

# **Keysight Technologies (KEYS)**

\$95.88 (As of 08/21/20)

Price Target (6-12 Months): \$102.00

Long Term: 6-12 Months	Zacks Recommendation:	Neutral
	(Since: 07/27/20)	
	Prior Recommendation: Under	rperform
Short Term: 1-3 Months	Zacks Rank: (1-5)	3-Hold
	Zacks Style Scores:	VGM:B
	Value: C. Growth: B	Momentum: A

### **Summary**

Keysight's better-than-expected fiscal third-quarter results and impressive guidance for fiscal fourth quarter reflect uptick in 5G test solutions and strong backlog. Improving supply chain management and demand recovery across Asia Pacific contributed to revenues. Keysight is well poised to gain from solid demand of its semiconductor measurement solutions as semiconductor companies look to develop chips based on next-generation process technologies. Also, higher government spending and momentum in investments aimed at technology modernization across the United States is a positive. However, coronavirus crisis-led weakness in automotive and general electronics sectors, and sluggish spending across Europe and Huawei related headwinds are major concerns. Notably, shares of Keysight have underperformed the industry on a year-to-date basis.

### **Data Overview**

Last EPS Surprise

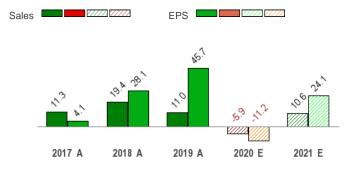
52 Week High-Low	\$110.00 - \$77.93
20 Day Average Volume (sh)	1,242,213
Market Cap	\$17.9 B
YTD Price Change	-6.6%
Beta	1.06
Dividend / Div Yld	\$0.00 / 0.0%
Industry	Electronics - Measuring Instruments
Zacks Industry Rank	Bottom 23% (194 out of 252)

Last Sales Surprise	10.1%
EPS F1 Est- 4 week change	-0.4%
Expected Report Date	NA
Earnings ESP	5.3%
P/E TTM	21.0
P/E F1	22.9
PEG F1	2.3
P/S TTM	4.4

## Price, Consensus & Surprise



## Sales and EPS Growth Rates (Y/Y %)



## Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	1,071 E	1,094 E	1,087 E	1,185 E	4,478 E
2020	1,095 A	895 A	1,011 A	1,140 E	4,048 E
2019	1,006 A	1,090 A	1,087 A	1,120 A	4,303 A
EPS E	stimates				
	Q1	Q2	Q3	Q4	Annual*
2021	\$1.17 E	\$1.26 E	\$1.26 E	\$1.40 E	\$5.20 E

\$1.19 A

\$1.25 A

\$1.38 E

\$1.33 A

\$4.19 E

\$4.72 A

\$0.78 A

\$1.22 A

\*Quarterly figures may not add up to annual.

\$1.26 A

\$0.93 A

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 08/21/2020. The reports text is as of 08/24/2020.

2020

2019

41.7%

#### Overview

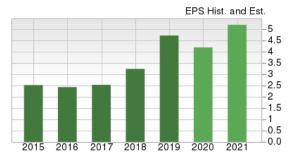
Based in Santa Rosa, CA, Keysight Technologies, Inc. is a provider of electronic design and test instrumentation systems. In 2013, Agilent Technologies announced that it will split into two independent companies. One of the companies was named Keysight Technologies, which became a fully independent electronic measurement company on Nov 1, 2014 and got listed on the New York Stock Exchange on Nov 3, 2014, with ticker symbol KEYS.

In fiscal 2019, the company generated non-GAAP revenues of \$4.312 billion

Beginning first-quarter fiscal 2020, the company's financial reporting comprises two segments — Electronic Industrial Solutions Group (EISG) and Communications Solutions Group (CSG). In third-quarter fiscal 2020, the company generated non-GAAP revenues of \$1.011 billion.

Under CSG segment (75% of the non-GAAP revenues in third-quarter fiscal 2020), the company offers radio frequency (RF) and microwave test instruments and allied software, and electronic design automation (EDA) software instruments, laser source products, optical amplifiers, and other software solutions.

Notably, Ixia Solutions Group (ISG) segment reporting has been aligned with the CGS segment. ISG was formed after conclusion of Ixia buyout in Apr 18, 2017. Keysight's test and visibility solutions, and software maintenance services, were formerly under ISG.



