UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended June 30, 2021

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ________ to ________

Commission File Number: 001-38263

ALTAIR ENGINEERING INC.
(Exact name of registrant as specified in its charter)

Delaware	**38-2591828**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
1820 East Big Beaver Road, Troy, Michigan	**48083**
(Address of principal executive offices)	**(Zip Code)**

(248) 614-2400
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Class A Common Stock $0.0001 par value per share	**ALTR**	**The NASDAQ Stock Market**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to section 13(a) of the Exchange Act ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.
On July 19, 2021, there were 46,570,452 shares of the registrant's Class A common stock outstanding and 28,956,197 shares of the registrant's Class B common stock outstanding.

ALTAIR ENGINEERING INC. AND SUBSIDIARIES

FORM 10-Q

FOR THE QUARTER ENDED JUNE 30, 2021

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PART I – FINANCIAL INFORMATION

Item 1. Financial Statements

ALTAIR ENGINEERING INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(In thousands)	June 30, 2021 (Unaudited)	December 31, 2020
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 260,098	$ 241,221
Accounts receivable, net	91,570	117,878
Income tax receivable	7,949	6,736
Prepaid expenses and other current assets	23,030	21,100
Total current assets	382,647	386,935
Property and equipment, net	39,610	36,332
Operating lease right of use assets	33,395	33,526
Goodwill	262,963	264,481
Other intangible assets, net	66,637	76,114
Deferred tax assets	8,265	7,125
Other long-term assets	26,699	25,389
TOTAL ASSETS	$ 820,216	$ 829,902
LIABILITIES, MEZZANINE EQUITY AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Current portion of long-term debt	$ —	$ 29,962
Accounts payable	6,515	8,594
Accrued compensation and benefits	35,846	34,772
Current portion of operating lease liabilities	10,770	10,331
Other accrued expenses and current liabilities	27,810	31,404
Deferred revenue	81,343	85,691
Convertible senior notes, net	193,926	—
Total current liabilities	356,210	200,754
Convertible senior notes, net	—	188,300
Operating lease liabilities, net of current portion	23,785	24,323
Deferred revenue, non-current	7,236	9,388
Other long-term liabilities	32,856	27,767
TOTAL LIABILITIES	420,087	450,532
Commitments and contingencies		
MEZZANINE EQUITY	784	784
STOCKHOLDERS' EQUITY:		
Preferred stock ($0.0001 par value), authorized 45,000 shares, none issued and outstanding	—	—
Common stock ($0.0001 par value)		
Class A common stock, authorized 513,797 shares, issued and outstanding 46,392 and 44,216 shares as of June 30, 2021, and December 31, 2020, respectively	4	4
Class B common stock, authorized 41,203 shares, issued and outstanding 29,091 and 30,111 shares as of June 30, 2021, and December 31, 2020, respectively	3	3
Additional paid-in capital	495,824	474,669
Accumulated deficit	(92,581)	(93,293)
Accumulated other comprehensive loss	(3,905)	(2,797)
TOTAL STOCKHOLDERS' EQUITY	399,345	378,586
TOTAL LIABILITIES, MEZZANINE EQUITY AND STOCKHOLDERS' EQUITY	$ 820,216	$ 829,902

See accompanying notes to consolidated financial statements.

ALTAIR ENGINEERING INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

(in thousands, except per share data)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
Revenue				
License	$ 66,632	$ 51,018	$ 163,027	$ 128,561
Maintenance and other services	32,926	30,815	66,072	61,715
Total software	99,558	81,833	229,099	190,276
Software related services	7,481	5,444	15,579	12,378
Total software and related services	107,039	87,277	244,678	202,654
Client engineering services	10,268	9,640	20,945	23,518
Other	2,605	1,644	4,452	3,852
Total revenue	119,912	98,561	270,075	230,024
Cost of revenue				
License	3,617	2,851	9,012	8,374
Maintenance and other services	12,043	8,502	23,598	18,957
Total software	15,660	11,353	32,610	27,331
Software related services	5,731	4,656	11,853	10,145
Total software and related services	21,391	16,009	44,463	37,476
Client engineering services	8,293	7,789	17,181	19,107
Other	2,262	1,283	3,724	2,995
Total cost of revenue	31,946	25,081	65,368	59,578
Gross profit	87,966	73,480	204,707	170,446
Operating expenses:				
Research and development	38,757	28,970	77,033	60,437
Sales and marketing	31,909	25,806	63,979	53,905
General and administrative	21,861	20,248	45,787	42,594
Amortization of intangible assets	4,615	3,692	9,492	7,532
Other operating income, net	(585)	(944)	(1,202)	(1,835)
Total operating expenses	96,557	77,772	195,089	162,633
Operating (loss) income	(8,591)	(4,292)	9,618	7,813
Interest expense	2,988	2,843	5,961	5,656
Other expense (income), net	708	320	1,543	(1,070)
(Loss) income before income taxes	(12,287)	(7,455)	2,114	3,227
Income tax expense	1,361	2,768	1,402	7,420
Net (loss) income	$ (13,648)	$ (10,223)	$ 712	$ (4,193)
(Loss) income per share:				
Net (loss) income per share attributable to common stockholders, basic	$ (0.18)	$ (0.14)	$ 0.01	$ (0.06)
Net (loss) imcome per share attributable to common stockholders, diluted	$ (0.18)	$ (0.14)	$ 0.01	$ (0.06)
Weighted average shares outstanding:				
Weighted average number of shares used in computing net (loss) income per share, basic	75,263	72,999	74,959	72,811
Weighted average number of shares used in computing net (loss) income per share, diluted	75,263	72,999	79,851	72,811

See accompanying notes to consolidated financial statements.

ALTAIR ENGINEERING INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited)

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
Net (loss) income	$ (13,648)	$ (10,223)	$ 712	$ (4,193)
Other comprehensive income (loss), net of tax:				
Foreign currency translation (net of tax effect of $0 for all periods)	2,640	2,560	(1,335)	(5,018)
Retirement related benefit plans (net of tax effect of $0, $(13), $0 and $0, respectively)	84	31	227	168
Total other comprehensive income (loss)	2,724	2,591	(1,108)	(4,850)
Comprehensive loss	$ (10,924)	$ (7,632)	$ (396)	$ (9,043)

See accompanying notes to consolidated financial statements.

ALTAIR ENGINEERING INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(Unaudited)

	Common stock						Accumulated other	Total
	Class A		Class B		Additional paid-in	Accumulated	comprehensive	stockholders'
(in thousands)	Shares	Amount	Shares	Amount	capital	deficit	loss	equity
Balance as of January 1, 2021	44,216	$ 4	30,111	$ 3	$ 474,669	$ (93,293)	$ (2,797)	$ 378,586
Net income	—	—	—	—	—	14,360	—	14,360
Exercise of stock options	490	—	—	—	271	—	—	271
Vesting of restricted stock	278	—	—	—	—	—	—	—
Conversion from Class B to Class A common stock	510	—	(510)	—	—	—	—	—
Stock-based compensation	—	—	—	—	9,644	—	—	9,644
Foreign currency translation, net of tax	—	—	—	—	—	—	(3,975)	(3,975)
Retirement related benefit plans, net of tax	—	—	—	—	—	—	143	143
Balance as of March 31, 2021	45,494	4	29,601	3	484,584	(78,933)	(6,629)	399,029
Net loss	—	—	—	—	—	(13,648)	—	(13,648)
Exercise of stock options	334	—	—	—	614	—	—	614
Vesting of restricted stock	54	—	—	—	—	—	—	—
Conversion from Class B to Class A common stock	510	—	(510)	—	—	—	—	—
Stock-based compensation	—	—	—	—	10,626	—	—	10,626
Foreign currency translation, net of tax	—	—	—	—	—	—	2,640	2,640
Retirement related benefit plans, net of tax	—	—	—	—	—	—	84	84
Balance as of June 30, 2021	46,392	$ 4	29,091	$ 3	$ 495,824	$ (92,581)	$ (3,905)	$ 399,345

See accompanying notes to consolidated financial statements.

ALTAIR ENGINEERING INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(Unaudited)

	Common stock				Additional		Accumulated other	Total
	Class A		Class B		paid-in	Accumulated	comprehensive	stockholders'
(in thousands)	Shares	Amount	Shares	Amount	capital	deficit	loss	equity
Balance as of January 1, 2020	41,271	$ 4	31,131	$ 3	$ 446,633	$ (82,405)	$ (9,528)	$ 354,707
Cumulative effect of an accounting change	—	—	—	—	—	(388)	—	(388)
Net income	—	—	—	—	—	6,030	—	6,030
Exercise of stock options	285	—	—	—	194	—	—	194
Vesting of restricted stock	143	—	—	—	—	—	—	—
Conversion from Class B to Class A common stock	80	—	(80)	—	—	—	—	—
Stock-based compensation	—	—	—	—	3,043	—	—	3,043
Foreign currency translation, net of tax	—	—	—	—	—	—	(7,578)	(7,578)
Retirement related benefit plans, net of tax	—	—	—	—	—	—	137	137
Balance as of March 31, 2020	41,779	4	31,051	3	449,870	(76,763)	(16,969)	356,145
Net loss	—	—	—	—	—	(10,223)	—	(10,223)
Exercise of stock options	197	—	—	—	283	—	—	283
Vesting of restricted stock	52	—	—	—	—	—	—	—
Conversion from Class B to Class A common stock	80	—	(80)	—	—	—	—	—
Stock-based compensation	—	—	—	—	4,586	—	—	4,586
Reclassification of mezzanine equity to permanent equity	—	—	—	—	1,568	—	—	1,568
Foreign currency translation, net of tax	—	—	—	—	—	—	2,560	2,560
Retirement related benefit plans, net of tax	—	—	—	—	—	—	31	31
Balance as of June 30, 2020	42,108	$ 4	$ 30,971	$ 3	$ 456,307	$ (86,986)	$ (14,378)	$ 354,950

See accompanying notes to consolidated financial statements.

