



bel

POWER | PROTECT | CONNECT

Sidoti Conference

November 19, 2020

(Nasdaq: BELFB) (Nasdaq: BELFA)



Safe Harbor Statement

The Company's consolidated operating results are affected by a wide variety of factors that could materially and adversely affect revenues and profitability, including the risk factors described in Item 1A of our 2019 Annual Report on Form 10-K. As a result of these and other factors, the Company may experience material fluctuations in future operating results on a quarterly or annual basis, which could materially and adversely affect its business, consolidated financial condition, operating results, and common stock prices. Furthermore, this document and other documents filed by the Company with the Securities and Exchange Commission ("SEC") contain certain forward-looking statements under the Private Securities Litigation Reform Act of 1995 ("Forward-Looking Statements") with respect to the business of the Company. Forward-Looking Statements are necessarily subject to risks and uncertainties, many of which are outside our control, that could cause actual results to differ materially from these statements. Forward-Looking Statements can be identified by

such words as "anticipates," "believes," "plan," "assumes," "could," "should," "estimates," "expects," "intends," "potential," "seek," "predict," "may," "will" and similar references to future periods. All statements other than statements of historical facts included in this report regarding our strategies, prospects, financial conditions, operations, costs, plans and objectives are Forward-Looking Statements. These Forward-Looking Statements are subject to certain risks and uncertainties, including those detailed in Item 1A of our 2019 Annual Report on Form 10-K, which could cause actual results to differ materially from these Forward-Looking Statements. The Company undertakes no obligation to publicly release the results of any revisions to these Forward-Looking Statements which may be necessary to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. Any Forward-Looking Statement made by the Company is based only on information currently available to us and speaks only as of the date on which it is made.



About Bel

Annual Sales of \$465M *

* Trailing twelve months ended 9/30/20

Bel (NASDAQ: BELFA/BELFB) designs, manufactures and markets a broad array of products that power, protect and connect electronic circuits.

These products are primarily used in the network, cloud infrastructure, military, aerospace, medical, industrial and telecom industries.

**Power Solutions
& Protection**

\$165M in sales (35%)

**Connectivity
Solutions**

\$158M in sales (34%)

**Magnetic
Solutions**

\$142M in sales (31%)

Why Investors Choose Bel



Stability

70 years

serving diversified industries with a broad array of products



Reinvestment

10 acquisitions

completed in the past 10 yrs



Gross margin expansion

22.5% → 25.9%
in 2019 in 9 mos-20



Free cash flow expansion

\$14.5M → \$30.3M
in full year 2019 in 9 mos-20



Constant eye on costs

\$10 million

of cost savings implemented in 2019/2020, \$3M of which is incremental to 2021



Continuous deleveraging

\$28 million

of debt paid down in the first 10 months of 2020, bringing balance down to \$115M by October 31st



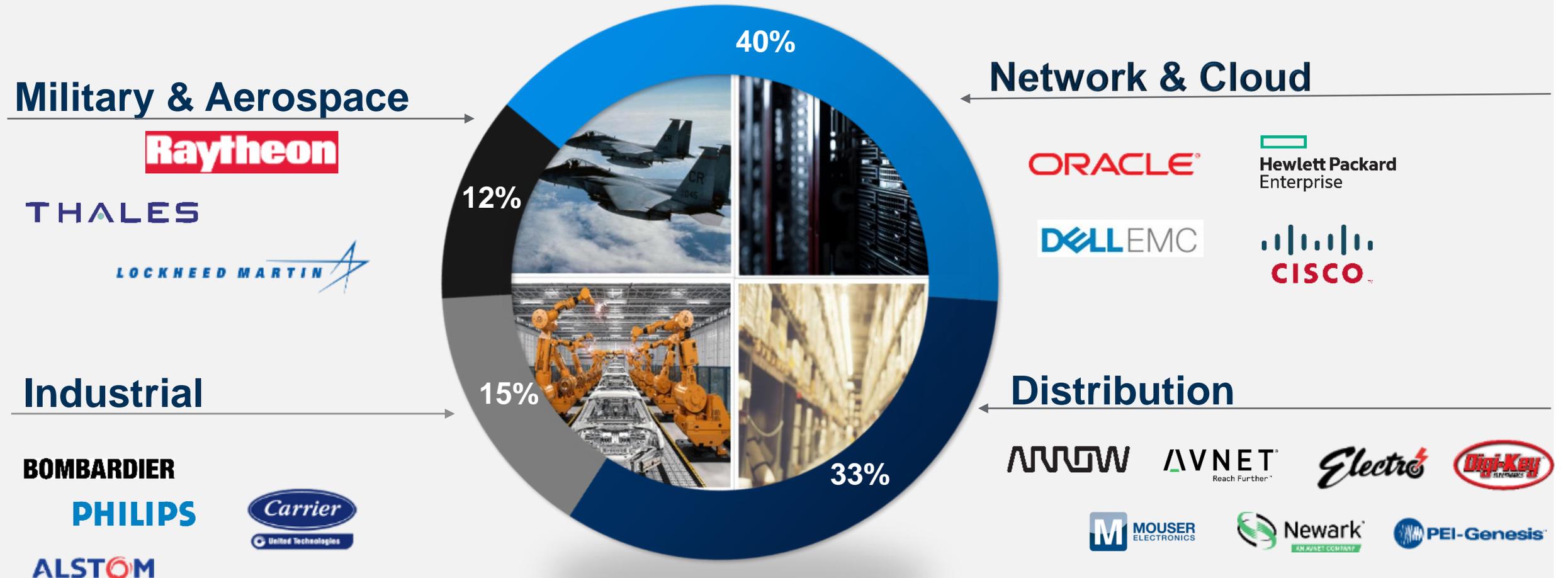
Return to shareholders

\$3 million

per year historically returned to shareholders in dividends



Diverse End-Markets & Blue-Chip Customer Base



Cinch Connectivity Solutions

Products

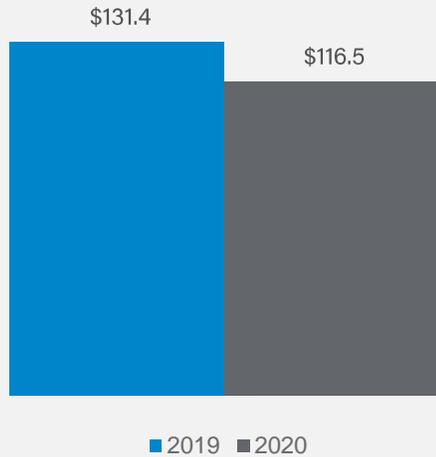
- **Harsh Environment Fiber Optics**
High-speed transceivers and media converters
Expanded beam optical connectors
- **Copper-based Connectors and Cable Assemblies:**
Mil-spec circular and rectangular
RF (radio frequency) and Ethernet connectivity

