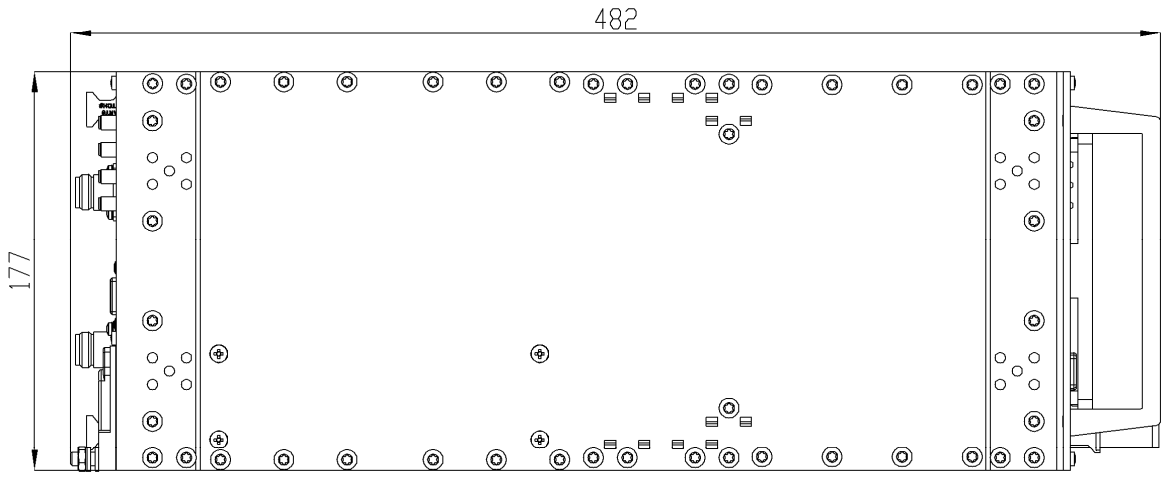

Figure 15 – DSPbR Dimensions Left Hand Side

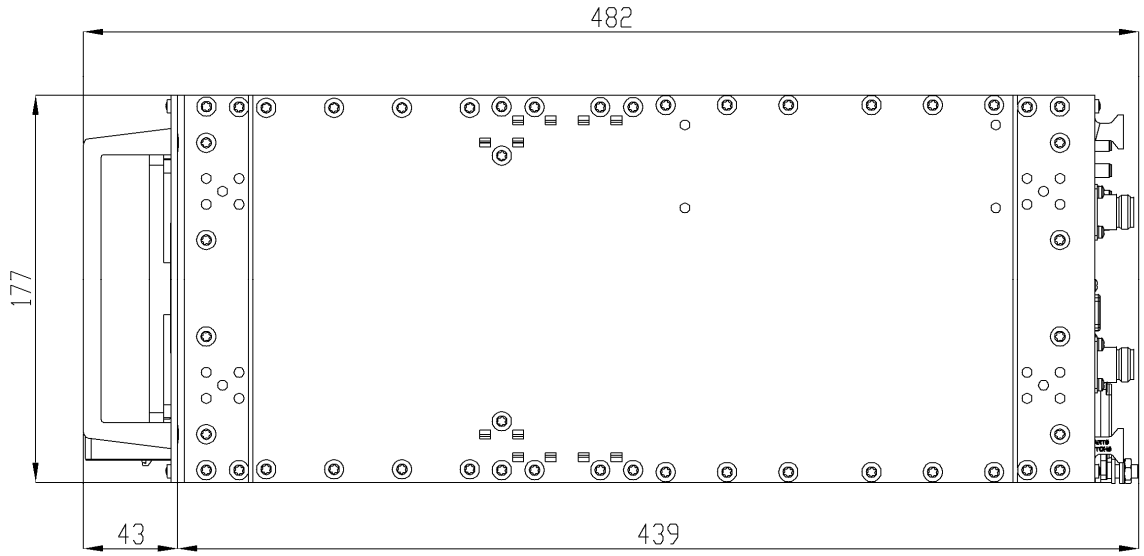

Figure 16 – DSPbR Dimensions Right Hand Side

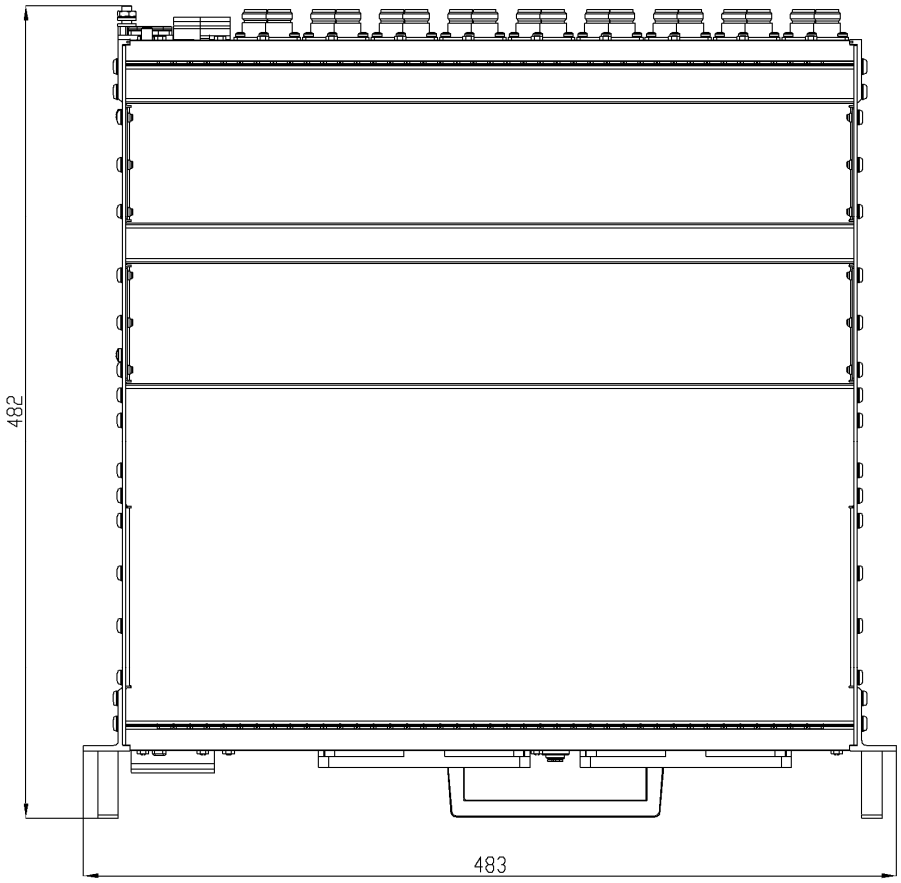

Figure 17 – DSPbR Dimensions Top View

The DSPbR is designed to be mounted within a 19-inch rack frame within an indoor environment. Although the mechanical strength of the DSPbR sub rack frame is robust enough to contend with a maximum "all up" module load, any additional weight bearing adjustable mechanical supports such as angle brackets extending between the 19-inch front mounting frame and a rear frame would add strength to the support. There are many types of 19" rack cabinets and we suggest you consult with your 19" rack frame or cabinet supplier for appropriate weight support options.

The DSPbR uses forced air cooling and requires good airflow from the front of the DSPbR where the two fans draw in cooler air and expel heated air at the rear. 19-inch rack cabinet ventilation must facilitate the unrestricted movement of cooler air from the front of the cabinet and the unrestricted movement of expelled hot air at the rear. The fan speeds are temperature controlled, alarm notification messages and hardwired state change critical alarm relay contacts will activate if the temperature exceeds safe operational limits.

At maximum fan speed, which equates to the internal temperature edging up to +70 deg C, the fans will be running at full speed. This equates to an airflow volume for both fans of 880 cubic meters of air in an hour (equating to around 0.25 cubic meters in a second). Ensure unrestricted airflow to reducing differentiating high and low air pressure zones.