ALTAIR ENGINEERING INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

(In thousands)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
OPERATING ACTIVITIES:		
Net income (loss)	$ 712	$ (4,193)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization	13,180	11,293
Provision for credit loss	205	589
Amortization of debt discount and issuance costs	5,631	5,342
Stock-based compensation expense	20,296	7,705
Deferred income taxes	(1)	(5,961)
Other, net	34	3
Changes in assets and liabilities:		
Accounts receivable	24,852	23,264
Prepaid expenses and other current assets	(3,367)	1,817
Other long-term assets	(5,067)	(960)
Accounts payable	(967)	(3,841)
Accrued compensation and benefits	1,548	497
Other accrued expenses and current liabilities	2,999	161
Deferred revenue	(5,333)	(2,315)
Net cash provided by operating activities	54,722	33,401
INVESTING ACTIVITIES:		
Capital expenditures	(5,391)	(2,530)
Payments for acquisition of developed technology	(344)	(433)
Payments for acquisition of businesses, net of cash acquired	—	(2,270)
Other investing activities, net	(45)	142
Net cash used in investing activities	(5,780)	(5,091)
FINANCING ACTIVITIES:		
Payments on revolving commitment	(30,000)	—
Proceeds from the exercise of stock options	885	477
Other financing activities	(206)	(210)
Net cash (used in) provided by financing activities	(29,321)	267
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(847)	(1,148)
Net increase in cash, cash equivalents and restricted cash	18,774	27,429
Cash, cash equivalents and restricted cash at beginning of year	241,547	223,497
Cash, cash equivalents and restricted cash at end of period	$ 260,321	$ 250,926
Supplemental disclosure of cash flow:		
Interest paid	$ 339	$ 306
Income taxes paid	$ 3,744	$ 9,491
Supplemental disclosure of non-cash investing and financing activities:		
Finance leases	$ —	$ 100
Property and equipment in accounts payable, other current liabilities and other liabilities	$ 631	$ 343

See accompanying notes to consolidated financial statements.

1. Organization and description of business

Altair Engineering Inc. ("Altair" or the "Company") is incorporated in the state of Delaware. The Company is a global technology company providing software and cloud solutions in the areas of simulation, high-performance computing ("HPC"), data analytics, and artificial intelligence ("AI"). Altair enables organizations across broad industry segments to compete more effectively in a connected world while creating a more sustainable future. The Company is headquartered in Troy, Michigan.

Basis of presentation

The accompanying unaudited consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles ("GAAP") and applicable rules and regulations of the Securities and Exchange Commission ("SEC") regarding interim financial information. Accordingly, the accompanying statements do not include all the information and notes required by GAAP for complete financial statements. The accompanying unaudited consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements (and notes thereto) for the year ended December 31, 2020, included in the most recent Annual Report on Form 10-K filed with the SEC.

Use of estimates

The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and reported amounts of revenue and expenses during the reporting periods. On an ongoing basis, management evaluates its significant estimates including the stand alone selling price, or SSP, for each distinct performance obligation included in customer contracts with multiple performance obligations, valuation of acquired intangible assets in business combinations, the incremental borrowing rate used in the valuation of lease liabilities, the determination of the period of benefit for capitalized costs to obtain a contract, fair value of convertible senior notes, provision for credit loss, tax valuation allowances, liabilities for uncertain tax provisions, impairment of goodwill and intangible assets, retirement obligations, useful lives of intangible assets, revenue for fixed price contracts, and stock-based compensation. Actual results could differ from those estimates.

Significant accounting policies

There have been no material changes to our significant accounting policies as of and for the six months ended June 30, 2021 as compared to the significant accounting policies described in our Annual Report on Form 10-K for the year ended December 31, 2020.

2. Recent accounting guidance

Accounting standards adopted

Income Taxes – In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, which simplifies the accounting for income taxes by removing certain exceptions to the general principles for income taxes. The Company adopted ASU 2019-12 effective as of January 1, 2021, and the adoption of this guidance did not have a material effect on its consolidated financial statements.

Accounting standards not yet adopted

Reference Rate Reform – In March 2020, the FASB issued ASU 2020-04. *Reference Rate Reform (Topic 848) - Facilitation of the Effects of Reference Rate Reform on Financial Reporting.* This ASU provides optional expedients and exceptions for applying U.S. GAAP to contract modifications and hedging relationships, subject to meeting certain criteria, that reference LIBOR or another rate that is expected to be discontinued. The amendments in the guidance are optional and effective for all entities as of March 12, 2020 through December 31, 2022. The Company is currently evaluating the impact of this new guidance on its consolidated financial statements and related disclosures and does not expect this guidance to have a material effect on its consolidated financial statements.

Debt – In August 2020, the FASB issued ASU No. 2020-06, *Debt – Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity's Own Equity (Subtopic 815-40).* This ASU simplifies the accounting for convertible instruments by eliminating certain separation models. Under ASU 2020-06, a convertible debt instrument will generally be reported as a single liability at its amortized cost with no separate accounting for embedded conversion features. The update also requires the if-converted method to be used for convertible instruments and the effect of potential share settlement be included in the diluted earnings per share calculation when an instrument may be settled in cash or shares. The amendments in this update are effective for fiscal years beginning after December 15, 2021, and interim periods within those fiscal years. The guidance allows entities to use a modified or full retrospective transition method. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. The Company will adopt ASU 2020-06 on January 1, 2022, and is currently evaluating the method of adoption and the related effect of the new guidance on its consolidated financial statements and earnings per share attributable to common stockholders.

3. Revenue from contracts with customers

Disaggregation of revenue

The Company disaggregates its software revenue by type of performance obligation and timing of revenue recognition as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Term licenses	$ 57,624	$ 43,260	$ 142,558	$ 112,641
Perpetual licenses	9,008	7,758	20,469	15,920
Maintenance	30,549	28,885	60,243	57,093
Professional software services	2,377	1,930	5,829	4,622
Software related services	7,481	5,444	15,579	12,378
Client engineering services	10,268	9,640	20,945	23,518
Other	2,605	1,644	4,452	3,852
Total revenue	$ 119,912	$ 98,561	$ 270,075	$ 230,024

The Company derived approximately 10% of its total revenue through indirect sales channels for the six months ended June 30, 2021 and 2020.

Costs to obtain a contract

As of June 30, 2021, and December 31, 2020, respectively, capitalized costs to obtain a contract were $4.7 million and $3.7 million recorded in Prepaid and other current assets and $0.5 million and $0.6 million recorded in Other long-term assets. Sales commissions were $1.9 million and $3.5 million, respectively, for the three and six months ended June 30, 2021, and $1.0 million and $1.6 million, respectively for the three and six months ended June 30, 2020. Sales commissions were included in Sales and marketing expense in the Company's consolidated statement of operations.

Contract assets

As of June 30, 2021, contract assets were $6.0 million included in Accounts receivable, and $2.8 million included in Prepaid expenses and other current assets. As of December 31, 2020, contract assets were $6.7 million included in Accounts receivable, $1.4 million included in Prepaid expenses and other current assets, and $1.3 million included in Other long-term assets.

Deferred revenue

Approximately $60.3 million of revenue recognized during the six months ended June 30, 2021, was included in deferred revenue at the beginning of the year.

Revenue allocated to remaining performance obligations represents contracted revenue that has not yet been recognized, which includes deferred revenue and amounts that will be invoiced and recognized as revenue in future periods. Contracted revenue not yet recognized was $128.5 million and $117.9 million as of June 30, 2021 and 2020, respectively. The Company expects to recognize approximately 84% of the contracted revenue over the next 12 months and the remainder thereafter.

4. Supplementary Information

Cash, cash equivalents and restricted cash

The Company considers all highly liquid investments with original or remaining maturities of 90 days or less at the date of purchase to be cash equivalents. Cash and cash equivalents are recorded at cost, which approximates fair value. Restricted cash is included in other long-term assets on the consolidated balance sheets. The following table provides a reconciliation of cash, cash equivalents and restricted cash reported in the consolidated balance sheets that sum to the total of the amounts reported in the consolidated statement of cash flows (in thousands):

	June 30, 2021	December 31, 2020
Cash and cash equivalents	$ 260,098	$ 241,221
Restricted cash included in other long-term assets	223	326
Total cash, cash equivalents, and restricted cash	$ 260,321	$ 241,547

Restricted cash represents amounts required for a contractual agreement with an insurer for the payment of potential health insurance claims, and term deposits for bank guarantees.

Property and equipment, net

Property and equipment consisted of the following (in thousands):

	June 30, 2021	December 31, 2020
Land	$ 9,993	$ 10,067
Building and improvements	15,640	15,630
Computer equipment and software	43,760	41,451
Furniture, equipment and other	13,664	10,136
Leasehold improvements	9,961	9,652
Right-of-use assets under finance leases	2,628	2,665
Total property and equipment	95,646	89,601
Less: accumulated depreciation and amortization	56,036	53,269
Property and equipment, net	$ 39,610	$ 36,332

Depreciation expense, including amortization of right-of-use assets under finance leases, was $1.9 million and $3.7 million, respectively, for the three and six months ended June 30, 2021, and $2.0 million and $3.8 million, respectively, for the three and six months ended June 30, 2020.

Other liabilities

The following table provides the details of other accrued expenses and current liabilities (in thousands):

	June 30, 2021	December 31, 2020
Income taxes payable	$ 6,384	$ 7,250
Accrued VAT	5,192	6,604
Accrued professional fees	3,617	3,156
Accrued royalties	2,175	2,009
Obligations for acquisition of businesses	1,715	1,957
Defined contribution plan liabilities	1,449	1,660
Billings in excess of cost	720	1,108
Non-income tax liabilities	714	1,366
Other current liabilities	5,844	6,294
Total	$ 27,810	$ 31,404

The following table provides details of other long-term liabilities (in thousands):

	June 30, 2021	December 31, 2020
Pension and other post retirement liabilities	$ 14,825	$ 14,497
Deferred tax liabilities	8,068	8,028
Other liabilities	9,963	5,242
Total	$ 32,856	$ 27,767

Restructuring expense

During the first quarter of 2021, the Company initiated a restructuring plan to realign resources with the Company's current business outlook and cost structure. The restructuring plan resulted in charges for employee termination benefits of $1.7 million and $5.1 million for the three and six months ended June 30, 2021, respectively. The Company expects remaining costs of less than $1 million to be incurred in the third quarter of 2021, and all amounts to be paid in 2021. The restructuring costs are attributable primarily to the Software reportable segment.

