

Cost of Net Revenue and Gross Profit

	Year Ended December 31,		% Change
	2019	2018	2019
	(dollars in thousands)		
Cost of net revenue	\$ 149,495	\$ 176,223	(15)%
% of net revenue	47%	46%	
Gross profit	167,685	208,774	(20)%
% of net revenue	53%	54%	

Cost of net revenue decreased \$26.7 million to \$149.5 million for the year ended December 31, 2019, as compared to \$176.2 million for the year ended December 31, 2018. The decrease was primarily driven by lower sales. The decrease in gross profit percentage for the year ended December 31, 2019, as compared to the year ended December 31, 2018, was due to lower revenue and product mix.

We currently expect that gross profit percentage will fluctuate in the future, from period-to-period, based on changes in product mix, average selling prices, and average manufacturing costs.

Research and Development

	Year Ended December 31,		% Change
	2019	2018	2019
	(dollars in thousands)		
Research and development	\$ 98,344	\$ 120,046	(18)%
% of net revenue	31%	31%	

Research and development expense decreased \$21.7 million to \$98.3 million for the year ended December 31, 2019 from \$120.0 million in the year ended December 31, 2018. The decrease was primarily due to decreases in payroll-related expenses of \$11.8 million due to lower headcount, prototype expenses of \$3.9 million due to timing of projects, depreciation expense of \$2.6 million as a result of certain machinery and equipment reaching the end of their useful lives, occupancy expenses of \$2.1 million from terminated leases, outside services of \$0.6 million, and travel-related expenses of \$0.4 million.

We expect our research and development expenses to increase in the future as we continue to focus on expanding our product portfolio and enhancing existing products.

Selling, General and Administrative

	Year Ended December 31,		% Change
	2019	2018	2019
	(dollars in thousands)		
Selling, general and administrative	\$ 88,762	\$ 101,789	(13)%
% of net revenue	28%	26%	

Selling, general and administrative expense decreased \$13.0 million to \$88.8 million for the year ended December 31, 2019, as compared to \$101.8 million for the year ended December 31, 2018. The decrease was primarily due to a decrease in intangible asset amortization of \$8.9 million as certain assets reached the end of their useful lives, as well as decreases in payroll-related expense of \$1.7 million due to lower headcount, professional fees of \$1.3 million, outside services of \$0.5 million, and travel-related expenses of \$0.3 million.

We expect selling, general and administrative expenses to remain relatively flat in the near-term; however, our expenses may increase in the future as we expand our sales and marketing organization to enable market expansion.