

6616 TOREX SEMICONDUCTOR

Sponsored Research
December 4, 2020

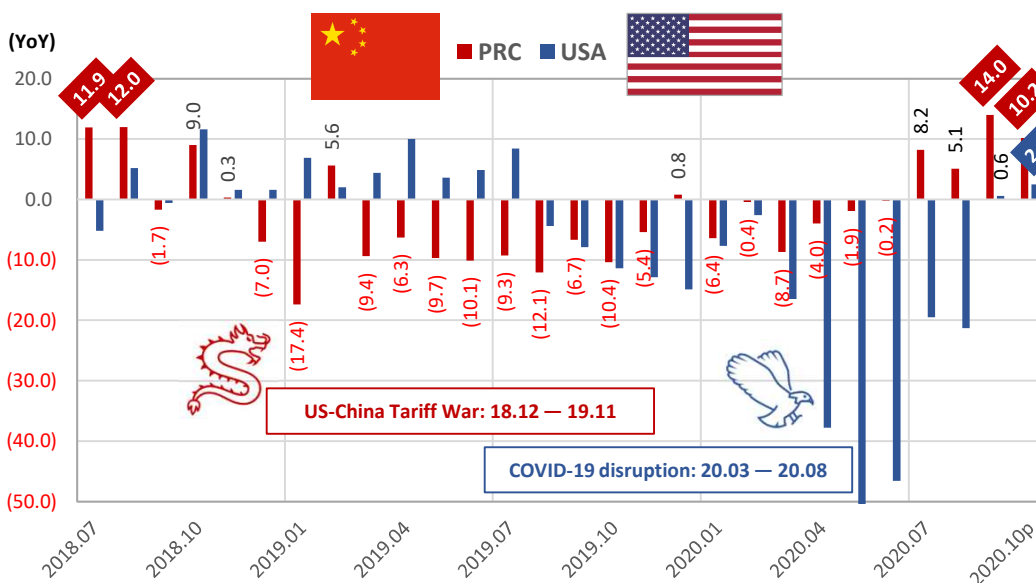


Focus shifting to outlook after COVID-19 YoY will get easier from the 4Q onward, many drivers in 2021

SUMMARY

- 1H consolidated results were net sales +10.4% and OP -21.0% YoY. Following strong 1Q (Apr-Jun) results of net sales +22.1% and OP +148.9%, 2Q (Jul-Sep) results were net sales +0.3% and OP -74.2%. In addition, implied 2H guidance is for net sales +3.8% and OP -31.2%. Why is the TOREX Group struggling while demand indicators and earnings of global competitors are starting to recover? The simple answer is the high base for comparison in 2Q and 3Q last term where TOREX got an extra boost in automotive applications from high growth in drive recorders in Japan and from China's initiative to ramp up ETC nationwide. In other words, nimble TOREX was able to outperform by securing orders from specialized niche segments in 2019.
- As a proxy for power management IC demand, we have identified Japan exports to China as a fairly reliable indicator of the health of global trade in general and the electronics supply chain in particular. The graphic below shows the impact of the US failed tariff war with China negatively impacted Japan exports to China from Dec-2018 through Nov-2019. This was followed by disruption from COVID-19 from Mar-2020 through Aug-2020 negatively impacting Japan exports to the US. The takeaway from this is Japan exports to China posting 4 consecutive months growth, reaching double-digits in September and October. **Stock market focus has shifted to the outlook post-coronavirus next year.** 3Q results in February will likely confirm 2Q had the worst YoY profit declines, and YoY comps get easier from the 4Q onward. Drivers next term include expanded 5G service coverage, recovery in focus industrial from IoT and in automotive from ramp-up of new model hybrids/EVs. Daiichi Plant integration will be completed, and Kagoshima will turn profitable.

Japan Exports by Destination: China up double-digits and US turns positive YoY



Source: compiled by Sessa Partners from MOF Trade Statistics of Japan monthly press releases.

2Q Follow-up



Focus Points:

Power management IC specialist with attractive growth profile from new applications driven by 5G, IoT-connected devices and the electrification of cars.

Key Indicators

Share price (12/3)	1,360
YH (20/1/14)	1,743
YL (20/3/13)	855
10YH (14/11/6)	3,187.5
10YL (14/5/20)	725.8
Shrs out. (mn shrs)	11.55
Mkt cap (¥ bn)	15.71
EV (¥ bn)	12.32
Net cash / mkt cap	21.6%
Shr eqty ratio (9/30)	61.7%
21.3 P/E (CE)	43.7x
21.3 EV/EBITDA (CE)	6.75x
20.9 P/B (act)	0.80x
21.3 DY (CE)	2.35%

YTD weekly share price



Source: SPEEDA

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TOREX SEMICONDUCTOR Consolidated Earnings Trend and FY3/21 Revised Full-term Guidance

J-GAAP JPY mn, %	FY3/16 act	FY3/17 act	FY3/18 act	FY3/19 act	FY3/20 act	1H 3/21 init CE	1H 3/21 act	2H 3/21 implied	FY3/21 rev'd CE
Net sales	10,621	21,560	23,997	23,897	21,501	11,400	11,409	11,591	23,000
YoY	6.5	103.0	11.3	(0.4)	(10.0)	10.3	10.4	3.8	7.0
Gross profit	5,063	5,900	7,177	6,494	5,452	—	2,536	—	—
GPM	47.7%	27.4%	29.9%	27.2%	25.4%	—	22.2%	—	—
SG&A expenses	3,923	4,649	4,964	4,943	4,774	—	2,275	—	—
Ratio to sales	36.9%	21.6%	20.7%	20.7%	22.2%	—	19.9%	—	—
Depreciation	442	1,219	934	1,085	1,312	—	547	778	1,325
EBITDA	1,582	2,470	3,147	2,636	1,990	—	807	1,018	1,825
YoY	(9.9)	56.2	27.4	(16.2)	(24.5)	—	(15.2)	(2.0)	(8.3)
EBITDA margin	14.9%	11.5%	13.1%	11.0%	9.3%	—	7.1%	8.8%	7.9%
Operating profit	1,140	1,251	2,212	1,551	678	220	261	239	500
YoY	(15.6)	9.8	76.8	(29.9)	(56.3)	(33.4)	(21.0)	(31.2)	(26.3)
OPM	10.7%	5.8%	9.2%	6.5%	3.2%	—	2.3%	2.1%	2.2%
Ordinary profit	971	906	1,998	1,820	676	180	178	222	400
YoY	(42.2)	(6.7)	120.6	(8.9)	(62.9)	(35.5)	(36.2)	(44.1)	(40.8)
Profit ATOP	580	2,931	902	1,049	418	170	158	182	340
YoY	(53.5)	404.9	(69.2)	16.3	(60.2)	7.8	0.0	(29.8)	(18.6)
EPS (¥)	54.59	308.77	99.44	95.89	38.03	15.58	14.44	16.70	31.14
DPS (¥)	32.00	32.00	34.00	38.00	40.00	16.00	16.00	16.00	32.00
BPS (¥)	1,022.30	1,267.65	1,338.74	1,717.90	1,712.30	—	1,705.64	—	—
Overseas sales ratio	70.6%	71.9%	71.0%	71.8%	67.2%	—	71.9%	—	—
Avg. forex rate (USD)	¥120.1	¥108.9	¥110.8	¥110.7	¥109.1	¥108.0	¥106.7	—	¥106.0
Capex	602	988	1,149	3,323	1,497	—	621	1,155	1,776
R&D	204	229	406	357	403	—	—	—	—
Cash and deposits	6,617	7,769	10,835	10,982	9,281	—	11,346	—	—
Interest bearing debt	3	6,094	4,980	4,671	4,649	—	7,949	—	—
ST loans	3	2,423	2,483	1,903	2,902	—	2,902	—	—
LT loans < 1Y	—	1,174	1,103	1,021	605	—	1,210	—	—
LT loans	—	2,496	1,394	1,748	1,143	—	3,838	—	—
Net cash (net debt)	6,613	1,675	5,855	6,311	4,632	—	3,397	—	—
Net assets	10,929	15,598	19,085	19,638	18,672	—	18,660	—	—
Non-controlling int.	43	4,165	4,582	44	—	—	—	—	—
Shr Eqty + Accum OCI	10,886	11,432	14,503	19,594	18,672	—	18,660	—	—
Total assets	12,973	25,210	27,995	28,386	27,847	—	30,250	—	—
Equity ratio (%)	83.9	45.3	51.8	69.0	67.1	—	61.7	—	—
ROE (%)	5.3	26.3	7.0	6.2	2.2	—	—	—	—
Amt dividends paid	340	305	341	425	438	—	—	—	—
Consol. payout (%)	58.6	10.7	34.2	39.6	105.2	—	—	—	102.6
DOE (%)	3.1	2.7	2.6	2.5	2.3	—	—	—	1.8