Restructuring expense was recorded as follows (in thousands):

	Three Months Ended June 30, 2021	Six Months Ended June 30, 2021
Cost of revenue – maintenance and other services	$ 55	$ 830
Cost of revenue – software related services	106	106
Research and development	616	1,745
Sales and marketing	1,014	1,926
General and administrative	(59)	471
Total restructuring expense	$ 1,732	$ 5,078

Other expense (income), net

Other expense (income), net consists of the following (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Foreign exchange loss (gain)	$ 787	$ 704	$ 1,716	$ (32)
Interest income and other	(79)	(384)	(173)	(1,038)
Other expense (income), net	$ 708	$ 320	$ 1,543	$ (1,070)

5. Goodwill and other intangible assets

Goodwill

The changes in the carrying amount of goodwill, which is attributable to the Software reportable segment, were as follows (in thousands):

Balance as of January 1, 2021	$	264,481
Effects of foreign currency translation and other		(1,518)
Balance as of June 30, 2021	$	262,963

Other intangible assets

A summary of other intangible assets is shown below (in thousands):

	June 30, 2021			
	Weighted average amortization period	Gross carrying amount	Accumulated amortization	Net carrying amount
Definite-lived intangible assets:				
Developed technology	4-6 years	$ 78,957	$ 44,409	$ 34,548
Customer relationships	7-10 years	40,132	19,451	20,681
Other intangibles	4-10 years	349	118	231
Total definite-lived intangible assets		119,438	63,978	55,460
Indefinite-lived intangible assets:				
Trade names		11,177		11,177
Total other intangible assets		$ 130,615	$ 63,978	$ 66,637

	December 31, 2020			
	Weighted average amortization period	Gross carrying amount	Accumulated amortization	Net carrying amount
Definite-lived intangible assets:				
Developed technology	4-6 years	$ 78,841	$ 37,651	$ 41,190
Customer relationships	7-10 years	40,207	16,673	23,534
Other intangibles	4-10 years	344	84	260
Total definite-lived intangible assets		119,392	54,408	64,984
Indefinite-lived intangible assets:				
Trade names		11,130		11,130
Total other intangible assets		$ 130,522	$ 54,408	$ 76,114

Amortization expense related to intangible assets was $4.6 million and $9.5 million for the three and six months ended June 30, 2021, respectively, and $3.7 million and $7.5 million for the three and six months ended June 30, 2020.

The allocation of fair value of purchase consideration to goodwill and intangible assets acquired from the Company's 2020 acquisitions remains preliminary as of June 30, 2021. Revisions to such allocation may result in adjustments to the amounts presented above. The primary areas that remain preliminary relate to the fair value of intangible assets acquired, certain tangible assets and liabilities acquired, income taxes and residual goodwill. The Company expects to finalize the valuation as soon as practicable, but not later than one year from the acquisition date. There were no changes to the preliminary fair value of assets acquired and liabilities assumed during the six months ended June 30, 2021.

6. Debt

The carrying value of debt was as follows (in thousands):

	June 30, 2021	December 31, 2020
Convertible senior notes	$ 230,000	$ 230,000
Revolving credit facility	—	30,000
Total debt	230,000	260,000
Less: unamortized debt discount	32,175	37,190
Less: unamortized debt issuance costs	3,899	4,548
Less: current portion of convertible senior notes, net	193,926	188,300
Less: current portion of other long-term debt	—	29,962
Long-term debt, net of current portion	$ —	$ —

Convertible senior notes

In June 2019, the Company issued $230.0 million aggregate principal amount of 0.25% convertible senior notes due in 2024 (the "Convertible Notes"), which includes the underwriters' exercise in full of their option to purchase an additional $30.0 million principal amount of the Convertible Notes, in a public offering. The net proceeds from the issuance of the Convertible Notes were $221.9 million after deducting the underwriting discounts and commissions and estimated issuance costs.

The Convertible Notes bear interest at a rate of 0.25% per year, payable semi-annually in arrears on June 1 and December 1 of each year, commencing December 1, 2019. The Convertible Notes mature on June 1, 2024, unless, earlier repurchased or redeemed by the Company or converted pursuant to their terms.

The Convertible Notes have an initial conversion rate of 21.5049 shares of the Company's Class A common stock per $1,000 principal amount of Convertible Notes, which is equivalent to an initial conversion price of approximately $46.50 per share of its Class A common stock. Refer to the Company's consolidated financial statements for the year ended December 31, 2020, for details of the issuance of the Convertible Notes.

For more than twenty trading days during the thirty consecutive trading days ended June 30, 2021, the last reported sale price of the Company's Class A common stock exceeded 130% of the conversion price of the Convertible Notes. As a result, the Convertible Notes were convertible at the option of the holders and remained classified as current liabilities on the consolidated balance sheet as of June 30, 2021. As of the date of this filing, none of the holders of the Convertible Notes have submitted requests for conversion.

The Company may settle the Convertible Notes in cash, shares of Class A Common Stock or a combination of cash and shares of the Class A Common Stock, at the Company's election. The Company intends to settle the principal amount of the Convertible Notes in cash and the conversion spread in shares. As of June 30, 2021, the "if converted value" exceeded the principal amount of the Convertible Notes by $111.1 million.

The net carrying value of the liability component of the Convertible Notes was as follows (in thousands):

	June 30, 2021	December 31, 2020
Principal	$ 230,000	$ 230,000
Less: unamortized debt discount	32,175	37,190
Less: unamortized debt issuance costs	3,899	4,510
Net carrying amount	$ 193,926	$ 188,300

The net carrying value of the equity component of the Convertible Notes was $50.0 million as of both June 30, 2021 and December 31, 2020.

The interest expense recognized related to the Convertible Notes was as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Contractual interest expense	$ 144	$ 144	$ 288	$ 288
Amortization of debt issuance cost and discount	2,831	2,683	5,625	5,330
Total	$ 2,975	$ 2,827	$ 5,913	$ 5,618

Credit agreement

Revolving credit facility

The Company has a $150.0 million credit facility with a maturity date of December 15, 2023 ("2019 Amended Credit Agreement"). The 2019 Amended Credit Agreement provides for an accordion feature that allows the Company to expand the size of the revolving line of credit by an additional $50.0 million, subject to certain conditions, by obtaining additional commitments from the existing lenders or by causing a person acceptable to the administrative agent to become a lender (in each case subject to the terms and conditions set forth in the 2019 Amended Credit Agreement).

As of June 30, 2021, there were no outstanding borrowings under the 2019 Amended Credit Agreement, there was $150.0 million available for future borrowing, and the Company was in compliance with all the financial covenants. The 2019 Amended Credit Agreement is available for general corporate purposes, including working capital, capital expenditures, and permitted acquisitions.

For additional information about the 2019 Amended Credit Agreement, refer to the Company's consolidated financial statements for the year ended December 31, 2020, included in our Annual Report on Form 10-K for the year ended December 31, 2020.

7. Fair value measurements

The accounting guidance for fair value, among other things, defines fair value, establishes a consistent framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the reporting date. The framework for measuring fair value consists of a three-level valuation hierarchy that prioritizes the inputs to valuation techniques used to measure fair value based upon whether such inputs are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect market assumptions made by the reporting entity. The three-level hierarchy for the inputs to valuation techniques is briefly summarized as follows:

Level 1 – Quoted prices in active markets for identical assets and liabilities at the measurement date;

Level 2 – Observable inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and

Level 3 – Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

An asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

The carrying value of cash and cash equivalents, accounts receivable, net and accounts payable approximate fair value due to their short maturities. Interest on the Company's line of credit is at a variable rate, and as such the debt obligation outstanding approximates fair value.

The carrying value of the Company's Convertible Notes are at face value less unamortized debt discount and issuance costs. The estimated fair values of the Convertible Notes, which the Company has classified as Level 2 financial instruments, were determined based on quoted bid prices of the Convertible Notes on the last trading day of each reporting period. As of June 30, 2021, the fair value of the Convertible Notes was $358.0 million and is presented for required disclosure purposes only. For further information on the Convertible Notes, see Note 6. – Debt.

8. Stock-based compensation

2017 stock-based compensation plan

In 2017, the Company's board of directors adopted the 2017 Equity Incentive Plan ("2017 Plan"), which was approved by the Company's stockholders. The 2017 Plan provides for the grant of incentive stock options to the Company's employees and any parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, stock appreciation rights, restricted stock, restricted stock units, performance units, performance shares, other cash-based awards and other stock-based awards to the Company's employees, directors and consultants and the Company's parent, subsidiary, and affiliate corporations' employees and consultants. The 2017 Plan has 12,506,833 authorized shares of the Company's Class A common stock reserved for issuance.

The following table summarizes the restricted stock units, or RSUs, awarded under the 2017 Plan for the period:

	Number of RSUs
Outstanding as of January 1, 2021	1,154,936
Granted	298,437
Vested	(331,563)
Forfeited	(53,203)
Outstanding as of June 30, 2021	1,068,607

The weighted average grant date fair value of the RSUs was $61.98 and the RSUs generally vest in four equal annual installments. Total compensation cost related to nonvested awards not yet recognized as of June 30, 2021, totaled $39.4 million, and is expected to be recognized over a weighted average period of 2.6 years.

The following table summarizes the stock option activity under the 2017 Plan for the period:

	Number of options	Weighted average exercise price per share	Weighted average remaining contractual term (years)	Aggregate intrinsic value (in millions)
Outstanding as of January 1, 2021	4,203,482	$ 45.68	9.7	
Granted	221,153	$ 61.11		
Exercised	(4,127)	$ 43.83		
Forfeited	(140,471)	$ 47.42		
Outstanding as of June 30, 2021	4,280,037	$ 46.42	9.1	
Exercisable as of June 30, 2021	38,346	$ 36.01	4.9	$ 1.3

The total intrinsic value of the 2017 Plan stock options exercised during the six months ended June 30, 2021, was $0.1 million.

