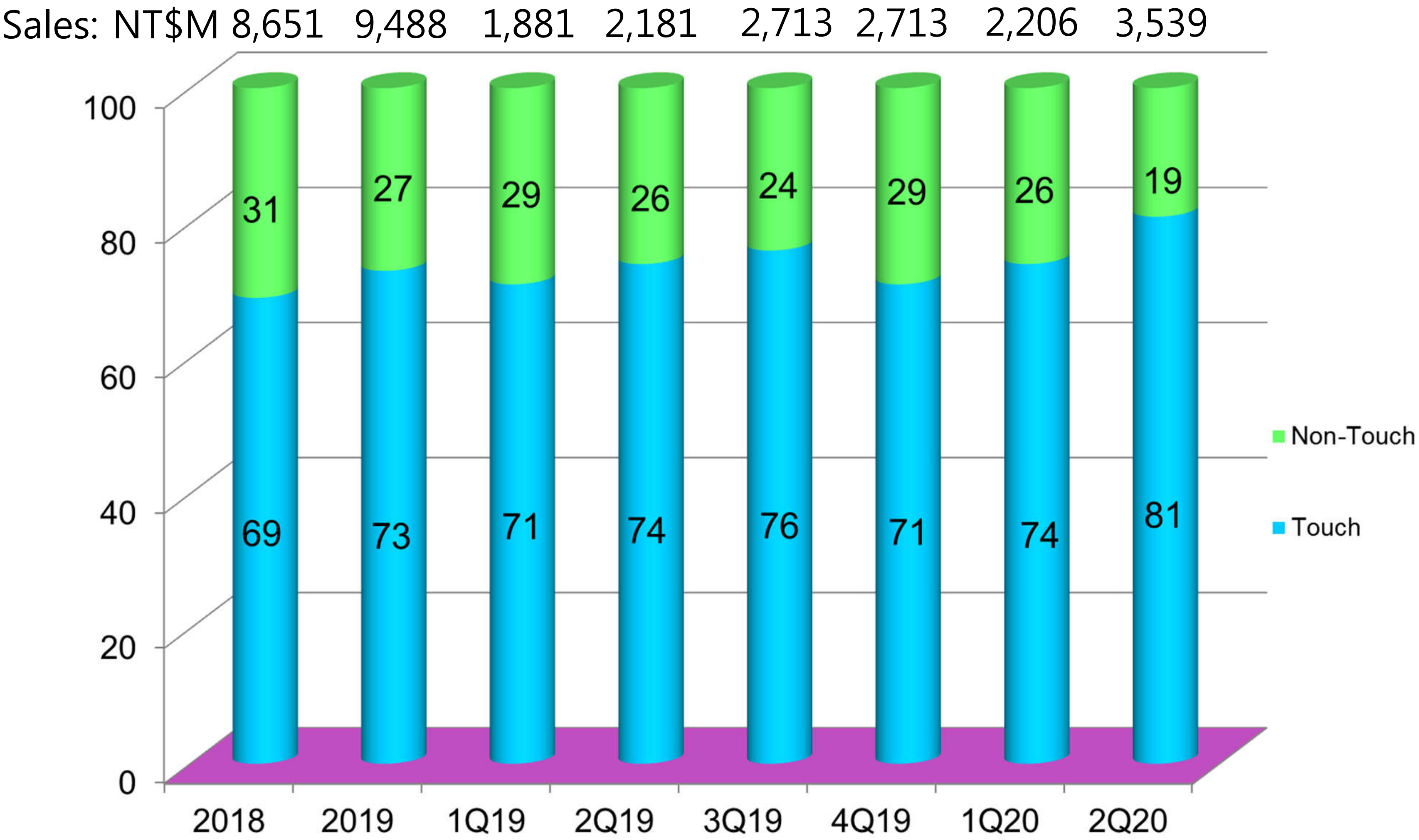
ELAN Smart-Input™ Solutions

Dual Transformation through AI

21st Credit Suisse Asian Technology Conference

ELAN Microelectronics Corporation

Sales Breakdown by Product Line (Consolidated)



- Touch: Touchscreen Controller, Touchpad, Biometrics
- Non-Touch: MCU, Pointing Stick, Affiliated Co. Products

2Q20 Income Statement

YoY Comparison (Consolidated)

NT$M

	2Q20	%	2Q19	%	YoY(%)
Sales	3,539	100.0	2,181	100.0	62.3
Gross profit	1,684	47.6	1,005	46.1	67.6
Sales expense	132	3.7	91	4.2	
G&A expense	101	2.9	82	3.7	
R&D expense	479	13.5	375	17.2	
Operating profit	972	27.5	457	21.0	112.7
Non-operating income & exp.	113	3.2	73	3.3	
Profit before tax	1,085	30.7	530	24.3	104.7
Net profit	893	25.2	424	19.4	110.6
Belong					
Parent company	918		434		
Non-Controlling Interests	(25)		(10)		
EPS (NT$)	3.15		1.49		111.4

* 304 million shares issued; 291.4 million shares outstanding as of the end of reporting period.

• Consolidated Statement of Financial Position (Reviewed).

2Q20 Income Statement

QoQ Comparison (Consolidated)

NT$M

	2Q20	%	1Q20	%	QoQ(%)
Sales	3,539	100.0	2,206	100.0	60.4
Gross profit	1,684	47.6	1,043	47.3	61.5
Sales expense	132	3.7	102	4.6	
G&A expense	101	2.9	70	3.2	
R&D expense	479	13.5	357	16.2	
Operating profit	972	27.5	514	23.3	89.1
Non-operating income & exp.	113	2.8	(445)	(20.2)	
Profit before tax	1,085	30.3	69	3.1	1,472.5
Net profit	893	24.9	44	2.0	1,929.5
Belong					
Parent company	918		54		
Non-Controlling Interests	(25)		(10)		
EPS (NT$)	3.15		0.18		

* 304 million shares issued; 291.4 million shares outstanding as of the end of reporting period.

* Consolidated Statement of Financial Position (Reviewed).

1H20 Income Statement

YoY Comparison (Consolidated)

NT$M

	1H20	%	1H19	%	YoY(%)
Sales	5,745	100.0	4,062	100.0	41.4
Gross profit	2,727	47.5	1,861	45.8	46.5
Sales expense	234	4.1	153	3.8	
G&A expense	171	3.0	163	4.0	
R&D expense	836	14.6	741	18.3	
Operating profit	1,486	25.9	804	19.7	84.8
Non-operating income & exp.	(332)	(5.8)	204	5.0	
Profit before tax	1,154	20.1	1,008	24.7	14.5
Net profit	937	16.3	808	19.9	16.0
Belong					
Parent company	972		829		
Non-Controlling Interests	(35)		(21)		
EPS (NT$)	3.33		2.85		16.8

* 304 million shares issued; 291.4 million shares outstanding as of the end of reporting period.
* Consolidated Statement of Financial Position (Reviewed).