NOTE: by Japanese accounting convention, figures reported in thousand yen are truncated (cut off) when displayed in million yen, however YoY percentages and various financial ratios are calculated based on thousand yen. In order to preserve accuracy of YoY percentages and ratios, figures here are input in thousand yen and displayed rounded off to the nearest million yen. SOURCE: compiled by Sessa Partners from company TANSWIN financial statements.

While 1H net sales came spot in line with initial guidance, 1H OP topped guidance for ¥220mn (-33.4%), coming in at ¥261mn (-21.0%), largely due to successful control of SG&A. Despite the 18.6% overshoot on OP, ordinary profit still came in below guidance due to the larger than expected forex loss, with realized 1H USD rate of ¥106.7 versus assumption of ¥108. The company released full-term FY3/21 guidance for the first time, with implied 2H OP guidance for -31.2% YoY. We believe there are built-in buffers from the conservative top-line forecast, considering strong potential for a cyclical recovery to begin to take hold in the 4Q, as well as room for actual 2H depreciation to be lower than budget. Even with prudent topping up of bank financing, the B/S remains extremely healthy, with net cash accounting for nearly 24% of market cap.

TOREX SEMICONDUCTOR Quarterly Consolidated Earnings Trend

JPY mn, %	FY3/19	FY3/20	1Q 3/19	2Q 3/19	3Q 3/19	4Q 3/19	1Q 3/20	2Q 3/20	3Q 3/20	4Q 3/20	1Q 3/21	2Q 3/21
	act	act	act	act	act	act	act	act	act	act	act	act
Net sales	23,896	21,500	6,203	6,266	6,074	5,353	4,797	5,534	5,598	5,571	5,858	5,550
YoY	(0.4)	(10.0)	8.6	2.8	0.6	(13.0)	(22.7)	(11.7)	(7.8)	4.1	22.1	0.3
• Phenitec contrib.	13,792	11,837	3,727	3,539	3,642	2,884	2,595	2,885	3,035	3,322	3,688	3,330
YoY	(0.3)	(14.2)	15.1	0.7	4.4	(19.6)	(30.4)	(18.5)	(16.7)	15.2	42.1	15.4
• Torex	10,104	9,663	2,476	2,727	2,432	2,469	2,202	2,649	2,563	2,249	2,170	2,220
YoY	(0.6)	(4.4)	0.1	5.7	(4.6)	(3.7)	(11.1)	(2.9)	5.4	(8.9)	(1.5)	(16.2)
Gross profit	6,493	5,451	1,921	1,892	1,530	1,151	1,269	1,422	1,446	1,315	1,325	1,210
GPM	27.2%	25.4%	31.0%	30.2%	25.2%	21.5%	26.5%	25.7%	25.8%	23.6%	22.6%	21.8%
SG&A	4,942	4,773	1,246	1,216	1,218	1,263	1,191	1,170	1,241	1,172	1,129	1,146
Ratio to sales	20.7%	22.2%	20.1%	19.4%	20.1%	23.6%	24.8%	21.1%	22.2%	21.0%	19.3%	20.6%
Depreciation	1,085	1,312	195	239	300	351	305	317	335	355	269	278
YoY	16.2	20.9	(11.8)	4.4	29.9	38.7	56.4	32.6	11.7	1.1	(11.8)	(12.3)
EBITDA	2,635	1,990	870	915	612	239	384	568	540	498	464	343
YoY	(16.2)	(24.5)	28.7	5.8	(21.5)	(71.0)	(55.9)	(37.9)	(11.8)	108.4	21.1	(39.6)
Ratio to sales	11.0%	9.3%	14.0%	14.6%	10.1%	4.5%	8.0%	10.3%	9.6%	8.9%	7.9%	6.2%
Operating profit	1,550	678	675	676	311	(112)	78	252	204	144	195	65
YoY	(29.9)	(56.3)	48.4	6.5	(43.5)	TR	(88.4)	(62.7)	(34.4)	TB	148.9	(74.2)
OPM	6.5%	3.2%	10.9%	10.8%	5.1%	-2.1%	1.6%	4.6%	3.6%	2.6%	3.3%	1.2%
• Phenitec contrib.	904	225	487	413	186	(182)	59	4	78	84	122	(33)
YoY	(42.7)	(75.1)	60.7	(19.6)	(46.1)	TR	(87.9)	(99.0)	(58.1)	TB	106.8	TR
OPM	6.6%	1.9%	13.1%	11.7%	5.1%	-6.3%	2.3%	0.1%	2.6%	2.5%	3.3%	-1.0%
• Torex	646	453	188	263	125	70	19	248	126	60	73	98
YoY	2.1	(29.9)	23.7	117.4	(39.0)	(54.8)	(89.9)	(5.7)	0.8	(14.3)	284.2	(60.5)
OPM	6.4%	4.7%	7.6%	9.6%	5.1%	2.8%	0.9%	9.4%	4.9%	2.7%	3.4%	4.4%
Ordinary profit	1,820	676	924	819	227	(150)	11	268	240	157	180	(3)
YoY	(8.9)	(62.9)	98.3	27.8	(62.5)	TR	(98.8)	(67.3)	5.7	TB	16.4x	TR
Profit ATOP	1,049	417	496	469	123	(39)	12	146	133	127	168	(11)
YoY	16.3	(60.2)	112.0	75.7	(58.0)	TR	(97.6)	(68.9)	8.1	TB	13.9x	TR

