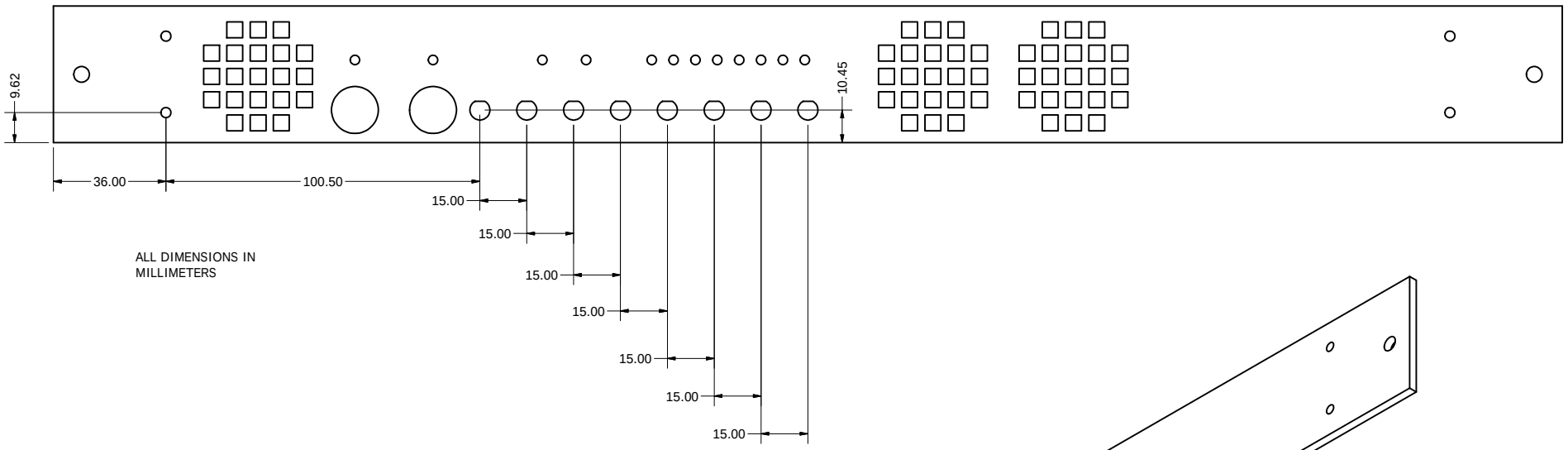
**ROACH2 STANDARD SAO Assembly BOM JW, JT, AY 8 Oct 2015 rev 2**

| *Item number* | *Quantity* | *Description* | *Vendor* | *Notes* |
|---|---|---|---|---|
| 1 | 1 | 1 U enclosure | All Fab | Modded by SAO |
| 2 | 1 | ROACH2 Assy | Digicom | |
| 3 | 1 | DDR3 Dimm | | |
| 4 | 1 | FPGA Heat Sink | | |
| 5 | 1 | FPGA Fan | | Info to be provided |
| 6 | 1 | PowerPC Heat Sink | | |
| 7 | as req | Thermal grease | Arctic Silver | Arctic Silver |
| 8 | 2 | ADC PCB | Digicom | |
| 9 | 2 | Heat sinks, ADC | | |
| 10 | 2 | Quad SFP+ Mez PCB | Digicom | |
| 11 | 1 | Front panel PCB | Digicom | |
| 12 | 1 | power PB switch | | |
| 13 | 1 | reset PB switch | | |
| 14 | 1 | Power Supply | XEAL TC1UFX2 | |
| 15 | 1 | Power Entry Module | | |
| 16 | 3 | Fans | | |
| 17 | 1 | Power Splitter | MiniCircuits | ZAPD-2-272+ (not the same as shown in photo) |
| 18 | 1 | Ribbon cable assy | Digicom | |
| 19 | 1 | cable, panel_ck-split | | see cabling chart |
| 20 | 2 | cable splitter-ADC | | see cabling chart |
| 21 | 2 | cable, IF-ADC | | see cabling chart |
| 22 | 2 | 6dB pads, SMA | | inline with IF in |
| 23 | 2 | cables, PPS and HB | | see cabling chart |
| 24 | 1 | cable, SMA_out-panel | | see cabling chart |
| 25 | 8 | SMA feedthroughs | | |
| 26 | 1 | Shunt JP2 "AUTO START" | | |

