IR Presentation 2020

2020년 경영실적 & 2021년 1Q 전망

OE SOLUTIONS

February 2021

OE Solutions IR

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2020년 경영실적 Review

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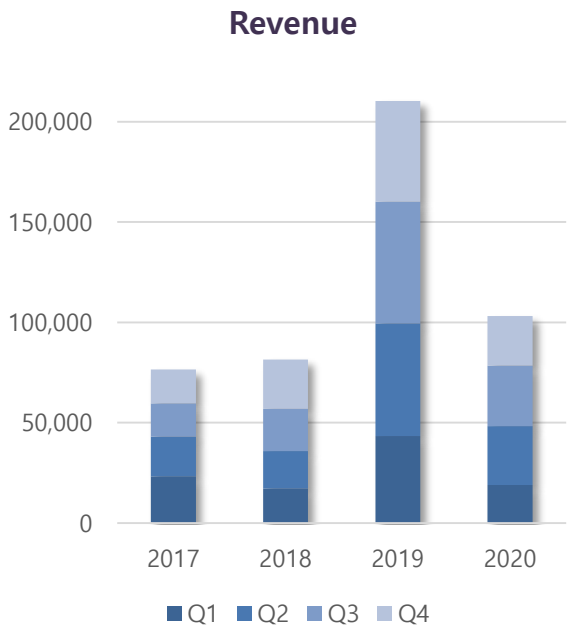
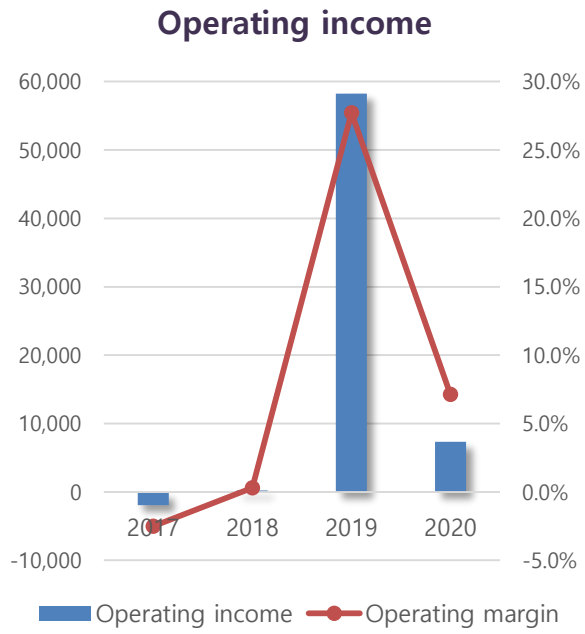
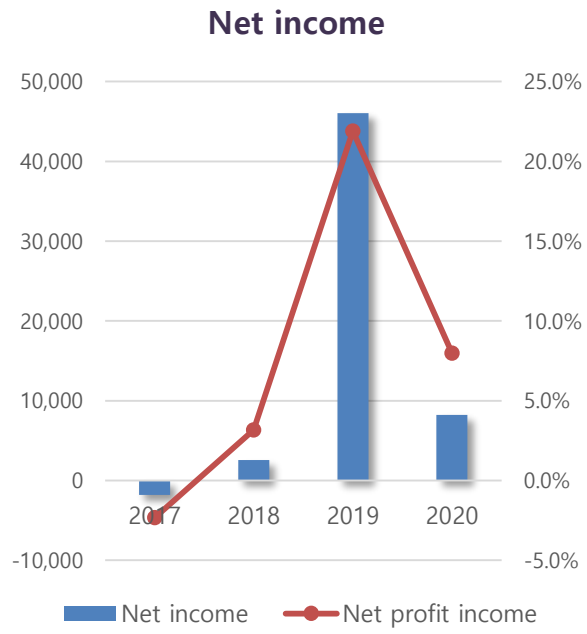
Financial Results

2020년 매출 1,032억원, 영업이익 74억원(7%), 당기순이익 82억원(8%)







※ 연결 기준임

(단위: 백만원)

구 분	2017	2018	2019	Q1 20	Q2 20	Q3 20	Q4 20	2020
• 매출액	76,594	81,504	210,283	18,938	29,378	30,157	24,706	**103,178**
• 영업이익	-1,917	234	58,262	-1,400	4,176	5,037	-460	**7,353**
• 영업이익율	-2.5%	0.3%	27.7%	-7.4%	14.2%	16.7%	-1.9%	**7.1%**
• 당기순이익	-1,786	2,584	46,065	175	3,793	4,514	-253	**8,229**
• 당기순이익율	-2.3%	3.2%	21.9%	0.9%	12.9%	15.0%	-1.0%	**8.0%**

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Financial Results

2020년 YoY -51% 하락된 1,032억 매출 및 영업이익 74억

COVID-19 팬더믹으로 인한 국내외 5G 투자 감소 및 지연

(단위: 백만원)

구 분	2019	2020	%	YoY	Q3 20	Q4 20	QoQ
매출액	**210,283**	**103,178**		-50.9%	**30,157**	**24,706**	-18.1%
매출총이익	**87,448**	**40,492**	**39.2%**	-53.7%	13,351	**8,000**	-40.1%
판매관리비	**29,186**	**33,139**	**32.1%**	13.5%	8,314	**8,460**	1.8%
영업이익	**58,262**	**7,353**	**7.1%**	흑자유지 (-87.4%)	**5,037**	**-460**	-109.1%
경상이익	**58,388**	**8,195**	**7.9%**	흑자유지 (-86.0%)	5,085	**-842**	-116.6%
당기순이익	**46,065**	**8,229**	**8.0%**	흑자유지 (-82.1%)	**4,514**	**-253**	-105.6%