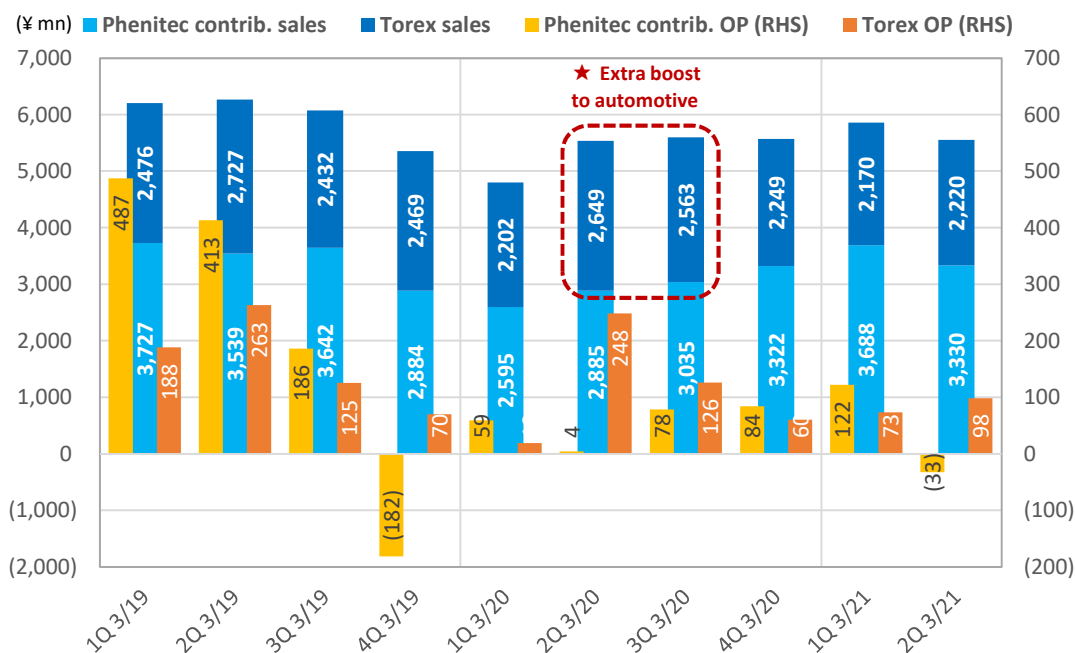
Source: compiled by Sessa Partners from company IR results briefing presentation materials.



Torex 2Q sales declined -16% due to the -60% decline in automotive, and OP declined sharply.

While Phenitec-contribution 2Q sales increased +15%, driven by the recovery in industrial and consumer electronics, mix deteriorated with high-margin Japan sales -9% and low-margin China consumer electronics up double-digits. In addition, the spike in gold increased raw materials costs, posting an operating loss.

Phenitec contribution 2Q 3/21 OP loss due to mix, gold spike and plant merger costs



Torex Sales Trend by Application and D-in based* Region

JPY mn, %	FY3/19	FY3/20	1Q 3/19	2Q 3/19	3Q 3/19	4Q 3/19	1Q 3/20	2Q 3/20	3Q 3/20	4Q 3/20	1Q 3/21	2Q 3/20
by Application												
Torex sales	10,104	9,663	2,476	2,727	2,432	2,469	2,202	2,649	2,563	2,249	2,170	2,220
• Industrial equipt.	3,927	3,463	966	1,063	945	953	784	912	933	834	872	763
• Automotive equipt.	1,535	1,749	381	384	362	408	350	615	457	327	241	249
• Medical equipt.	125	118	36	26	26	37	25	21	29	43	73	44
• Wearable equipt.	238	220	71	74	37	56	53	66	54	47	50	100
• Other	4,279	4,113	1,022	1,180	1,062	1,015	990	1,035	1,090	998	934	1,064
YoY												
Torex sales	(0.6)	(4.4)	0.1	5.7	(4.6)	(3.7)	(11.1)	(2.9)	5.4	(8.9)	(1.5)	(16.2)
• Industrial equipt.	5.3	(11.8)	9.8	14.3	(0.1)	(2.0)	(18.8)	(14.2)	(1.3)	(12.5)	11.2	(16.3)
• Automotive equipt.	(10.1)	13.9	(3.5)	(3.3)	(18.1)	(13.9)	(8.1)	60.2	26.2	(19.9)	(31.1)	(59.5)
• Medical equipt.	15.7	(5.6)	80.0	(13.3)	(23.5)	54.2	(30.6)	(19.2)	11.5	16.2	192.0	109.5
• Wearable equipt.	2.1	(7.6)	10.9	19.4	(31.5)	5.7	(25.4)	(10.8)	45.9	(16.1)	(5.7)	51.5
• Other	(2.6)	(3.9)	788.7	(45.4)	(1.0)	(2.5)	(3.1)	(12.3)	2.6	(1.7)	(5.7)	2.8
by Region												
Torex D-in* sales	10,104	9,663	2,476	2,727	2,432	2,469	2,202	2,649	2,563	2,249	2,170	2,220
• Japan	4,401	4,187	1,086	1,159	1,070	1,086	950	1,090	1,104	1,043	896	895
• Asia	3,312	3,405	791	896	818	807	724	1,001	980	700	781	849
• Europe	1,430	1,212	345	402	304	379	305	329	268	310	259	242
• North America	961	859	254	270	240	197	223	229	211	196	234	234
YoY												
Torex D-in* sales	(0.6)	(4.4)	0.1	5.7	(4.6)	(3.7)	(11.1)	(2.9)	5.4	(8.9)	(1.5)	(16.2)
• Japan	2.4	(4.9)	8.8	6.5	0.4	(5.1)	(12.5)	(6.0)	3.2	(4.0)	(5.7)	(17.9)
• Asia	(0.5)	2.8	(0.3)	13.0	(8.7)	(4.7)	(8.5)	11.7	19.8	(13.3)	7.9	(15.2)
• Europe	(4.1)	(15.2)	(19.0)	0.5	(7.9)	13.1	(11.6)	(18.2)	(11.8)	(18.2)	(15.1)	(26.4)
• North America	(8.7)	(10.6)	(1.2)	(10.0)	(6.6)	(17.2)	(12.2)	(15.2)	(12.1)	(0.5)	4.9	2.2

*Note: Torex 'Design-in' based sales = regional sales adjusted on orders received basis.

As can be seen in the table above, Torex automotive equipment sales in FY3/20 rose +14%, 2Q +60% and 3Q +26%, driven by China's vertical ramp-up of ETC nationwide (special demand that disappears this term), and high growth in drive recorders in Japan. The four exhibits on P5 show selected trends in automotive electronics applications. The first graph shows special demand from China's vertical ramp-up of ETC nationwide, which finished in 2019. The second graph shows high growth in drive recorder shipments in Japan last year, 2Q +52% and 3Q +40%. Structural high growth came to an abrupt halt in 4Q and 1Q due to stay-at-home orders and guidance to restrict travel between prefectures to halt the spread of COVID-19. Similar trends can be seen in the monthly trend for other key car electronics segments. Since people were using their cars much less, car-related purchases went on the back burner. However, drive recorders rose +82% QoQ in Jul-Sep, and car AV main units posted the highest unit shipments in September and October in the last 2 years as pent-up demand returns.