Stock-based compensation expense

The stock-based compensation expense was recorded as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Cost of revenue – maintenance and other services	$ 1,222	$ 552	$ 2,380	$ 918
Research and development	4,143	1,830	7,329	3,258
Sales and marketing	3,659	1,273	7,127	2,000
General and administrative	1,624	879	3,460	1,529
Total stock-based compensation expense	$ 10,648	$ 4,534	$ 20,296	$ 7,705

9. Net (loss) income per share

Basic net income per share attributable to common stockholders is computed using the weighted average number of shares of common stock outstanding for the period, excluding dilutive securities, stock options and restricted stock units ("RSUs"). Diluted net income per share attributable to common stockholders is based upon the weighted average number of shares of common stock outstanding for the period and potentially dilutive common shares, including the effect of dilutive securities, stock options and RSUs under the treasury stock method. The following table sets forth the computation of the numerators and denominators used in the basic and diluted net loss per share amounts (in thousands, except per share data):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Numerator:				
Net (loss) income	$ (13,648)	$ (10,223)	$ 712	$ (4,193)
Denominator:				
Denominator for basic (loss) income per share— weighted average shares	75,263	72,999	74,959	72,811
Effect of dilutive securities, stock options and RSUs	—	—	4,892	—
Denominator for dilutive (loss) income per share	75,263	72,999	79,851	72,811
Net (loss) income per share attributable to common stockholders, basic	$ (0.18)	$ (0.14)	$ 0.01	$ (0.06)
Net (loss) income per share attributable to common stockholders, diluted	$ (0.18)	$ (0.14)	$ 0.01	$ (0.06)

Anti-dilutive shares excluded from the computation of diluted net loss per share were as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Stock options	3,580	4,473	—	4,459
Convertible shares	1,460	—	—	—
Total shares excluded from calculation	5,040	4,473	—	4,459

10. Income taxes

The Company's income tax expense and effective tax rate for the three and six months ended June 30, 2021 and 2020, were as follows (in thousands, except percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Income tax expense	$ 1,361	$ 2,768	$ 1,402	$ 7,420
Effective tax rate	(11%)	(37%)	66%	230%

The tax rate is affected by the Company being a U.S. resident taxpayer, the tax rates in the U.S. and other jurisdictions in which the Company operates, the relative amount of income earned by jurisdiction and the relative amount of losses or income for which no benefit or expense is recognized due to a valuation allowance. The Company’s effective tax rate for the six months ended June 30, 2021 and 2020, also includes net discrete benefit of $2.4 million and net discrete expense of $3.7 million, respectively, primarily related to changes in tax laws, withholding taxes on royalties, changes in reserves, changes in accruals for unremitted earnings and other adjustments.

The Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”) and the Consolidated Appropriations Act, 2021 ("CAA") were enacted during 2020 in response to the COVID-19 pandemic. The CARES Act and CAA, among other things, provide relief to U.S. federal corporate taxpayers through temporary adjustments to net operating loss rules, changes to limitations on interest expense deductibility, and the acceleration of available refunds for minimum tax credit carryforwards. The CARES Act and CAA did not have a material effect on the Company’s consolidated financial statements.

11. Accumulated other comprehensive loss

The components of accumulated other comprehensive loss were as follows (in thousands):

	Foreign currency translation	Retirement related benefit plans	Total
Balance as of January 1, 2021	$ 854	$ (3,651)	$ (2,797)
Other comprehensive loss before reclassification	(1,335)	99	(1,236)
Amounts reclassified from accumulated other comprehensive loss	—	128	128
Tax effects	—	—	—
Other comprehensive (loss) income	(1,335)	227	(1,108)
Balance as of June 30, 2021	$ (481)	$ (3,424)	$ (3,905)

12. Commitments and contingencies

Legal proceedings

From time to time, the Company may be subject to legal proceedings and claims in the ordinary course of business. The Company has received, and may in the future continue to receive, claims from third parties asserting, among other things, infringement of their intellectual property rights. Future litigation may be necessary to defend the Company, its partners and its customers by determining the scope, enforceability and validity of third-party proprietary rights, or to establish and enforce the Company’s proprietary rights. The results of any current or future litigation cannot be predicted with certainty and regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management resources and other factors.

13. Segment information

The Company defines its operating segments as components of its business where separate financial information is available and used by the chief operating decision maker (“CODM”) in deciding how to allocate resources to its segments and in assessing performance. The Company’s CODM is its Chief Executive Officer.

The Company has identified two reportable segments for financial reporting purposes: Software and Client Engineering Services. The primary measure of segment operating performance is Adjusted EBITDA, which is defined as net income (loss) adjusted for income tax expense (benefit), interest expense, interest income and other, depreciation and amortization, stock-based compensation expense, restructuring charges, asset impairment charges and other special items as determined by management. Adjusted EBITDA includes an allocation of corporate headquarters costs.

The following tables are in thousands:

Three Months Ended June 30, 2021	Software	CES	All other	Total
Revenue	$ 107,039	$ 10,268	$ 2,605	$ 119,912
Adjusted EBITDA	$ 8,616	$ 1,212	$ (332)	$ 9,496

Three Months Ended June 30, 2020	Software	CES	All other	Total
Revenue	$ 87,277	$ 9,640	$ 1,644	$ 98,561
Adjusted EBITDA	$ 5,102	$ 977	$ (330)	$ 5,749

Six Months Ended June 30, 2021	Software	CES	All other	Total
Revenue	$ 244,678	$ 20,945	$ 4,452	$ 270,075
Adjusted EBITDA	$ 44,854	$ 2,222	$ (620)	$ 46,456

Six Months Ended June 30, 2020	Software	CES	All other	Total
Revenue	$ 202,654	$ 23,518	$ 3,852	$ 230,024
Adjusted EBITDA	$ 25,566	$ 2,479	$ (624)	$ 27,421

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Reconciliation of Adjusted EBITDA to U.S. GAAP (loss) income before income taxes:				
Adjusted EBITDA	$ 9,496	$ 5,749	$ 46,456	$ 27,421
Stock-based compensation expense	(10,648)	(4,534)	(20,296)	(7,705)
Interest expense	(2,988)	(2,843)	(5,961)	(5,656)
Depreciation and amortization	(6,494)	(5,633)	(13,180)	(11,293)
Restructuring expense	(1,732)	—	(5,078)	—
Special adjustments, interest income and other	79	(194)	173	460
(Loss) income before income taxes	$ (12,287)	$ (7,455)	$ 2,114	$ 3,227

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this quarterly report and with our audited consolidated financial statements (and notes thereto) for the year ended December 31, 2020, included in our Annual Report on Form 10-K filed with the SEC. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. All statements in this quarterly report regarding the future impact of COVID-19 are forward-looking in nature and thus subject to the safe harbor provisions described below.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This quarterly report on Form 10-Q contains forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 under Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, assumptions, estimates, intentions and future performance, and involve known and unknown risks, uncertainties and other factors, which may be beyond our control, and which may cause our actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be forward-looking statements. You can identify these forward-looking statements through our use of words such as "may," "can," "anticipate," "assume," "should," "indicate," "would," "believe," "contemplate," "expect," "seek," "estimate," "continue," "plan," "point to," "project," "predict," "could," "intend," "target," "potential" and other similar words and expressions of the future.

There are a number of important factors that could cause the actual results to differ materially from those expressed in any forward-looking statement made by us. These factors include, but are not limited to:

- our ability and the time it takes to acquire new customers;
- reduced spending on product design and development activities by our customers;
- our ability to successfully renew our outstanding software licenses;
- our ability to maintain or protect our intellectual property;
- our ability to retain key executive members;
- our ability to internally develop new software products, inventions and intellectual property;
- our ability to successfully integrate and realize the benefits of our past or future strategic acquisitions or investments;
- demand for our software by customers other than simulation engineering specialists and in additional industry verticals;
- acceptance of our enhanced business model by customers and investors;
- our susceptibility to factors affecting the automotive, aerospace and financial services industries where we derive a substantial portion of our revenues;
- the accuracy of our estimates regarding expenses and capital requirements;
- our susceptibility to foreign currency risks that arise because of our substantial international operations;
- the significant quarterly fluctuations of our results; and
- the uncertain effect of COVID-19 or other future pandemics or events on our business, operating results and financial condition, including disruption to our customers, our employees, the global economy and financial markets.

The foregoing does not represent an exhaustive list of matters that may be covered by the forward-looking statements contained herein or risk factors that we are faced with that may cause our actual results to differ from those anticipated in our forward-looking statements. For additional risks which could adversely impact our business and financial performance please see “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2020, which was filed with the SEC on February 26, 2021, and other information appearing elsewhere in our Annual Report on Form 10-K, this report on Form 10-Q and our other filings with the SEC.

All forward-looking statements are expressly qualified in their entirety by this cautionary notice. You are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this report or the date of the document incorporated by reference into this report. We have no obligation, and expressly disclaim any obligation, to update, revise or correct any of the forward-looking statements, whether as a result of new information, future events or otherwise. We have expressed our expectations, beliefs, and projections in good faith, and we believe they have a reasonable basis. However, we cannot assure you that our expectations, beliefs, or projections will result or be achieved or accomplished.

Overview

We are a global technology company providing software and cloud solutions in the areas of simulation, high-performance computing (“HPC”), data analytics, and artificial intelligence (“AI”). We enable organizations across broad industry segments to compete more effectively in a connected world while creating a more sustainable future.

Impact of COVID-19

In March 2020, The World Health Organization declared the outbreak of COVID-19, a pandemic and a public health emergency of international concern. The global spread of COVID-19 has negatively impacted several of the markets we serve, including the automotive and aerospace markets, and has disrupted the business of many of our customers and partners. These disruptions have had an adverse effect on our business and consolidated results of operations and could impact our financial condition in the future.

