Winning Through Disruption In The Transport Market

Investor Overview
September 2017
This presentation contains "forward-looking" statements that involve risks, uncertainties and assumptions. If the risks or uncertainties ever materialize or the assumptions prove incorrect, our results may differ materially from those expressed or implied by such forward-looking statements. All statements other than statements of historical fact could be deemed forward-looking, including, but not limited to, any statements about future market and financial performance and similar statements; statement regarding future products or technology as well as the timing to market of any such products or technology; any statements about historical results that may suggest trends for our business; any statements of the plans, strategies, and objectives of management for future operations; any statements of expectation or belief regarding future events, potential markets or market size, technology and product developments, or enforceability of our intellectual property rights; statements regarding our second quarter outlook; and any statements of assumptions underlying any of the items mentioned.

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Optical Transport – Where it Plays in the Network

Routing:
- Routers interconnect over transport systems

Switching:
- DC Edge Router Spine Switch
- Leaf Switch

Optical Transport:
- DCI Transport

Long-haul Transport

Core Routers

Edge Routers

Metro Transport

Data Center #1

Data Center #2
Optical Transport Industry Overview

**Systems Vendors**
- Infinera
- Ciena
- Nokia
- Huawei
- ADVA
- Coriant
- Cisco

**Components Vendors**
- Optics: Finisar, Lumentum, Oclaro, NeoPhotonics
- Coherent DSPs: Acacia, Inphi, NTT Electronics

Systems vendors typically buy optics from third parties and may in- or outsource DSPs. Infinera predominantly makes and designs its components in-house.

Infinera disrupts the traditional optical model
Technology Leadership
Infinera **Uniquely** Delivers Massive Scale

**Conventional Approach**

- Electronics/ASICs
- Intelligent software
- Photonic integrated circuits
- Coherent optical engine
- Vertically Integrated

**The Infinera Approach**

- Vertically Integrated
- Photonic integrated circuits
- Coherent optical engine
- Intelligent software
- Electronics/ASICs

**Significant Barriers to Entry**

- Hundreds of millions of dollars spent over the years to build indium phosphide PIC factory
- 15+ years of experience
- More than 450 patents covering IP

*Moore’s Law-like for Optical*
Infinera: A Differentiated Optical Systems Company

- The most vertically integrated optical transport systems company
  - Unique technology innovation with PIC
  - Vertical integration drives superb reliability and differentiated cost structure
  - Best-in-class systems with automation, convergence and scalability

- Industry-leading global service and support
- Right tools for right job
- Focused on customer success

Enabling An Infinite Pool of Intelligent Bandwidth
An End-to-End Portfolio to Serve an Expanding Market
Long-haul: Infinera’s Heritage

- **2000**: Infinera founded, promises to do the impossible: PICs
- **2004**: Introduced industry’s first large-scale PIC
- **2005**: Shipped 10G PIC-based DTN, rapidly reaches $100M
- **2007**: 10G wave market leader (47%)*, completed IPO
- **2008**: #1 market share in NA Long-haul*
- **2010**: Leapfrogs 40G, invests in 100G
- **2012**: Shipped 500G PIC-based DTN-X

**DTN-X Fuels Infinera’s Growth**
- 2012-2015 Revenue CAGR
  - Infinera: 26%
  - Worldwide Long-haul: 8%**

* Dell’Oro DWDM Long-haul Reports

**Average of projections from Dell’Oro, Ovum, IHS
Long-haul: Established Leader

Long-haul Market Leadership*

- #2 North America, #5 worldwide
- Market Share: ~30% North America; ~10% Worldwide

Technological Differentiation

- Operational simplicity
- Terabit-class PIC-enabled scalability
- Sliceable photonics
- Power/space network efficiency

* Based on average last 4 quarters of reports from Dell’Oro, Ovum, IHS

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DTN-X Family

XT Series
- XT-3600
- XT-3300
- XT-500

XTC Series

Infinera
Portfolio Expansion Increases ex-China TAM

Optimized Solutions
Increased Share

Long-haul & Subsea | Compact DCI | Metro Aggregation
---|---|---
2016 TAM ($M) | $4.3B | $0.1B | $4.5B
5-yr CAGR | 3% | 66% | 7%
2021 TAM ($M) | $5.0B | $1.4B | $6.3B