Inductor built-in micro DC/DC converter target markets / applications

Personal Electronics	Industrial Equipment	Automotive Equipment	Medical Equipment
Wireless earphones	5G optical transceivers	Drive recorders	Blood pressure monitors
Wearables	Microcontroller boards	ETC onboard units	Blood sugar monitors
Beauty care products	Sensor modules	Car navigation	Fingertip pulse oximeters
Bluetooth, WiFi, GPS modules	Camera modules	AV main units	Healthcare equipment
	Home security	Camera and sensor modules	
	POS terminals	Keyless entry	
	IoT device modules	Power sliding doors	
		Sub displays	



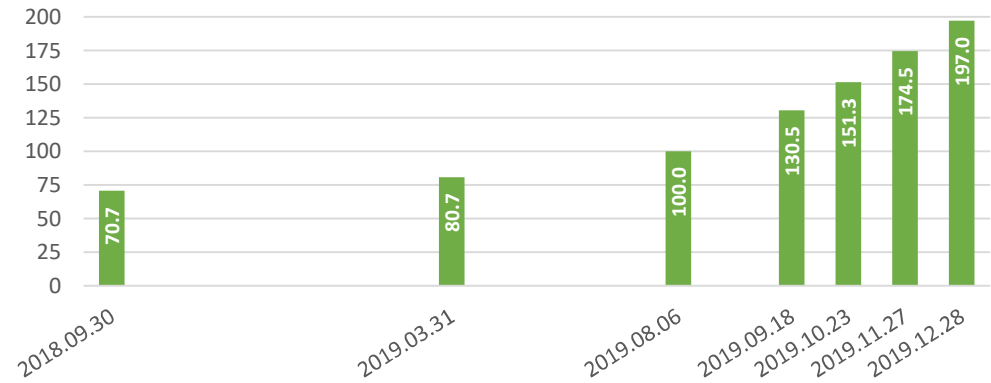
Selected Trends in Automotive Electronics

Full LCD display rear view mirror-type drive recorder (DR)



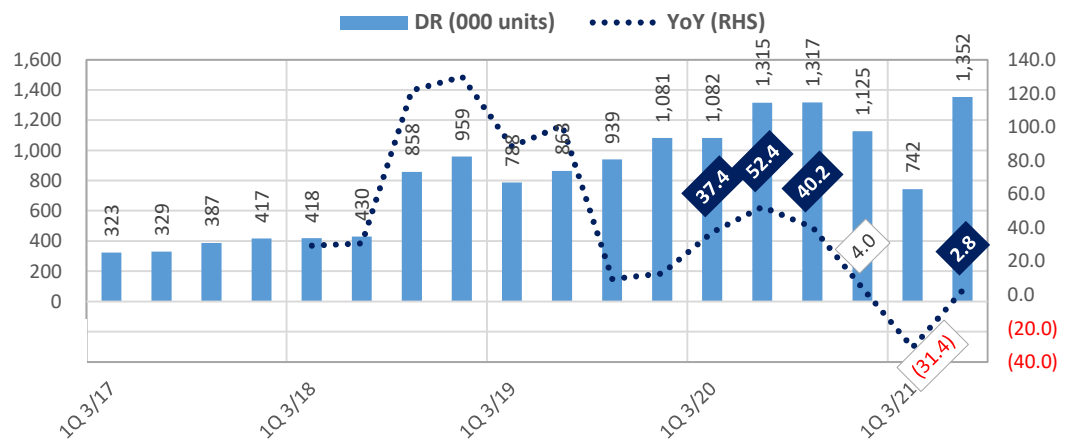
Source: MAXWIN

China exceeds 2019 year-end target of 180mn ETC users nationwide (mn units)



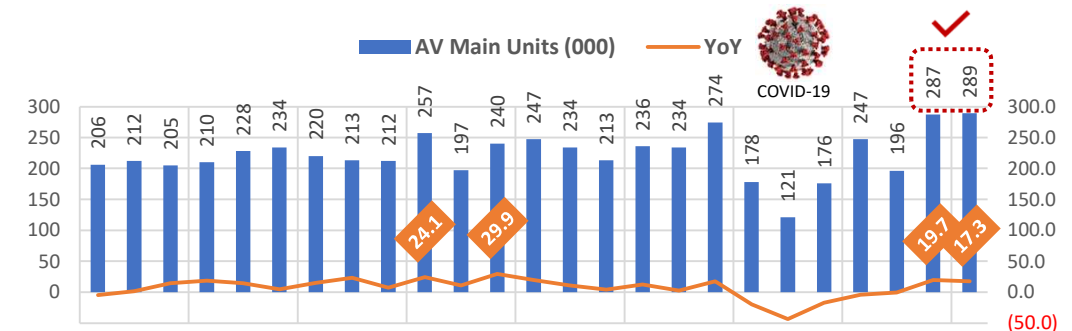
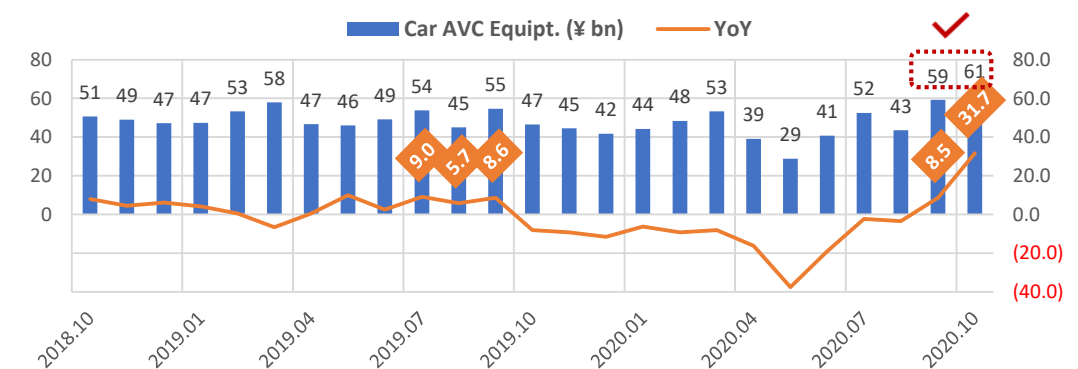
Source: China Daily (Xinhua News), China Ministry of Transport, Department of Road Transportation

Quarterly Trend of Drive Recorder (DR) Unit Shipments in Japan



Source: Japan Electronics and Information Technology Industries Association (JEITA)

JEITA Monthly Trend of Selected Car Electronics Shipments in Japan



Selected unit shipments YoY

Category	Sep-20	Oct-20
Navigation systems	(12.4)	14.5
Car AV main units	19.7	17.3
Car speakers	0.1	9.0
ETC onboard units	(18.6)	7.6
ETC 2.0 (DSRC)	7.3	51.0