※ 상기 실적은 연결 기준임

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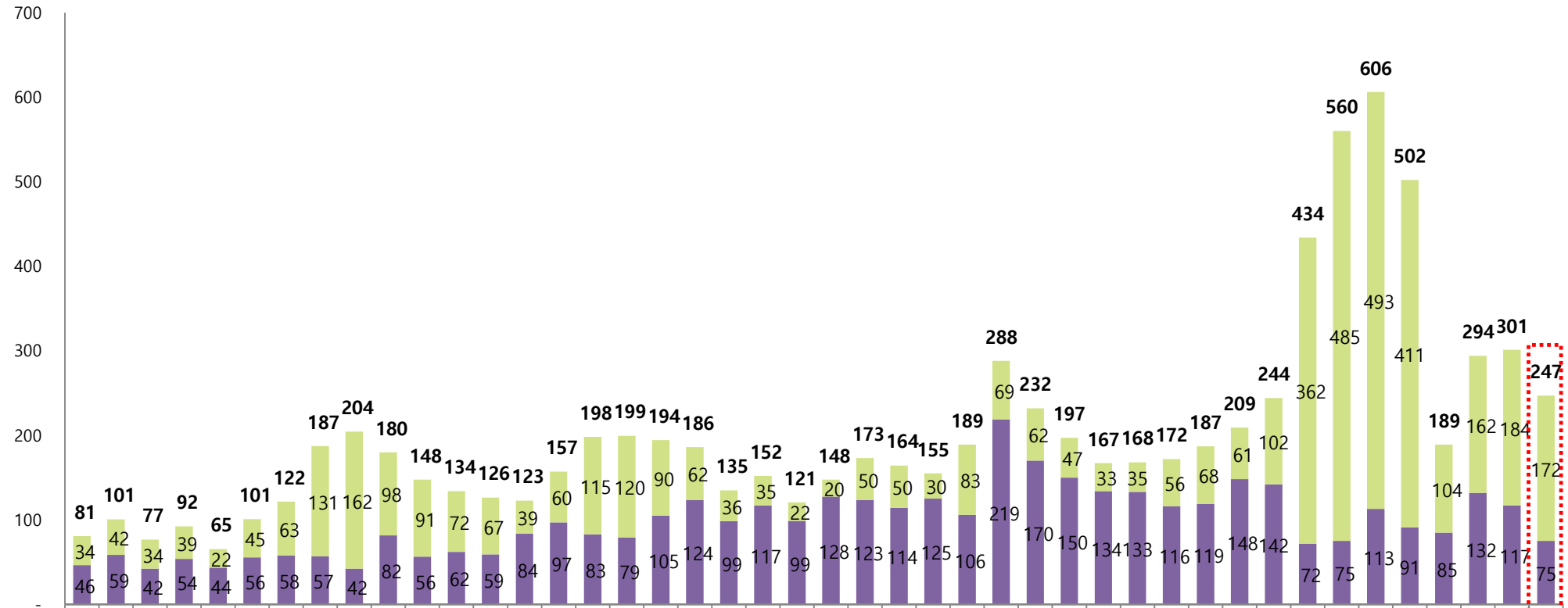
분기별 매출 추이

COVID-19 확산 등의 이슈로 5G 투자 감소 및 지연

2021년 해외 5G 투자 본격화될 것으로 기대

(단위: 억원)



	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	2010				2011				2012				2013				2014				2015				2016				2017				2018				2019				2020			
Total	81	101	77	92	65	101	122	187	204	180	148	134	126	123	157	198	199	194	186	135	152	121	148	173	164	155	189	288	232	197	167	168	172	187	209	244	434	560	606	502	189	294	301	247
Korean	34	42	34	39	22	45	63	131	162	98	91	72	67	39	60	115	120	90	62	36	35	22	20	50	50	30	83	69	62	47	33	35	56	68	61	102	362	485	493	411	104	162	184	172
Export	46	59	42	54	44	56	58	57	42	82	56	62	59	84	97	83	79	105	124	99	117	99	128	123	114	125	106	219	170	150	134	133	116	119	148	142	72	75	113	91	85	132	117	75

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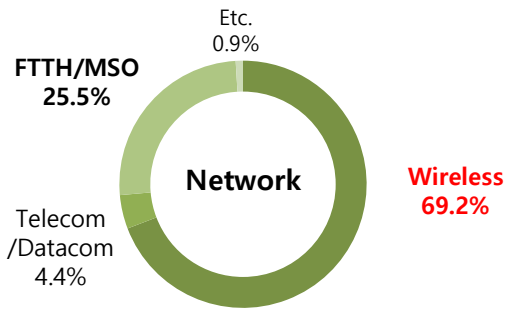
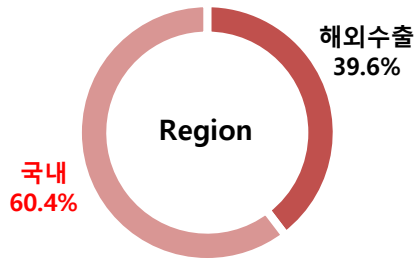
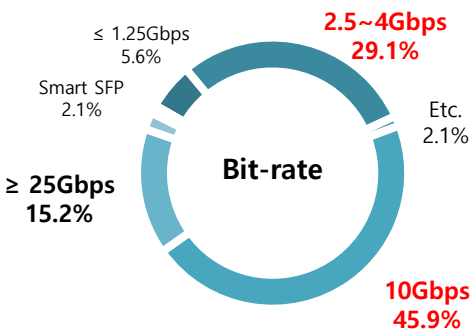
매출분석

북미 FTTH/MSO Infra 투자에 따른 매출 상승
Wireless 69.2%, 국내매출 60.4% 비중 차지







(단위: 억원)

구 분	2019	2020	YoY (%)
응용산업별			
• Wireless	1,840	713.7	-61.2%
• Telecom/Datacom	96.2	45.6	-52.6%
• FTTH/MSO	166.1	262.6	58.1%
• etc.		9.8	N/A
지역별			
• 국내	1,751.5	622.6	-64.5%
• 해외	350.9	409.0	16.6%
해외수출 비중	16.7%	%	
전송속도별			
• ≤1.25Gbps	61.2	58.1	-5.1%
• 2.5~4Gbps	210.8	300.3	42.5%
• 5~6Gbps	24.3	12.5	-48.6%
• 10Gbps	1,056.7	473.2	-55.2%
• ≥25Gbps	713.1	156.4	-78.1%
• Smart SFP	35.3	21.2	-39.9%
• Component / Chip		9.8	N/A
• 기타 (상품 등)	1.04	0.2	-77.6%
총 계	2,102.4	1,031.7	-50.9%

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국내외 5G 무선 통신 Business 전망

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국내외 5G 모바일 통신 Business 전망

5G Network Supply chain

Telecommunication Carriers

LG U+, kt, SK telecom, verizon, AT&T, T-Mobile, Sprint, docomo, KDDI

Network Equipment

SAMSUNG, NOKIA, ERICSSON, FUJITSU, NEC

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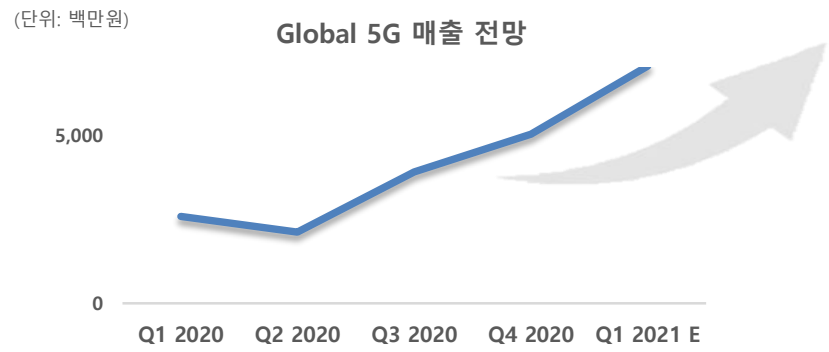
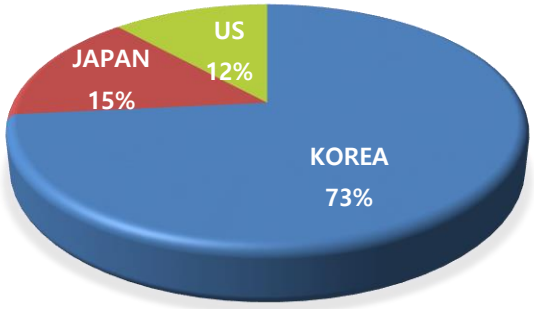
Global 5G Revenue Forecast