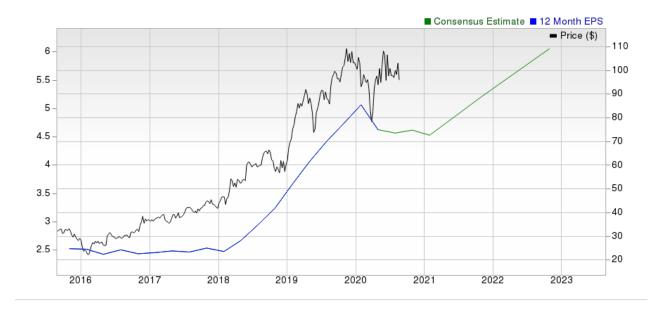


CSG includes commercial communications (CC) and aerospace, defense & government (ADG) end markets.

In third-quarter fiscal 2020, CC and ADG revenues came in at \$468 million and \$185 million, respectively.

EISG (25%) accounts for design verification devices; general purpose test and measurement equipment; end-to-end manufacturing systems, and material analysis devices.

The company generated 36% of non-GAAP revenues from Americas in third-quarter fiscal 2020. Meanwhile, revenues from Europe and Asia Pacific came in at 16% and 48%, respectively.



#### **Reasons To Buy:**

▲ Electronic devices form the very fulcrum of Internet of Things (IoT) services, wireless devices, data centers and 5G technologies. The rapid adoption of these devices is increasing demand for electronics testing equipment. Further, ongoing technical advancement in mobile communications, semiconductors and automotive markets are likely to drive growth. Moreover, rising demand for power management applications is a key catalyst. Sturdy efforts toward the ongoing modification of the Internet infrastructure, evolution of smart cars & autonomous-driving vehicles bode well. Additionally, medical devices and pharmaceutical markets hold immense potential, thanks to growing usage of electronics-based testing equipment in these markets. In fact, per MarketsandMarkets data, test and measurement

Robust adoption driven by high demand for 5G design and test solutions primarily from telecom vendors, and a strong pipeline for new business bookings are key catalysts.

equipment market is projected to be \$32.3 billion by 2024 at a CAGR of 3.9% from the estimated valuation of approximately \$25.7 billion in 2018.

- ▲ Keysight is gaining from strong industry wide growth. The company is witnessing solid adoption of its electronic design and test solutions. Strong demand for its solutions has been a key catalyst behind robust top-line growth. The company boasts a solid clientele comprising Alphabet, Amazon, Boeing, Facebook, MediaTek, Microsoft, Nvidia, Samsung, TSMC, and Tesla, to mention a few. Moreover, the company has a strong pipeline of new business bookings.
- ▲ Keysight boasts of a robust 5G portfolio. The company's 5G product design validation solutions ranging from Layer 1 to 7 enable telecom and semiconductor companies to accelerate their 5G initiatives. Further, Keysight's 5G network emulation solutions facilitate end-to-end processes from development to deployment, accelerating the 5G device architecture. The solutions offer cost-efficient test techniques with high flexibility and control capabilities, reducing time-to-market. Notably, over past three years, Keysight witnessed CAGR of more than 60% in order growth in 5G domain. Intensive infrastructure investments in 5G deployment and positive trial testing results hold promise. In fact, per ResearchAndMarkets data, global 5G market is expected to reach \$277 billion by 2025, witnessing a CAGR of around 111% between 2019 and 2025. Based on its portfolio strength, we believe that the company is well poised to gain from this robust growth prospect.
- Apart from strength in 5G domain, Keysight's efforts in other emerging growth markets like Internet of Things (IoT) and high-speed data centers, bodes well for the top line. Particularly, management's focus on Automotive and Energy, and Aerospace and Defense domains augur well in the long haul. In fact, growth in revenues from Aerospace, Defense and Government end-market deserves a special mention. Moreover, estimated higher spending on aerospace and defense as reflected in the fiscal 2021 defense budget proposal bodes well. If approved, such a stupendous budgetary amendment will reflect massive growth prospects. The company is expected to benefit from the growing proliferation of electronic content in vehicles, momentum in space and satellite applications, and rising adoption of driver-assistance systems globally.
- ▲ The company has been active on the acquisition front. Keysight recently acquired Thales Calibration Services, a subsidiary of Thales Group. The buyout is likely to expand the company's current electrical portfolio, aiding Keysight in gaining foothold in the defense and security space. Similarly, buyouts like Ixia (January 2017), Electroservices Enterprises and Anite (August 2015), and Eagleware-Elanix (August 2005) have aided growth by expanding product portfolio at various levels and adding competence and domain expertise.
- ▲ Keysight is also expanding its business through collaborations with established sector players. Notably, the company is extending Ixia's CloudLens visibility platform capabilities, enabling it to offer access to packet data in leading cloud platforms including Amazon Web Services ("AWS"), Microsoft Azure, Google Cloud Platform, Alibaba Cloud, among others. This move is expected to augment adoption of CloudLens, which in turn favors top-line growth. Furthermore, Keysight's collaborations with the likes of Softbank, OPPO, ASUS, Motorola, Verizon Communications and Qualcomm Technologies, are enabling it to achieve 5G commercialization related milestones. Additionally, tie-ups with fabless semiconductor companies engaged in providing 5G chipsets, like UNISOC, MediaTek, among others, enhances Keysight's prospects in the 5G domain, favoring top-line growth. Moreover, the company is also part of China-based Phase I Step 3 5G trials led by IMT-2020 Promotion Group. The extended collaborations augur well for the company in the long haul.
- ▲ Management execution has been good amid the coronavirus-induced crisis scenario. As of Jul 31, 2020, Keysight had cash & cash equivalents of \$1.697 billion and \$450 million of further liquidity available for use under untapped revolving credit facility. As on Jul 31, 2020, the company reported long-term debt of \$1.789 billion. Solid near-term liquidity position provides the company with the flexibility required to pursue any growth strategy, whether by way of acquisitions or otherwise. Also, total debt to total equity of 59.2% is lower than the prior quarter's figure of 63.2%. Moreover, cash flow from operations during the third quarter of fiscal 2020 came in at \$183 million and free cash flow was \$151 million. The strong cash flows are expected to help Keysight to continue shareholder-friendly initiatives of share repurchase.