Phenitec FY3/20 net sales declined -14%, largely due to the -38% decline in focus industrial equipment applications. By regions, Asia, which is largely China, declined -16%, and North America declined -31%. China demand began recovering from the 4Q, and North America in the 1Q and 2Q on new business from its specified major US client IXYS. Regarding China business, according to the company, there has been a strong recovery in low-margin consumer electronics demand. At the same time, high-margin Japan sales declined -9% in the 2Q, resulting in mix deterioration. In addition, the graph below shows the gold price spiked to over \$2,000/oz during the 2Q, raising raw materials costs. Finally, there were increased costs associated with delayed client certifications for the Daiichi Plant due to coronavirus, resulting in posting a 2Q operating loss. **The key point is that the integration project will be completed by FY-end, and the company will begin to benefit from the 6-inch wafer ratio rising from 24% → 64%, energy saving and efficient layout, etc., and the Kagoshima Plant will begin contributing to profits.**



Phenitec* Sales Trend by Application and Region

JPY mn, %	FY3/19	FY3/20	1Q 3/19	2Q 3/19	3Q 3/19	4Q 3/19	1Q 3/20	2Q 3/20	3Q 3/20	4Q 3/20	1Q 3/21	2Q 3/20
by Application												
Phenitec* sales	15,452	13,297	4,136	3,973	4,075	3,268	2,983	3,251	3,435	3,628	3,982	3,703
• Industrial equipt.	3,262	2,009	759	705	1,100	698	408	412	493	696	911	630
• Automotive equipt.	3,560	3,604	908	873	923	856	876	921	892	915	838	738
• Medical equipt.	390	288	98	63	145	84	70	48	54	116	60	32
• Other	8,240	7,396	2,371	2,332	1,907	1,630	1,629	1,870	1,996	1,901	2,173	2,303
YoY												
Phenitec* sales	0.6	(13.9)	14.9	1.3	5.1	(17.6)	(27.9)	(18.2)	(15.7)	11.0	33.5	13.9
• Industrial equipt.	(3.9)	(38.4)	(15.3)	(8.7)	29.4	(20.3)	(46.2)	(41.6)	(55.2)	(0.3)	123.3	52.9
• Automotive equipt.	15.3	1.2	49.1	11.6	9.8	0.0	(3.5)	5.5	(3.4)	6.9	(4.3)	(19.9)
• Medical equipt.	9.2	(26.2)	22.5	(52.6)	70.6	42.4	(28.6)	(23.8)	(62.8)	38.1	(14.3)	(33.3)
• Other	(3.3)	(10.2)	17.7	4.4	(9.3)	(25.0)	(31.3)	(19.8)	4.7	16.6	33.4	23.2
by Region												
Phenitec* sales	15,452	13,297	4,136	3,973	4,075	3,268	2,983	3,251	3,435	3,628	3,982	3,703
• Japan	5,529	5,586	1,479	1,362	1,356	1,332	1,346	1,410	1,427	1,403	1,280	1,277
• Asia	3,306	2,764	1,019	1,070	750	467	495	661	803	805	914	869
• Europe	789	920	198	182	204	205	199	224	261	236	268	244
• North America	5,828	4,027	1,440	1,359	1,765	1,264	943	956	944	1,184	1,520	1,313
YoY												
Phenitec* sales	0.6	(13.9)	14.9	1.3	5.1	(17.6)	(27.9)	(18.2)	(15.7)	11.0	33.5	13.9
• Japan	10.4	1.0	27.5	5.6	8.2	1.9	(9.0)	3.5	5.2	5.3	(4.9)	(9.4)
• Asia	(10.9)	(16.4)	25.0	17.8	(23.9)	(53.3)	(51.4)	(38.2)	7.1	72.4	84.6	31.5
• Europe	3.1	16.6	8.8	(20.9)	7.4	25.8	0.5	23.1	27.9	15.1	34.7	8.9
• North America	(0.9)	(30.9)	(0.1)	(9.0)	21.7	(15.5)	(34.5)	(29.7)	(46.5)	(6.3)	61.2	37.3

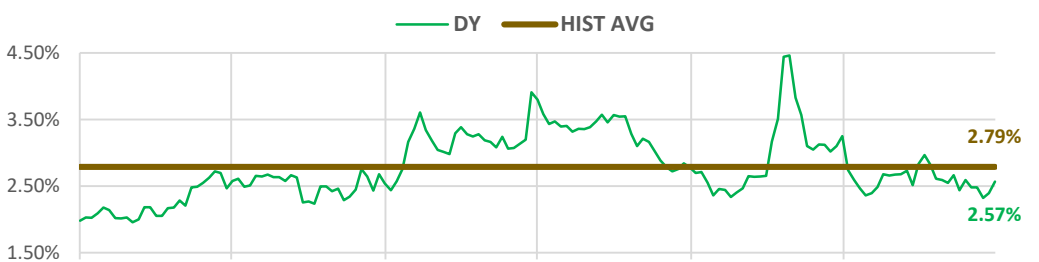
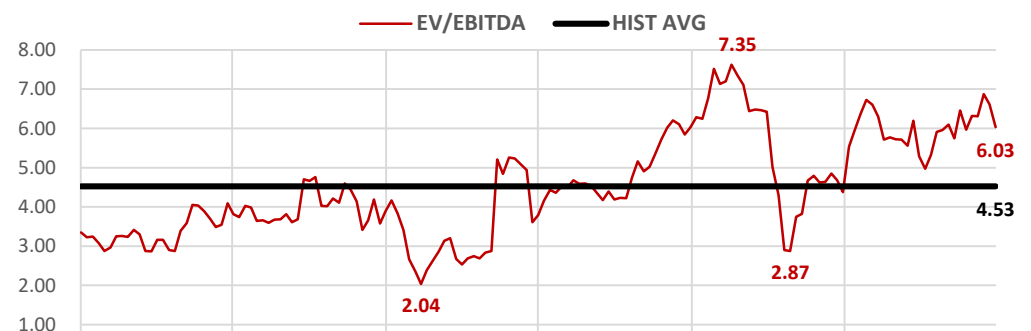
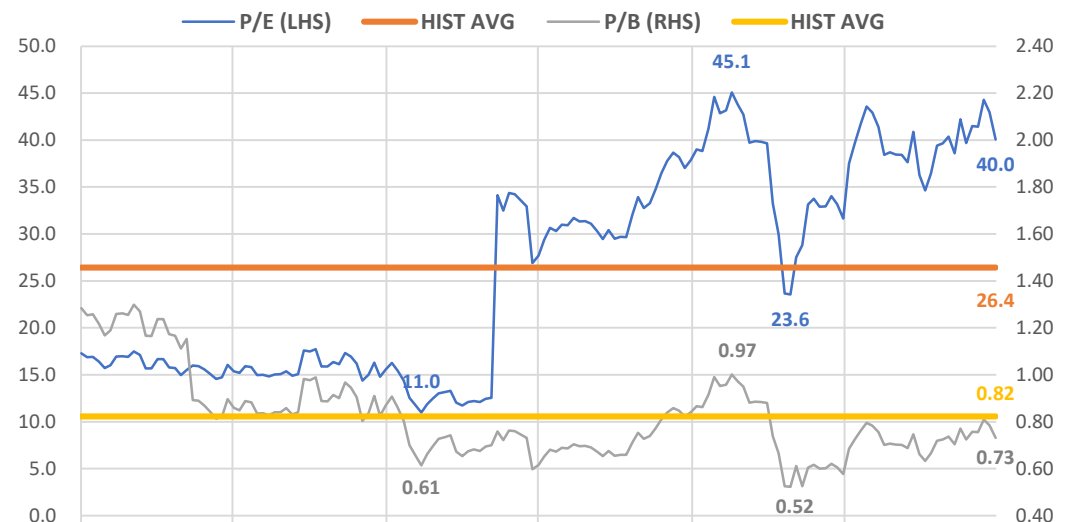
*Note: Phenitec sales include intra-company transactions with Torex. Classifications subject to change.