하반기 Global(US, Japan 등) 5G 매출 증가폭은 더욱 커질 것으로 전망



2020년 5G Revenue



(단위: 백만원)

Region	Operator	Revenue
KOREA	KT	37,691
	LG U+	
	SKT	
JAPAN	KDDI	7,606
	NTT docomo	
US	Verizon	6,028
	AT&T	
Total		51,326

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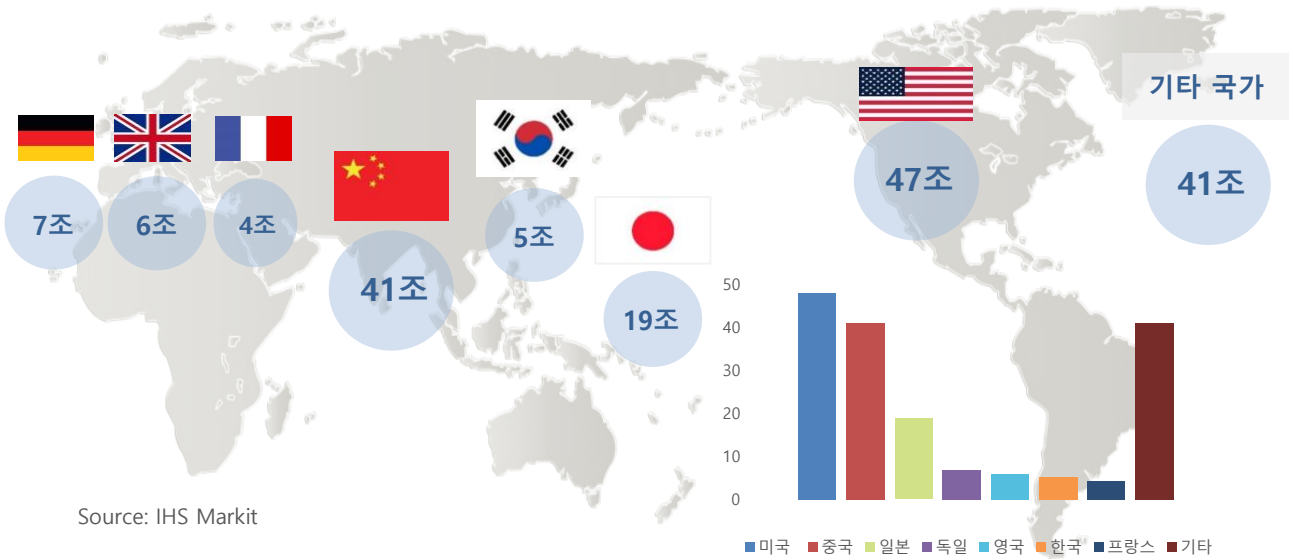
국내외 5G 무선통신 Business 전망

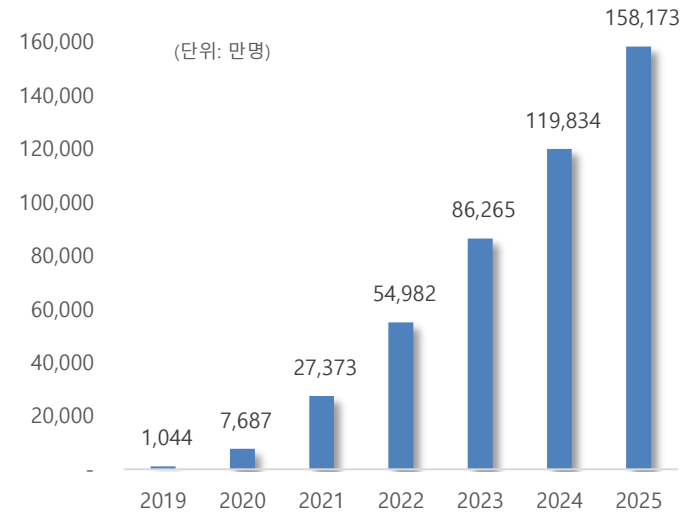
5G Market Forecast

5G Infra 장비투자 전망
- 5개년 평균치



Source: IHS Markit

Global 5G 가입자 전망



Source: IHS Markit

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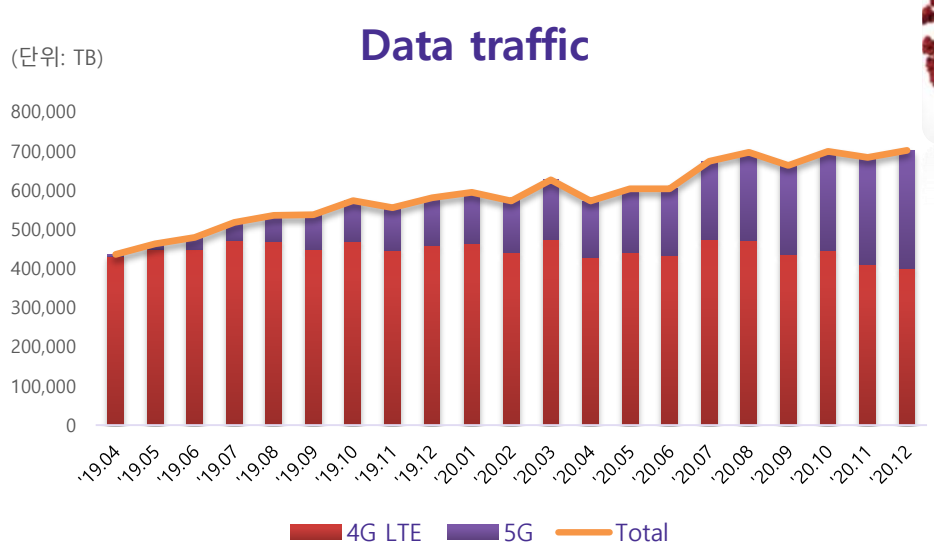
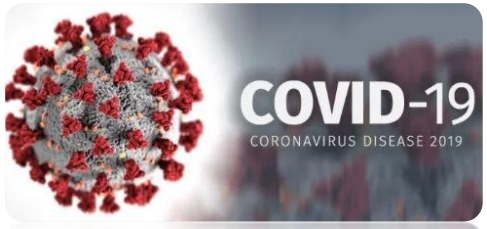
국내외 5G 무선통신 Business 전망