Both fans have front panel accessible dust filters, which will require periodic cleaning. Please note that caution must be taken removing the fan covers and dust filters whilst the unit is operational as the fans may start up or be running. Although there is a protective guard to prevent fingers from accessing the fan blades, the suction and fan noise may startle the unknowing.

The dust filters can be removed for cleaning by carefully levering off the plastic fan covers. No special tools are required and this can be done by hand. A mild soap wash and dry should be sufficient to clean the dust filters. Should they be perished in any way, please replace them. The fan dust filter part number is located under the part number section of this user's manual.

Different configurations will influence the weight of the DSPbR, It is however important to know that the DSPbR could weigh up to 38kgs, which is considered heavy and a two man lift. There are three handles located on the front panel of the unit of which only the two side handles are available for lifting the unit. The third handle is to be used only for the removal of the PSU and is marked with a label underneath the handle indicating that this handle is not to be used for lifting.

4.3 Earthing and Electrical

Before proceeding with this chapter, if you have not done so, please read and familiarise yourself with the Health and Safety warnings in chapter 1.2 of this user's manual.

The DSPbR can be powered from either a DC or AC mains power source. Please check the power connectivity at the bottom right hand side of the rear of the sub rack frame (viewing the DSPbR from the rear) to determine which option has been supplied.

Prior to connecting the power source, ensure the unit is well earthed.