Applications

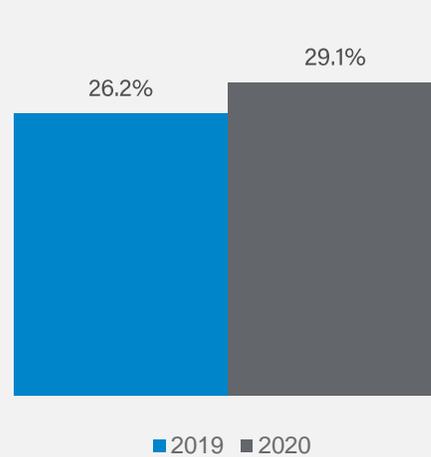
- **Military and Aerospace**
- **Industrial**
- **Data Communications**



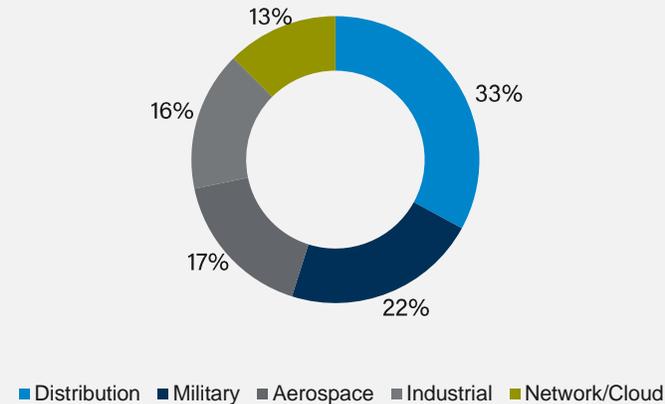
Cinch Connectivity Solutions
Sales - YTD Sept 30 (\$ in millions)



Cinch Connectivity Solutions
GM % - YTD Sept 30



Cinch Connectivity Solutions
Sales by End Market¹



Customers

GENERAL DYNAMICS

Raytheon

LOCKHEED MARTIN

LEONARDO DRS

Power Solutions & Protection

Products

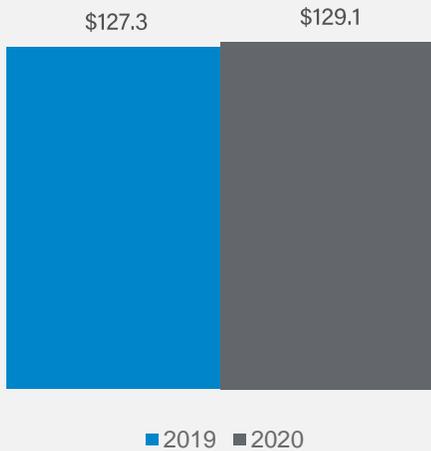
- Front-end (AC-DC) power supplies
- Board mount power (BMP)
- Industrial power products
- e-Mobility converters and inverters
- Circuit protection

Applications

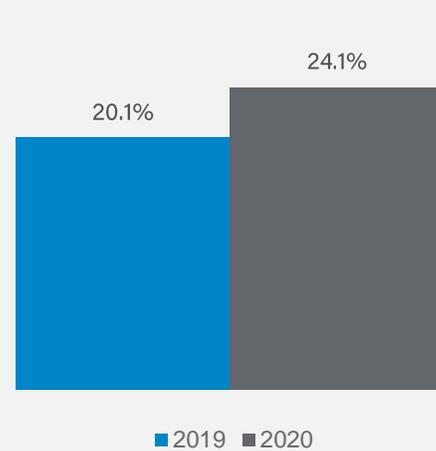
- Servers, storage and networking
- Industrial and Transportation
- Lighting and Consumer



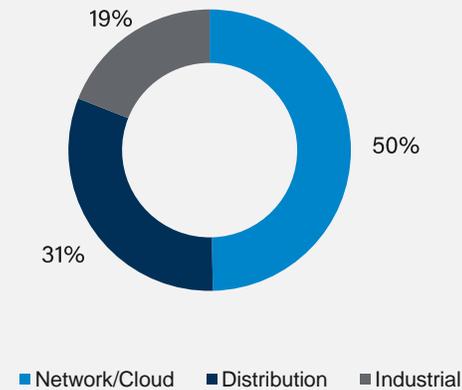
Power Solutions & Protection
Sales - YTD Sept 30 (\$ in millions)



Power Solutions & Protection
GM % - YTD Sept 30



Power Solutions & Protection
Sales by End Market¹



Customers



Magnetic Solutions

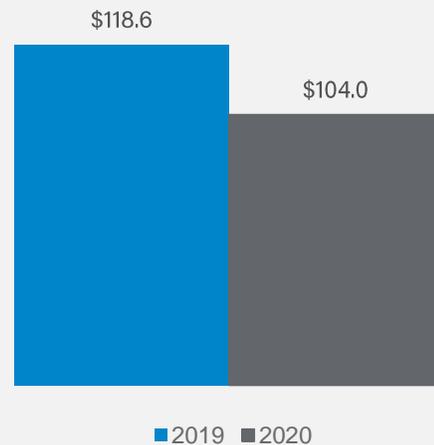
Products

- Integrated Connector Modules (ICMs)
- Power Transformers
- Power Inductors
- Discrete Components

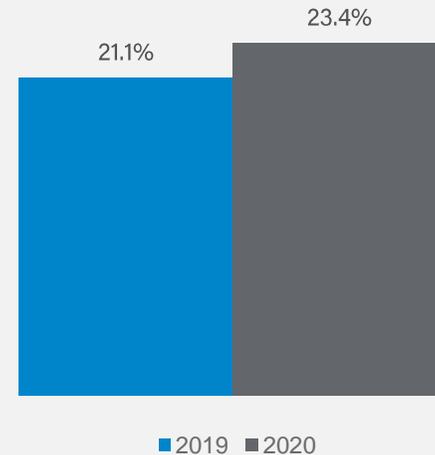
Applications

- Data Communications
- Industrial
- Medical

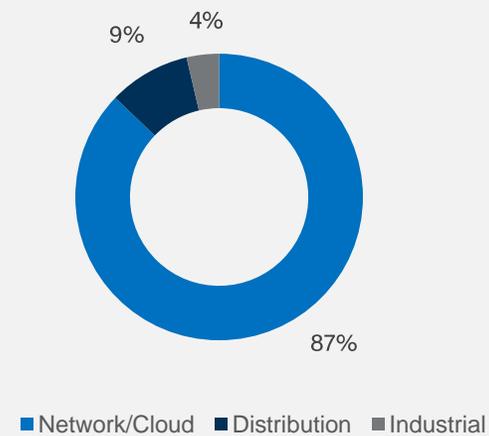
Magnetics Solutions
Sales - YTD Sept 30 (\$ in millions)



Magnetics Solutions
GM % - Sept June 30



Magnetic Solutions
Sales by End Market¹



Customers



Growth Drivers



Military & Aerospace

- Positions on key defense programs
- Commercial aerospace business impacted by COVID. Rebound expected once international travel resumes
- Longer term rebound with increase in new aircraft build rates



Networking & High-Performance Computing

- Artificial Intelligence
- 5G
- Cloud Applications
- Open Compute Network infrastructure
- High power conduction-cooled solutions



E-Mobility

- Full range of power solutions
- Over 200 customers in the last 4 years
- Customer base consist of big OEM automotive, mining, marine and construction companies



Distribution

- Increases product accessibility to developers of tomorrow's technology
- Digi-Key (large catalog distributor that seeds new product development):
 - Bel top 15 supplier overall
 - Bel #1 power supplier

Recent Acquisition: CUI Power Group



Closed December 3, 2019



In the first nine months of 2020...