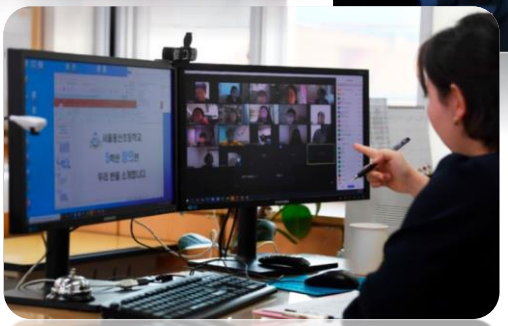
COVID-19 장기화

비대면 문화(교육, 업무, 소비 등) 확산에 따른 Data traffic 지속적 증가 예상

Data traffic







(Source: 과학기술정보통신부)

(단위: TB)

구 분	'20.01	'20.02	'20.03	'20.04	'20.05	'20.06	'20.07	'20.08	'20.09	'20.10	20.11	20.12
4G LTE	463,118	440,395	473,543	427,662	441,233	433,645	472,636	471,662	436,093	445,047	410,676	399,193
5G	131,241	132,057	152,729	144,192	162,200	169,898	201,227	225,055	226,786	253,697	272,598	302,278
Total	594,359	572,452	626,272	571,854	603,433	603,543	673,863	696,717	662,879	698,744	683,274	701,471
Growth rate	2.5%	-3.7%	9.4%	-8.7%	5.5%	0.02%	11.7%	3.4%	-4.9%	5.4%	-2.2%	2.7%

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OE Solutions Vision & Strategy

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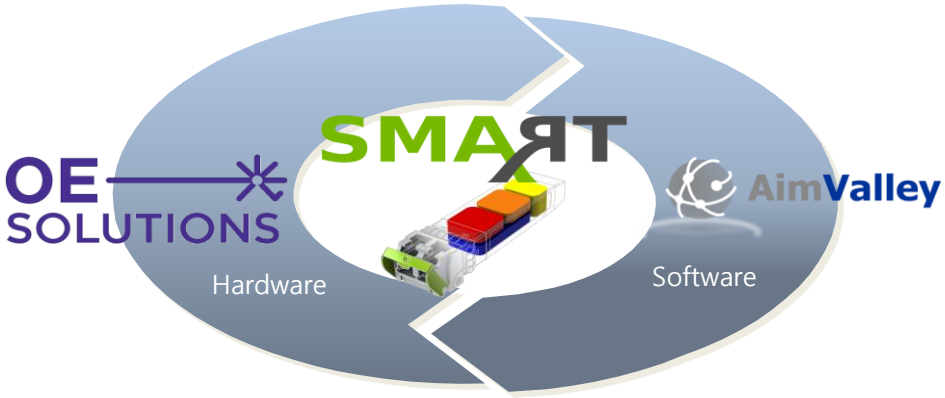
Unique Products-Smart Transceivers

World's First Leading Technology Smart Transceiver

Smart Transceiver



Product Features

Smart 트랜시버란?

통신시스템을 통해 구현되는 기능을 트랜시버에 탑재하여 **저비용· 고효율**로 네트워크 Migration 구축이 가능하게 하는 제품으로

OE Solutions/AimValley의

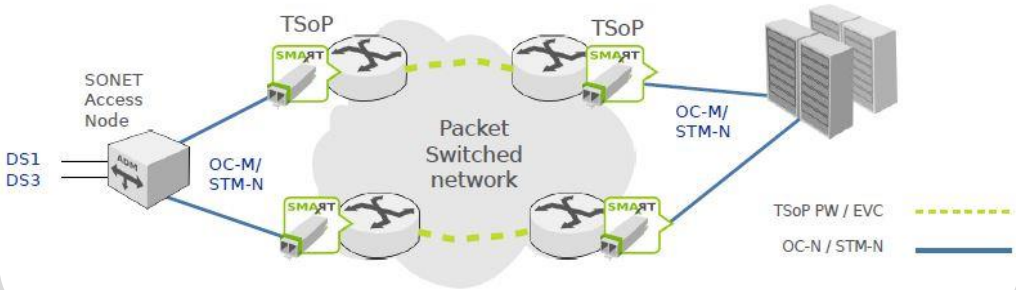
세계최초 독자 기술

Global Tier 1 고객들과 긍정적인 설계 진행

- CISCO, Nokia, Juniper, Ciena, ADVA 등

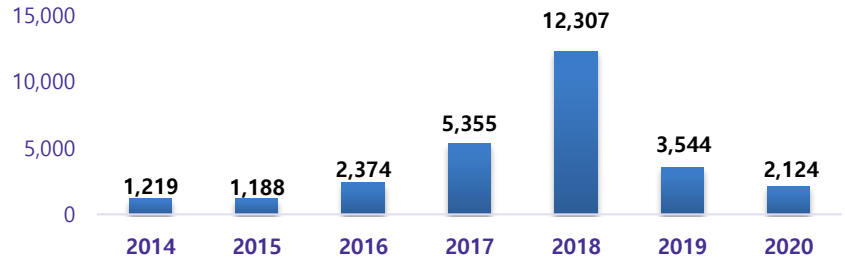
Simplify Network Migration

Example of using Smart SFP



(Unit: million KRX)

Smart Transceiver Revenue



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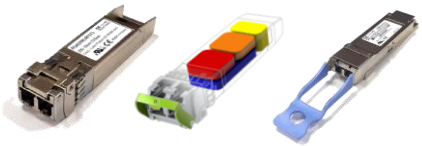
Vision & Strategy

Business 확대

Optical Component

- 2020년 Optical Component 국산화 양산 예정
- 10G/25G/100G 자사 Transceiver 내재화
- 중국 5G / Cloud Data center 시장 판매
- 높은 수익성 기대
- In-house capability를 통한 원가 경쟁력, 수급 안정화, 고객 맞춤형 개발 등
- Road map : 10G DML, 25G DFB, 25G EML, Tunable Chip
- 25G EML : Joint with ETRI

Transceiver



- Global 5G Transceiver line-up 구축
- 자사 Component 사용을 통한 경쟁력 확보
- High bit-rate Transceiver 개발을 통한 다양한 Network Target 제품 출시
- Road map : 50Gbps, 100Gbps, 400Gbps, Tunable SFP Etc.