#### **Reasons To Sell:**

Keysight derives a significant proportion of its revenues from outside the United States (64% of total non-GAAP revenues in third-quarter fiscal 2020), subjecting the company to exchange rate volatility. Unfavorable movement in exchange rates of foreign currencies like renminbi, euro, pound sterling, Costa Rican colon, and yen related to the U.S. dollar can adversely impact results and undermine its growth potential to some extent.

Exposure to foreign currency fluctuations, integration risks and a leveraged balance sheet remain major concerns.

- ▼ Keysight is considerably exposed particularly to the demand environment in China (19.1% of revenues in fiscal 2019), which is at present quite sluggish. Further, imposition of tariffs owing to trade war between the United States and China is anticipated to negatively impact growth prospects. The uncertainty over the trade war truce has impacted investors' confidence and is likely to remain an overhang on the company's performance.
- ▼ Moreover, the coronavirus outbreak led global supply chain disruptions and shutdown of production facilities and associated macroeconomic challenges are expected to impede Keysight's near-term growth prospects. The coronavirus crisis-induced weakness in automotive and general electronics sectors, and sluggish spending across Europe, remain major headwinds.
- ▼ Keysight's frequent acquisitions have escalated integration risks. Moreover, we note that the buyouts negatively impacted the company's balance sheet in the form of high level of goodwill and net intangible assets, which comprised of 26.9% of total assets as of Jul 31, 2020.
- ▼ Keysight is trading at premium in terms of Price/Book (P/B). Keysight currently has a trailing 12-month P/B ratio of 5.35X. This level compares unfavorably with what the industry witnessed in the prior year. Consequently, the valuation looks slightly stretched from P/B perspective.

### **Last Earnings Report**

#### Keysight Q3 Earnings Beat Estimates, Revenues Down Y/Y

Keysight Technologies, Inc. reported third-quarter fiscal 2020 non-GAAP earnings of \$1.19 per share, outpacing the Zacks Consensus Estimate by 41.7%. However, the bottom line declined 4.8% from the year-ago quarter.

Non-GAAP revenues declined 7% year over year to \$1.011 billion. Non-GAAP core revenues (excluding the impact of currency and revenues from acquisitions in a year's time) declined 7% on a year-over-year basis to \$1.007 billion. Moreover, GAAP revenues slumped 7% from the prior-year quarter to \$1.011 billion. The Zacks Consensus Estimate for revenues was pegged at \$919 million.