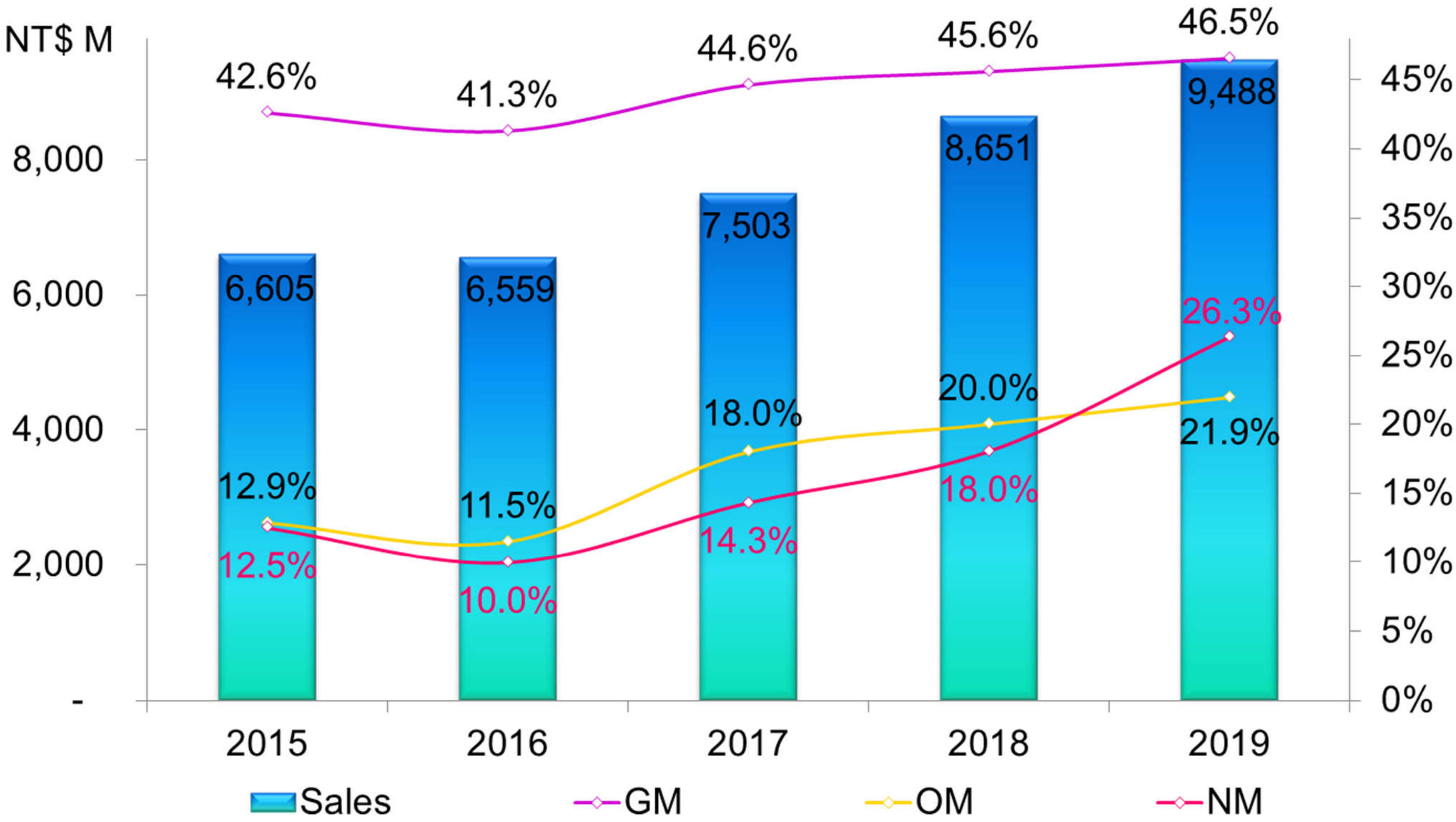
3Q20 Guidance

Based on our current business outlook, ELAN expects:

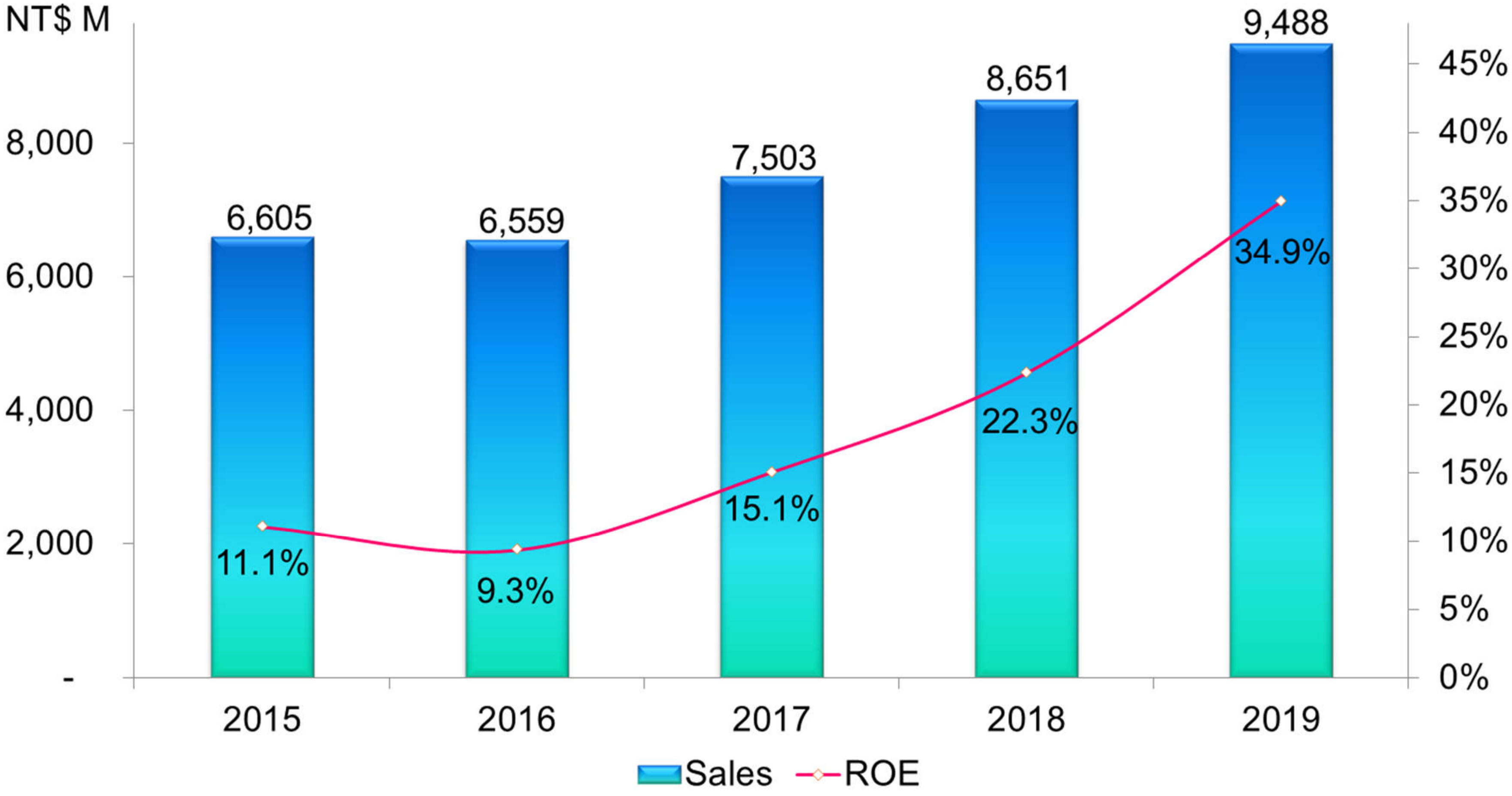
- Consolidate revenue to be approximately between NT$ 4.6 billion and NT$ 4.8 billion
- Gross margin to be about 47% to 48%
- Operating margin to be about 31% to 33%

- ELAN’s forward-looking statements are subject to significant risks and uncertainties that could cause actual results to differ materially from the forward-looking statements made in this presentation.
- Except as required by law, we undertake no obligation to update any forward-looking statement, whether as a result of new information, future events, or otherwise.

