

miniBackplane Manufacturing PCB Specification

1 PCB General data.

- **Dimension:** 440,06 mm x 174,40mm
- **Thickness:** 1,49 mm \pm 10%
- **Number of layers:** 4
 - 2 routing layers (“Top Layer” and “Bottom Layer”)
 - 2 plane layers (“GND” and “PWR”)
- **Components total:** 480 (top: 156, bottom: 324)
- **SMD components:** Yes, both sides
- **Silkscreen:** Yes, both sides
- **Nets:** 434
- **Vias:** 1180
 - Hole Size: 0,3 mm
 - Via Diameter: 0,7 mm
- **Pads:** 2249
- **Plating Finish:** Nickel-Gold
- **Controlled Impedance:** Yes, on “Top Layer” and “Bottom Layer”

2 Stack-Up Diagram

Top Layer		17 + 25 μ m
PrePreg		178 μ m
GND		35 μ m
Core		980 μ m
PWR		35 μ m
PrePreg		178 μ m
Bottom Layer		17 + 25 μ m
Thickness Total:		1,49 mm \pm 10%

3 Layer Stack-Up Detail

Layer Name	Gerber Document	Copper Thickness	Dielectric Height	Dielectric Material	Dielectric Constant	50 Ω Impedance Width	100 Ω Differential Impedance Width/Gap
Top Solder Mask	(.GTS)		0,010mm	Solder Resist	3,5		
Top Layer	(.GTL)	0,042mm				0,3mm	0,2mm/0,2mm
PrePreg			0,178mm	FR-4	4,8		
GND	(.GP1)	0,035mm					
Core			0,98mm	FR-4	4,8		
PWR	(.GP2)	0,035mm					
PrePreg			0,178mm	FR-4	4,8		
Bottom Layer	(.GBL)	0,042mm				0,3mm	0,2mm/0,2mm
Bottom Solder Mask	(.GBS)		0,010mm	Solder Resist	3,5		