Expansion into Metro and DCI significantly increases TAM

3x TAM Expansion
2016 LH/Subsea Only = ~$4B
2016 Overall = ~$9B
2021 Overall = ~$13B

China market not accessible
- China 2016 TAM: $3.0B
- China 2021 TAM: $4.1B

Source: Ovum ON Forecast Spreadsheet: 2016-21; TAM excludes China
DCI: Cloud Architecture Drives Network Demands

Search Query

HTTP request

Cloud Data Center Network

1500 Miles

930X Network Traffic

sources: google.com, facebook.com
DCI: Infinera Cloud Xpress Family

Cloud Xpress
- 500 Gb/s super-channel line
- 10/40/100 GbE clients

Cloud Xpress 2
- 1.2 Tb/s super-channel line in 1RU
- 100 GbE clients
- 16QAM

Hyperscale Density | Low Power | Instant Bandwidth | Simple Operation | Automation | Built-in Security
Metro: Solutions From Core To Access

- 1G to 100G packet-optical
- 100G at Layer 1 and Layer 2 P-OTS
- 16QAM applications with XT-3300 and XT-3600
- Multi-service, access to core
- Low power and latency, high-density design

Building a differentiated portfolio from core to access
Metro: A Significant Growth Opportunity

**Differentiated Approach**
- Strong customer base and reputation in metro edge/access
- Power-efficient and purpose-built products
- Early technology leadership in emerging applications like mobile fronthaul and Remote PHY

**Vertical Integration**
- High-capacity solutions for metro core upgrades to 100G
- Over time, lowers cost structure and enhances technology differentiation

**Customer Base**
- Long-haul customer base upgrading to 100G metro
- Strong presence in metro-heavy cable vertical

**Infinera Current Metro Market Share: 3% Worldwide***

**Significant opportunities to grow!**

*Average of latest projections from Ovum, IHS, Dell’Oro and ACG*
**Instant Network: The Next Generation of Software Defined Capacity (SDC) for Cloud Scale Networks**

**Instant Bandwidth**
- Infinera DNA Software and Xceed Software Suite
- Microservices Architecture
- Open Software and SDN APIs

**Software Foundation:**
- Industry-leading Photonics - 500G PIC, 2.4T Infinite Capacity Engine
- Integrated and Disaggregated Architecture
- Massive Pre-deployed Capacity, Sliceable

**Hardware Foundation:**
- Software Defined Capacity

**Instant Network Benefits**
- Reduce Idle CapEx
  - As much as 50% of capacity idle
  - Lower initial CapEx by activating SDC when revenue-generating services demand it
  - Reduce business risk by shrinking time between paying for capacity and activating services
- Reduce OpEx
  - Fewer truck rolls, automate LSO
- Accelerate Service Delivery
  - Respond quickly to new service demands
- Increase Service Reliability
  - Reduce human touchpoints

**Cognitive Networking**
Infinera Unified End-to-end Portfolio

**Transport Market:** $13 billion addressable market by 2021*

Source: Ovum ON Forecast Spreadsheet: 2016-21; Addressable market excludes China
Market Expansion

Bandwidth Explosion and Evolving Network Architectures Create Opportunities
Explosion Of Bandwidth-hungry Applications And Devices

By the end of the decade*

- **Mobility**
  - 11.6B devices
  - Traffic >30 exabytes/month

- **Video**
  - 80% global internet usage = video
  - 11x more mobile video traffic than 2015

- **Cloud**
  - Public cloud services: 19.4% CAGR from 2015 to $141B (2019)

- **Internet of Things**
  - > 24B networked devices
  - 42.5 Mb/s avg fixed broadband speed, 2x 2014

Infinera well-positioned to address bandwidth explosion

*Source: TeleGeography Global Bandwidth Forecast Q3 2016*
The Dismantling of Status Quo Networks is Underway