Quarter Ending	07/2020		
Report Date	Aug 20, 2020		
Sales Surprise	10.05%		
EPS Surprise	41.67%		
Quarterly EPS	1.19		
Annual EPS (TTM)	4.56		
7			

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The coronavirus crisis-induced weakness in automotive and general electronics sectors, and sluggish spending across Europe, primarily led to year-over-year decline.

Nevertheless, improving supply chain management, uptick in 5G test solutions on accelerated 5G deployment, and demand recovery across Asia Pacific led to better-than-expected performance.

Also, robust growth in Software and services revenues (represented more than 30% of total revenues) are providing buoyancy to Keysight's business model, bolstering recurring revenue growth and leading to expansion in gross margins.

During the reported quarter, Keysight concluded the acquisition of Eggplant from The Carlyle Group with an aim to boost software test automation capabilities.

#### **Quarter in Detail**

Orders fell 4% on a year-over-year basis to \$1.067 billion during the reported quarter. Notably, core orders declined 4%.

Beginning first-quarter fiscal 2020, the company's financial reporting comprises two segments — Electronic Industrial Solutions Group (EISG) and Communications Solutions Group (CSG). Ixia Solutions Group (ISG) segment reporting has been aligned with the CGS segment.

CSG includes commercial communications (CC) and aerospace, defense & government (ADG) end markets. CSG revenues of \$760 million declined 4% on year-over-year and core basis. CSG contributed 75% to total non-GAAP revenues in the fiscal third quarter.

CC revenues of \$559 million were up 2% year over year due to robust 5G order growth primarily fueled by 5G investments despite coronavirus crisis-induced supply chain disruption.

5G commercial deployment led to improvement in orders from 5G device and design developers. Moreover, expansion of investments in O-RAN (or Open Radio Access Network) and virtualization technologies contributed to recovery.

ADG revenues of \$201 million were down 17% year over year, due to coronavirus pandemic induced lower spending in aerospace, defense and government across Europe and Asia. However, higher government spending and momentum in investments aimed at technology modernization across the United States was a positive.

EISG revenues declined 15% to \$251 million. Challenges pertaining to coronavirus crisis induced softness in automotive and general electronics sector weighed on revenues. However, management noted momentum in first-to-market solutions, and strong demand for the company's solutions in process node technology testing, in semiconductor end-market. EISG contributed 25% to total non-GAAP revenues in third-quarter fiscal 2020.

Markedly, solid momentum in semiconductor measurement solutions was driven by growing clout of high-speed networking, smartphone processors, and high-performance data center applications.

#### Revenue Breakup by Geography

Non-GAAP revenues from Americas were \$365 million, down 18% (down 18% on a core basis) year over year on sluggishness in CC and EISG domains, on account of COVID-19 led disruptions. Robust order demand in ADG vertical failed to mitigate the decline.

Non-GAAP revenues from Europe of \$159 million declined 13% (down 14% on a core basis) on a year-over-year basis. Solid order demand in EISG vertical could not offset coronavirus crisis induced sluggishness in ADG and CC domains.

Non-GAAP revenues from Asia Pacific of \$487 million improved 5% (up 5% on a core basis) on a year-over-year basis. Strength in order demand across CC and EISG offset the softness in ADG domain.

Americas, Europe and Asia Pacific contributed 36%, 16% and 48%, respectively, to total non-GAAP revenues in the reported quarter.

#### **Margin Highlights**

Non-GAAP gross margin expanded 110 basis points (bps) to 64.5% during the reported quarter. CSG gross margin of 65.2% expanded 110 bps, while EISG's gross margin of 62.4% expanded 90 bps on a year-over-year basis.

Non-GAAP operating expenses fell 6.5% to \$388 million. As a percentage of revenues, the figure expanded 30 bps to 38.4%.

Non-GAAP operating margin expanded 90 bps to 26.1%.

### **Balance Sheet & Cash Flow**

As of Jul 31, 2020, Keysight had cash & cash equivalents of \$1.697 billion, compared with \$1.841 billion as of Apr 30, 2020. The cash balance reflects impact of \$319 million of expenses pertaining to acquisition of Eggplant. At the end of the quarter, the company also had \$450 million of further liquidity available for use under untapped revolving credit facility.

As on Jul 31, 2020, the company reported long-term debt of \$1.789 billion, compared with \$1.788 billion as of Apr 30, 2020.

Cash flow from operations during the quarter was \$183 million compared with \$298 million reported in the prior quarter.