Sales & Profitability Trending Up



ROE Trend


NT$ M
8,000
6,000
4,000
2,000
-
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
6,605
6,559
7,503
8,651
9,488
11.1%
9.3%
15.1%
22.3%
34.9%
2015
2016
2017
2018
2019
Sales
ROE

Payout Ratio

Unit: NT$

Year	EPS	Dividend			Payout Ratio (%)
		Total	Cash	Stock	
2019	8.57	6.50	6.50	0.00	75.8 (EPS Based on Net Profit) 91 (EPS - Operating Profit)
2018	5.35	5.00	5.00	0.00	93.5
2017	2.58	2.58	2.58	0.00	100
2016	1.57	1.57	1.57	0.00	100
2015	1.98	2.03	2.03	0.00	102.6
2014	3.61	3.66	3.66	0.00	101.3
2013	3.8	3.53	3.53	0.00	92.9
2012	3.02	3.00	3.00	0.00	99.5

- 2018 capital reduction NT$3 in 4Q18 (new capital)
- 2019 based on the weighted average number of shares outstanding

Our Great Advantages

1. Strong alliance with global OS/ platform/ spec defining players. (MPP/ USI/ AES/ Win8/ Win10...)

2. Close partnership with top 5 NB brands in product development, future tech trend, understanding of user behavior, and market status. (QTR, QBR)

3. Superior support and resolution to competitors for customers.

4. Great emphasis on and dedication to information security. (anti-spoof, encryption for smartcard, NB and smartphone)

5. Prompt adaption to substantial external environmental changes.

New Catalyst in 2020 (WFH, Online Education, Stay at Home)

1. Touchpad

- ELAN market share is expected to grow from 50% in 19' to over 60% in 20'.
- Growth is driven by consumer market and Chromebook (ELAN has ~90% Share).
- Blended ASP is higher than existing selling price.
  - ✓ Haptic-Pad / Lighting-Pad / Total Solutions
- US back-to-school expenditures up vs Japan may fulfill "GIGA School Program" by 2020 .

2. Touchscreen

- Touch penetration rate grew from 21% to 28%.
- High ASP with pen controller shipment is higher than last year.
- PCBA module / New spec. launch (MPP2.5) / Surface series ...

3. Fingerprint Sensor – (Acer/Asus/HP/Lenovo/Dell)

- Fingerprint sensor in NB market penetration rate rising.
- Blended ASP is higher than last year.
- FP revenue in 1H20 exceeded that in 2019.
- New Windows Hello spec for 3D Anti-spoofing with ELAN leading the way.

4. Smartphone Market

- Touch with pen capability for foldable OLED smartphone.

Our Next Step

1. Continue to grow market share in Touchpad/ Touchscreen/Fingerprint

2. Tap into foldable smartphone market.

3. Enter Mini/ Micro LED market via alliance with LED driver player – Macroblock.

4. Expand exposure to in-cell NB display with LTDI (Large Touch Display Integration).

2020 Global NB Market

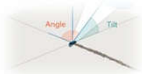
M units	2017	2018	2019	1H20	2H20(F)	2020(F)
Quanta	42.4	37.8	35.1	21.8	29.2	51.0
Compal	39.4	39.5	43.9	20.3	23.7	44.0
Wistron	19.0	17.5	17.4	8.8	8.8	17.5
Inventec	18.0	18.5	18.9	9.1	9.8	18.9
Pegatron	8.9	7.8	10.2	4.5	6.0	10.5
TW Top 5 NB ODM	127.7	121.1	125.5	64.5	77.5	141.9
Others	32.3	42.9	45.5	24.5	24.2	48.7
Global NB shipments	160.0	164.0	171.0	89.0	101.6	190.6
TW Top 5 share	80%	74%	73%	72%	76%	74%
Others	20%	26%	27%	28%	24%	26%

Source: ODM shipments from company data, BofA Global Research; Global shipments from IDC.
Others include LCFC, Bitland, Huaqin, Samsung & Fujitsu.

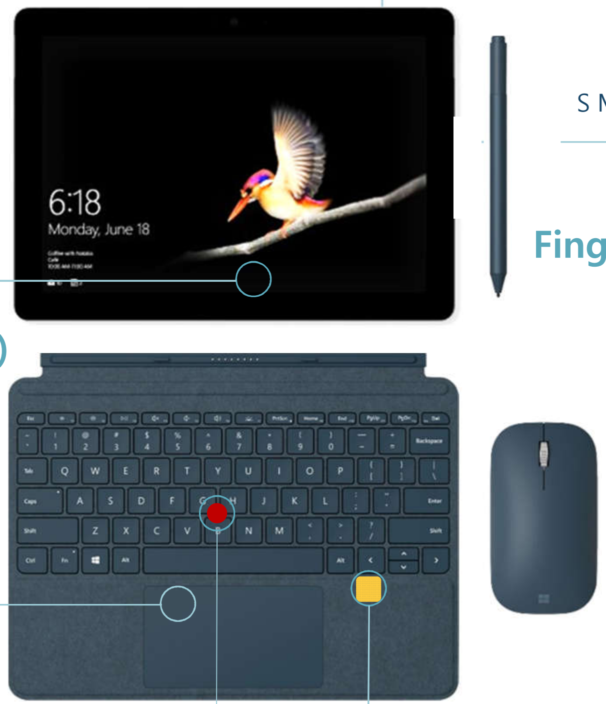
ELAN Cash Cow

Touchscreen Controllers (World Wide #1)

MPP Standard & MPP Pro



Tilt Sensing



SMART HUMAN INTERFACE LEADER

Fingerprint-ID (World Wide Top 2)

MOH (Encryption)
MOC (Secure Bio)

FIDO Dongle

FP Keycap

FP Mouse

FIDO Mouse

Touchpad Modules (World Wide #1)