We are unable to accurately predict the full impact that COVID-19 will have due to numerous uncertainties, including the full scope of the pandemic, the duration of the outbreak, the number and intensity of subsequent waves of infections, actions that may be taken by governmental authorities, the impact to the businesses of our customers and partners, the development of treatments and vaccines, and other factors identified in Part I, Item 1A – Risk Factors included in our Annual Report on Form 10-K for the year ended December 31, 2020. We will continue to evaluate the nature and extent of the impact to our business, consolidated results of operations, and financial condition.

Factors Affecting our Performance

We believe that our future success will depend on many factors, including those described below. While these areas present significant opportunity, they also present risks that we must manage to achieve successful results. If we are unable to address these challenges, our business, operating results and prospects could be harmed. Please see “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2020.

Seasonality and quarterly results

Our billings have historically been highest in the first and fourth quarters of any calendar year and may vary in future quarters. The timing of recording billings and the corresponding effect on our cash flows may vary due to the seasonality of the purchasing and payment patterns of our customers. In addition, the timing of the recognition of revenue, the amount and timing of operating expenses, including employee compensation, sales and marketing activities, and capital expenditures, may vary from quarter-to-quarter which may cause our reported results to fluctuate significantly. In addition, we may choose to grow our business for the long-term rather than to optimize for profitability or cash flows for a particular shorter-term period. This seasonality or the occurrence of any of the factors above may cause our results of operations to vary and our financial statements may not fully reflect the underlying performance of our business.

Integration of recent acquisitions

We believe that our recent acquisitions result in certain benefits, including expanding our portfolio of software and products and enabling us to better serve our customers’ requests for data analytics and simulation technology. However, to realize some of these anticipated benefits, the acquired businesses must be successfully integrated. The success of these acquisitions will depend in part on our ability to realize these anticipated benefits. We may fail to realize the anticipated benefits of these acquisitions for a variety of reasons.

Foreign currency fluctuations

Because of our substantial international operations, we are exposed to foreign currency risks that arise from our normal business operations, including in connection with our transactions that are denominated in foreign currencies, including the Euro, British Pound Sterling, Indian Rupee, Japanese Yen, and Chinese Yuan. To identify changes in our underlying business without regard to the impact of currency fluctuations, we evaluate certain of our operating results both on an as reported basis, as well as on a constant currency basis.

Business Segments

We have identified two reportable segments: Software and Client Engineering Services:

- *Software* —Our Software segment includes software and software related services. The software component of this segment includes our portfolio of software products including our solvers and optimization technology products, high-performance computing software applications and hardware products, modeling and visualization tools, data analytics and analysis products, IoT platform and analytics tools, as well as support and the complementary software products we offer through our Altair Partner Alliance, or APA. The APA includes technologies ranging from computational fluid dynamics and fatigue, to manufacturing process simulation and cost estimation. The software related services component of this segment includes consulting, implementation services, and training focused on product design and development expertise and analysis from the component level up to complete product engineering at any stage of the lifecycle.
- *Client Engineering Services* —Our client engineering services, or CES, segment provides client engineering services to support our customers with long-term, ongoing expertise. We operate our CES business by hiring engineers and data scientists for placement at a customer site for specific customer-directed assignments. We employ and pay them only for the duration of the placement.

Our other businesses which do not meet the criteria to be separate reportable segments are combined and reported as “Other” which represents innovative services and products, including toggled, our LED lighting business. toggled is focused on developing and selling next-generation solid state lighting technology along with communication and control protocols based on our intellectual property for the direct replacement of fluorescent light tubes with LED lamps. Other businesses combined within Other include potential services and product concepts that are still in development stages.

For additional information about our reportable segments and other businesses, see Note 13 in the Notes to consolidated financial statements in Item 1, Part I of this Quarterly Report on Form 10-Q.

Results of operations

Comparison of the three and six months ended June 30, 2021 and 2020

The following table sets forth the results of operations and the period-over-period percentage change in certain financial data for the three and six months ended June 30, 2021 and 2020:

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Increase / (decrease) %	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	Increase / (decrease) %
Revenue:						
Software	$ 99,558	$ 81,833	22%	$ 229,099	$ 190,276	20%
Software related services	7,481	5,444	37%	15,579	12,378	26%
Total software and related services	107,039	87,277	23%	244,678	202,654	21%
Client engineering services	10,268	9,640	7%	20,945	23,518	(11%)
Other	2,605	1,644	58%	4,452	3,852	16%
Total revenue	119,912	98,561	22%	270,075	230,024	17%
Cost of revenue:						
Software	15,660	11,353	38%	32,610	27,331	19%
Software related services	5,731	4,656	23%	11,853	10,145	17%
Total software and related services	21,391	16,009	34%	44,463	37,476	19%
Client engineering services	8,293	7,789	6%	17,181	19,107	(10%)
Other	2,262	1,283	76%	3,724	2,995	24%
Total cost of revenue	31,946	25,081	27%	65,368	59,578	10%
Gross profit	87,966	73,480	20%	204,707	170,446	20%
Operating expenses:						
Research and development	38,757	28,970	34%	77,033	60,437	27%
Sales and marketing	31,909	25,806	24%	63,979	53,905	19%
General and administrative	21,861	20,248	8%	45,787	42,594	7%
Amortization of intangible assets	4,615	3,692	25%	9,492	7,532	26%
Other operating income, net	(585)	(944)	(38%)	(1,202)	(1,835)	(34%)
Total operating expenses	96,557	77,772	24%	195,089	162,633	20%
Operating (loss) income	(8,591)	(4,292)	100%	9,618	7,813	23%
Interest expense	2,988	2,843	5%	5,961	5,656	5%
Other expense (income), net	708	320	121%	1,543	(1,070)	NM
(Loss) income before income taxes	(12,287)	(7,455)	65%	2,114	3,227	(34%)
Income tax expense	1,361	2,768	(51%)	1,402	7,420	(81%)
Net (loss) income	$ (13,648)	$ (10,223)	34%	$ 712	$ (4,193)	NM
Other financial information:						
Billings(1)	$ 117,762	$ 98,870	19%	$ 263,575	$ 226,805	16%
Adjusted EBITDA(2)	$ 9,496	$ 5,749	65%	$ 46,456	$ 27,421	69%
Net cash provided by operating activities	$ 18,151	$ 5,365	238%	$ 54,722	$ 33,401	64%
Free cash flow(3)	$ 15,799	$ 4,479	253%	$ 49,331	$ 30,871	60%

NM Not meaningful.

(1) Billings consists of our total revenue plus the change in our deferred revenue, excluding deferred revenue from acquisitions. For more information about Billings and our other non-GAAP financial measures and reconciliations of our non-GAAP financial measures to the most directly comparable financial measures calculated and presented in accordance with GAAP, see "Non-GAAP financial measures" contained herein.

(2) We define Adjusted EBITDA as net income (loss) adjusted for income tax expense (benefit), interest expense, interest income and other, depreciation and amortization, stock-based compensation expense, restructuring charges, asset impairment charges and other special items as determined by management. For more information about Adjusted EBITDA and our other non-GAAP financial measures and reconciliations of our non-GAAP financial measures to the most directly comparable financial measure calculated and presented in accordance with GAAP, see "Non-GAAP financial measures" contained herein.

(3) We define Free Cash Flow as net cash provided by operating activities less capital expenditures. For a reconciliation of Free Cash Flow, see "Non-GAAP financial measures" contained herein.

Three months ended June 30, 2021 and 2020

Revenue

Total revenue increased by $21.4 million, or 22%, for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020.

Software

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Period-to-period change $	Period-to-period change %
Software revenue	$ 99,558	$ 81,833	$ 17,725	22%
As a percent of software segment revenue	93%	94%		
As a percent of consolidated revenue	83%	83%		

The 22% increase in our software revenue for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020, was primarily the result of growth across all three geographic regions, and supported by increases in new and expansion business, as well as retention in our renewal base.

Software related services

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Period-to-period change $	Period-to-period change %
Software related services revenue	$ 7,481	$ 5,444	$ 2,037	37%
As a percent of software segment revenue	7%	6%		
As a percent of consolidated revenue	6%	6%		

Software related services revenue increased 37% for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020. This increase was primarily the result of an increase in customer demand for these services as businesses begin to recover from effects of COVID-19.

Client engineering services

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Period-to-period change $	Period-to-period change %
Client engineering services revenue	$ 10,268	$ 9,640	$ 628	7%
As a percent of consolidated revenue	9%	10%		

CES revenue increased 7% for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020. This increase was primarily the result of an increase in customer demand for these services as businesses begin to recover from the effects of COVID-19.

Other

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Period-to-period change $	Period-to-period change %
Other revenue	$ 2,605	$ 1,644	$ 961	58%
As a percent of consolidated revenue	2%	2%		

The 58% increase in other revenue for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020, was due to increased unit sales by toggled, our LED lighting business.

Cost of revenue

Software

(in thousands)	Three Months Ended June 30, 2021	2020	Period-to-period change $	%
Cost of software revenue	$ 15,660	$ 11,353	$ 4,307	38%
As a percent of software revenue	16%	14%		
As a percent of consolidated revenue	13%	12%		

Cost of software revenue increased $4.3 million, or 38%, for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020. The increase in the current year period was primarily attributable to increased employee compensation and related costs of $2.1 million as a result of an increased headcount and compensation in the current year. Employee compensation was lower in the prior year quarter as a result of temporary compensation reductions made in the second quarter of 2020. Stock-based compensation expense increased $0.7 million, hardware costs increased $0.5 million, cloud hosting and third-party royalty expense both increased $0.3 million in the current quarter.

Software related services

(in thousands)	Three Months Ended June 30, 2021	2020	Period-to-period change $	%
Cost of software related services revenue	$ 5,731	$ 4,656	$ 1,075	23%
As a percent of software related services revenue	77%	86%		
As a percent of consolidated revenue	5%	5%		

Cost of software related services revenue increased 23% for the three months ended June 30, 2021, driven by the increase in revenue, as compared to the three months ended June 30, 2020. The increase in the current year expense was primarily attributable to increased employee compensation of $1.0 million. Employee compensation was lower in the prior year quarter as a result of temporary compensation reductions made in the second quarter of 2020.