Free cash flow was \$151 million compared with the previous quarter's \$275 million.

During the reported quarter, the company did not repurchase any shares.

#### Guidance

Keysight is improving production and services operations, and anticipates returning to 100% capacity by the end of the fiscal fourth quarter despite persistent supply chain challenges.

For fourth-quarter fiscal 2020, the company expects revenues to be \$1.17-\$1.19 billion. The guidance includes impact from ongoing coronavirus crisis. Non-GAAP earnings per share are projected to be \$1.42-\$1.48.

#### **Recent News**

On Aug 19, Keysight announced that its connected car test solutions have been implemented by China FAW Group Co, Ltd (or FAW).

On Aug 18, Keysight announced that its 5G device test solutions have been adopted by Korea-based Telecommunications Technology Association (TTA) to provide radio resource management (RRM) and 5G new radio (NR) radio frequency (RF) conformance validation services.

On Aug 12, Keysight announced that Baicells has adopted its 5G User Equipment Emulation (UEE) solutions in a bid to validate the performance of base stations.

On Jul 27, Keysight announced collaboration with IPG Automotive and Nordsys in a bid to codevelop and accelerate design of a new modular test platform aimed at accelerating the validation process of advanced driver-assistance systems (ADAS) and related functions for autonomous driving.

On Jul 22, Keysight announced that its 5G user equipment emulation (UEE) solutions have been adopted by Mavenir to facilitate development of advanced software for 5G radio access network (RAN) and innovative 5G core (5GC) platforms.

On Jul 14, Keysight expanded its Scienlab Charging Discovery System (CDS) portfolio with two latest certification and test solutions for charging interfaces within an electric vehicle (EV) or electric vehicle supply equipment (EVSE). The first solution offers high-power charging, while the second is an EMC optimized version that aids AC or DC charging.

On Jul 9, Keysight announced that its conformance and carrier acceptance test solutions have been adopted by SGS to comply with 5G new radio (NR) certification criteria set by 3GPP and mobile operators in the United States and Asia-Pacific (APAC).

On Jul 7, Keysight rolled out a new test solution in a bid to aid 5G device vendors optimize the performance of 5G devices, which utilize MIMO and massive MIMO technology, and increase data throughput and enhance network capacity.

On Jun 29, Keysight announced that its 5G test platforms were selected by Arcadyan to validate consumer premises equipment (CPE) for fixed wireless access applications (FWA).

On Jun 25, Keysight concluded the acquisition of Eggplant from The Carlyle Group with an aim to boost software test automation capabilities. Notably, the deal is worth \$330 million.

On Jun 18, Keysight launched a new family of photovoltaic (PV) array simulators that are the first to deliver 2000 V and 20 kW of power in a 3U format. The simulators enable engineers to maximize solar power conversion.

On Jun 16, Keysight announced the launch of two new bidirectional, regenerative DC power supplies that provide high power and voltage for battery and electronics testing in hybrid-electric/electric vehicles (HEV/EV).

On Jun 10, Keysight announced that its 5G and 4G LTE test platforms have been selected by Gemtek — a Taiwan-based original design manufacturer (ODM) of wireless broadband communications equipment — to validate data rate performance of mobile devices and consumer premises equipment (CPE).

On Jun 4, Keysight announced that its 5G test platforms have been selected by Sporton, a Taiwan-based test laboratory, to certify 5G devices in compliance with standards specified by 3GPP, and other regulatory measures.

On Jun 2, Keysight announced that its end-to-end 5G emulation solutions have been adopted by CETECOM to comply with 5G new radio (NR) certification criteria per the latest 3GPP standards.

On May 28, Keysight announced that its 5G verification solutions have been selected by Audix, a Taiwan-based test laboratory, to authenticate safe levels of radio frequency (RF) and microwave emissions from wireless devices.

On May 20, Keysight announced that its 5G device testing solutions have been selected by China Unicom to ensure 5G smartphones and consumer premises equipment (CPE) comply to the latest 5G new radio (NR) standards.

On May 12, Keysight announced the launch of the Infiniium MXR-Series mixed signal oscilloscope, the first ever oscilloscope with 8 analog channels at 6 GHz and 16 simultaneous digital channels which provides greater accuracy and performance.

On May 11, Keysight announced the launch of a new simulation workflow that connects PathWave Advanced Design System (ADS) with VPI Design Suite from VPIphotonics, and enables designers to predict the signal integrity of Electrical-Optical-Electrical data links.

