For every point-to-point interconnect
Prologue

2016.4 Incorporation in US, founded by people from Marvell, Finisar, Samsung

Team of 22 PhD and MS engineers & growing fast

~2019 Series A Round (US and Korea VCs) ~$8 MIL USD

14 US and other countries patents

- 5G Smart Device Interconnect
- 5G Big Data Center Interconnect
- 5G Mobile Network
Prologue

5G Smart Device Interconnect

<25cm
>30Gbps

High Data-rate
Chip-to-Chip Interconnect

5G Big Data Center Interconnect

<5m
400Gbps

All Copper
C-Tube™ Cable

5G Mobile Network

>40km
25Gbps

5G Range Extender™
Network Module

POINT²’s 5G Solution for All Distances
5G Mobile Network

**5G RangeXtender™ Transceiver**

- 70% Cost Reduction
- Covering up to 40km
- Error free (<10^-12)

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5G network requires 50 times more traffic than 4G, and a 25Gbps link to be deployed.

Existing solution, the Max. reach is 10km due to higher dispersion in 5G network (25Gbps).

Customer wants a single solution for all distances, covering up to 40km.
RangeXtender™ IC
PT-E1012322

KEY FEATURES
◆ 2-lanes bi-directional EDC+CDR (25Gbps/lane)
◆ Low power consumption < 9mWatts/Gbps
◆ Background channel adaptation
◆ Integrated test features such as standard pattern generator/checker and internal, real-time internal eye scanner
◆ Embedded CPU allows full flexibility, customization and testability.
◆ Loopback (Remote and local) tests
◆ -40C ~ 85C operating temperature range.
◆ 3.8mm x 3.8mm 64-ball fcCSP (0.4mm pitch)

RangeXtender™ allows the existing infrastructure to reach much longer distance
5G Big Data Center Interconnect

Optics are too expensive for short cables

Optics

Too Expensive

BOM and Assembly costs are too high ($600~900)

All Copper

C-Tube™ Cable

C-Tube™ Cable

Quad channel 400Gbps (PAM-4)

• Up to 7m
• Plug and play
• Low power consumption (<4.5W per end)
5G Big Data Center Interconnect

All copper, full speed, active cable for short reach

C-Tube™ Cable

Point2 Technology’s C-Tube™ (PT-QD20132) is used in the next generation low power, high performance QSFP-DD Active Electrical Cable (AEC) modules that support 400G Base-SR4 Ethernet. It accepts eight lanes of 53.125Gbps PAM4 (26.5625 Gbaud/lane) and each lane can operate up to 7 meters while simultaneously achieving excellent BER performance and maintaining low power dissipation.

C-Tube™ is an affordable alternative to Active Optical Cables (AOCs). The cable offers world class lowest power, best performance CDR SOC technology that can replace any existing AOC for significantly lower power and cost while maintaining identical interface and performance. C-Tube™ adopts the standard QSFP-DD form factor and complies with MSA specifications.

C-Tube™ integrates high-performance DSP technology and equalization techniques to compensate for Intersymbol Interference (ISI) effects. Additionally, an onboard MCU that allows users to access full monitoring and configuration data via the 2-wire QSFP Management Interface. To satisfy any different settings for various environments, a customized firmware can be downloaded to C-Tube™.

Reach
3m – 7m

Data-rate
400G

Cost
No Optics,
Everything is in-house design

C-Tube™ Cable
C-Tube™ Cable
PT-QD20132
400G QSFP56-DD

KEY FEATURES
◆ 8-lanes with Data Rate up to 425Gbps
◆ 3m -7m Reach
◆ Power consumption < 4.5 Watts/End
◆ PAM4 encoding
◆ Compliant with IEEE 802.3cd Base-SR4 Ethernet
◆ Compliant with QSFP56-DD MSA compliant
◆ Hot pluggable QSFP56-DD form factor
◆ Much lower cost than optical cable

C-Tube™ Cable is a cost and power efficient QSFP56-DD for high-speed, short-reach links