- Sales: **\$29.8M**
- Gross margin: **35.2%**
- EBITDA: **\$5.3M**



Purchase price of \$29M cash
financed through credit line

Expected Benefits

- Broaden power portfolio
- Strengthen our position at key e-catalog distributors
- Alternative business model
- Enhance Bel's gross margin profile
- Accretive to Bel's earnings since Q1-20
- Cost savings of \$750K identified to date

2020 Highlights

1.



Factories operational despite COVID

2.



Global cost review led to gross margin expansion

3.



CUI Acquisition: Record Breaking Revenue & Profits

4.



Strong End Markets: Defense, Medical, Networking

Financial Overview



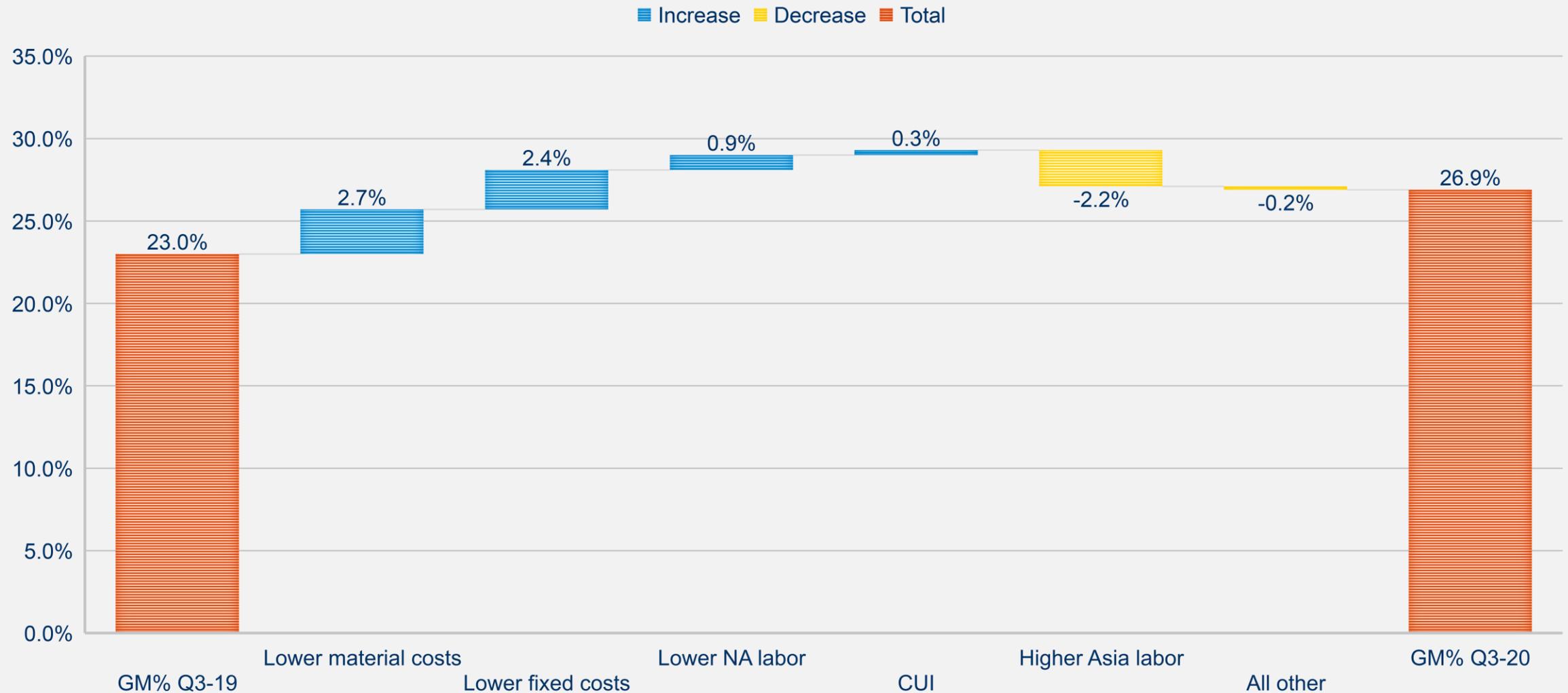
Financial Summary: Q3-20

| | Q3-20 | Q3-19 | Change |
|---|--------|----------|---------|
| \$ in millions, except EPS amounts | | | |
| Sales | \$124 | \$124 | 0% |
| Gross margin | 26.9% | 23.0% | 390 bps |
| Operating margin | 7.1% | -4.2% | nm* |
| EBITDA as % of sales | 9.4% | -0.4% | nm* |
| Adj EBITDA⁽²⁾ as % of sales | 9.5% | 7.1% | 240 bps |
| GAAP EPS (BELFB) | \$0.61 | (\$0.53) | nm* |
| Non-GAAP EPS (BELFB)⁽¹⁾ | \$0.62 | \$0.20 | 210% |

¹These financial measures exclude the impact of costs associated with acquisition-related costs, ERP system implementation expenses and restructuring charges, and the impact of gain on sale of property.

* Not meaningful. Q3-19 operating margin, EBITDA and GAAP EPS include the effects of an \$8.9M goodwill impairment charge.