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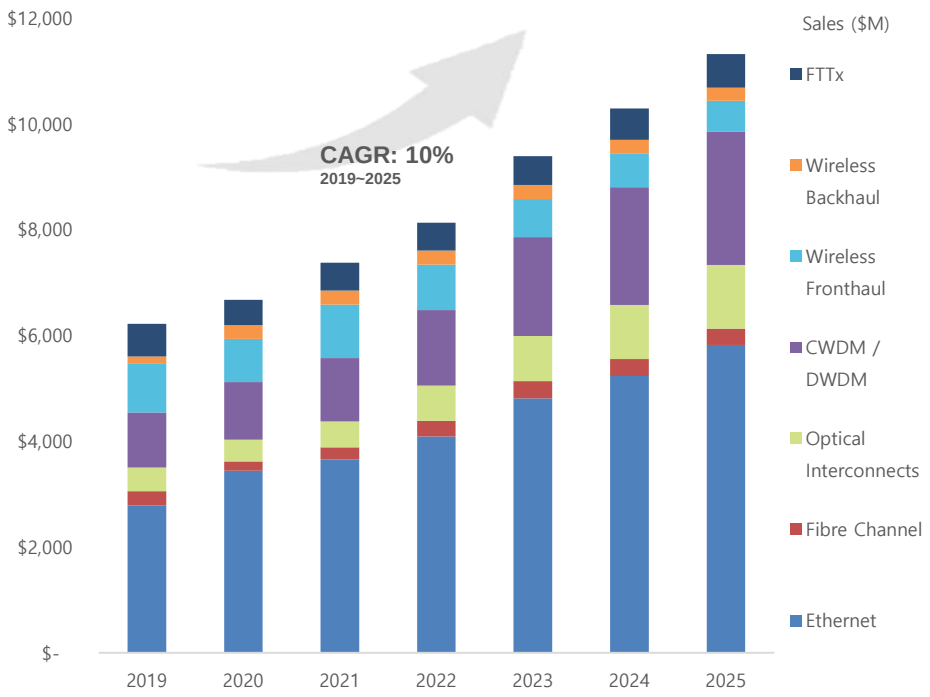
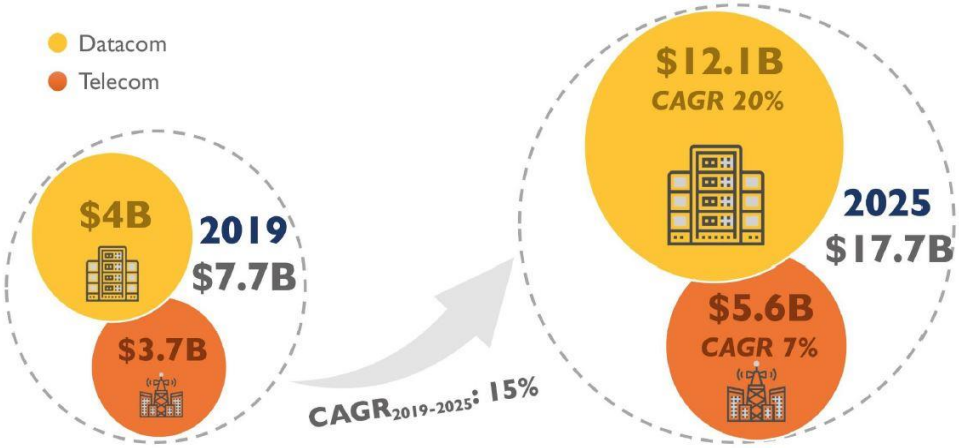
Data 연결이 필요한 고성능 인프라 투자에 의한 Transceiver 수요 지속적인 증가

Transceiver Market Forecast



Source : LightCounting, 2020 October Report



Source : Yole Developpement, 2020

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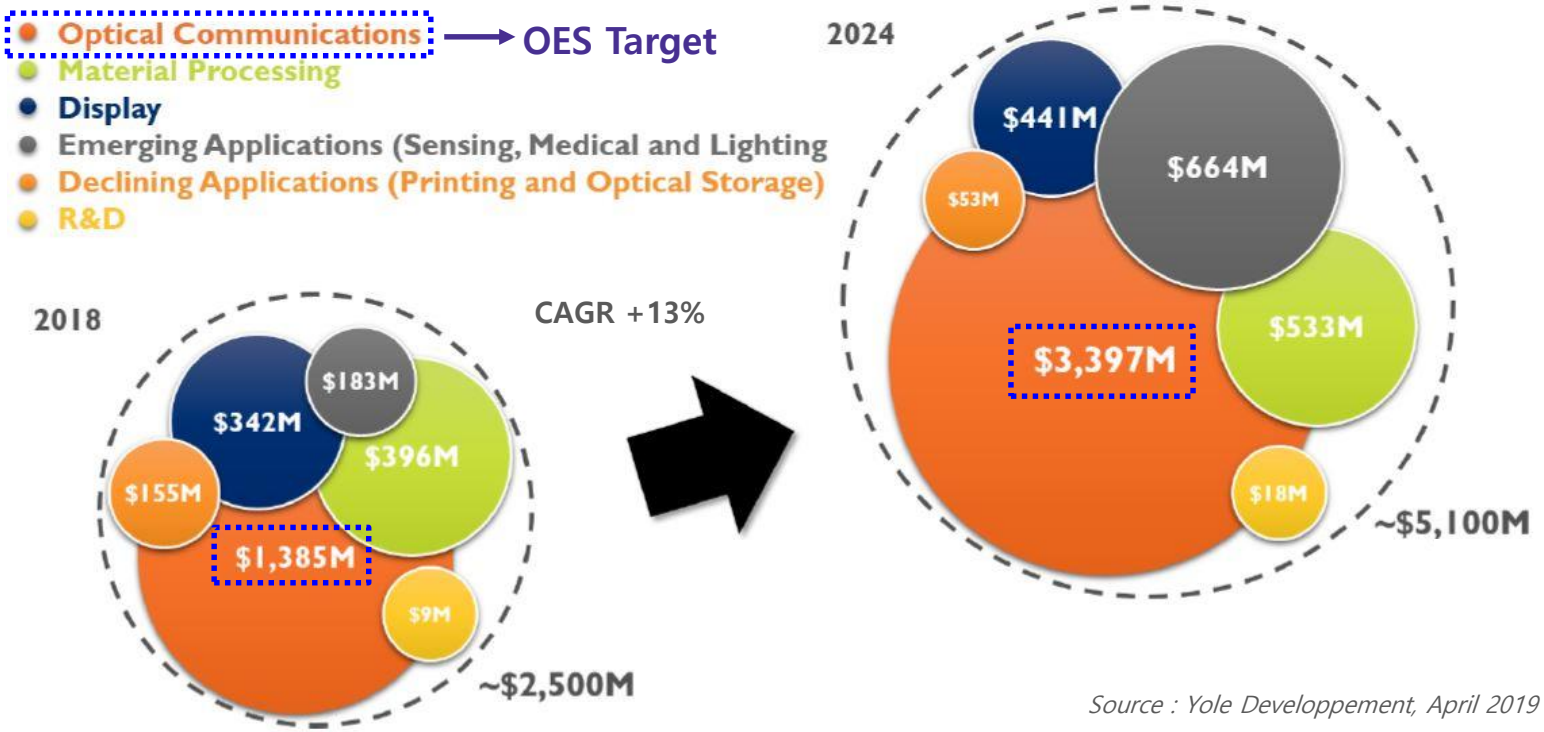
Edge Emitting Lasers 기술을 통해 Optical Communication 시장 Target
EEL 기술 여러 사업으로 확장 가능성 존재함