On May 5, Keysight unveiled PathWave Waveform Analytics, an edge-to-cloud computing application, which accelerates anomaly detection and reduces data storage costs in pre-silicon validation with sacrificing reliability.

On May 4, Keysight announced that it has become the first company to gain approval from 3GPP for 5G new radio (NR) protocol test cases that support carrier aggregation (CA) technology.

## **Valuation**

Keysight's shares are down 6.6% in the year-to-date period but up 0.8% over the trailing 12-month period. Stocks in the Zacks sub-industry are down 6.1%, while the same in the Zacks Computer & Technology sector are up 23.7% in the year-to-date period. Over the past year, the Zacks sub-industry and the sector are up 11.9% and 40.9%, respectively.

The S&P 500 index is up 5.5% in the year-to-date period and 18.3% in the past year.

The stock is currently trading at 19.14X forward 12-month earnings compared with 26.9X for the Zacks sub-industry, 26.81X for the Zacks sector and 22.85X for the S&P 500 index.

In the past five years, the stock has traded as high as 24.71X and as low as 8.96X, with a five-year median of 17.91X. Our Neutral recommendation indicates that the stock will perform in line with the market. Our \$102 price target reflects 20.36X forward 12-month earnings.

The table below shows summary valuation data for KEYS

Valuation Multiples - KEYS					
		Stock	Sub-Industry	Sector	S&P 500
	Current	19.14	26.9	26.81	22.85
P/E F12M	5-Year High	24.71	31.58	26.81	22.85
	5-Year Low	8.96	12.94	16.72	15.25
	5-Year Median	17.91	23.39	19.6	17.58
	Current	4.08	3.35	4.17	3.71
P/S F12M	5-Year High	4.73	3.71	4.17	3.71
	5-Year Low	1.19	0.98	2.32	2.53
	5-Year Median	2.41	1.72	3.14	3.05
	Current	4.41	3.34	4.86	3.33
EV/Sales TTM	5-Year High	4.84	3.6	4.86	3.46
	5-Year Low	1.44	1.1	2.59	2.14
	5-Year Median	2.99	2.16	3.64	2.88

As of 08/21/2020

# Industry Analysis Zacks Industry Rank: Bottom 23% (194 out of 252) ■ Industry Price

#### ■ Price \_110 Industry h\_M-100 30 - 🕠 -20

# **Top Peers**

Company (Ticker)	Rec R	lank
Garmin Ltd. (GRMN)	Outperform	1
Lam Research Corporation (LRCX)	Outperform	1
AAON, Inc. (AAON)	Neutral	4
ASML Holding N.V. (ASML)	Neutral	3
Amtech Systems, Inc. (ASYS)	Neutral	3
Canon, Inc. (CAJ)	Neutral	4
Cadence Design Systems, Inc. (CDNS)	Neutral	2
Nova Measuring Instruments Ltd. (NVMI)	Neutral	3