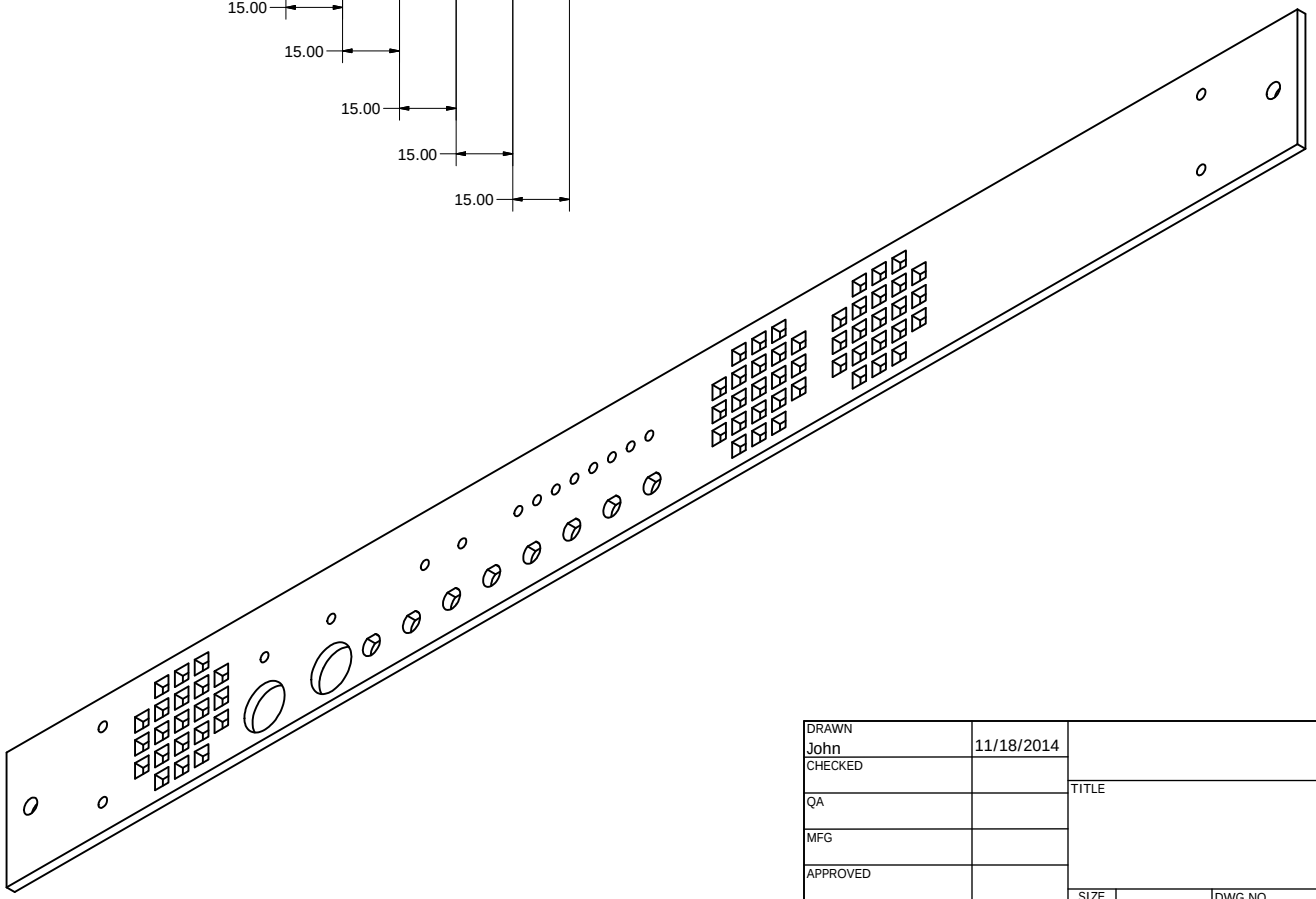



ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SPECIFIED

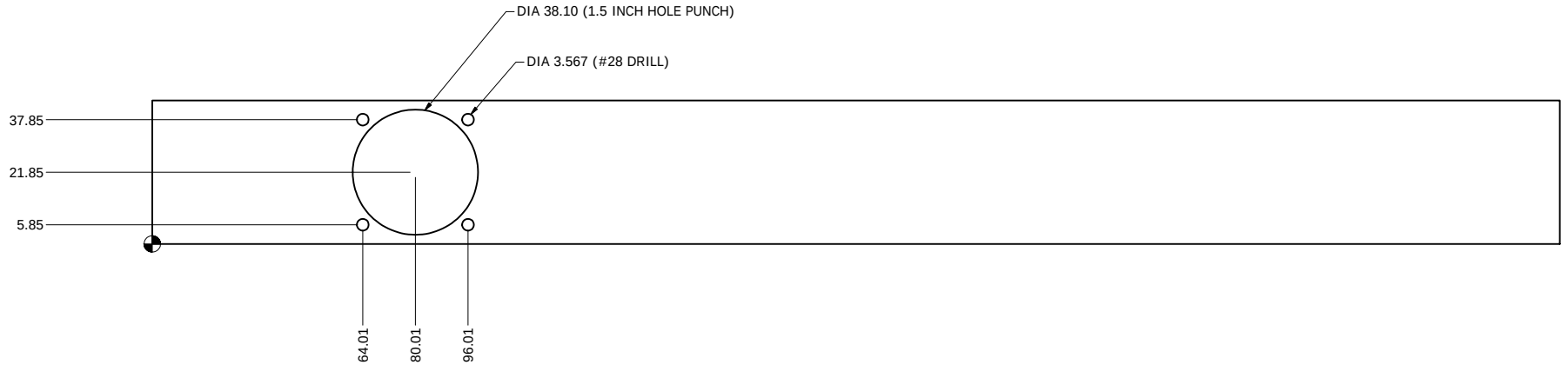
| | | |
|---|---|---|
| DRAWN John | 11/20/2014 | |
| CHECKED | | TITLE |
| QA | | |
| MFG | | |
| APPROVED | | |
| | | SIZE C / DWG NO SMA_Roach2_Front_Chassis / REV |
| | | SCALE / SHEET 1 OF 1 |