NFV/Software pressuring traditional router infrastructure

Routing (L3)

Transport (L0-L2)

Routers need transport systems to connect

Pressure to break Proprietary OS, Slow Innovation

“LAYER T”

Transport Becomes More Capable with More Intelligence

Intelligent Transport increasingly capable of substituting for many router functions

Intelligent Transport shifting $$ away from Routing
Network Transformation: The New Layers T and C

**Layer T**: Intelligent Transport

- Open packet optical, move bits
- DC-DC, DC-user

**LAYER T**: L0 – L3

**Old Model**
- Firewall
- SBC
- B-RAS
- CPE

**New Model**
- Layer C: Cloud Services
  - NFV
  - Apps
  - SDN Control

**Layer C**: Cloud Services

- Firewall
- SBC
- B-RAS
- CPE

**LAYER C**: L3 – L7

- Open APIs
- Appliance per Function, Rigid, $$$, Closed
- Shared Infrastructure, Agile, Open, $

Every possible network function runs in cloud

Layer T powers hyperscale cloud networks – positive for Infinera
DCI and Long-haul: Layer T Traffic Patterns Changing

Trans-Atlantic Bandwidth Mix
Source: Telegeography

Internet: 21% CAGR
Mostly user to content

Private: 70% CAGR
Mostly DC to DC

100G Services are Surging
Source: Ovum

10G: 16% CAGR
100G: 75% CAGR
Hyperscalers Increasingly Dominate Cloud Services

Top Four Providers: 77% Market Share by 2020

Source: Cloud market share from UBS report, 5/9/16, “Is the Sky the Limit for Cloud Computing”
Metro: Layer T Architectural Shift, Fiber Deeper Into Metro

Fiber-deep Opportunity

- **Fiber to the business**
  - Fiber to the business

- **Fiber to the tower**
  - Fiber to the tower

- **Fiber to the node**
  - Fiber to the node

Packet-Optical Requirements

- Ethernet Services
- Low Latency
- Superior Sync
- Low Space and Power
- Hardened Systems
From 4G to 5G – What Can We Expect?

- **4G**
  - Bandwidth 50x over 3G
  - 10 ms latency
  - Fiber MFH w/CPRI emerges
  - Ethernet Backhaul
  - Central RAN emerges
  - Early open environment

- **5G**
  - 1000x bandwidth per unit area
  - New apps/MEC - 1 ms latency
  - Fiber everywhere possible, MFH and MBH merge
  - Cloud RAN pervasive
  - Fully open and RAN vendor-agnostic

Industry expects 4G co-existence as 5G emerges

Bandwidth explosion further “densifies” the network, creating significant opportunities

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2008: LTE (R8)

2013: LTE-A (R10/R11)

2016: LTE-A (R13)

2020: 5G
Market Expansion
How Infinera Wins
Infinera’s Journey – Seizing and Creating Market Inflections

- **2000**: Infinera founded, promises to do the impossible: PICs
- **2004**: Introduced industry’s first large-scale PIC
- **2005**: Shipped 10G PIC-based DTN, rapidly reaches $100M
- **2007**: 10G wave market leader (47%)*, completed IPO
- **2008**: #1 market share in NA Long-haul*
- **2010**: Leapfrogs 40G, invests in 100G
- **2012**: Shipped 500G PIC-based DTN-X
- **2014**: Introduced Cloud Xpress for DCI
- **2015**: Infinera enters metro; acquires Transmode
- **2016**: Infinera validates interoperability with white box open line system
- **2017**: Expect to introduce several next-generation products powered by new optical engine (“ICE4”) and deliver upgrades to XTM metro portfolio

* Dell’Oro DWDM Long-haul Reports
A Significant Market Expansion Opportunity

- Prior to 2015, Infinera only addressed the long-haul market (~$3.5B ex-China)
- Expansion into Compact DCI and Metro expands TAM 3x to ~$13B ex-China by 2020
- Infinera well-positioned to outgrow the overall market through 2020