Touchpad

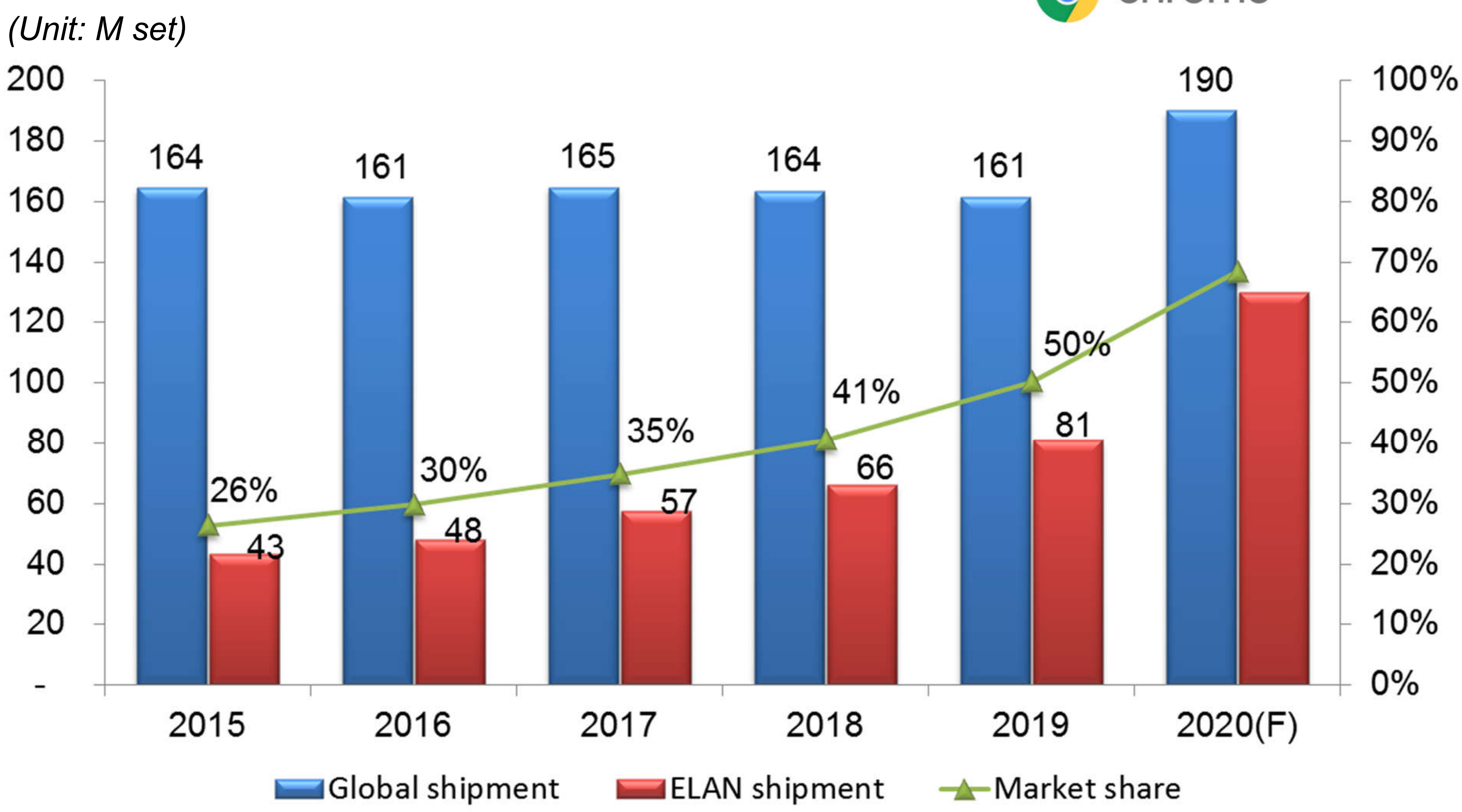
Lighting-Pad

ID-Pad

Point Stick (World Wide #1)

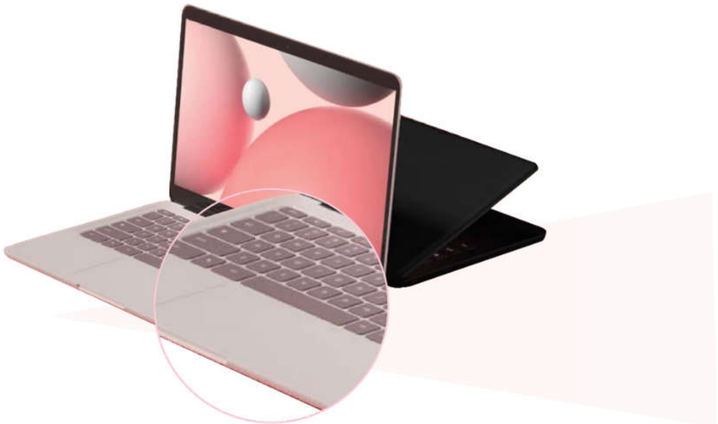
Point Stick Generations

NB Touchpad Shipments
Global vs. ELAN



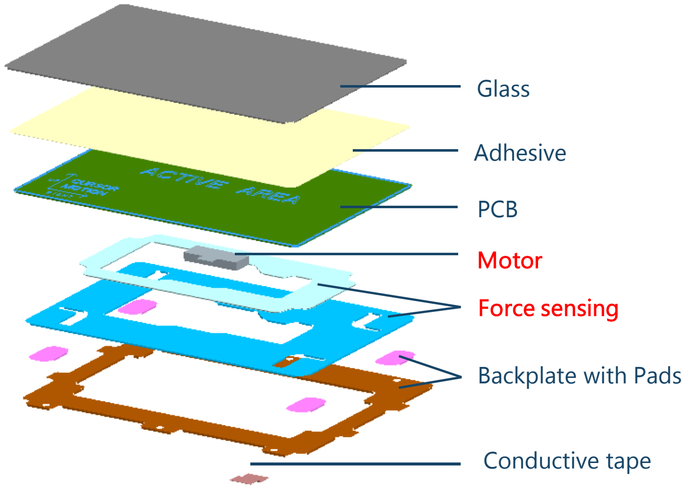
Source: TrendForce, TRI, NB Players, ELAN

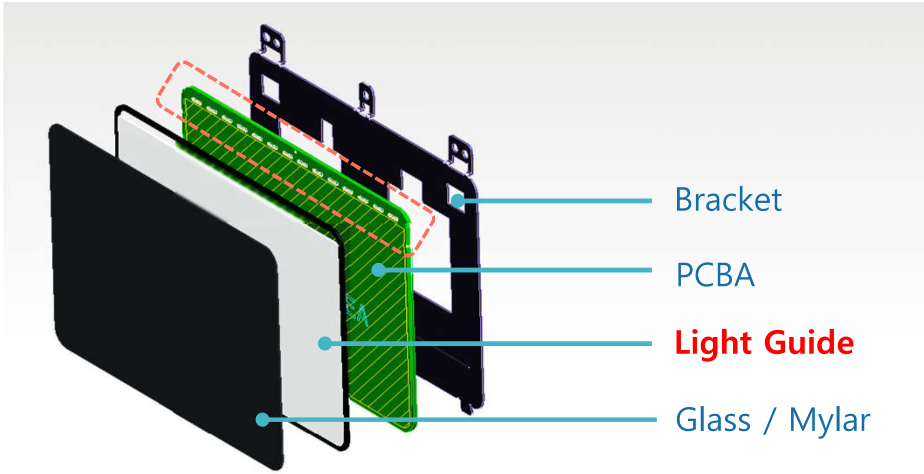
ELAN High ASP Touchpad Total Solution – Next Growth Driver