***EEL Market**

*EEL : Edge Emitting Lasers



Source : Yole Developpement, April 2019

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Q1 of 21 Guidance

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Q1 of 21 Guidance

2021년 1분기 250억 매출 예상

YoY 32% 상승, QoQ 1.2% 상승

Quarterly Guidance

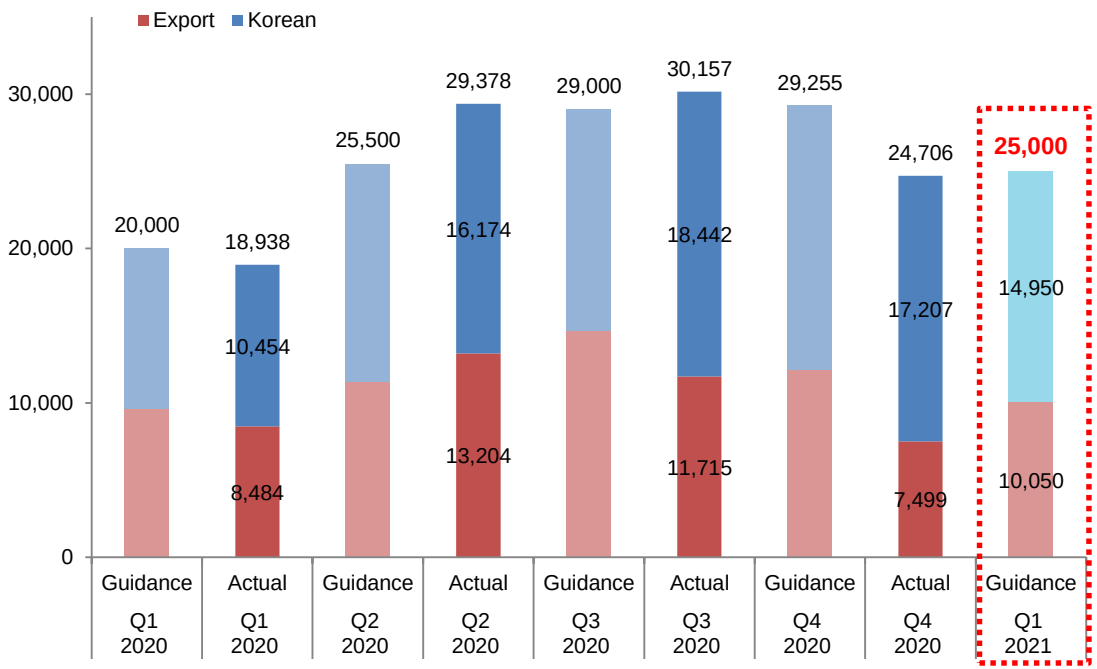
(단위: 백만원)

	Q1 2020 Actual	Q2 2020 Actual	Q3 2020 Actual	Q4 2020 Actual	Q1 2021 Guidance
Revenue (Sales)	18,938	29,378	30,157	24,706	**25,000**
Domestic	10,454	16,174	18,442	17,207	**14,950**
Export	8,484	13,204	11,715	7,499	**10,050**

※ 연결기준이며, 당사 2021년 2월 기준 전망치

Quarterly Trends

(단위: 백만원)



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Appendix

- Company Introduction
- Financials

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About OE Solutions

회사개요

회사명	주식회사 오이솔루션	**설립일**	2003년 8월 7일
종업원	**447명** (한국: 425명 / 미국: 19명 / 일본: 3명)	**상장일**	2014년 2월 27일 (KOSDAQ code : 138080)
주제품	통신용 모듈 (광 트랜시버)	**홈페이지**	www.oesolutions.com
소재지	**한국)** 광주 북구 첨단연신로 30번길 53 / 경기도 안양시 동안구 학의로 282 금강펜테리움 IT타워 B동 1619호		

('21년 01/31 기준)

Locations - 글로벌 영업 및 R&D

AimValley

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Hilversum, Netherlands
- Europe Headquarter
- Europe Sales
- Smart and system R&D

Gwangju, Korea
- Global Headquarter
- Manufacturing
- R&D

Seoul (Anyang), Korea
- Korea Sales
- R&D

Seoul (Suwon), Korea
- Korea Sales
- Engineering Support

Taipei, Taiwan
- China Sales
- Engineering Support

Tokyo, Japan
- Japan Sales
- Engineering Support

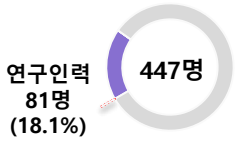
Ridgefield Park, NJ, USA
- US Headquarter
- US (East Coast) Sales
- Engineering Support

Irvine, CA, USA
- Engineering Support
- R&D

Santa Babara, CA, USA
- Engineering Support
- R&D

R&D 직원 및 투자 현황

< 부문별 >



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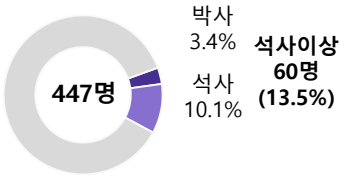
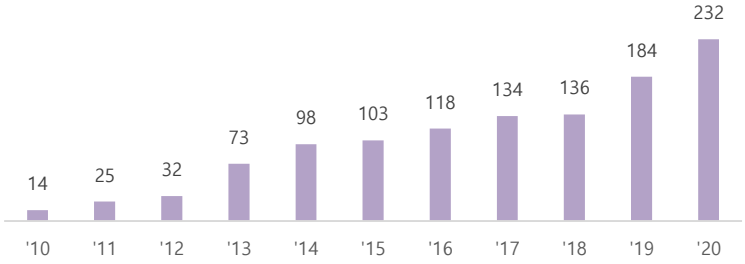


(단위: 억원)