Client engineering services

(in thousands)	Three Months Ended June 30, 2021	2020	Period-to-period change $	%
Cost of client engineering services revenue	$ 8,293	$ 7,789	$ 504	6%
As a percent of client engineering services revenue	81%	81%		
As a percent of consolidated revenue	7%	8%		

Cost of CES revenue increased 6% for the three months ended June 30, 2021, consistent with the increase in revenue, as compared to the three months ended June 30, 2020. We have managed CES headcount and compensation to match our customers' demand for our staffing resources, and therefore our costs have moved accordingly.

Other

(in thousands)	Three Months Ended June 30, 2021	2020	Period-to-period change $	%
Cost of other revenue	$ 2,262	$ 1,283	$ 979	76%
As a percent of other revenue	87%	78%		
As a percent of consolidated revenue	2%	1%		

Cost of other revenue increased 76%, for the three months ended June 30, 2021, consistent with the increase in revenue, as compared to the three months ended June 30, 2020, driven by hardware costs.

Gross profit

(in thousands)	Three Months Ended June 30, 2021	2020	Period-to-period change $	%
Gross profit	$ 87,966	$ 73,480	$ 14,486	20%
As a percent of consolidated revenue	73%	75%		

Gross profit increased by $14.5 million, or 20%, for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020. This increase in gross profit was primarily attributable to the increase in software revenue, partially offset by an increase in cost of revenue.

Operating expenses

Operating expenses, as discussed below, support all the products and services that we provide to our customers and, as a result, they are reported and discussed in the aggregate.

Research and development

(in thousands)	Three Months Ended June 30, 2021	2020	Period-to-period change $	%
Research and development	$ 38,757	$ 28,970	$ 9,787	34%
As a percent of consolidated revenue	32%	29%		

Research and development expenses increased by $9.8 million, or 34%, for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020. Employee compensation and related expense increased $6.4 million, primarily due to increased headcount and compensation in the current year. Employee compensation was lower in the prior year quarter as a result of temporary compensation reductions made in the second quarter of 2020. Stock-based compensation expense and cloud hosting expense increased $2.3 million and $0.7 million, respectively, and we incurred $0.6 million of restructuring expense in the three months ended June 30, 2021.

Sales and marketing

(in thousands)	Three Months Ended June 30, 2021	2020	Period-to-period change $	%
Sales and marketing	$ 31,909	$ 25,806	$ 6,103	24%
As a percent of consolidated revenue	27%	26%		

Sales and marketing expenses increased by $6.1 million, or 24%, for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020. Employee compensation and related expense increased $2.0 million, primarily due to increased headcount and compensation in the current year. Employee compensation was lower in the prior year quarter as a result of temporary compensation reductions made in the second quarter of 2020. Stock-based compensation expense and advertising and trade show related expenses increased $2.4 million and $0.9 million, respectively, and we incurred $1.0 million of restructuring expense in the three months ended June 30, 2021.

General and administrative

(in thousands)	Three Months Ended June 30, 2021	2020	Period-to-period change $	%
General and administrative	$ 21,861	$ 20,248	$ 1,613	8%
As a percent of consolidated revenue	18%	21%		

General and administrative expenses increased by $1.6 million, or 8%, for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020. Stock-based compensation expense increased $0.7 million, and professional fees increased $0.3 million in the current year.

Amortization of intangible assets

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Period-to-period change $	Period-to-period change %
Amortization of intangible assets	$ 4,615	$ 3,692	$ 923	25%
As a percent of consolidated revenue	4%	4%		

Amortization of intangible assets increased by $0.9 million, or 25%, for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020. Amortization of intangible assets in the current year period increased primarily as a result of prior year acquisitions.

Other operating income, net

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Period-to-period change $	Period-to-period change %
Other operating income, net	$ (585)	$ (944)	$ (359)	(38%)
As a percent of consolidated revenue	(0%)	(1%)		

Other operating income, net decreased $0.4 million for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020. This decrease was primarily the result of a $0.3 million decrease in grant income in the current quarter.

Interest expense

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Period-to-period change $	Period-to-period change %
Interest expense	$ 2,988	$ 2,843	$ 145	5%
As a percent of consolidated revenue	2%	3%		

Interest expense increased $0.2 million for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020, as a result of an increase in the amortization of the debt discount and issuance costs on our convertible notes.

Other expense (income), net

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Period-to-period change $	Period-to-period change %
Other expense (income), net	$ 708	$ 320	$ 388	121%
As a percent of consolidated revenue	1%	0%		

Other expense (income), net increased by $0.4 million for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020. This increase in expense was primarily a result of a $0.3 million decrease in interest income in the current year period due to lower interest rates as compared to the prior year.

Income tax expense

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Period-to-period change $	Period-to-period change %
Income tax expense	$ 1,361	$ 2,768	$ (1,407)	(51)%

The effective tax rate was -11% and -37% for the three months ended June 30, 2021 and 2020 respectively. The tax rate is affected by the Company being a U.S. resident taxpayer, the tax rates in the U.S. and other jurisdictions in which the Company operates, the relative amount of income earned by jurisdiction and the relative amount of losses or income for which no benefit or expense is recognized due to a valuation allowance. The Company’s effective tax rate for the three months ended June 30, 2021 and 2020, also includes net discrete expense of $1.2 million and $1.7 million, respectively, primarily related to changes in tax laws, withholding taxes on royalties, changes in reserves, changes in accruals for unremitted earnings and other adjustments.

Net loss

(in thousands)	Three Months Ended June 30, 2021	2020	Period-to-period change $	%
Net loss	$ (13,648)	$ (10,223)	$ (3,425)	34%

Net loss increased by $3.4 million for the three months ended June 30, 2021, as compared to the three months ended June 30, 2020. This increase in net loss was primarily attributable to increased employee compensation and related expense, increased stock-based compensation expense, and restructuring charges in the current year, as described above, partially offset by an increase in revenue.

Six months ended June 30, 2021 and 2020

Revenue

Total revenue increased by $40.1 million, or 17%, for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020.

Software

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Software revenue	$ 229,099	$ 190,276	$ 38,823	20%
As a percent of software segment revenue	94%	94%		
As a percent of consolidated revenue	85%	83%		

The 20% increase in our software revenue for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020, was primarily the result of growth across all three geographic regions, and supported by increases in new and expansion business, as well as retention in our renewal base.

Software related services

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Software related services revenue	$ 15,579	$ 12,378	$ 3,201	26%
As a percent of software segment revenue	6%	6%		
As a percent of consolidated revenue	6%	5%		

Software related services revenue increased 26% for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020. This increase was primarily the result of an increase in customer demand for these services as businesses begin to recover from effects of COVID-19.

Client engineering services

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Client engineering services revenue	$ 20,945	$ 23,518	$ (2,573)	(11%)
As a percent of consolidated revenue	8%	10%		

CES revenue decreased 11% for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020. This decrease is primarily a result of our CES customers response to COVID-19, including furloughed staff positions and reduced CES staff working hours beginning in the quarter ended June 30,2020.

Other

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Other revenue	$ 4,452	$ 3,852	$ 600	16%
As a percent of consolidated revenue	2%	2%		

The 16% increase in other revenue for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020, was primarily due to increased sales from toggled, our LED lighting business, in the second quarter of 2021.

Cost of revenue

Software

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Cost of software revenue	$ 32,610	$ 27,331	$ 5,279	19%
As a percent of software revenue	14%	14%		
As a percent of consolidated revenue	12%	12%		

Cost of software revenue increased $5.3 million, or 19%, for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020. Employee compensation and related expense increased $1.7 million, primarily due to increased headcount and compensation in the current year. Employee compensation was lower in the prior year as a result of temporary compensation reductions made in the second quarter of 2020. Stock-based compensation expense increased $1.5 million, hardware costs increased $0.6 million, third-party consulting fees increased $0.5 million, and we incurred $0.8 million of restructuring expense in the six months ended June 30, 2020.

Software related services

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Cost of software related services revenue	$ 11,853	$ 10,145	$ 1,708	17%
As a percent of software related services revenue	76%	82%		
As a percent of consolidated revenue	4%	4%		

Cost of software related services revenue increased 17% for the six months ended June 30, 2021, driven by the increase in revenue, as compared to the six months ended June 30, 2020. The increase in the current year expense was primarily attributable to increased employee compensation of $1.7 million. Employee compensation was lower in the prior year quarter as a result of temporary compensation reductions made in the second quarter of 2020.

Client engineering services

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Cost of client engineering services revenue	$ 17,181	$ 19,107	$ (1,926)	(10%)
As a percent of client engineering services revenue	82%	81%		
As a percent of consolidated revenue	6%	8%		

Cost of CES revenue decreased 10% for the six months ended June 30, 2021, consistent with the decrease in revenue, as compared to the six months ended June 30, 2020. We have managed CES headcount and compensation to match our customers’ demand for our staffing resources, and therefore our costs have moved accordingly.

Other

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Cost of other revenue	$ 3,724	$ 2,995	$ 729	24%
As a percent of other revenue	84%	78%		
As a percent of consolidated revenue	1%	1%		

Cost of other revenue increased 24%, for the six months ended June 30, 2021, consistent with the increase in revenue, as compared to the six months ended June 30, 2020, driven by hardware costs.

Gross profit

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Gross profit	$ 204,707	$ 170,446	$ 34,261	20%
As a percent of consolidated revenue	76%	74%		

Gross profit increased by $34.3 million, or 20%, for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020. This increase in gross profit was primarily attributable to the increase in software revenue combined with a relatively smaller increase in cost of revenue.

Operating expenses

Operating expenses, as discussed below, support all the products and services that we provide to our customers and, as a result, they are reported and discussed in the aggregate.

Research and development

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Research and development	$ 77,033	$ 60,437	$ 16,596	27%
As a percent of consolidated revenue	29%	26%		

Research and development expenses increased by $16.6 million, or 27%, for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020. Employee compensation and related expense increased $10.1 million, primarily due to increased headcount and compensation in the current year. Employee compensation was lower in the prior year as a result of temporary compensation reductions made in the second quarter of 2020. Stock-based compensation expense and cloud hosting expense increased $4.1 million and $1.3 million, respectively, and we incurred $1.7 million of restructuring expense in the six months ended June 30, 2020. These increases were partially offset by a reduction in travel costs.