Industry Comparison Industr	ndustry Comparison Industry: Electronics - Measuring Instruments				Industry Peers			
	KEYS	X Industry	S&P 500	ASML	ASYS	CA		
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutra		
Zacks Rank (Short Term)	3	-	-	3	3	4		
VGM Score	В	-	-	С	D	В		
Market Cap	17.93 B	70.04 M	23.62 B	156.22 B	72.63 M	18.55 E		
# of Analysts	6	1	14	3	2	3		
Dividend Yield	0.00%	0.00%	1.65%	0.67%	0.00%	4.27%		
Value Score	С	-	-	D	С	Α		
Cash/Price	0.10	0.14	0.07	0.03	0.65	0.24		
EV/EBITDA	16.32	4.95	13.29	43.12	4.85	3.67		
PEG Ratio	2.32	3.65	3.03	1.90	NA	23.36		
Price/Book (P/B)	5.81	3.84	3.11	11.17	0.88	0.73		
Price/Cash Flow (P/CF)	15.84	18.03	12.69	45.87	12.94	5.59		
P/E (F1)	23.23	25.41	21.51	43.20	NA	23.36		
Price/Sales (P/S)	4.35	1.18	2.43	11.04	1.03	0.62		
Earnings Yield	4.37%	3.54%	4.46%	2.31%	-10.25%	4.30%		
Debt/Equity	0.62	0.10	0.76	0.36	0.12	0.03		
Cash Flow (\$/share)	6.05	0.68	6.93	8.11	0.40	3.12		
Growth Score	В	-	-	В	D	C		
Hist. EPS Growth (3-5 yrs)	16.53%	18.62%	10.44%	23.00%	-46.92%	-7.30%		
Proj. EPS Growth (F1/F0)	-11.16%	-6.18%	-5.53%	25.01%	-289.29%	-29.56%		
Curr. Cash Flow Growth	-28.59%	-24.28%	5.20%	-4.32%	-45.26%	-27.71%		
Hist. Cash Flow Growth (3-5 yrs)	15.69%	17.64%	8.52%	14.58%	20.49%	-6.35%		
Current Ratio	3.47	3.17	1.33	2.91	8.21	1.75		
Debt/Capital	38.26%	9.35%	44.50%	26.70%	10.82%	2.85%		
Net Margin	14.68%	0.75%	10.13%	22.70%	-18.28%	2.18%		
Return on Equity	25.59%	4.52%	14.67%	23.21%	1.58%	2.51%		
Sales/Assets	0.61	0.88	0.51	0.56	0.62	0.68		
Proj. Sales Growth (F1/F0)	-5.92%	0.00%	-1.54%	15.43%	-29.43%	-7.34%		
Momentum Score	Α	-	-	D	F	C		
Daily Price Chg	-6.75%	-1.05%	-0.15%	-0.01%	-0.19%	-0.46%		
1 Week Price Chg	4.90%	0.74%	1.09%	1.37%	2.64%	4.20%		
4 Week Price Chg	-3.33%	-1.89%	1.64%	-3.15%	2.17%	-11.87%		
12 Week Price Chg	-7.49%	16.38%	6.72%	16.30%	-0.00%	-18.16%		
52 Week Price Chg	-4.45%	17.08%	1.00%	72.87%	-0.77%	-32.17%		
20 Day Average Volume	1,242,213	50,583	1,873,576	719,432	50,973	592,349		
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
(F1) EPS Est 4 week change	-0.42%	5.60%	1.79%	1.17%	-200.00%	-14.50%		
(F1) EPS Est 12 week change	-10.67%	5.88%	3.35%	18.10%	-200.00%	-23.02%		
(Q1) EPS Est Mthly Chg	0.00%	0.00%	0.42%	0.00%	-270.00%	-106.67%		

## **Zacks Stock Rating System**

We offer two rating systems that take into account investors' holding horizons: Zacks Rank and Zacks Recommendation. Each provides valuable insights into the future profitability of the stock and can be used separately or in combination with each other depending on your investment style.

#### **Zacks Recommendation**

The Zacks Recommendation aims to predict performance over the next 6 to 12 months. The foundation for the quantitatively determined Zacks Recommendation is trends in the company's estimate revisions and earnings outlook. The Zacks Recommendation is broken down into 3 Levels; Outperform, Neutral and Underperform. Unlike many Wall Street firms, we have an excellent balance between the number of Outperform and Neutral recommendations. Our team of 70 analysts are fully versed in the benefits of earnings estimate revisions and how that is harnessed through the Zacks quantitative rating system. But we have given our analysts the ability to override the Zacks Recommendation for the 1200 stocks that they follow. The reason for the analyst over-rides is that there are often factors such as valuation, industry conditions and management effectiveness that a trained investment professional can spot better than a quantitative model.

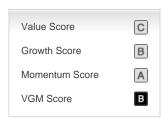
#### **Zacks Rank**

The Zacks Rank is our short-term rating system that is most effective over the one- to three-month holding horizon. The underlying driver for the quantitatively-determined Zacks Rank is the same as the Zacks Recommendation, and reflects trends in earnings estimate revisions.

### **Zacks Style Scores**

The Zacks Style Score is as a complementary indicator to the Zacks rating system, giving investors a way to focus on the highest rated stocks that best fit their own stock picking preferences.

Academic research has proven that stocks with the best Value, Growth and Momentum characteristics outperform the market. The Zacks Style Scores rate stocks on each of these individual styles and assigns a rating of A, B, C, D and F. We also produce the VGM Score (V for Value, G for Growth and M for Momentum), which combines the weighted average of the individual Style Scores into one score. This is perfectly suited for those who want their stocks to have the best scores across the board.



As an investor, you want to buy stocks with the highest probability of success. That means buying stocks with a Zacks Recommendation of Outperform, which also has a Style Score of an A or a B.

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