Gross Margin Bridge: Q3-20



Global Cost Savings Program

| Region | Product Group | P&L Classification | Cost Reduction Action | Annual Savings | Savings in Effect |
|--|---------------|--------------------|-------------------------------------|----------------|-------------------|
| Europe | Power | R&D | Headcount reduction | \$1.2M | Q3-2019 |
| Asia | Power | R&D | Headcount reduction | \$0.6M | Q3-2019 |
| North America | Magnetics | COGS | Closed Inwood, NY facility | \$0.5M | Q3-2019 |
| Asia | All | COGS | Indirect headcount reduction | \$1.4M | Q4-2019 |
| Asia | All | COGS | Indirect headcount reduction | \$0.9M | Q4-2019 |
| Asia | Magnetics | COGS | Indirect headcount reduction | \$0.6M | Q1-2020 |
| Asia | Connectivity | SG&A | Closed Shanghai office | \$0.5M | Q1-2020 |
| North America | Power | SG&A | Indirect headcount reduction | \$0.1M | Q3-2020 |
| Europe | Power | R&D | Closure of Switzerland R&D facility | \$3.0M | Q4-2020 |
| Europe | Power | SG&A | Closure of Germany sales office | \$0.6M | Q2-2021 |
| North America | Power/Mag | SG&A | North America Sales reorganization | \$0.5M | Q4-2020 |
| Total Annual Savings Implemented in 2019 & 9 mos-20 | | | | \$10.0M | |

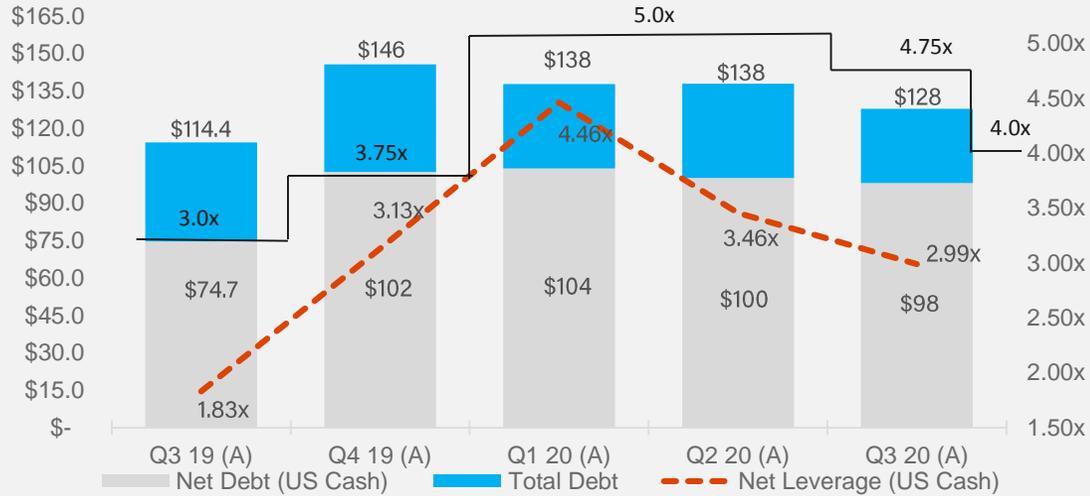


Gross Margin Trend



Credit Metrics

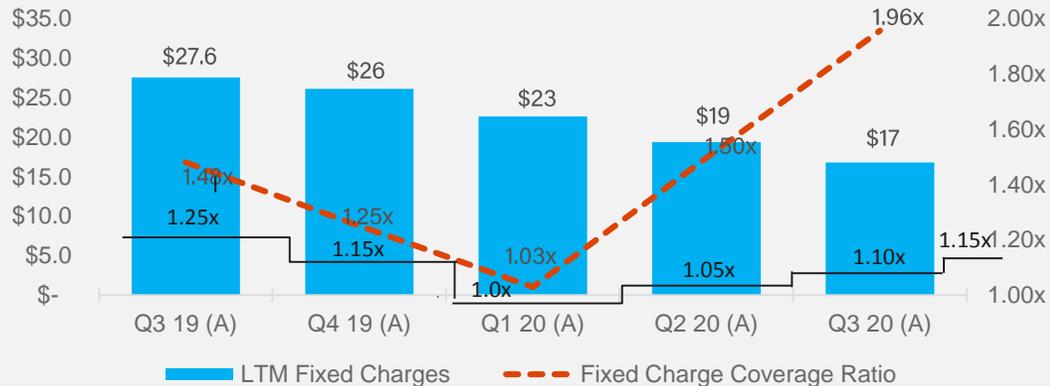
Total Debt and Net Leverage [US Cash] (\$ in millions)



Cash by Region (\$ in millions)



LTM Fixed Charges and FCC Ratio (\$ in millions)



Credit Agrmt EBITDA - LTM (\$ in millions)



Share Information

Key Statistics (as of 11/13/20)

| | |
|--------------------------|----------------------------------|
| Stock Price | BELFA: \$12.53 BELFB: \$13.77 |
| Total Shares Outstanding | 12,359,000 |
| Market Cap | \$168M |
| Enterprise Value | \$212M |



Outstanding shares
2,145,000

Outstanding shares
10,234,000

25
Institutions | **1,100,000**
shares (51%)

161
Institutions | **7,860,000**
shares (78%)

Quarterly dividends
\$0.06 / share

Quarterly dividends
\$0.07 / share

21% held by insiders

3% held by insiders

Stock Trend: BELFB – 5 years

5-yr high
\$33.10

5-yr low
\$6.60

Book Value as
of 9/30/20
\$14.46

Closing Price on
11/13/20
\$13.77



Q&A



Appendix



Growth Driver: Acquisition



| Acquired Company | Year | Products | Revenue | Purchase |
|--|------|--------------|---------|----------|
| CUI Global's Power Business* | 2019 | Power | \$37M | \$29M |
| BCMZ Precision Engineering Limited | 2018 | Connectivity | \$3M | \$2.6M |
| Emerson Network Power Connectivity Solutions* | 2014 | Connectivity | \$78M | \$98M |
| ABB/Power-One Power Solutions* | 2014 | Power | \$194M | \$117M |
| TE's Coil Wound Magnetics Business* | 2013 | Magnetics | \$75M | \$22.4M |
| Array Connector | 2013 | Connectivity | \$10M | \$10M |
| GigaCom Interconnect | 2012 | Connectivity | \$2M | \$2.7M |
| Fibreco Limited | 2012 | Connectivity | \$7M | \$13.7M |
| Powerbox Italia S.R.I. | 2012 | Power | \$4M | \$3M |
| Safran/Cinch Connectors* | 2010 | Connectivity | \$52M | \$37.5M |
| Galaxy Power | 2005 | Power | \$18M | \$18M |
| Netwatch s.r.o | 2005 | Connectivity | \$2M | \$1.5M |
| Insilco Passive Components Group* | 2003 | Magnetics | \$70M | \$35M |
| APC UK | 2003 | Power | \$5M | \$5.5M |
| E-Power/Current Concepts | 2001 | Power | \$3M | \$6.2M |
| Lucent Transformers + Inductor Group* | 1998 | Magnetics | \$35M | \$30M |

