

Topology	Schematic	Power (Watts)	Typical Efficiency	Relative Cost	Magnetics Required	DC Transfer Function (V_{out}/V_{in})	Maximum Practical Duty Cycle	Universal Input (90-264) V _{AC}	Multiple Outputs	$V_{out} < V_{in}$ Range	$V_{out} > V_{in}$ Range
Non-Isolated Topologies	Buck 	500	85	1	Single Inductor	D	0.9	No	No	Yes	No
	Boost 	150	70	1	Single Inductor	$\frac{1}{1-D}$	0.9	No	No	No	Yes
	Buck-Boost 	150	70	1	Single Inductor	$\frac{-D}{1-D}$	0.9	No	No	Yes	Yes
	SEPIC 	150	75	1.2	Coupled or Two Inductors	$\frac{D}{1-D}$	0.9	No	No	Yes	Yes
	Ćuk 	150	75	1.2	Coupled or Two Inductors	$\frac{-D}{1-D}$	0.9	No	No	Yes	Yes
Isolated Topologies	DCM Flyback 	150	75	1.5	Transformer	$Dx \sqrt{\frac{TxV_{out}}{2xI_{out}xLP}}$	0.9	Yes	Yes	Yes	Yes
	Forward 	150	75	1.8	Transformer and Inductor	$\frac{2N_s}{N_p} x D$	0.45	Yes	Yes	Yes	Yes
	Push-Pull 	500	80	1.8	Transformer and Inductor	$\frac{N_s}{N_p} x D$	0.45	No	Yes	Yes	Yes
	Half-Bridge 	500	85	2	Transformer and Inductor	$\frac{N_s}{N_p} x D$	0.45	Yes	Yes	Yes	Yes
	Resonant LLC 	500	90	2	Transformer	Frequency Dependent Based on Resonant Tank Transfer Function	0.45	Yes	Yes	Yes	Yes