Connect the 19" rack earthing facility on the sub rack frame using the provisioned 6mm threaded stud on the sub rack frame as illustrated in figure 18.

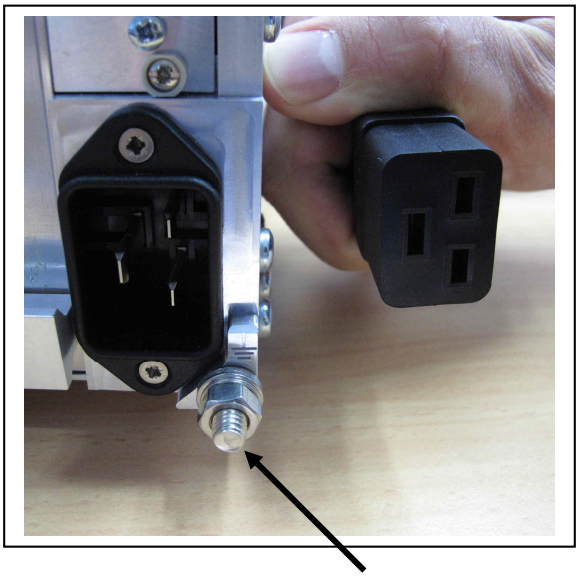

Figure 18 – Sub Rack Frame M6 Earthing Stud

Connect an earth bonding cable with a minimum cross section of 16mm² terminated with the appropriate crimped lug for the 6mm stud and 16mm² copper cable. The 16mm² cable must be identifiable by the green and yellow coloured PE sheath. Loosen the Hex nut, connect the cable-crimped lug between the two washers and fasten.

Consideration has to be given to adequate grounding of the RF coaxial cables prior to termination into the DSPbR, and surge protection for the Ethernet and AC Mains.

Warning: There is no ON/OFF power switch located on the DSPbR.

Where connecting to an AC supply, it is recommended that the DSPbR is turned on via either the wall mount socket switch, a dual pole isolator switch or dedicated circuit breaker after the mains cord has been fitted.

Where connecting to DC supply, it is recommended that an appropriately rated dual pole DC circuit breaker be installed. This will assume the role of an ON/OFF switch.

Prior to connecting to either a mains or DC supply, ensure that the RF outputs at the rear of the DSPbR sub rack frame, whether via an internal or external combiner, are terminated into 50 ohm loads. Once mains power has been applied to the DSPbR, the outputs of the RFBE's will automatically activate after approx 45 seconds.

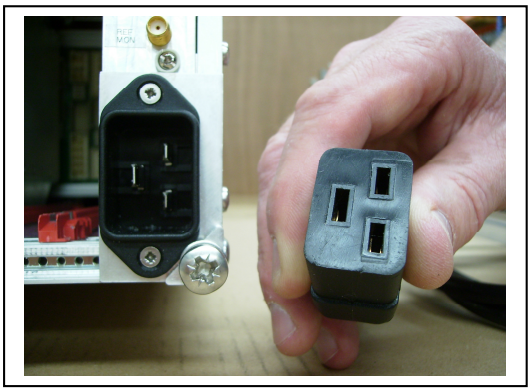

Figure 19 – AC Mains IEC320-C19 Plug and Socket

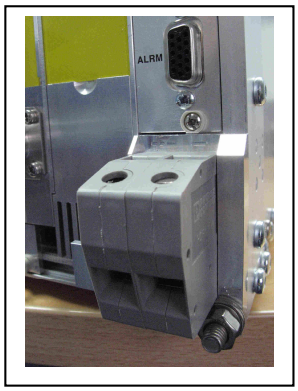

Figure 20 – DC Cable Termination Connector Phoenix HDFK 16A

The AC mains IEC320-C19 socket rating is 15 Amps, which is used for the full AC input range from 110V to 240V.

Two industry standard AC mains power cord options are available with the DSPbR. For the Australian market a 2.5 metre cord fitted with a 15 Amp mains plug is provided. For the US market a 2.5 metre cord with a 15 Amp rated 5-15P mains plug is provided.

Please note that the current rating on the mains wall socket must correspond with the rating of the supplied mains plug.

DC connection to the DSPbR is via a two terminal 85 Amp rated polarised modular Phoenix connector block (Phoenix model number HDFK 16A). The polarised DC power cables must be rated to carry the required current with minimal voltage drop. We recommend the use of 10AWG gauge cable for the 48VDC supply option.

DC power cables are not provided with the DSPbR.

Warning: Do not attempt to connect or disconnect the power cord as a means to turn on and off the DSPbR. Turn off the mains power source before connecting or disconnecting the power cord to the DSPbR. Turn on the mains once the cord is fitted.

We strongly recommend that you consult with a suitably qualified electrician to assist with the installation.