*Blue denotes > Divestitures acquired

Sales & Bookings

(dollars in millions)

| SALES | Q3-19 | Q3-20 | % change '19-'20 | TTM Sept-18 | TTM Sept-19 | TTM Sept-20 | % change '19-'20 |
|------------------------------|---------------|---------------|-------------------------|--------------------|--------------------|--------------------|-------------------------|
| Magnetics Solutions | 40 | 38 | -4% | 175 | 167 | 142 | -15% |
| Power Solutions & Protection | 40 | 48 | 19% | 168 | 175 | 165 | -6% |
| Connectivity Solutions | 44 | 38 | -13% | 182 | 178 | 158 | -11% |
| Total | \$ 124 | \$ 124 | 0% | \$ 525 | \$ 520 | \$ 465 | -11% |

| BOOKINGS | Q3-19 | Q3-20 | % change '19-'20 | TTM Sept-18 | TTM Sept-19 | TTM Sept-20 | % change '19-'20 |
|------------------------------|---------------|--------------|-------------------------|--------------------|--------------------|--------------------|-------------------------|
| Magnetics Solutions | 37 | 14 | -61% | 204 | 140 | 136 | -3% |
| Power Solutions & Protection | 31 | 41 | 29% | 182 | 154 | 162 | 5% |
| Connectivity Solutions | 44 | 28 | -37% | 190 | 176 | 140 | -20% |
| Total | \$ 112 | \$ 83 | -26% | \$ 576 | \$ 470 | \$ 438 | -7% |

| BACKLOG | Sept-18 | Sept-19 | Sept-20 | % change '19-'20 |
|------------------------------|----------------|----------------|----------------|-------------------------|
| Magnetics Solutions | 57 | 30 | 27 | -8% |
| Power Solutions & Protection | 69 | 52 | 63 | 20% |
| Connectivity Solutions | 59 | 61 | 48 | -21% |
| Total | \$ 185 | \$ 143 | \$ 138 | -3% |

Financial Summary – 9 mos-20

| | 9 mos-20 | 9 mos-19 | Change |
|---|----------|----------|---------|
| \$ in millions, except EPS amounts | | | |
| Sales | \$350 | \$377 | -7.3% |
| Gross margin | 25.9% | 22.8% | 310 bps |
| Operating margin | 3.8% | 0.7% | 310 bps |
| EBITDA as % of sales | 6.9% | 4.0% | 290 bps |
| Adj EBITDA⁽²⁾ as % of sales | 7.0% | 6.1% | 90 bps |
| GAAP EPS (BELFB) | \$0.76 | (\$0.19) | nm* |
| Non-GAAP EPS (BELFB)⁽¹⁾ | \$0.79 | \$0.46 | 72% |

¹ These financial measures exclude the impact of costs associated with acquisition-related costs, ERP system implementation expenses and restructuring charges, and the impact of gain on sale of property.

* Not meaningful. Q3-19 operating margin, EBITDA and GAAP EPS include the effects of an \$8.9M goodwill impairment charge.

Balance Sheet Metrics

| \$ in millions | September 2020 | December 2019 |
|-----------------|-------------------|------------------|
| Cash | \$81 | \$72 |
| Debt | 125 | 144 |
| Equity | 179 | 168 |
| Working Capital | 195 | 193 |
| Current Ratio | 3.2 to 1 | 3.1 to 1 |
| Inventory Turns | 3.7x | 3.6x |
| DSO | 52 days | 60 days |
| Leverage Ratio | 2.99x | 3.14x |

Financial Drivers Q1-20

Favorable

- FX was favorable in COGS vs. Q1-19, as USD appreciated against:
 - EUR by 2%
 - MXN by 2%
 - RMB by 2%
- Variable costs within COGS largely flat (53.4% of sales in Q1-20 vs 53.6% of sales in Q1-19)
- Fixed costs within COGS down \$3.5M (\$24.4M in Q1-20 vs. \$27.9M in Q1-19), largely due to \$2.5M reduction in overhead and \$900k lower support labor and fringe (receipt of \$2M in funds from Chinese government related to COVID-19 relief program)
- R&D expenses were lower by \$1.1M vs Q1-19 due to cost savings from recent restructuring efforts and favorable FX environment in Q1-20
- FX gain of \$45k in Q1-20 vs. FX loss of \$573k in Q1-19
- Addition of CUI sales of \$8.2M in Q1-20 at a 13.5% EBITDA margin

Unfavorable

- COVID-19:
 - Temporary closures of manufacturing facilities in the PRC
 - Delays throughout supply chain
 - \$14-17M of sales scheduled for Q1 shipment delayed to Q2
- Sales down \$21.4M (17%) from Q1-19
 - Connectivity sales ↓ by \$5.3M (\$3.4M decline in commercial aerospace, \$1.3M reduction in industrial applications, and \$1.8M decline in passive, offset by gains of \$1.7M in military applications)
 - Magnetic sales ↓ by \$9.5M (large networking OEM customer)
 - Power sales ↓ by \$6.7M (cloud customer down \$4.9M, distribution down \$3.5M, Modules down \$1.3M; DC/DC down \$1.1M, offset by CUI sales of \$8.2M)
- Fluctuation in gain/loss on cash surrender value of COLI policies:
 - \$1.9M loss in Q1-20 vs \$1.0M gain in Q1-19
 - Unfavorable y/y fluctuation of \$2.9M

Financial Drivers Q2-20

Favorable

- Addition of CUI sales of \$10.6M in Q2-20 at a 23.6% EBITDA margin
- Variable costs within COGS down (54.0% of sales in Q2-20 vs 56.4% of sales in Q2-19), primarily due to shift in product mix (declines in power products with high material content; increase in high-margin CUI product and connectivity products going into military applications)
- Fixed costs within COGS down \$4.8M (\$24.3M in Q2-20 vs. \$29.1M in Q2-19), largely due to \$2.4M reduction in support labor and fringe and \$2.3M of lower overhead costs (receipt of \$1M in funds from Chinese government related to COVID-19 relief program)
- FX was favorable in COGS vs. Q2-19, as USD appreciated against:
 - MXN by 19%; RMB by 4%; EUR by 2%
 - Overall, resulted in lower labor and overhead costs of \$1.2M
- R&D expenses were lower by \$684k vs Q2-19 due to cost savings from recent restructuring efforts and favorable FX environment in Q2-20
- T&E expenses of \$162k in Q2-20 vs \$844k in Q2-19 (a decrease of \$682k)
- Fluctuation in gain/loss on cash surrender value of COLI policies:
 - \$1.5M gain in Q2-20 vs \$243k gain in Q2-19
 - Favorable y/y fluctuation of \$1.3M

Unfavorable

- Sales down \$6.2M (5%) from Q2-19
 - Connectivity sales ↓ by \$3.6M (\$5.6M decline in commercial aerospace, \$1.7M reduction in industrial applications, offset by gains of \$3.8M in military applications)
 - Magnetic sales ↓ by \$3.6M (ICM's down \$1.5M/large networking OEM customer & Signal down \$1.8M/pause in ordering of non-essential medical equip)
 - Excluding CUI, Power sales ↓ by \$10.5M, Fuse sales up by \$537k and a \$336k increase in module sales. \$3.8M in Power reduction relates to low-margin business.
- FX loss of \$103k in Q2-20 vs. FX gain of \$450k in Q2-19 (unfavorable swing in Other Income/Expense of \$553k)
- Continued COVID-19 operational inefficiencies