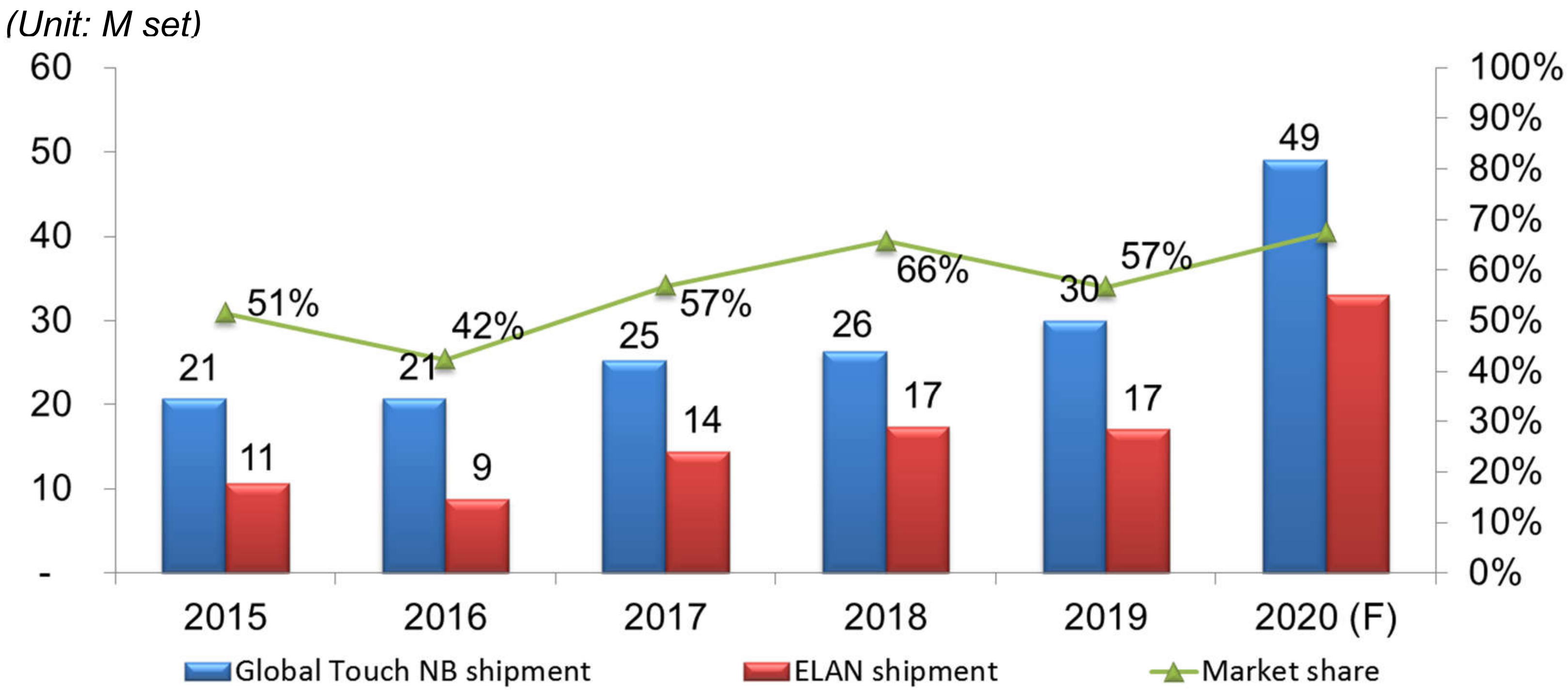
Haptic Pad Solution

Lighting Pad Solution





NB Touchscreen Shipments
Global vs. ELAN



	2015	2016	2017	2018	2019	2020(F)
Global NB Q'ty	147	148	149	146	146	173
Penetration Rate	14%	14%	17%	18%	21%	28%

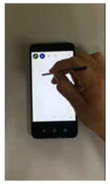
* PS.: Global Touch NB Q'ty excluding Apple which does not support touchscreen function

Source: TrendForce, TRI, NB Players, ELAN

Touchscreen Next Growth Driver

Smartphone

TDDI+Pen
(Touch and Display Driver Integration)

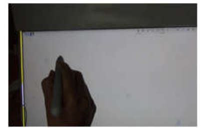


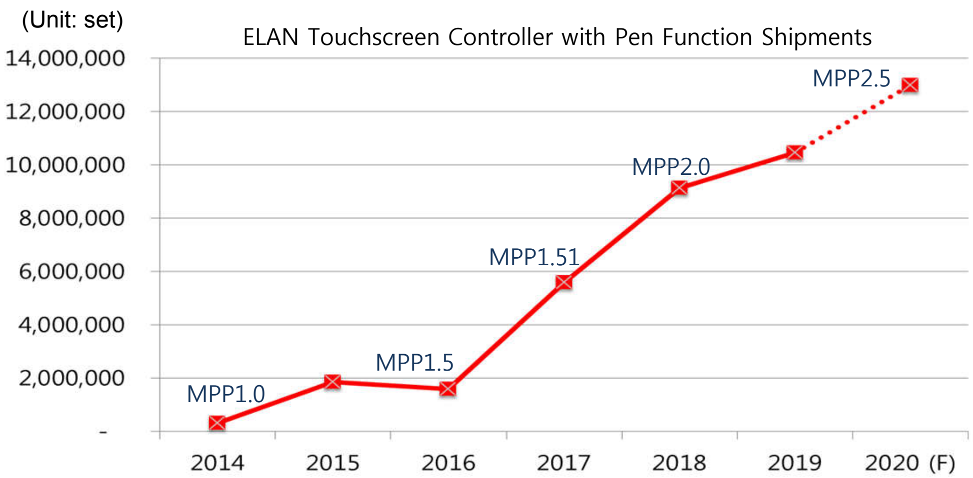
F.OLED Touch+Pen

NB

Touch+Pen

LTDI+Pen





LTDI May Support Microsoft Surface Series

All Devices Compatible with MS Pen

Tablet with KB Cover	Tablet with KB Cover	Clamshell	Detachable Clamshell	AIO Desktop
Surface Go 10" ($399+)	Surface Pro 12.3" ($799+)	Surface Laptop 13.5" ($799+)	Surface Book 13.5"/15.6" ($1,499+)	Surface Studio 28" ($2,999+)
				