- Market sizing based average of latest forecasts from IHS, Cignal AI, Ovum, Dell’Oro, ACG; China data from IHS; Compact DCI from Cignal AI
Global, Fast-growing Customer Base

- Over 600 customers spanning six continents
- Three of the top four internet content providers
- Leading North America and pan-European wholesale operators
- Majority of large cable operators in North America and Europe
- 19 Tier 1 operators globally

Brands: Telefónica, Facebook, Level3, Liberty Global, CenturyLink, Vodafone, interoute, BICS, NTT Communications, KDDI, Telecom Italia, Telia Carrier, HGC, Equinix, T-Mobile, Windstream, Cox, Telstra, Colt, Rostelecom
Optical Engines at an Increasing Cadence

**Infinite Capacity Engine Family**

- **Gen3 Engine**
  - Up to 500G

- **ICE4**
  - Up to 2.4T
  - Up to 200G/λ

- **ICE5**
  - Up to 4.8T
  - Up to 600G/λ

- **ICE6**
  - Up to 6.4T
  - Up to 800G/λ

- **ICE NG**
  - In Planning

**Family of engines: High to low channel count**

- 2012
- 2016
- 2018
- 2020

Capacity per module pair

24 months between generations

48 months
Infinera Leads the Move To OPEN

“Open” Drives Opportunities

**Open ICE** - Scalable capacity over any line system; successful interop testing with *Lumentum* OLS

**FlexILS** - Industry’s most widely deployed flexible grid open line system

**Xceed Software Suite** – Transport SDN; integrating with multiple orchestrators

**Collaboration Efforts:**

- **TELECOM INFRA PROJECT**
- **OPEN DAYLIGHT**

**Open APIs and Cloud Automation:**
Netconf/YANG, REST, XML, OpenFlow, OVSDB, OpenConfig, gRPC
Our Strategy: How Infinera Wins

Building Blocks
- Deliver Differentiated Next-gen Platforms in 2017
- Increase Cadence of Optical Engine
- Lead in Open: Open APIs, Open Line Systems

Markets
- Disaggregated and Integrated Solutions Optimized per Customer
- Balanced Portfolio – LH/SS/Metro/DCI (End-to-end)
- Grow Faster than the Overall Optical Market

Help Customers Transition to “Layer T” and Win in Their Markets
A Structure to Deliver Differentiated Financials

Gross Margin
- High scale integration
- Fixed cost leverage
- Unique pricing structures

Operating Expenses
- R&D = long-term target 20% of revenue
- G&A grows slower than revenue
- Success based S&M investment
- Structured long-term financial model
- Financial discipline
Sustained Success and a Setback... Long-term Targets Intact

**Solid Balance Sheet**
- $333M cash and investments
- $183M net cash (cash and investments less face value of convertible debt)

**Q2‘17 Performance**
- $177 million revenue
- 40.7% Gross Margin
- -12.2% Operating Margin

**Q3‘17 Outlook**
- $190 million revenue +/- $5 million
- 39% Gross Margin +/- 200 bps
- -12% Operating Margin implied
Overcoming recent challenges

Key Challenges

- Customer M&A
- Overexposure to Long-haul
- Managing Technology Transition
- Addressing challenges
  - Broad Portfolio Refresh in 2017
  - Faster Technology Cadence
  - End-to-End Expansion

Temporarily hit long-term financial targets

$333M cash at end of Q2-2017

Cash includes cash, restricted cash and investments;
Non-GAAP Gross Margin and Non-GAAP Operating Margin;
A reconciliation of the GAAP to non-GAAP measures can be found at www.infinera.com and on the last slide.
FY17 – Paving the Path to Profitable Growth

Revenue Growth Drivers

End of 2016

Current Products

1H 2017

+ CX2

+ XT/S-3300

2H 2017

+ XTM2 400G

+ XT/S-3600

+ XTC-10/4 1.2 Tb/s

Entering 2018 with a new product portfolio attacking a broad market

Margin Expansion

Integration drives lower costs

More purpose-built products

Fewer investment deals

Fixed cost leverage as volumes grow

Improving yields

Follow-on IB licenses

Planned expansion of gross margin begins late 2017; continues in 2018
Growth in All Markets: Building a Diversified Company