Financial Drivers Q3-20

Favorable

- Addition of CUI sales of \$10.9M in Q3-20 at a 15.2% EBITDA margin
- Variable costs within COGS down (52.8% of sales in Q3-20 vs 54.2% of sales in Q3-19), primarily due to shift in product mix (declines in power products with high material content; increase in high-margin CUI product and connectivity products going into military applications)
- Fixed costs within COGS down \$3.1M (\$25.6M in Q3-20 vs. \$28.7M in Q3-19), largely due to \$2.3M reduction in overhead costs and \$0.7M of lower support labor and fringe expense (receipt of \$0.9M in funds from Chinese government related to COVID-19 relief program).
- FX had minimal impact in COGS vs. Q3-19, as USD appreciation against the MXN (14%) largely offset depreciation against EUR (5%), GBP (5%) and RMB (1%)
- Tariff refunds from US Government \$400k
- R&D expenses were lower by \$400k vs Q3-19 due to cost savings from recent restructuring efforts, offset by unfavorable FX environment in Q3-20
- \$500k reduction in travel expenses vs. Q3-19
- \$600k favorable fluctuation in gain/loss on cash surrender value of COLI (gain in Q3-20 of \$700k vs. gain in Q3-19 of \$100k)

Unfavorable

- Excluding CUI, sales were down \$10.9M:
 - Connectivity sales ↓ by \$6.0M (\$5.3M decline in commercial aerospace, \$3.0M reduction in sales through distribution, \$1.6M decline in sales into industrial applications, offset by gains of \$3.6M in military applications)
 - Magnetic sales ↓ by \$1.5M (ICM's down \$1.3M & Signal down \$500k, offset by increase in discrete sales of \$300k)
 - Excluding CUI, Power sales ↓ by \$3.4M (reduced sales to datacenter customer (\$3.2M), distribution down \$1.1M, networking customer down \$1.1M; DC/DC down \$1.4M; partially offset by increased fuse revenue of \$1.4M and increase in AC/DC sales of \$400k)
- FX loss of \$1M in Q3-20 vs. FX gain of \$600k in Q3-19 (unfavorable swing in Other Income/Expense of \$1.6M)

Historical Financial Highlights

| | Net Sales | Gross Margin | EBITDA Margin ¹ | D&A | Capital Spending | Free Cash Flow ² |
|-------------|-----------|--------------------|----------------------------|---------|------------------|-----------------------------|
| 2012 | \$286,594 | 16.2% | 3.5% | \$9,113 | \$4,744 | \$6,865 |
| 2013 | \$349,189 | 17.8% | 7.9% | 12,382 | 6,940 | \$3,641 |
| 2014 | \$487,076 | 17.9% | 7.0% | 20,367 | 9,042 | \$13,415 |
| 2015 | \$567,080 | 19.2% | 9.9% | 23,009 | 9,891 | \$55,898 |
| 2016 | \$500,153 | 20.0% | 10.4% ³ | 21,778 | 8,223 | \$30,380 |
| 2017 | \$491,611 | 20.8% | 7.6% | 20,718 | 6,425 | \$17,695 |
| 2018 | \$548,184 | 20.0% | 8.6% | 18,207 | 11,594 | -\$1,497 |
| 2019 | \$492,412 | 22.5% ⁴ | -0.4% | 16,471 | 9,891 | 14,559 |

¹ EBITDA as calculated by the Company represents earnings before interest, taxes, depreciation and amortization. EBITDA margin as presented above is calculated by dividing EBITDA by net sales.

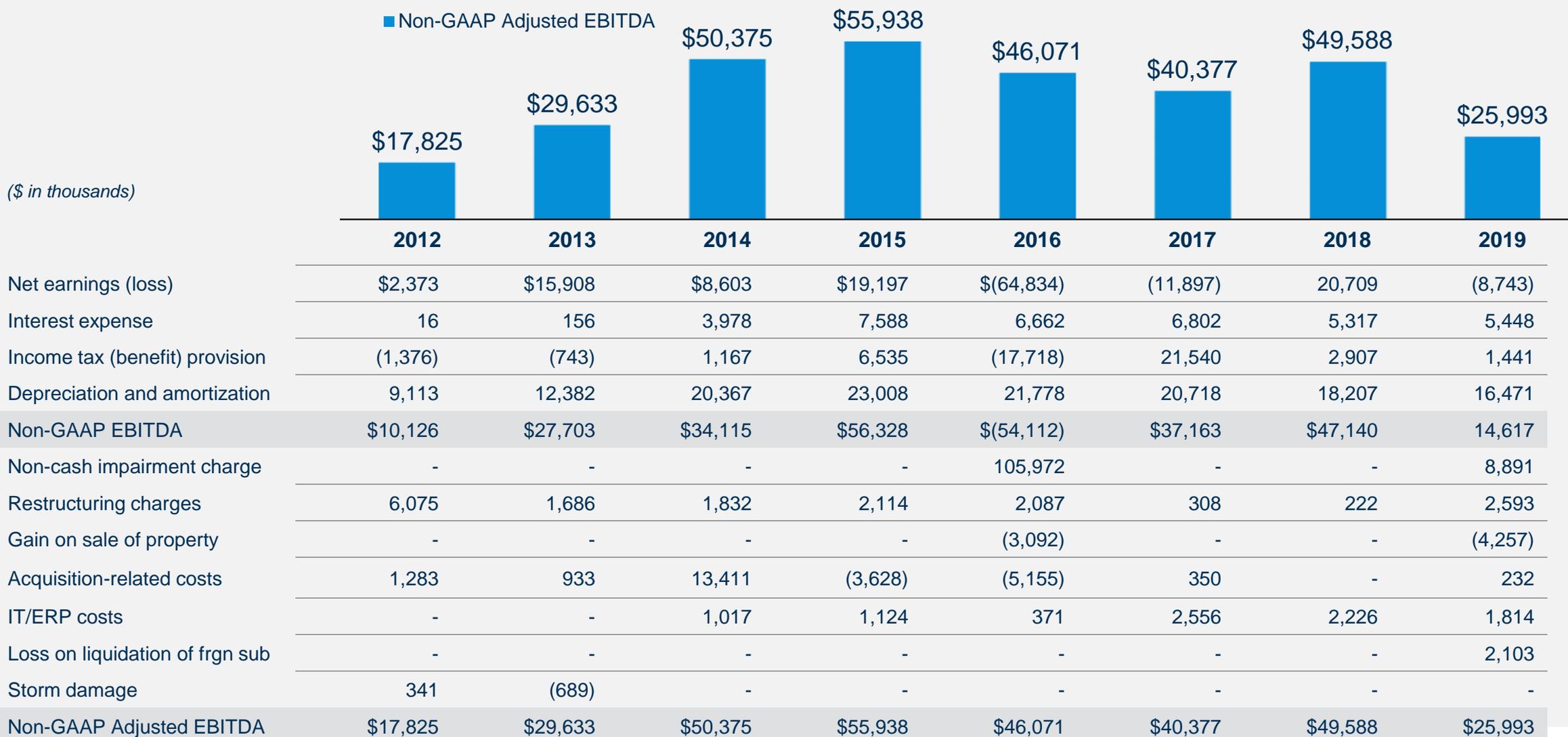
² Free cash flow as presented above represents net cash provided by operating activities less cash paid for capital expenditures.