Performance and valuations

- ✓ The P/E of 40x and EV/EBITDA of 6x are not expensive on trough earnings for a high growth company
- ✓ P/B on 0.7x with net cash equivalent to nearly 24% of market cap is undervalued in our view
- ✓ The next catalyst will be 3Q results, which should confirm 2Q had the worst YoY profit declines, and YoY comps get easier from 4Q onward
- ✓ The over 100% payout ratio and 2.6% DY mean you get paid to take the risk of holding the stock until growth drivers kick in from 2H 3/22

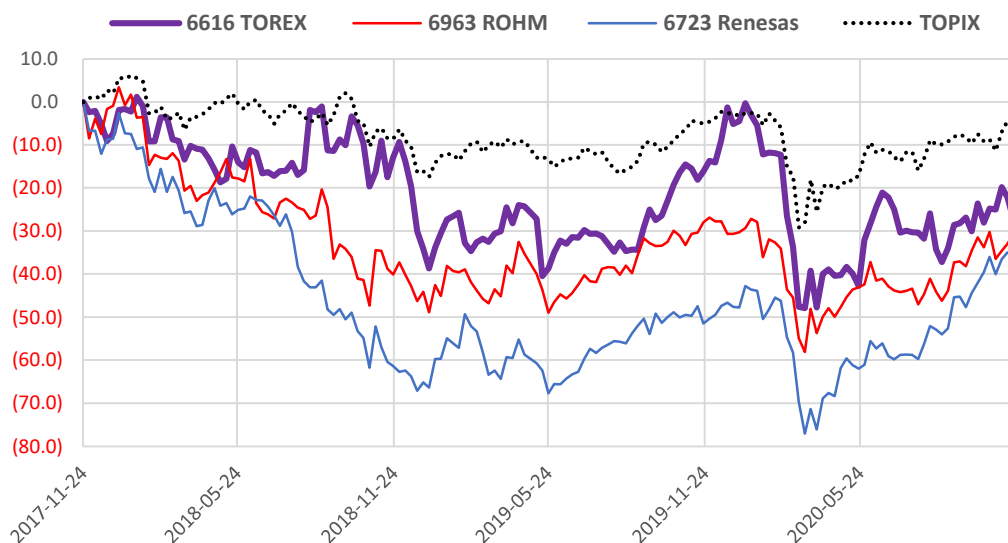
Sessa Smart Charts: 3-Year Weekly Share Price and Valuations Trend



Source: compiled by Sessa Partners from SPEEDA historical earnings and price data. Note: FY3/21 based on revised CE.



3-Year Weekly Relative Performance



Source: compiled by Sessa Partners from SPEEDA historical price data.

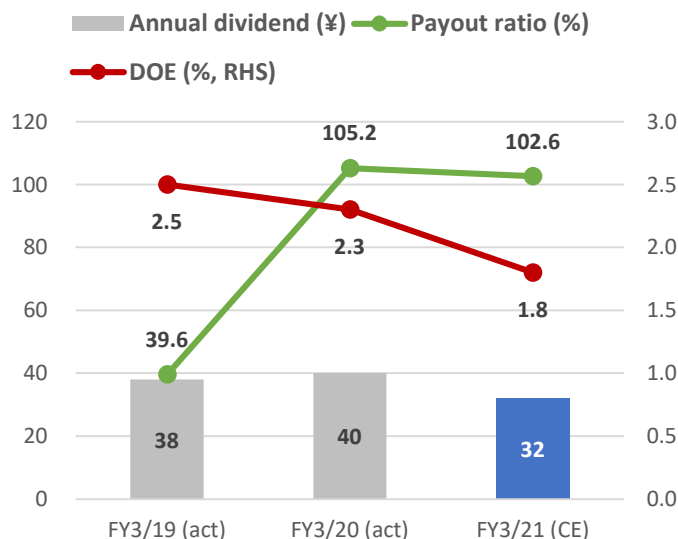
Last year, the share price outperformed the market and larger competitors from 4Q results in May through the 3Q on the extra boost to automotive demand as a nimble niche player picking up orders in specialized segments. Another key driver of the outperformance last year was the high net cash balance utilized to conduct a 5.2% buyback during the 1H, hike the dividend, AND pay down loans. The lower left table shows that **both Chairman Fujisaka and President Shibamiya are in the top 10 shareholders, whose interests are aligned with all shareholders**, an attractive point that cannot be understated in our view.

Conversely, relative performance in 2020 has been lackluster as the share price digests the headwinds from the high base last year. However, if and when 3Q results confirm 2Q had the worst YoY profit declines, with YoY comps getting easier from the 4Q and multiple drivers from 2H 3/22, we believe risks are balanced to the upside.

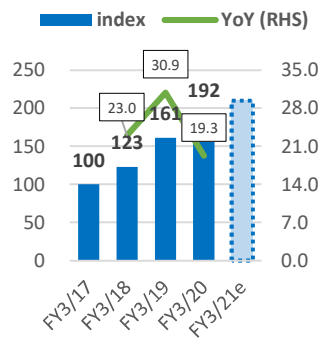
TOREX SEMICONDUCTOR Major Shareholders (2020/09/30)

Rank	Shareholder	(%)
1	The Master Trust Bank of Japan, Ltd. (Trust Acct)	9.97%
2	Custody Bank of Japan, Ltd. (Trust Acct)	7.22%
3	THE BANK OF NEW YORK 133652	5.26%
4	Tomoyuki Fujisaka (Phenitex Chairman)	4.62%
5	The Chugoku Bank, Limited	4.30%
6	ARS Co., Ltd.	4.12%
7	Kibi Kogyo Co., Ltd.	3.62%
8	Takanori Ozaki	2.93%
9	Koji Shibamiya (Torex President)	2.68%
10	Custody Bank of Japan, Ltd. (Trust Acct 5)	2.07%
Top 10 —		46.79%

Source: YUHO 1H FY3/21 Securities Report



Inductor built-in micro DC/DC converters

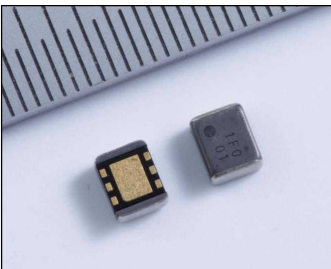


Note: indexed to FY3/17 = 100.

One of the strengths of Torex and a factor driving growth is aggressive new product development of inductor built-in micro DC/DC converters, which have the properties of 1) ultra-compact, 2) low power consumption, 3) high efficiency and 4) low EMI noise, and different package types emphasize the required property. The graph above shows this category has been growing at +24.3% CAGR over the last 3 years.