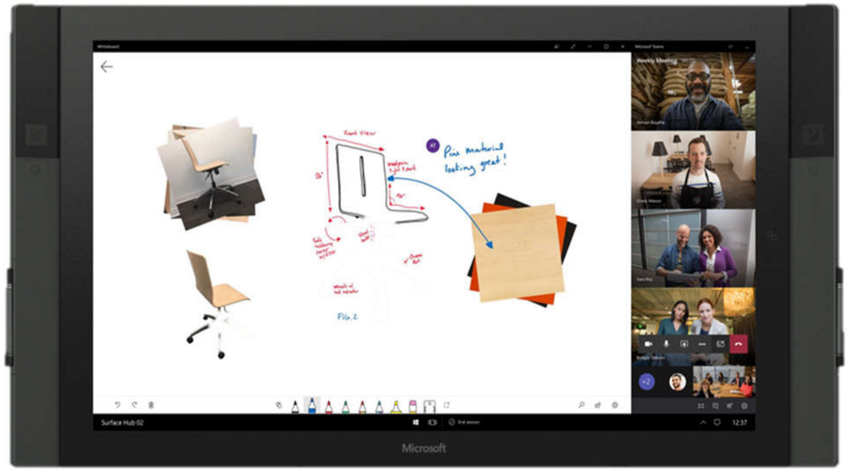
Seamless Across Multi-Platform with Active Pen