³ Excludes the effect of a \$106M impairment charge on goodwill and other intangible assets recorded in 2016 and \$8.9M in TTM 9/30/19. Without adjusting for this factor, EBITDA margin for 2016 is (10.8)% and EBITDA margin for TTM 9/30/19 is 5.3%.

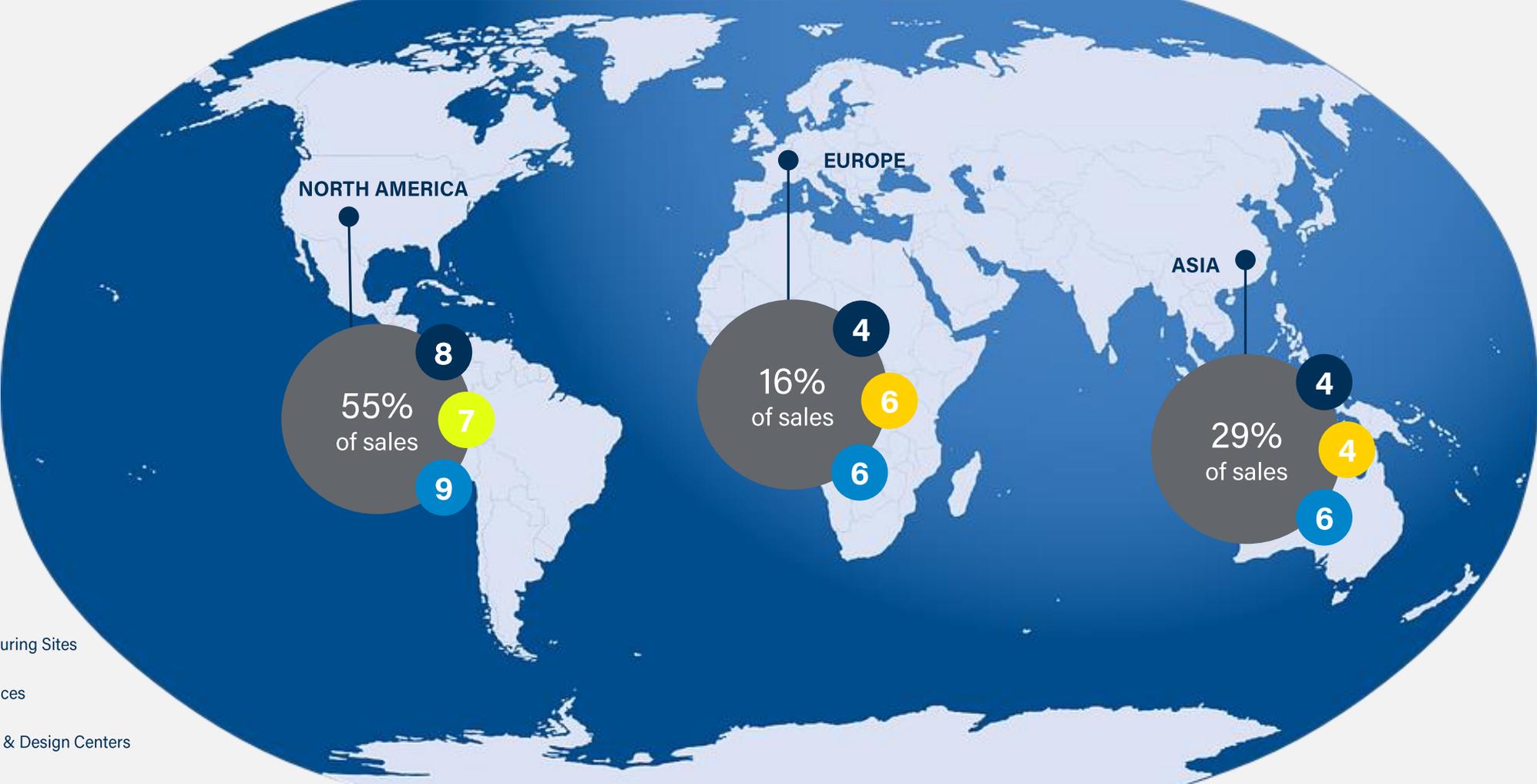
⁴ Effective with the fourth quarter 2019 reporting, R&D expense is now reflected outside of COGS and is therefore no longer a factor in arriving at gross margin. Prior year gross margin % has not been recast on this slide. The comparable 2019 GM% would have been 17.0%



Historical: Net Earnings to EBITDA



Global Presence



- Manufacturing Sites
- Sales Offices
- Research & Design Centers



Lean Management Team

Dan Bernstein
President & CEO

Dennis Ackerman
President
Bel Power Solutions &
Protection

Power Group:
Power-One
Bel Power
Powerbox
CUI

Circuit Protection
Group

Module Group

Pete Bittner
President
Cinch Connectivity
Solutions

Cinch Connectivity
Solutions
Cinch, CCS,
Fibreco, Gigacom,
Array, BCMZ

Stewart Connector

Magnetics

Signal Transformer

TRP/ICM Group

LAN Magnetic
Group

Raymond Cheung
VP Asia Operations

China

Hong Kong

Macau

India

Taiwan

Craig Brosious
VP Finance

Accounting

Finance

Investor Relations

Sherry Urban
VP Human
Resources

Human Resources

Payroll

Workplace Safety

Diverse Offerings

| | Power Solutions | Circuit Protection | Connectivity Solutions | Magnetic Solutions |
|---------------------------|-----------------|--------------------|------------------------|--------------------|
| Bel | ● | ● | ● | ● |
| Delta | ● | ○ | ● | ● |
| TE Connectivity | ○ | ○ | ● | ● |
| Molex | ○ | ○ | ● | ● |
| Pulse Electronics (Yageo) | ○ | ● | ● | ● |
| Bussmann (EATON) | ● | ● | ○ | ● |
| Amphenol | ○ | ○ | ● | ● |
| Littelfuse | ○ | ● | ○ | ○ |
| Artesyn | ● | ○ | ○ | ○ |
| Murata | ● | ○ | ○ | ● |

The Catalyst 9400 Series is the next generation of the industry's most widely deployed enterprise switching platform... These modular access switches are built for security, IoT, and cloud. They deliver state-of-the-art high availability, support up to 9 Tbps, provide the latest in 90-watt UPOE+, and form one of the building blocks for SD-Access, Cisco's leading enterprise architecture.