Long-haul outgrows market; DCI and metro expected to fuel growth and increase as percentage of revenue mix.
Gross Margin: Investments today drive value tomorrow

<table>
<thead>
<tr>
<th>Long-haul</th>
<th>Metro</th>
<th>DCI</th>
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<tbody>
<tr>
<td>Pre-deployment of bandwidth at next-gen pricing</td>
<td>Investing to earn incumbency and footprint</td>
<td>Pricing pressure increasing; bridging key customers to CX-2</td>
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</tbody>
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<thead>
<tr>
<th>Strong return on investment</th>
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<tbody>
<tr>
<td>Well-positioned with a strong customer base and growing IB license stream</td>
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<tr>
<td>Market transition from 10G to 100G packet-optical creates great opportunity</td>
</tr>
<tr>
<td>Emergence of cloud architectures should drive tremendous growth</td>
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Q3 GM% midpoint guide 39% +/- 200bps; Low 40s GM% anticipated Q4-17 into early FY18

GM% is non-GAAP
Key to Long-Term Differentiation – Cost Structure

Typical Systems Vendor Cost Structure

- System
  - Margin
  - Cost
  - Margin
  - Cost
- ASICs/DSP
  - Margin
  - Cost
- Optics
  - Margin
  - Cost

Infinera Cost Structure

- INFN aspires to achieve a significant gross margin advantage over closest competitors

- System manufacturer
- Silicon manufacturers
- Component manufacturers

Vertical Integration

INFN aspires to achieve a significant gross margin advantage over closest competitors
The Future is Bright: Infinera’s Ultimate Opportunity

Long-haul/subsea return to growth; DCI and metro = high-growth opportunities

Photonic integration and pricing strategies enable differentiated cost model

Balancing technology investments with disciplined expense management

Long-term Goals Intact
- Outgrow Market
- 50% Gross Margin
- 15% Operating Margin

Gross margin and operating margin targets are non-GAAP
Thank You

www.infinera.com
Infinera Corporation
GAAP to Non-GAAP Reconciliation
(In millions, except percentages and per share data)
(Unaudited)

Note: Amounts represent the midpoint of the expected range.

<table>
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<tr>
<th>Reconciliation of Gross Margin:</th>
<th>Q2’17 Actual</th>
<th>Q3’17 Outlook</th>
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</thead>
<tbody>
<tr>
<td>U.S. GAAP</td>
<td>36.7%</td>
<td>35%</td>
</tr>
<tr>
<td>Stock-based compensation</td>
<td>1.2%</td>
<td>1%</td>
</tr>
<tr>
<td>Amortization of acquired intangible assets</td>
<td>2.8%</td>
<td>3%</td>
</tr>
<tr>
<td>Non-GAAP</td>
<td>40.7%</td>
<td>39%</td>
</tr>
</tbody>
</table>

| Reconciliation of Operating Expenses: | | |
|-------------------------------------| | |
| U.S. GAAP                           | $                | 108          |
| Stock-based compensation            | (11)             |              |
| Amortization of acquired intangible assets | (2) | |
| Non-GAAP                            | $                | 96           |

| Reconciliation of Operating Margin: | | |
|------------------------------------| | |
| U.S. GAAP                          | (22.9)%         | (22)%        |
| Stock-based compensation           | 7.0%            | 7%           |
| Amortization of acquired intangible assets | 3.7% | 3% |
| Non-GAAP                           | (12.2)%         | (12)%        |

| Net Loss per Common Share: | | |
|----------------------------| | |
| U.S. GAAP                  | $                | (0.30)       |
| Stock-based compensation   | 0.09             |              |
| Amortization of acquired intangible assets | 0.04 | |
| Amortization of debt discount | 0.02 | |
| Income tax effects         | (0.01)          |              |
| Non-GAAP                   | $                | (0.16)       |