The XCL303/XCL304 series below announced last November targets high-speed optical transceivers for 5G applications, and it is the first inductor built-in micro DC/DC converter product on the market to handle negative output voltage.

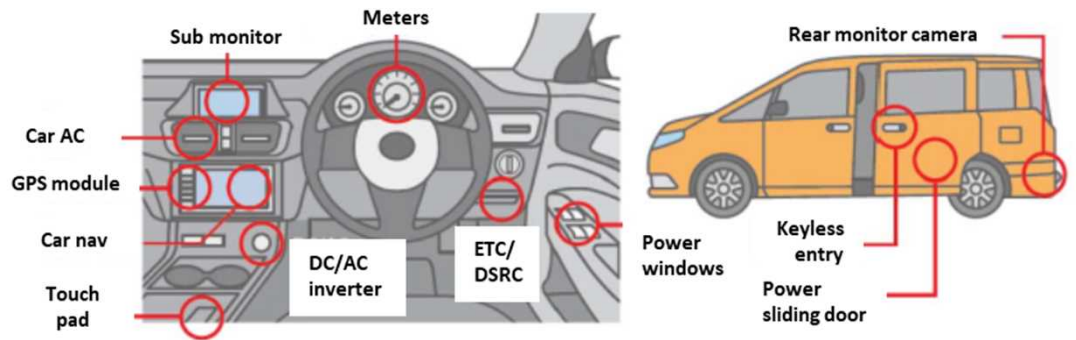
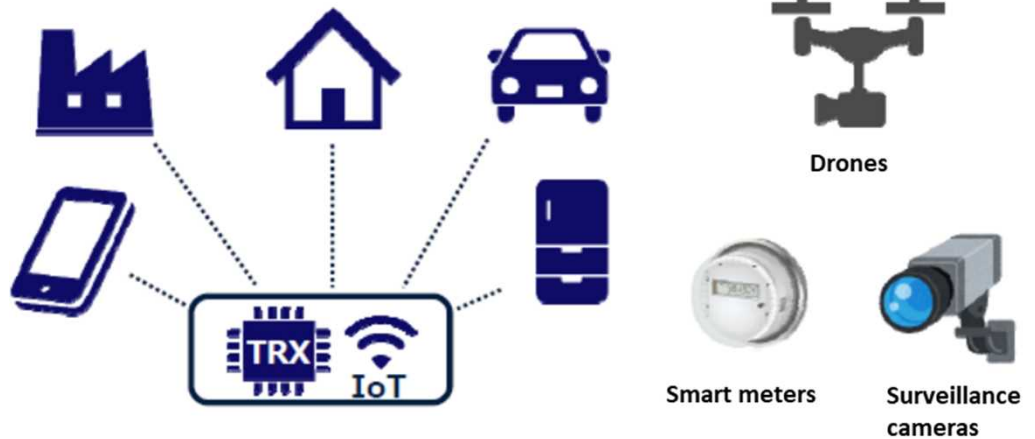
XCL303/XCL304 Series
CL-2025-02 pkg (2.0 x 2.5 x 1.04mm)



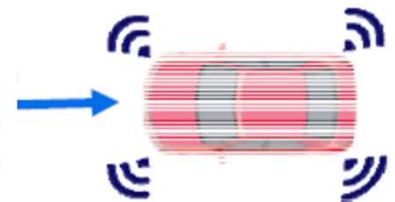
Developed to meet demand for **optical transceivers** for high-speed communication such as 5G between data centers for expected new compact products.

TOREX Power Management IC Applications Summary

INDUSTRIAL: growing number of IoT connected devices



AUTOMOTIVE: power management ICs for the sharp increase in sensor and camera modules required for autonomous driving



Power Management IC Applications

INDUSTRIAL

Industrial robots / POS registers / POS terminals / Industrial measuring instruments / Smart meters / Security equipment

AUTOMOTIVE

Car navigation systems / Car audio systems / Power windows / Power seats / In-vehicle ETC systems / Dashboard cameras / Rear-view monitor cameras / Drive recorders

MEDICAL & HEALTHCARE

Electronic thermometers / Scales / Blood pressure monitors / ECGs / Blood glucose monitors / Monitoring equipment

WEARABLES

Smartwatches / Smartglasses / Smart cards / Wearable cameras / Wearable devices

CONSUMER ELECTRONICS

LCD TVs / Beauty care products / Consumer game consoles / Home appliances / Home theaters / LED lighting

COMPUTERS & COMMUNICATIONS

Smartphones / PC peripherals / IC recorders / Digital cameras / Laptops / Electronic dictionaries / E-readers / Portable game devices

Source: results briefing materials

Dallas-based Texas Instruments generates about 95% of its revenue from semiconductors and the remainder from its well-known calculators. Texas Instruments is the **world's largest maker of analog chips**, which are used to process real-world signals such as sound and power. Texas Instruments also has a leading market share position in digital signal processors, used in wireless communications, and microcontrollers used in a wide variety of electronics applications (SPEEDA).

Texas Instruments (NASDAQ: TXN) Consolidated Earnings Trend

USD mn, %	FY12/17 act	YoY	FY12/18 act	YoY	FY12/19 act	YoY
Total revenue	14,961	11.9	15,784	5.5	14,383	(8.9)
▪ Analog (Power, Signal Chain and High Volume)	9,900	16.0	10,801	9.1	10,223	(5.4)
▪ Embedded Processing (Conn. Microcontrollers)	3,498	15.7	3,554	1.6	2,943	(17.2)
▪ Other (DLP, Calculators and Custom ASICs)	1,563	(13.7)	1,429	(8.6)	1,217	(14.8)
Total OP	6,083	25.3	6,713	10.4	5,723	(14.7)
▪ Analog	4,468	30.8	5,109	14.3	4,477	(12.4)
▪ Embedded Processing	1,143	39.9	1,205	5.4	907	(24.7)
▪ Other*	472	(24.1)	399	(15.5)	339	(15.0)
OPM	40.7%		42.5%		39.8%	
▪ Analog	45.1%		47.3%		43.8%	
▪ Embedded Processing	32.7%		33.9%		30.8%	
▪ Other	30.2%		27.9%		27.9%	