Sales and marketing

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Sales and marketing	$ 63,979	$ 53,905	$ 10,074	19%
As a percent of consolidated revenue	24%	23%		

Sales and marketing expenses increased by $10.1 million, or 19%, for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020. Employee compensation and related expense increased $4.8 million, primarily due to increased headcount and compensation in the current year. Employee compensation was lower in the prior year as a result of temporary compensation reductions made in the second quarter of 2020. Stock-based compensation expense increased $5.1 million, and we incurred restructuring expense of $1.9 million in the six months ended June 30, 2020. These increases were partially offset by a $1.6 million decrease in travel and marketing expense from suspension or reduction of certain in-person sales and marketing activities as a result of COVID-19.

General and administrative

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
General and administrative	$ 45,787	$ 42,594	$ 3,193	7%
As a percent of consolidated revenue	17%	19%		

General and administrative expenses increased by $3.2 million, or 7%, for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020. Stock-based compensation expense increased $1.9 million, facilities costs increased $0.7 million, employee compensation and related expense increased $0.5 million, and we incurred restructuring expense of $0.5 million in the six months ended June 30, 2020. These increases were partially offset by a $0.6 million decrease in cloud hosting expense in the current year.

Amortization of intangible assets

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Amortization of intangible assets	$ 9,492	$ 7,532	$ 1,960	26%
As a percent of consolidated revenue	4%	3%		

Amortization of intangible assets increased by $2.0 million, or 26%, for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020. Amortization of intangible assets in the current year period increased primarily as a result of prior year acquisitions.

Other operating income, net

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Other operating income, net	$ (1,202)	$ (1,835)	$ (633)	(34%)
As a percent of consolidated revenue	(0%)	(1%)		

Other operating income, net decreased $0.6 million for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020. This decrease was primarily the result of a $0.8 million decrease in grant income, partially offset by a $0.4 million decrease in credit loss expense in the current year.

Interest expense

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Interest expense	$ 5,961	$ 5,656	$ 305	5%
As a percent of consolidated revenue	2%	2%		

Interest expense increased $0.3 million for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020, as a result of an increase in the amortization of the debt discount costs on our convertible notes.

Other expense (income), net

(in thousands)	Six Months Ended June 30, 2021	2020	Period-to-period change $	%
Other expense (income), net	$ 1,543	$ (1,070)	$ 2,613	NM
As a percent of consolidated revenue	1%	(0%)		

Other expense (income), net increased by $2.6 million for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020. This increase in expense was primarily a result of $1.7 million in losses from foreign currency fluctuations in the United States dollar relative to other functional currencies during the six months ended June 30, 2021, and a $0.9 million decrease in interest income in the current year due to lower interest rates as compared to the six months ended June 30, 2020.

Income tax expense

(in thousands)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	Period-to-period change $	Period-to-period change %
Income tax expense	$ 1,402	$ 7,420	$ (6,018)	(81%)

The effective tax rate was 66% and 230% for the six months ended June 30, 2021 and 2020 respectively. The tax rate is affected by the Company being a U.S. resident taxpayer, the tax rates in the U.S. and other jurisdictions in which the Company operates, the relative amount of income earned by jurisdiction and the relative amount of losses or income for which no benefit or expense is recognized due to a valuation allowance. The Company’s effective tax rate for the six months ended June 30, 2021 and 2020, also includes net discrete benefit of $2.4 million and net discrete expense of $3.7 million, respectively, primarily related to changes in tax laws, withholding taxes on royalties, changes in reserves, changes in accruals for unremitted earnings and other adjustments.

Net income (loss)

(in thousands)	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020	Period-to-period change $	Period-to-period change %
Net income (loss)	$ 712	$ (4,193)	$ 4,905	NM

We generated net income of $0.7 million for the six months ended June 30, 2021 as compared, to a net loss of $4.2 million for the six months ended June 30, 2020. The $4.9 million increase in net income was primarily attributable to an increase in revenue and decrease in income tax expense, partially offset by increases in employee compensation and related expense, stock-based compensation expense, and restructuring charges in the current year, as described above.

Non-GAAP financial measures

We monitor the following key non-GAAP (United States generally accepted accounting principles) financial and operating metrics to help us evaluate our business, measure our performance, identify trends affecting our business, formulate business plans and make strategic decisions. In analyzing and planning for our business, we supplement our use of GAAP financial measures with non-GAAP financial measures, including Billings as a liquidity measure, Adjusted EBITDA as a performance measure and Free Cash Flow as a liquidity measure.

(in thousands)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
Other financial data:				
Billings	$ 117,762	$ 98,870	$ 263,575	$ 226,805
Adjusted EBITDA	$ 9,496	$ 5,749	$ 46,456	$ 27,421
Free Cash Flow	$ 15,799	$ 4,479	$ 49,331	$ 30,871

Billings. Billings consists of our total revenue plus the change in our deferred revenue, excluding deferred revenue from acquisitions during the period. Given that we generally bill our customers at the time of sale, but typically recognize a portion of the related revenue ratably over time, management believes that Billings is a meaningful way to measure and monitor our ability to provide our business with the working capital generated by upfront payments from our customers.

Adjusted EBITDA. We define Adjusted EBITDA as net income (loss) adjusted for income tax expense (benefit), interest expense, interest income and other, depreciation and amortization, stock-based compensation expense, restructuring charges, asset impairment charges and other special items as determined by management. Our management team believes that Adjusted EBITDA is a meaningful measure of performance as it is commonly utilized by management and the investment community to analyze operating performance in our industry.

Free Cash Flow. Free Cash Flow is a non-GAAP measure that we calculate as cash flow provided by operating activities less capital expenditures. Management believes that Free Cash Flow is useful in analyzing our ability to service and repay debt, when applicable, and return value directly to stockholders.

These non-GAAP financial measures reflect an additional way of viewing aspects of our business that, when viewed with our GAAP results and the accompanying reconciliations to corresponding GAAP financial measures included in the tables below, may provide a more complete understanding of factors and trends affecting our business. These non-GAAP financial measures should not be relied upon to the exclusion of GAAP financial measures and are by definition an incomplete understanding of the Company and must be considered in conjunction with GAAP measures.

We believe that the non-GAAP measures disclosed herein are only useful as an additional tool to help management and investors make informed decisions about our financial and operating performance and liquidity. By definition, non-GAAP measures do not give a full understanding of the Company. To be truly valuable, they must be used in conjunction with the comparable GAAP measures. In addition, non-GAAP financial measures are not standardized. It may not be possible to compare these financial measures with other companies' non-GAAP financial measures having the same or similar names. We strongly encourage investors to review our consolidated financial statements and the notes thereto in their entirety and not to rely on any single financial measure.

Reconciliation of non-GAAP financial measures

The following tables provides reconciliations of revenue to Billings, net income (loss) to Adjusted EBITDA, and net cash provided by operating activities to Free Cash Flow:

Billings

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2021**	**2020**	**2021**	**2020**
Revenue	$ 119,912	$ 98,561	$ 270,075	$ 230,024
Ending deferred revenue	88,579	80,348	88,579	80,348
Beginning deferred revenue	(90,729)	(80,039)	(95,079)	(83,567)
Billings	$ 117,762	$ 98,870	$ 263,575	$ 226,805

Adjusted EBITDA

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2021**	**2020**	**2021**	**2020**
Net (loss) income	$ (13,648)	$ (10,223)	$ 712	$ (4,193)
Income tax expense	1,361	2,768	1,402	7,420
Stock-based compensation expense	10,648	4,534	20,296	7,705
Interest expense	2,988	2,843	5,961	5,656
Depreciation and amortization	6,494	5,633	13,180	11,293
Restructuring expense	1,732	—	5,078	—
Special adjustments, interest income and other	(79)	194	(173)	(460)
Adjusted EBITDA	$ 9,496	$ 5,749	$ 46,456	$ 27,421

Free Cash Flow

	Six Months Ended June 30,	
(in thousands)	**2021**	**2020**
Net cash provided by operating activities	$ 54,722	$ 33,401
Capital expenditures	(5,391)	(2,530)
Free cash flow	$ 49,331	$ 30,871

Recurring software license rate

A key factor to our success is our recurring software license rate which we measure through Billings, primarily derived from annual renewals of our existing subscription customer agreements. We calculate our recurring software license rate for a particular period by dividing (i) the sum of software term-based license Billings, software license maintenance Billings, and 20% of software perpetual license Billings which we believe approximates maintenance as an element of the arrangement by (ii) the total software license Billings including all term-based subscriptions, maintenance, and perpetual license billings from all customers for that period. For the six months ended June 30, 2021 and 2020, our recurring software license rate was 92% and 93%, respectively. The recurring software license rate may vary from period to period.

Liquidity and capital resources

As of June 30, 2021, our principal sources of liquidity were $260.1 million in cash and cash equivalents and $150.0 million availability on our credit facility. We have outstanding debt in the form of convertible senior notes with a $230.0 million principal amount as of June 30, 2021.

For more than twenty trading days during thirty consecutive trading days ended June 30, 2021, the last reported sale price of our common stock exceeded 130% of the conversion price of the convertible senior notes. As a result, the convertible senior notes were convertible at the option of the holders, and the $193.9 million carrying amount of the convertible senior notes remains classified as a short-term liability as of June 30, 2021, which reduced our net working capital compared to the prior year. We have the ability to settle the convertible notes in cash, shares of our common stock, or a combination of cash and shares of our common stock at our own election. Conversion of the notes by noteholders may cause dilution to the ownership interests of existing stockholders.

We continue to evaluate possible acquisitions and other strategic transactions designed to expand our business. As a result, our expected uses of cash could change, our cash position could be reduced, or we may incur additional debt obligations to the extent we complete additional acquisitions.