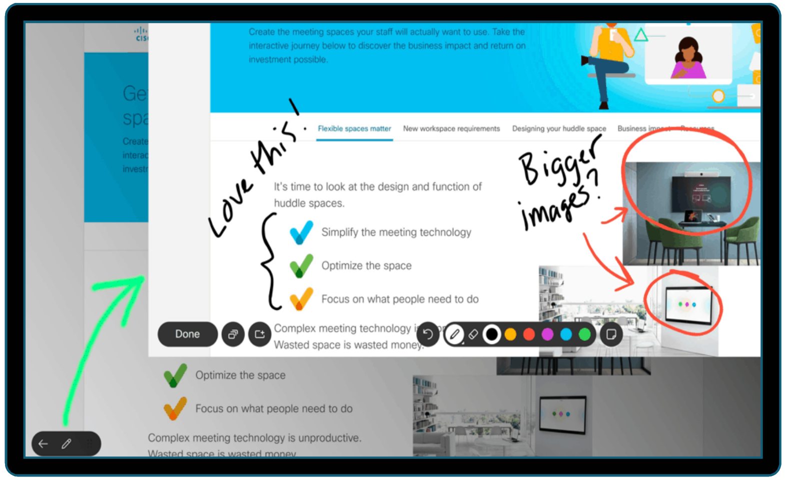
with ELAN Touch IC Inside

Infinix Note 6	Surface Go	Laptop
		

Video Conferencing with Whiteboard / Annotations

Microsoft Teams





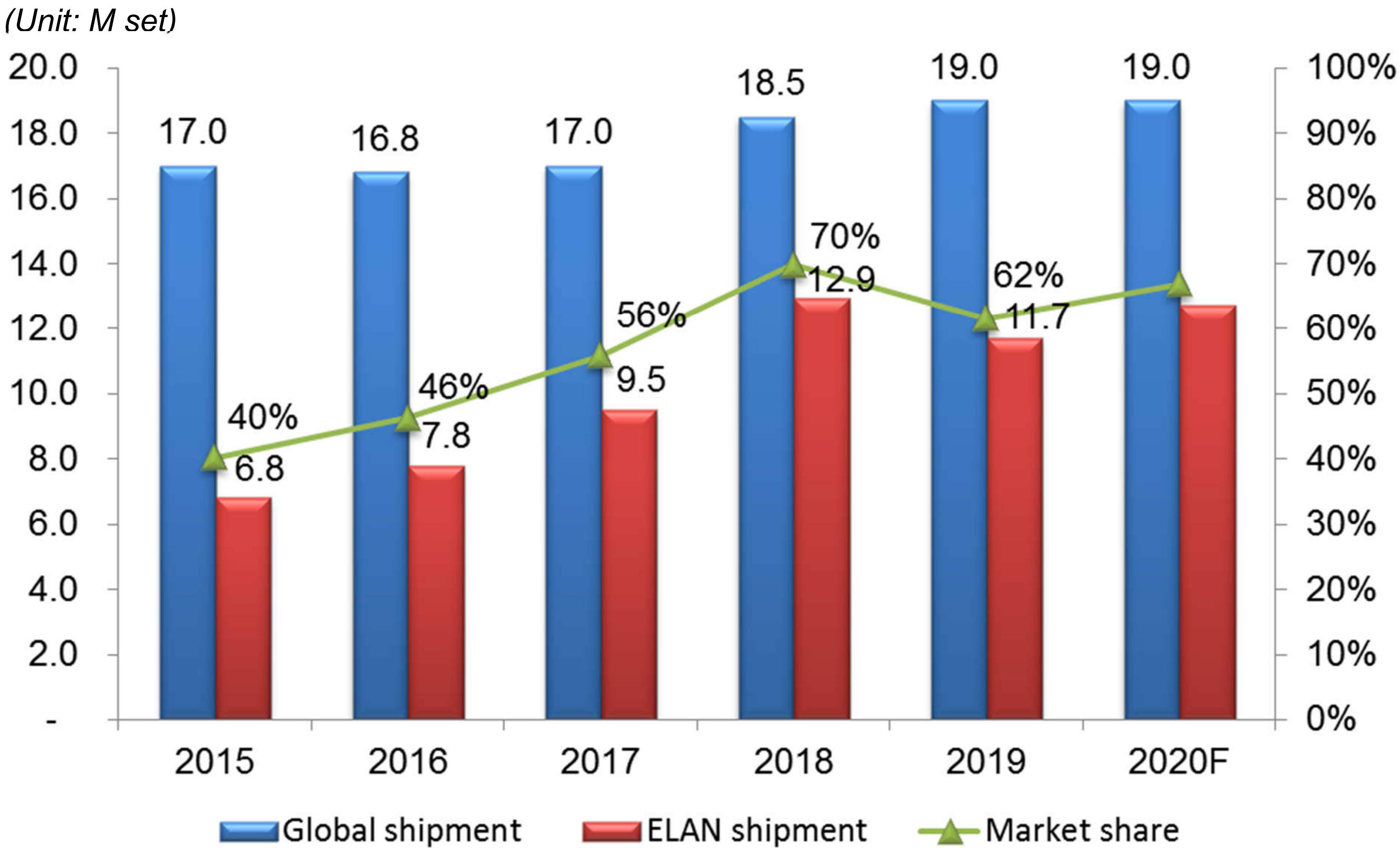
Cisco webex

GOOGLE MEET

zoom

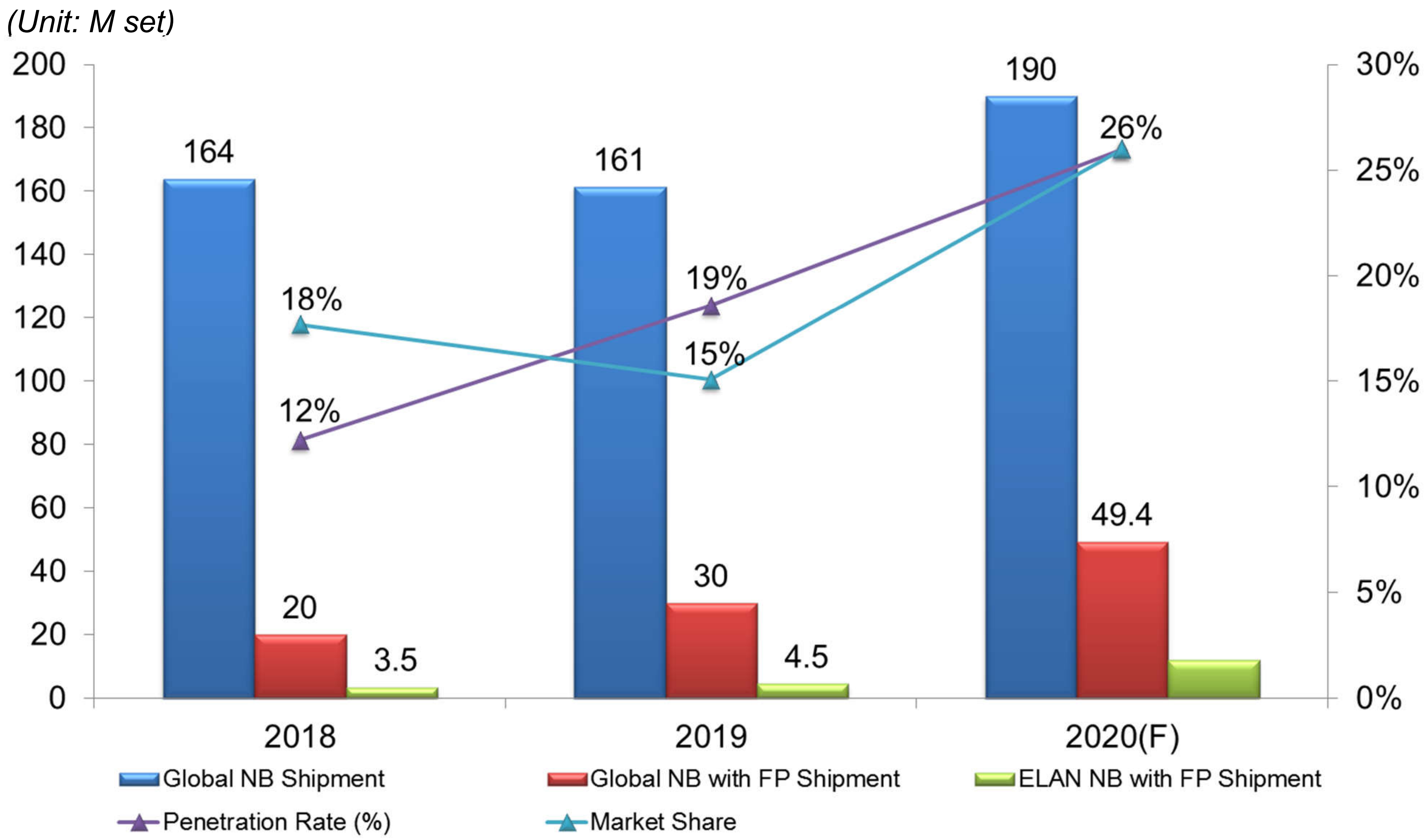
ELAN

NB PST Shipments
Global vs. ELAN



Source: ELAN

Fingerprint Sensor in NB Market Trend

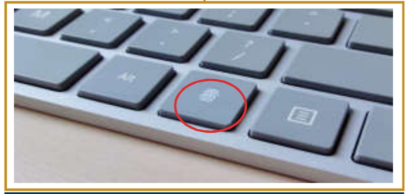


Source: ELAN

Fingerprint Sensor in NB Trends Going Up

Fingerprint on C cover
Supply Chain Overhead
Double Tooling Charge

Smart-ID™ Button



Smart-ID™ KeyCap

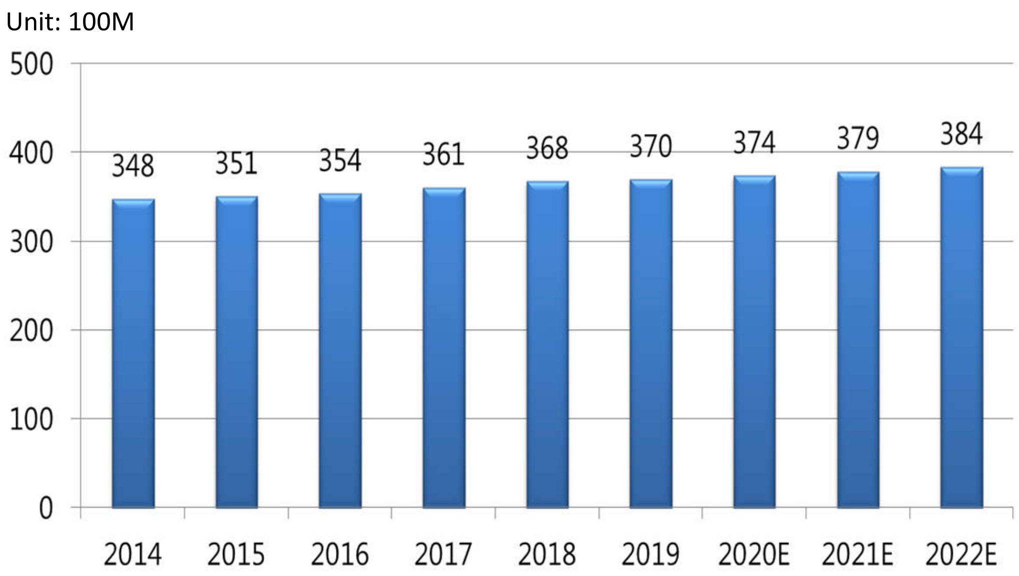
Smart-ID™ Pad
✓ Seamless Integration
✓ Better User Experience

2020 & 2021 Opportunity

- Gain Market Share (MOC ASP & Penetration Rate)
- Fingerprint Solution on NB with 3D Anti-Spoofing

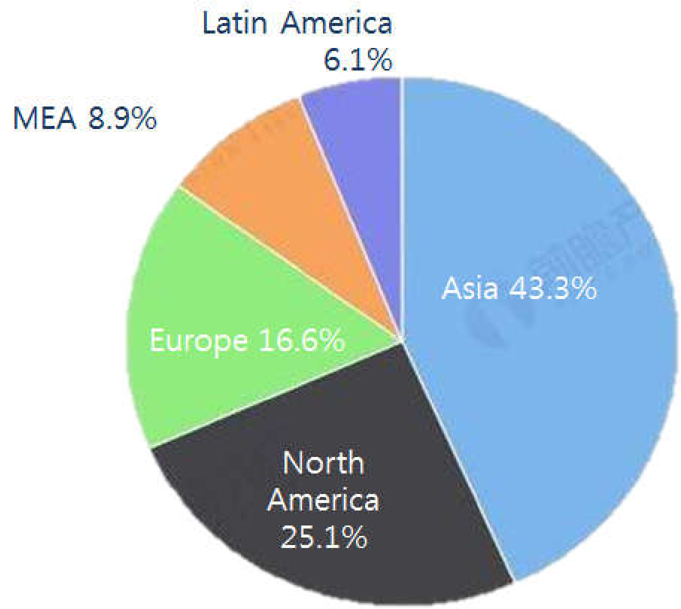
Global Smart Card Market

2014-2022 Global Smart Card Units



Source: ICMA/Forward Business and Intelligence Co., Ltd.