- Cisco website



Internal Board level components:

- Fuses
- DC/DC isolated board mount converters
- DC/DC point-of-load converters
- Passive jack communications ports

Multiport ICMs

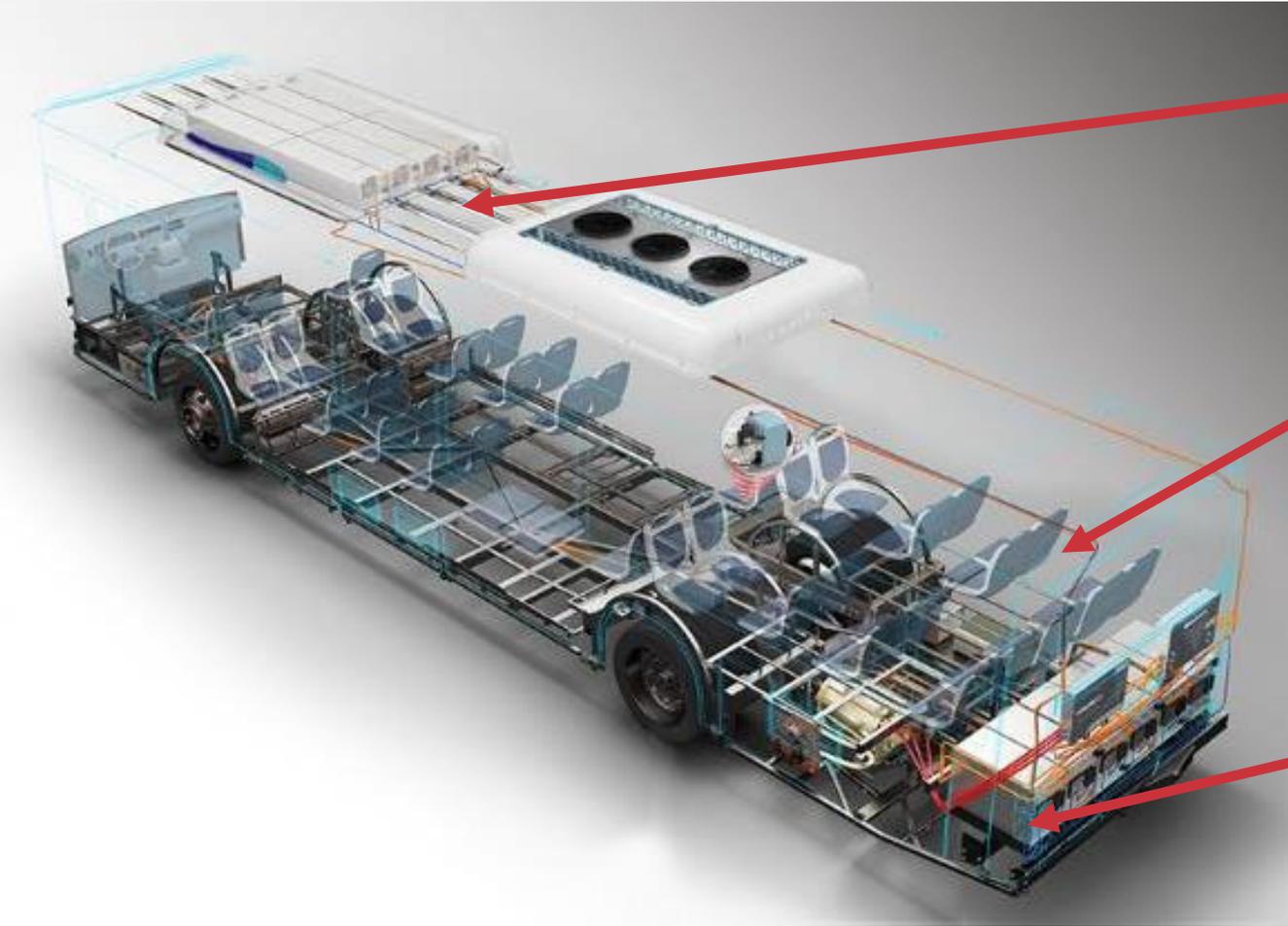
- 1G to 10G port speeds
- 15-90W PoE capability



BCL Series 25 kW AC/DC Charger

On-board bidirectional charger
with single/three-phase input
(250 – 800 Vdc)

- Liquid cooling
- CAN bus SAE J1939
- Galvanic isolated
- ECE R10.6 / IEC61851-21-1 / UL2202
- IP65 / IP67 compliant
- SAE J1772 type 2 compliant



Auxiliary Inverter



DC/DC Converter



On-Board Battery
Charger



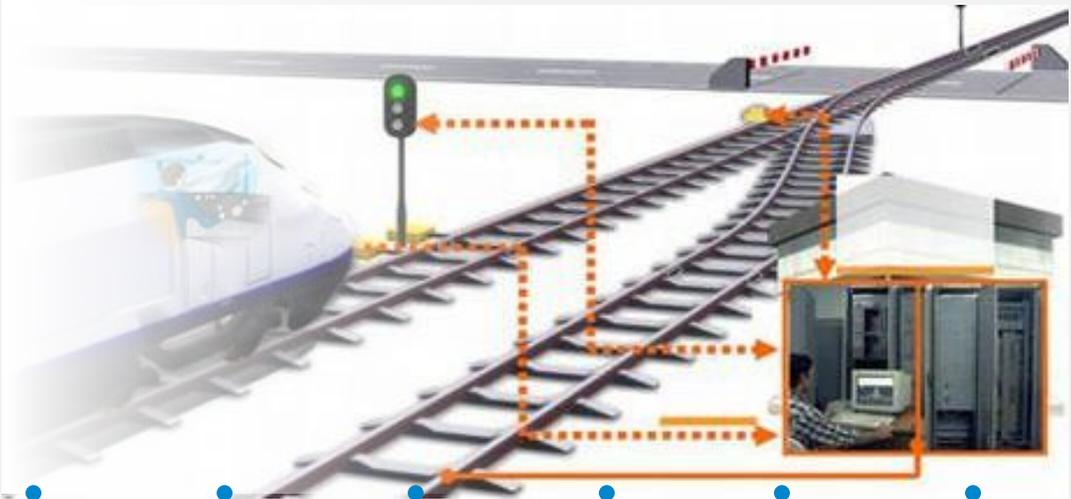
AC/USB Power Plug, Door Control, HVAC, Toilet Systems, Windshield Wiper/Defroster, On-Board WLAN, Lighting, Fire Safety Systems, etc

Battery Charging

Brake System

Train Control System

Headlights



Point Machine

Level Crossing Barriers

Railway Signal

Control / Computer Room

Axle Counting

GSM-R

Rolling Stock Applications

Approximately \$20,000 of Installed Power per Rail Set



Trackside Applications



POWER | PROTECT | CONNECT