Our existing cash and cash equivalents may fluctuate during fiscal 2021, due to changes in our planned cash expenditures, including changes in incremental costs such as direct costs and integration costs related to acquisitions. Cash from operations could also be affected by various risks and uncertainties, including, but not limited to, the effects of COVID-19. It is possible that certain customers may unilaterally decide to extend payments on accounts receivable, however the Company's customer base is comprised primarily of larger organizations with typically strong liquidity and capital resources.

We believe that our existing cash balances, together with funds generated from operations and amounts available under our credit facility, will be sufficient to finance our operations and meet our foreseeable cash requirements for the next twelve months. We also believe that our financial resources, along with managing discretionary expenses, will allow us to manage the impact of COVID-19 on our business operations for the foreseeable future, which could include reductions in revenue and delays in payments from customers and partners. We will continue to evaluate our financial position as developments evolve relating to COVID-19.

Revolving credit facility

We have a $150.0 million credit facility with a maturity date of December 15, 2023 ("2019 Amended Credit Agreement"). The 2019 Amended Credit Agreement allows us to request that the aggregate commitments under the 2019 Amended Credit Agreement be increased by up to $50.0 million for a total of $200.0 million, subject to certain conditions.

As of June 30, 2021, there were no outstanding borrowings under the 2019 Amended Credit Agreement and there was $150.0 million available for future borrowing. The 2019 Amended Credit Agreement is available for general corporate purposes, including working capital, capital expenditures and permitted acquisitions. As of June 30, 2021, we were in compliance with the financial covenants.

For additional information about the 2019 Amended Credit Agreement, refer to the Company's consolidated financial statements for the year ended December 31, 2020, included in our Annual Report on Form 10-K filed with the SEC on February 26, 2021.

Cash flows

As of June 30, 2021, we had aggregate cash and cash equivalents of $260.1 million available for working capital purposes, acquisitions, and capital expenditures; $195.7 million of this aggregate amount was held in the United States and $57.5 million was held in the APAC and EMEA regions with the remainder held in Canada, Mexico and South America.

Other than statutory limitations, there are no significant restrictions on the ability of our subsidiaries to pay dividends or make other distributions to Altair. Based on our current liquidity needs and repatriation strategies, we expect that we can manage our global liquidity needs without material adverse tax implications. The 2017 changes in U.S. tax law could materially affect our tax obligations. For further discussion, please see our 2020 Annual Report on Form 10-K, "Item 1A. Risk Factors – New legislations or tax-reform policies that would change U.S. or foreign taxation of international business activities, including uncertainties in the interpretation and application of the 2017 Tax Cuts and Jobs Act, could materially affect our tax obligations and effective tax rate.

The following table summarizes our cash flows for the periods indicated:

(in thousands)	Six Months Ended June 30, 2021	2020
Net cash provided by operating activities	$ 54,722	$ 33,401
Net cash used in investing activities	(5,780)	(5,091)
Net cash (used in) provided by financing activities	(29,321)	267
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(847)	(1,148)
Net increase in cash, cash equivalents and restricted cash	$ 18,774	$ 27,429

Net cash provided by operating activities

Net cash provided by operating activities for the six months ended June 30, 2021 was $54.7 million, which reflects an increase of $21.3 million compared to the six months ended June 30, 2020. This increase was the result of an increase in our net income and changes to our working capital position for the six months ended June 30, 2021, as compared to the six months ended June 30, 2020.

Net cash used in investing activities

Net cash used in investing activities for the six months ended June 30, 2021 was $5.8 million, which reflects an increase of $0.7 million compared to the six months ended June 30, 2020. The increase was primarily the result a $2.9 million increase in cash payments for capital expenditures in the current year, partially offset by a $2.3 million payment in the prior year for business acquisitions.

Net cash (used in) provided by financing activities

Net cash used in financing activities for the six months ended June 30, 2021 was $29.6 million, compared to cash provided by financing activities of $0.3 million for the six months ended June 30, 2020. For the six months ended June 30, 2021, we made a $30.0 million payment on our revolving credit facility.

Effect of exchange rate changes on cash, cash equivalents and restricted cash

There were adverse effects of exchange rate changes on cash, cash equivalents and restricted cash of $0.9 million and $1.2 million for the six months ended June 30, 2021 and 2020, respectively.

Contractual obligations and commitments

For more than twenty trading days during thirty consecutive trading days ended June 30, 2021, the last reported sale price of our common stock exceeded 130% of the conversion price of our convertible senior notes. As a result, the convertible senior notes were convertible at the option of the holders and the $193.9 million carrying amount of the convertible senior notes remained classified as a short-term liability. We may owe additional cash or shares to the note holders upon early conversion if our stock price exceeds $60.45 per share and we may experience dilution to the ownership interests of existing stockholders.

In January 2021, we repaid the $30.0 million outstanding balance on our revolving credit facility. There were no other material changes in our commitments under contractual obligations as disclosed in our Annual Report on Form 10-K for the year ended December 31, 2020.

Off-balance sheet arrangements

Through June 30, 2021, we did not have any relationships with unconsolidated organizations or financial partnerships, such as structured finance or special purpose entities that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Recently issued accounting pronouncements

See Note 2 in the Notes to consolidated financial statements in Item 1, Part I of this Quarterly Report on Form 10-Q for a full description of the recent accounting pronouncements and our expectation of their impact, if any, on our results of operations and financial condition.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to certain global market risks, including foreign currency exchange risk and interest rate risk primarily associated with our revolving credit facility.

Foreign Currency Risk

As a result of our substantial international operations, we are exposed to foreign currency risks that arise from our normal business operations, including in connection with our transactions that are denominated in foreign currencies. In addition, we translate sales and financial results denominated in foreign currencies into United States dollars for purposes of our consolidated financial statements. As a result, appreciation of the United States dollar against these foreign currencies generally will have a negative impact on our reported revenue and operating income while depreciation of the United States dollar against these foreign currencies will generally have a positive effect on reported revenue and operating income.

To date, we have not entered into any foreign currency hedging contracts, since exchange rate fluctuations have not had a material impact on our operating results and cash flows. Based on our current international operations, we do not plan on engaging in hedging activities in the near future.

Market Risk and Market Interest Risk

In June 2019, we issued $230.0 million aggregate principal amount of 0.250% convertible senior notes due 2024. Our Convertible Notes have fixed annual interest rates at 0.250% and, therefore, we do not have economic interest rate exposure on our Convertible Notes. However, the value of the Convertible Notes is exposed to interest rate risk. Generally, the fair market value of our fixed interest rate Convertible Notes will increase as interest rates fall and decrease as interest rates rise. In addition, the fair values of the Convertible Notes are affected by our stock price. The fair value of the Convertible Notes will generally increase as our Class A common stock price increases in value and will generally decrease as our Class A common stock price declines in value. Additionally, we carry the Convertible Notes at face value less unamortized discount and issuance costs on our balance sheet, and we present the fair value for required disclosure purposes only.

As of June 30, 2021, we had cash, cash equivalents and restricted cash of $260.3 million, consisting primarily of bank deposits and money market funds. As of June 30, 2021, we had no outstanding borrowings under our 2019 Amended Credit Agreement. Such interest-bearing instruments carry a degree of interest rate risk; however, historical fluctuations of interest expense have not been significant.

Interest rate risk relates to the gain/increase or loss/decrease we could incur on our debt balances and interest expense associated with changes in interest rates. Changes in interest rates would impact the amount of interest income we realize on our invested cash balances. It is our policy not to enter into derivative instruments for speculative purposes, and therefore, we hold no derivative instruments for trading purposes.

Item 4. Controls and Procedures

The Company maintains disclosure controls and procedures (as defined in Rule 13a-15(e) or 15d-15(e) of the Exchange Act) that are designed to ensure that information required to be disclosed in periodic reports filed with the SEC under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to the Company’s management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of our disclosure controls and procedures as defined in Rule 13(a)-15(e) under the Exchange Act as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of June 30, 2021.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended June 30, 2021, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

As previously described in the Company’s Annual Report on Form 10-K for the year ended December 31, 2020, the Company is subject to legal proceedings for which there were no material changes during the six months ended June 30, 2021.

Item 1A. Risk Factors

There have been no material changes to the risk factors disclosed in the Company’s Annual Report on Form 10-K for the year ended December 31, 2020.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Not applicable.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

No.	Description
31.1*	Certification of the Chief Executive Officer of Altair Engineering Inc. pursuant to Rule 13a-14(a)/Rule 15d-14(a) under the Securities Exchange Act of 1934, as amended
31.2*	Certification of the Chief Financial Officer of Altair Engineering Inc. pursuant to Rule 13a-14(a)/Rule 15d-14(a) under the Securities Exchange Act of 1934, as amended
32.1**	Certification of the Chief Executive Officer and Chief Financial Officer of Altair Engineering Inc. pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS*	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibits 101).

* Filed herewith.

** The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Quarterly Report on Form 10-Q and will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the registrant specifically incorporates it by reference.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ALTAIR ENGINEERING INC.

Date: August 5, 2021

By: /s/ James Scapa
James R. Scapa
Chief Executive Officer (Principal Executive Officer)

Date: August 5, 2021

By: /s/ Matthew Brown
Matthew Brown
Chief Financial Officer (Principal Financial Officer)

Date: August 5, 2021

By: /s/ Brian Gayle
Brian Gayle
Senior Vice President, Chief Accounting Officer (Principal Accounting Officer)

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, James R. Scapa, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Altair Engineering Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of registrant’s board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

/s/ James Scapa
James R. Scapa
Chief Executive Officer
(Principal Executive Officer)

August 5, 2021

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Matthew Brown, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Altair Engineering Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of registrant’s board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

/s/ Matthew Brown
Matthew Brown
Chief Financial Officer
(Principal Financial and Accounting Officer)

August 5, 2021

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Altair Engineering Inc. (the "Company"), on Form 10-Q for the period ended June 30, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned officers of the Company certify to their knowledge and in their respective capacities, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ James Scapa
James R. Scapa
Chief Executive Officer
(Principal Executive Officer)

/s/ Matthew Brown
Matthew Brown
Chief Financial Officer
(Principal Financial and Accounting Officer)

August 5, 2021