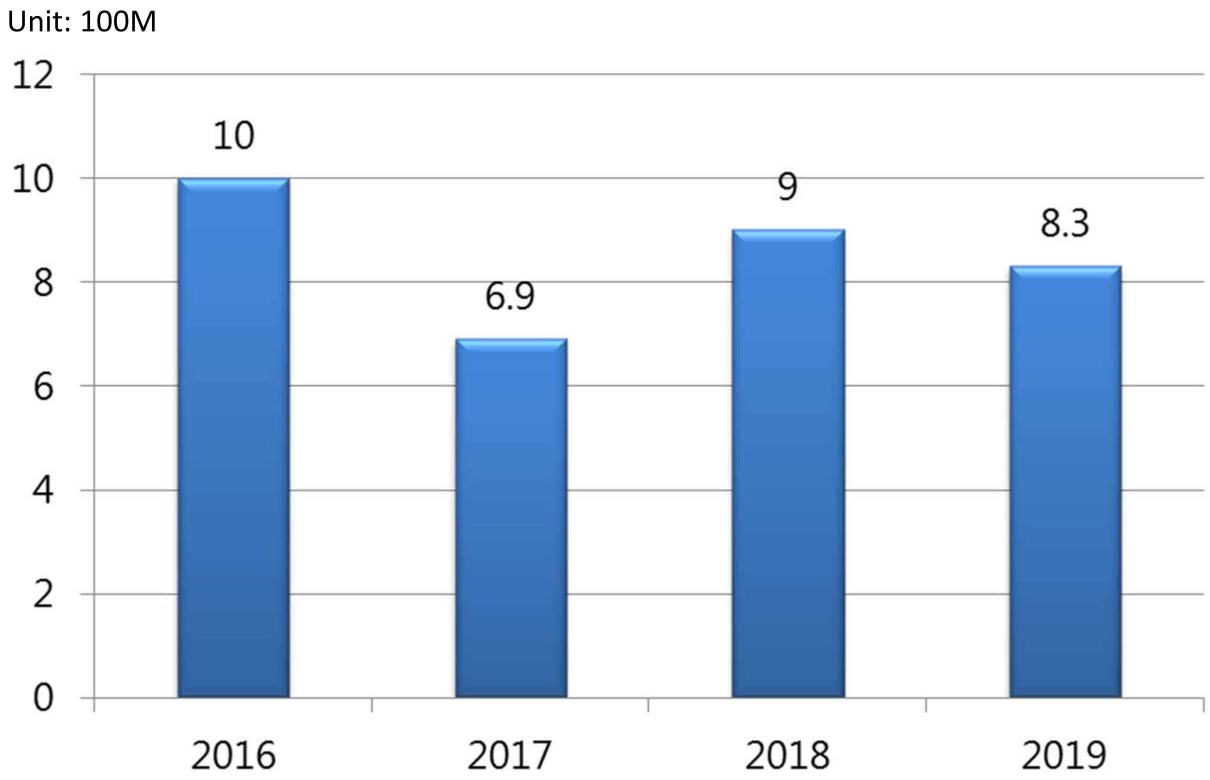
Global Smart Card Units by Region



Source: Business Next

According to RBR, a payment research institution, UnionPay accounts for 36% of the global bank card market, while Visa and Mastercard account for only 32% and 20%. In recent years, UnionPay has locked in emerging markets and continued to expand its international business.

Global UnionPay Card Circulation (銀聯卡)



Source: China UnionPay. In 2019, the UnionPay card in circulation reached to 8.42 billion.

ELAN Ultra-low Power Fingerprint Sensor for Battery-less Card

Korea Woori Bank

ITU ID card

ELAN Biometrics Smart Card Ecosystem

Mastercard

Based in US Vendor

FIME

Based in EU Lab

Visa

Based in US Vendor

CTC

Based in EU Lab

Union Pay

Based in CN Vendor

BCTC

Based in CN Lab

ELAN Specification have Achieves ISO Standard

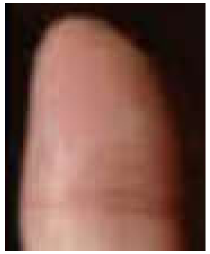
	ISO/IEC Standard	ELAN
System on Card	Match-on-SE	Match-on-SE
FRR	<3%	<3%
FAR	<1/10,000	<1/10,000
Verification Time	1.5s	1s
Field Strength 1.5 A/m Sensing Distance	20mm	30mm

Presentation Attack Instruments (PAIs)

ELAN has rich experience in presentation attack instruments.

Spoof & Live Finger Image Comparison

fake finger
(conductive silicone)

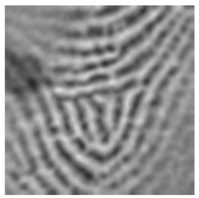


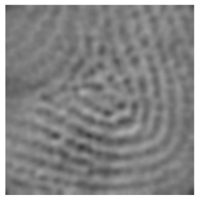
live finger

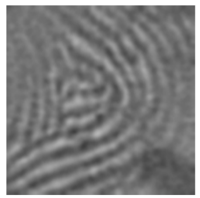
fake finger
(gelatin)

Capacitive Sensor

Optical Sensor







Fingerprint Recognition w/3D Anti-Spoofing Next Growth Driver

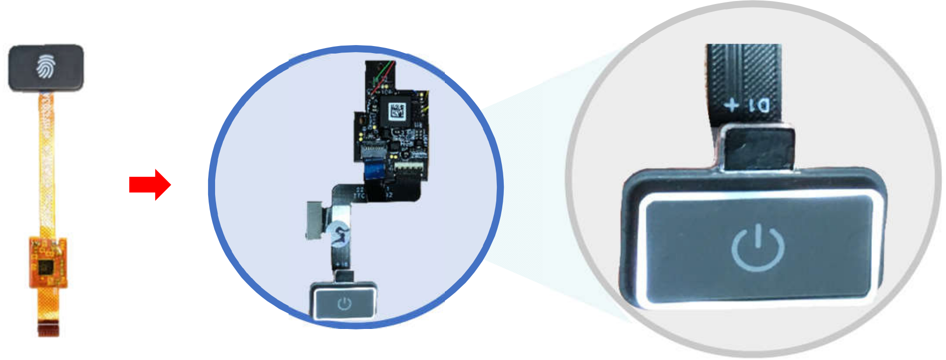
Smart Card

(Match on SE)

UnionPay

VISA

NB



Smart Phone

Capacitive Type

Optical Type

Security Key

(Match on Chip)

3D Anti-Spoofing Demo

Flexible Phone with Pen Will be a Trend

Flexible OLED @ SID Show
with ELAN Touch IC Inside

7.77" QXGA Foldable AMOLED

Alliance Between Elan & Macroblock

Smart Watch

3 in 1
Touch + Display Driver + FP

Micro LED Driver + Tcon

NB

LTDI + **Mini LED Driver**
(Local Dimming)

Smart Monitor

2 in 1
Touch + Display Driver

Mini LED Driver
+ Touch w/Pen


ELAN
25TH
Anniversary
AI Transformation