
























SCB (Switching Core Board) Manufacturing PCB Specification

1 PCB General data.

- **Dimension:** 180,61 mm x 73,51mm
- **Thickness:** 1,60 mm \pm 10%
- **Number of layers:** 12
 - 6 routing layers (“Top Layer”, “MidLayer1”, “MidLayer2”, “MidLayer3”, “MidLayer4” and “Bottom Layer”)
 - 6 plane layers (“GND1”, “GND2”, “GND3”, “PWR1”, “PWR2” and “PWR3”)
- **Components total:** 818 (top: 445, bottom: 373)
- **SMD components:** Yes, both sides
- **Silkscreen:** Yes, both sides
- **Nets:** 1006
- **Vias:** 3110, two sizes:
 - Hole Sizes: 0,15mm and 0,4 mm
 - Via Diameters: 0,4mm and 0,6 mm
- **Pads:** 4866
- **Plating Finish:** Nickel-Gold
- **Controlled Impedance:** Yes, in all the routing layers

2 Stack-Up Diagram

Top Layer		17 + 25 μ m
PrePreg		65 μ m
GND1		17 μ m
Core		150 μ m
MidLayer1		17 μ m
PrePreg		130 μ m
PWR1		17 μ m
Core		150 μ m
MidLayer2		17 μ m
PrePreg		130 μ m
GND2		17 μ m
Core		100 μ m
PWR2		17 μ m
PrePreg		130 μ m
MidLayer3		17 μ m
Core		150 μ m
GND3		17 μ m
PrePreg		130 μ m
MidLayer4		17 μ m
Core		150 μ m
PWR3		17 μ m
PrePeg		65 μ m
Bottom Layer		17 + 25 μ m
Thickness Total:		1,604 mm \pm 10%

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3 Layer Stack-Up Detail

Layer Name	Gerber Document	Copper Thickness	Dielectric Height	Dielectric Material	Dielectric Constant	50Ω Impedance Width	100Ω Differential Impedance Width/Gap
Top Solder Mask	(.GTS)		10 μm	Solder Resist	3,5		
Top Layer	(.GTL)	42 μm				100 μm	100μm/265μm
PrePreg			65 μm	FR-4	4,6		
GND1	(.GP1)	17 μm					
Core			150 μm	FR-4	4,5		
MidLayer1	(.G1)	17 μm				100 μm	100 μm/261 μm
PrePreg			130 μm	FR-4	4,7		
PWR1	(.GP2)	17 μm					
Core			150 μm	FR-4	4,5		
MidLayer2	(.G2)	17 μm				100 μm	100 μm/261 μm
PrePreg			130 μm	FR-4	4,7		
GND2	(.GP3)	17 μm					
Core			100 μm	FR-4	4,5		
PWR2	(.GP4)	17 μm					
PrePreg			130 μm	FR-4	4,7		
MidLayer3	(.G3)	17 μm				100 μm	100 μm/261 μm
Core			150 μm	FR-4	4,5		
GND3	(.GP5)	17 μm					
PrePreg			130 μm	FR-4	4,6		
MidLayer4	(.G4)	17 μm				100 μm	100 μm/261 μm
Core			150 μm	FR-4	4,8		
PWR3	(.GP6)	17 μm					
PrePreg			65 μm	FR-4	4,8		
Bottom Layer	(.GBL)	42 μm				100 μm	100μm/265μm
Bottom Solder Mask	(.GBS)		10 μm	Solder Resist	3,5		