* 자회사 포함

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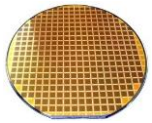
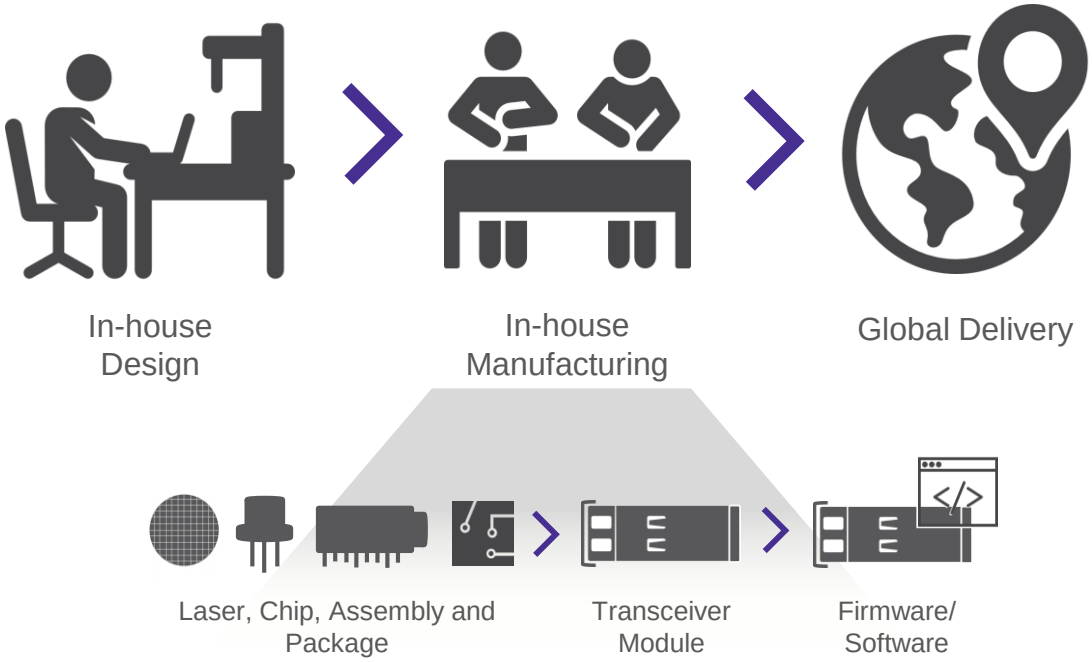
OE Solutions – A Global Supplier of Transceivers

Leading Supplier of High-Reliability Optical Components for Challenging Deployment Environments



- Leading supplier of optical components since 2003
- Founded by a team of Bell Labs and Samsung veterans
- Traded on KOSDAQ since 2014
- Key supplier to tier-1 MSO and Wireless OEMs
- Serving global customer in over 50 countries
- Leading supplier of BIDI and I-Temp Optics
- Leading supplier of Smart SFPs (co-developed with AimValley)
- Vertically integrated production
- In-house production in Gwangju, S. Korea factory
- R&D sites in Korea, USA and the Netherlands



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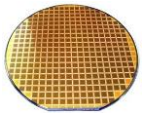
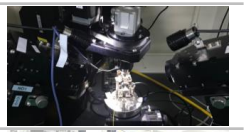
Vertical Integration

Manufacturing Process			Manufacturing Technology	
Chip		Laser Diode Photo Diode	Epitaxy / Fabrication / Wafer Characterization	
Assembly		TO/ XMD (Cooled/ Uncooled)	Die Bonding, Wire Bonding, Seam Sealing, Burn-in, DC/AC Test	
Package		OSA (TOSA/ ROSA/ BOSA)	Laser welding, Epoxy bonding, DC/AC Test	
Circuit / Module		Transceiver (Tuning & Test)	Auto Soldering / Auto Tuning / Test	
Firmware / Software		Sub-system (Network Migration & Self-Monitoring Technology)	Co-developed with AimValley, a networking technology expert in Netherlands	
Production		Own manufacturing, assembly & testing facility	Low cost, flexible production	

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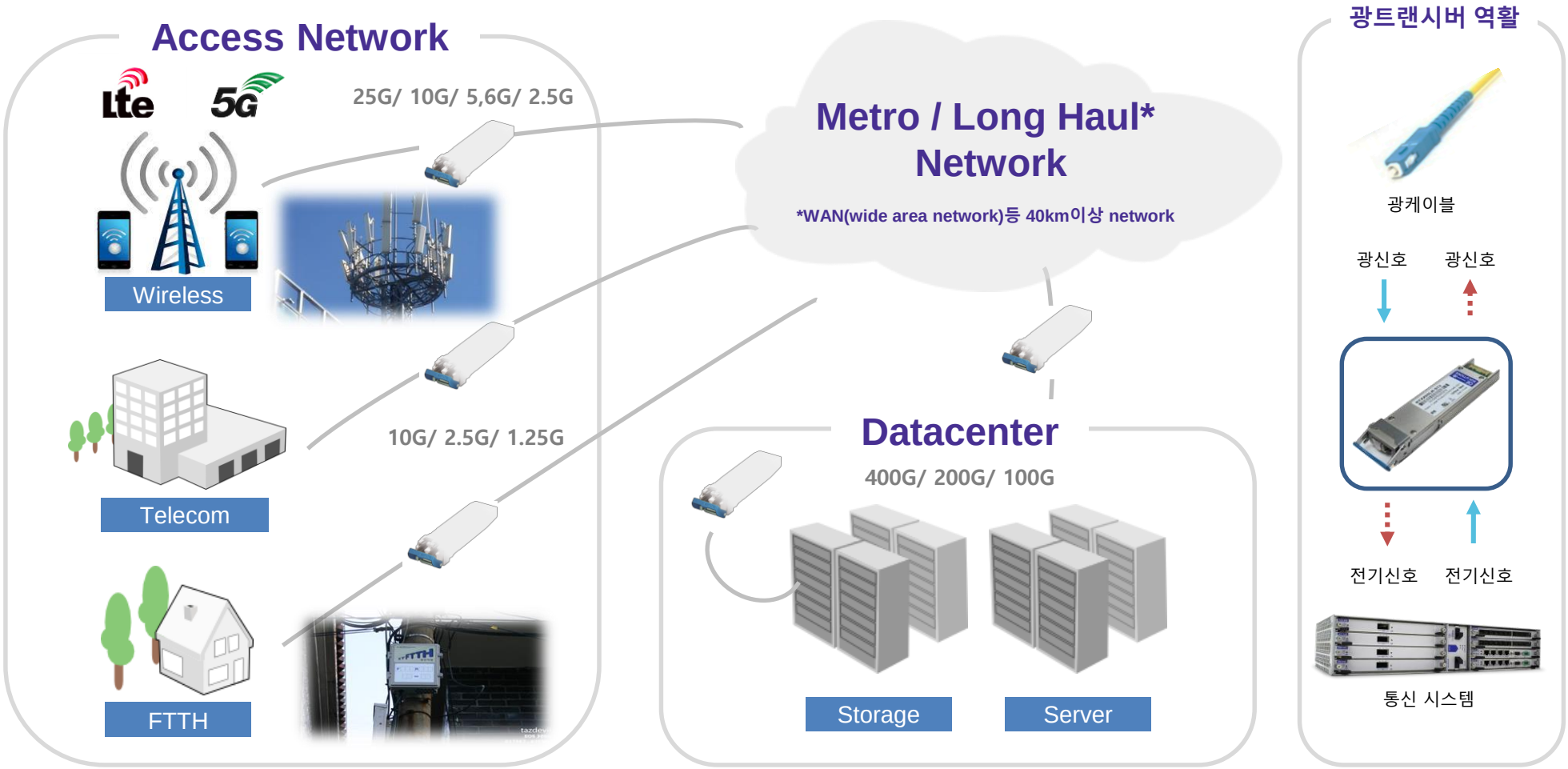
Products Application