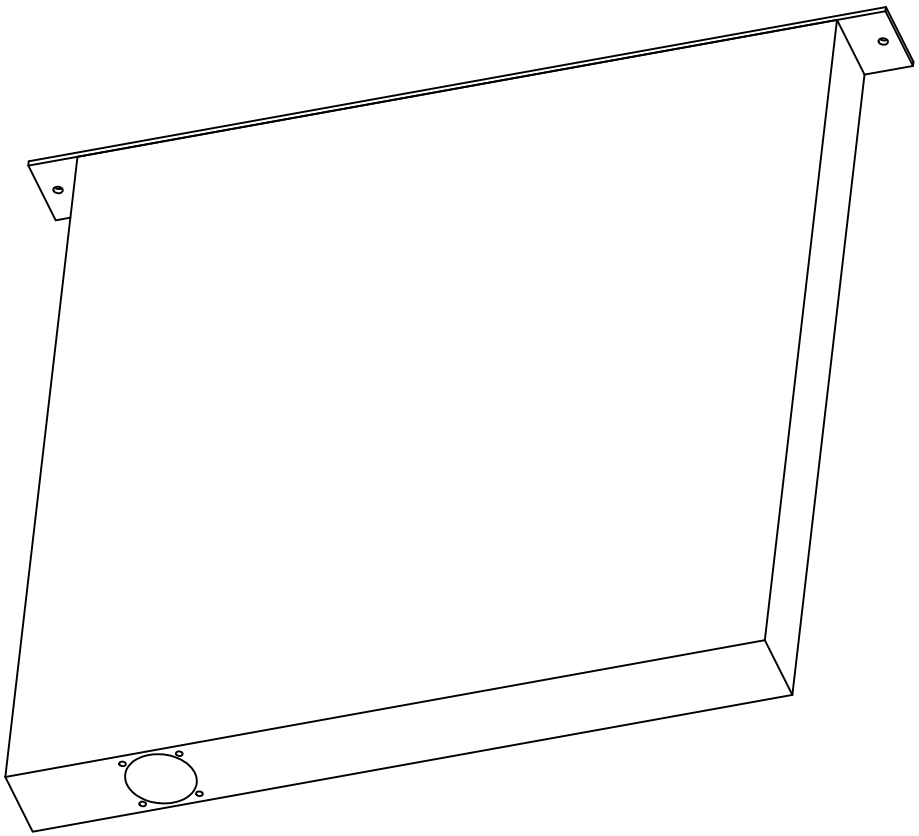

ALL DIMENSIONS IN MILLIMETERS



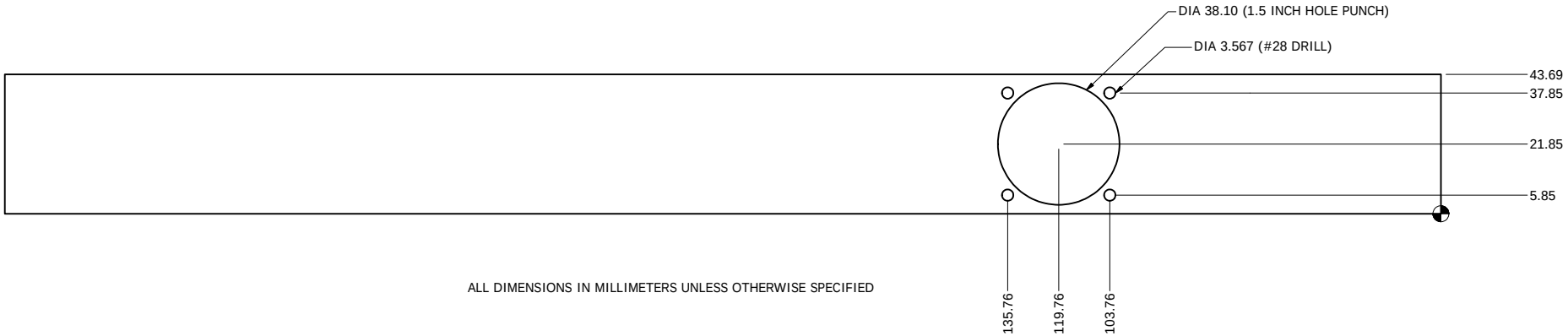
| | | | | |
|---|---|---|---|---|
| DRAWN John | 11/18/2014 | | | |
| CHECKED | | TITLE | | |
| QA | | | | |
| MFG | | | | |
| APPROVED | | SIZE C | DWG NO SMA_Roach2_Front_Panel | REV |
| | | SCALE | SHEET 1 OF 1 | |