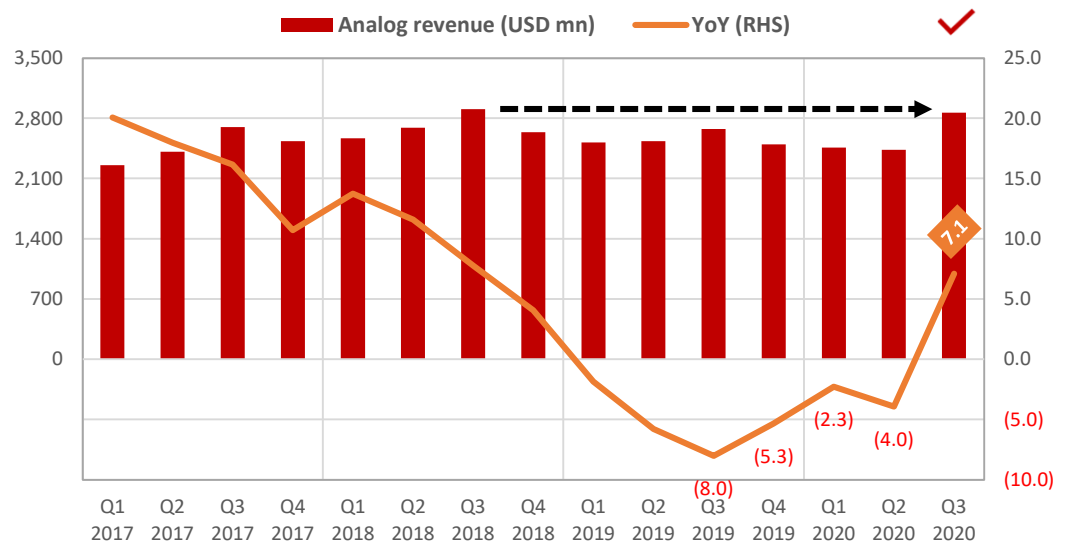
Global revenue	14,961	11.9	15,784	5.5	14,383	(8.9)
▪ US	1,901	13.0	2,288	20.4	1,827	(20.1)
▪ China	6,600	10.0	7,000	6.1	7,200	2.9
▪ Europe, ME, Africa	2,907	21.5	3,047	4.8	2,707	(11.2)
▪ Asia	2,224	9.9	2,240	0.7	1,450	(35.3)
▪ Japan	1,049	0.9	869	(17.2)	796	(8.4)
▪ Rest of World	280	21.2	340	21.4	403	18.5

Source: compiled by Sessa Partners from SPEEDA data. *Note: As of January 1, 2017, royalties were moved from revenue to OI&E.

TI 3Q earnings release:

- Analog revenue increased 7% YoY, due to strength in Signal Chain and Power.
- The automotive market rebounded 75% QoQ back to levels similar to the previous year as North American and European plants resumed operations.
- Personal electronics was up over 20% QoQ and up roughly 15% YoY boosted by demand under COVID-19. Industrial was down low single-digits QoQ, and roughly flat YoY.
- Q3 2020 analog revenue was only 1% lower than Q3 2018 before US-China tariff disputes escalated, damaging global trade.

Global No.1 Texas Instruments Analog Revenue Quarterly Trend



Source: compiled by Sessa Partners from quarterly earnings press releases.

Littelfuse is a designer and manufacturer of sensors, power control solutions, and circuit protection products for the industrial, consumer electronics, and automotive markets. The firm **acquired IXYS Corporation in 2018** for \$856 million and complemented its position in the power semiconductor market with products that serve the medium and high-power applications in addition to Littelfuse's existing strength in the low-power market (SPEEDA).

IXYS is the specified major North American client of Phenitec.

Littelfuse (NASDAQ: LFUS) Consolidated Earnings Trend

USD mn, %	FY12/17 act	YoY	FY12/18 act*	YoY	FY12/19 act	YoY
Total revenue	1,222	15.7	1,718	40.6	1,504	(12.5)
▪ Electronics	662	23.7	1,124	69.8	961	(14.5)
▪ Automotive	453	9.2	480	6.0	429	(10.6)
▪ Industrial	106	0.0	114	7.5	114	0.0
Total OP	219	67.2	225	2.7	193	(14.2)
▪ Electronics	156	33.3	241	54.5	146	(39.4)
▪ Automotive	63	5.0	55	(12.7)	47	(14.5)
▪ Industrial	10	150.0	17	70.0	22	29.4
(eliminations)	(10)		(89)		(22)	
OPM	17.9%		13.1%		12.8%	
▪ Electronics (before elim)	23.6%		21.4%		15.2%	
▪ Automotive (before elim)	13.9%		11.5%		11.0%	
▪ Industrial (before elim)	9.4%		14.9%		19.3%	

Global revenue	1,222	15.7	1,718	40.6	1,504	(12.5)
▪ US	383	7.3	512	33.7	440	(14.1)
▪ China	321	21.6	468	45.8	416	(11.1)
▪ Other countries	517	18.6	739	42.9	647	(12.4)

Source: compiled by Sessa Partners from SPEEDA data. *Note: completed acquisition of IXYS Corp., the TOREX Group's large North American customer, on 2018.01.17

Littelfuse Quarterly Trend of Net Sales by Segments YoY

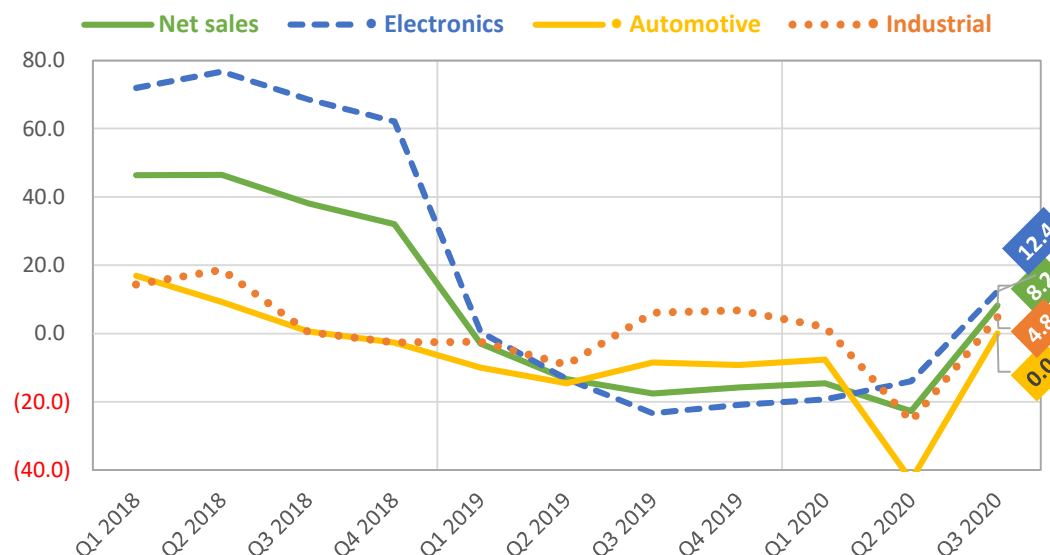
YoY	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020
Net sales	46.4	46.5	38.1	32.0	(2.9)	(13.4)	(17.6)	(15.8)	(14.6)	(22.8)	8.2
• Electronics	72.0	76.7	68.5	62.1	0.4	(13.3)	(23.3)	(20.9)	(19.3)	(14.0)	12.4
• Automotive	17.0	9.2	0.5	(2.7)	(10.0)	(14.6)	(8.5)	(9.2)	(7.7)	(42.9)	0.0
• Industrial	14.4	18.7	0.4	(2.6)	(2.4)	(9.1)	6.1	6.8	1.9	(25.6)	4.8

Source: compiled by Sessa Partners from quarterly earnings releases.

Littelfuse 3Q earnings release:

- Net sales were up 8% YoY due to higher-than-expected demand in automotive, and strong growth in electronics and recovery in industrial applications.
- 4Q outlook for net sales: +7-10% YoY

Littelfuse Acquired Phenitec Client IXYS Corporation in Jan-2018



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