

# 400GE Extended Reach – A look at Broad Market Potential

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July 25, 2016

# Broad Market Potential

- Direct analyst estimates / forecast of 400GBASE-ERx market volumes are not yet available.
- Ovum data sourced from:  
Total\_OC\_Forecast\_Spreadsheet\_2014-2020,  
[www.ovum.com](http://www.ovum.com)
- Fujitsu Network Communications (FNC) developed projections based on their modelling approach off the Ovum published baseline 100G datasets.
- FNC Derive Worldwide market estimates:
  - High estimate: {100GBASE-ER4 + 100GE WAN} / 4
    - Assume that 100GE SMF 10km+ interconnect completely migrates to 400GE. Highly unlikely, thus an upper-bound forecast.
  - Medium estimate: forecast that 400G-ERx tracks the history of 100G-ER4 as a percentage of total 100G SMF units.

# FNC “High” Estimate

- Use the Ovum 100G forecast and assume 100% shift to 400G

		2013	2014	2015	2016	2017	2018	2019	2020
100GBASE-ER4	DataCom	25	90	382	1,628	3,338	4,597	6,584	8,191
up to 40 km	WAN Client	475	1,706	3,902	7,210	10,815	16,223	24,334	36,501
	Total	500	1,796	4,283	8,839	14,153	20,820	30,918	44,692

- We divide it by 4

		2013	2014	2015	2016	2017	2018	2019	2020
High	400G <40km	125	449	1071	2210	3538	5205	7729	11173

Data used by permission of OVUM.

# FNC “Medium” Estimate

- Use the Ovum 100G forecast ratio of ER/40km to total 100G

	2013	2014	2015	2016	2017	2018	2019	2020
100GBASE-ER4	25	90	382	1,628	3,338	4,597	6,584	8,191
100G WAN <40km	475	1,706	3,902	7,210	10,815	16,223	24,334	36,501
100GBASE-LR4	1,923	11,384	17,628	41,632	55,373	74,862	88,385	104,501
100G up to 10km	32,323	60,993	90,098	139,567	190,744	256,214	335,072	410,903
	34,746	74,173	112,010	190,037	260,271	351,895	454,374	560,096
% of ER 100G	1.4%	2.4%	3.8%	4.7%	5.4%	5.9%	6.8%	8.0%

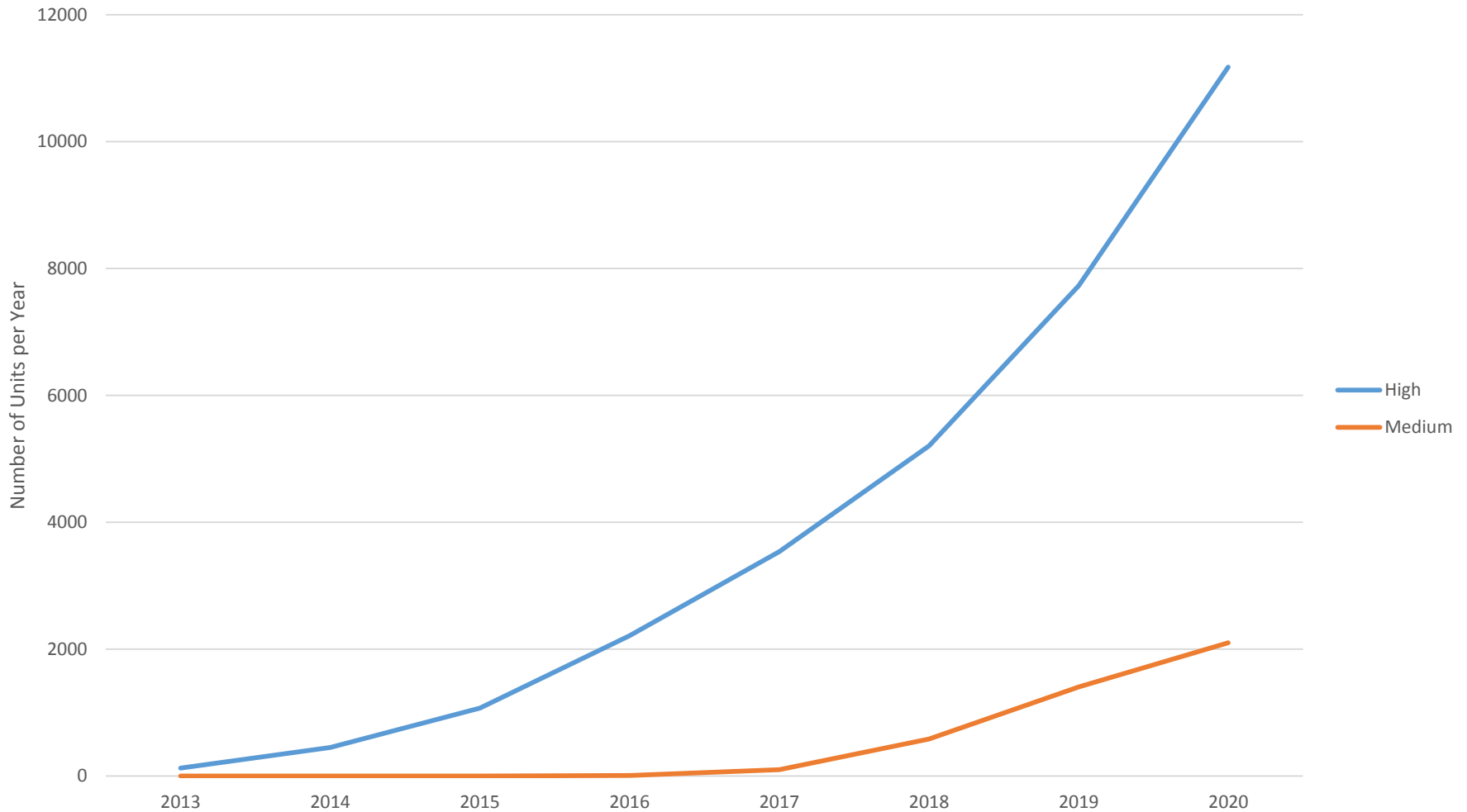
- We multiply the 400G SM forecast by the % of ER 100G

	2013	2014	2015	2016	2017	2018	2019	2020
% of ER 100G	1.4%	2.4%	3.8%	4.7%	5.4%	5.9%	6.8%	8.0%
400GBASE (single mode)	0	0	0	121	1,837	9,825	20,613	26,331
400G ER				6	100	581	1403	2101

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# Broad Market Forecast

400GBASE-ERx Worldwide Potential Volume Forecast  
Fujitsu Network Communications Derivation based on OVUM data.



IEEE 802.3 NG-ECDC ICAID. July 25, 2016