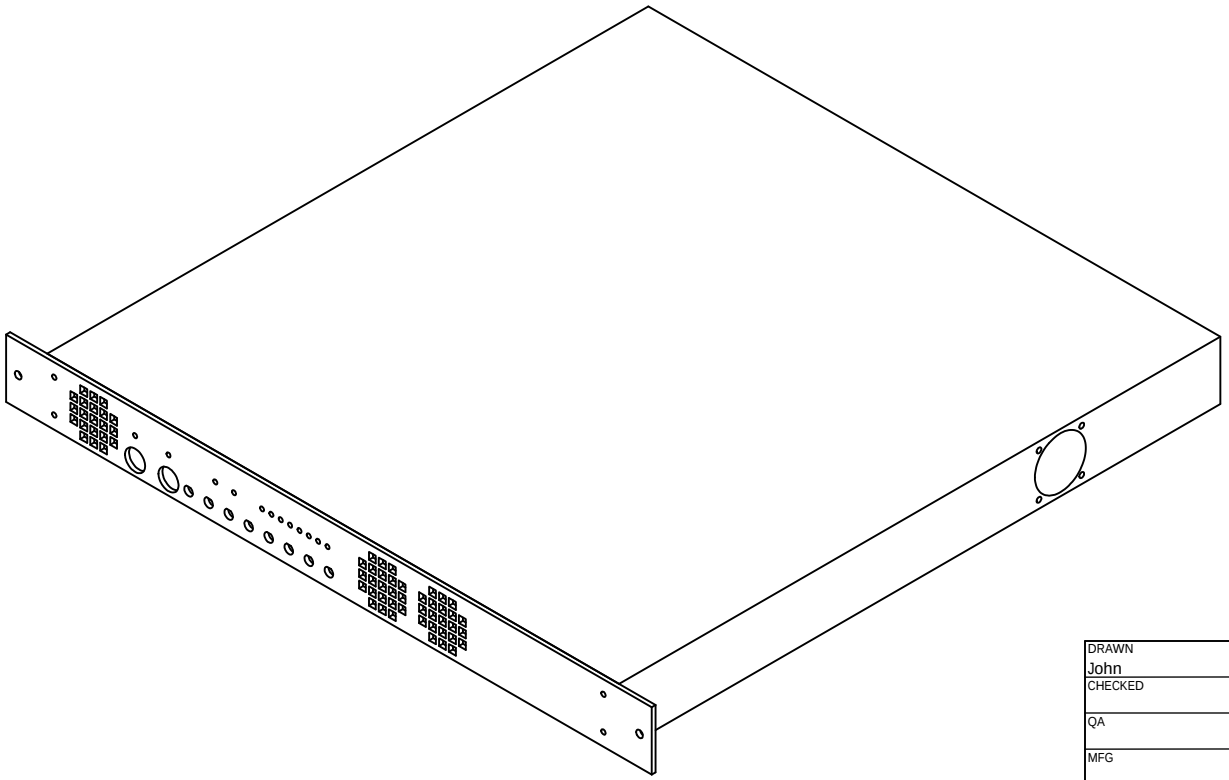

ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SPECIFIED



| | | |
|---|---|---|
| DRAWN John | 11/20/2014 | |
| CHECKED | | TITLE |
| QA | | |
| MFG | | |
| APPROVED | | |
| | | SIZE C / DWG NO SMA_Roach2_Rear_Chassis_ / REV |
| | | SCALE / SHEET 1 OF 1 |




ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SPECIFIED



| | | | | |
|---|---|---|---|---|
| DRAWN John | 11/20/2014 | | | |
| CHECKED | | TITLE | | |
| QA | | | | |
| MFG | | | | |
| APPROVED | | SIZE C | DWG NO SMA_Roach2_Side_Chassis | REV |
| | | SCALE | SHEET 1 OF 1 | |