통신 네트워크 내 트랜시버 응용 분야

네트워크 연결 시 필수인 광 트랜시버



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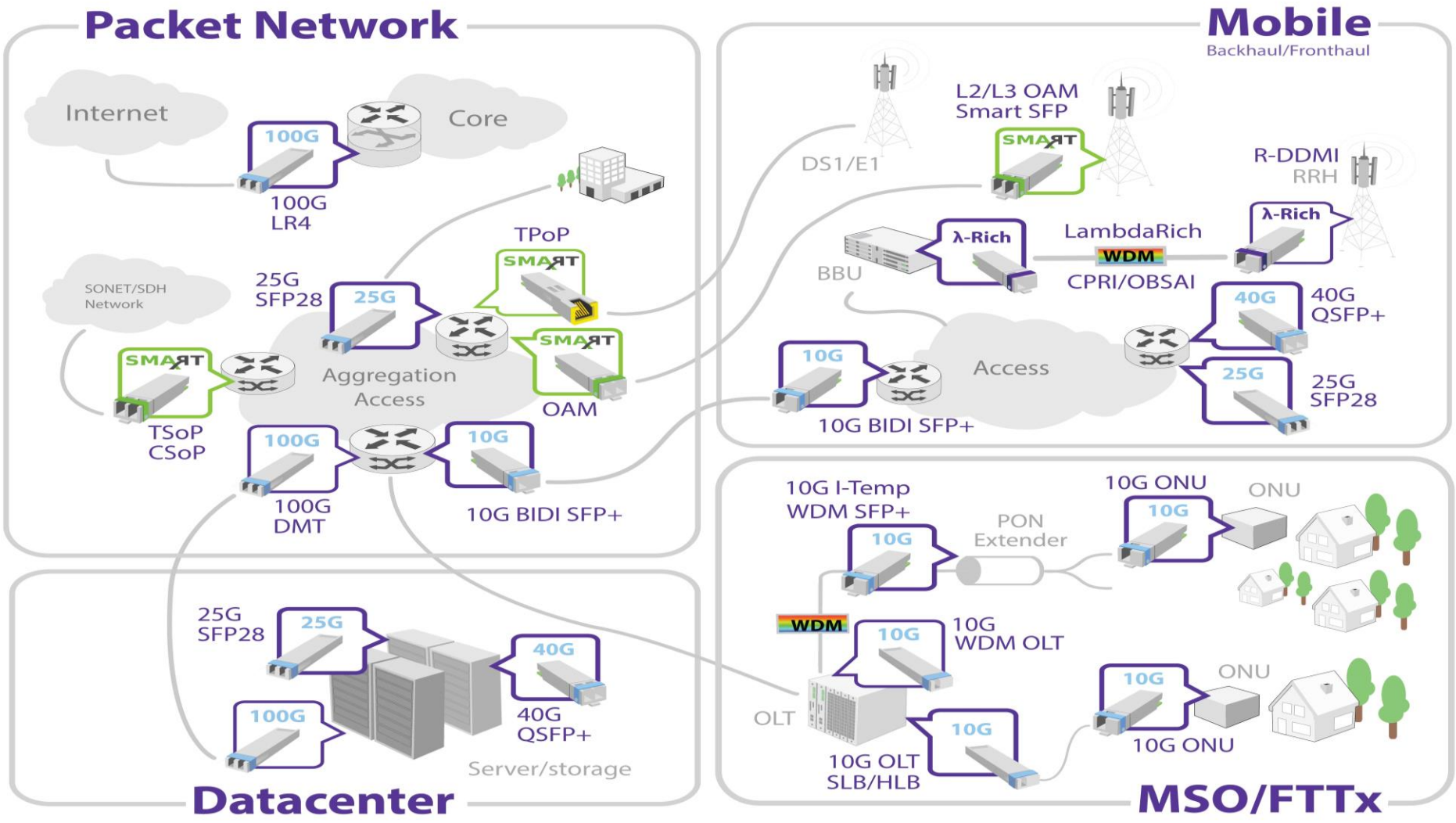
Key Application Areas



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요약 손익계산서

연결

(단위: 백만원)

	2017	2018	2019	2020
매출액	**76,594**	**81,504**	**210,283**	**103,178**
매출원가	53,973	54,106	122,835	62,686
매출총이익	22,620	27,398	87,448	40,492
판매관리비	24,538	27,164	29,186	33,139
영업이익	**(1,917)**	**234**	**58,262**	**7,353**
법인세차감전 순이익	(3,788)	1,951	58,388	8,195
당기순이익	**(1,786)**	**2,584**	**46,065**	**8,229**

별도

(단위: 백만원)

	2017	2018	2019	2020
매출액	**76,535**	**81,406**	**210,242**	**103,172**
매출원가	53,914	54,117	122,835	62,686
매출총이익	22,621	27,289	87,407	40,486
판매관리비	25,174	26,925	28,533	33,160
영업이익	**(2,553)**	**364**	**58,874**	**7,326**
법인세차감전 순이익	(4,514)	1,945	59,436	8,480
당기순이익	**(2,338)**	**2,641**	**47,026**	**8,422**

- **상기 내용 중 2020년 사업연도 당기순이익은 현재 진행하고 있는 세무 경정청구 상황에 따라 추후 변경될 수 있습니다.**

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요약 재무상태표

연결

(단위: 백만원)

	2017	2018	2019	2020
유동자산	57,247	57,027	137,422	126,477
현금및현금성자산	21,923	11,073	44,259	40,068
매출채권	14,626	18,969	33,138	14,847
재고자산	18,840	19,740	24,222	22,484
비유동자산	38,809	42,125	46,945	64,248
유형자산	29,597	30,476	30,161	39,292
무형자산	766	782	738	746
자 산 총 계	**96,056**	**99,152**	**184,367**	**190,725**
유동부채	24,807	25,369	42,847	45,404
단기차입금	20,000	19,400	27,000	36,000
비유동부채	4,302	5,736	2,211	2,463
부 채 총 계	**29,110**	**31,105**	**45,059**	**47,867**
자본금	3,870	3,870	5,312	5,312
주식발행초과금	26,969	26,969	52,031	52,002
이익잉여금	33,937	34,868	79,731	83,388
자 본 총 계	**66,946**	**68,047**	**139,308**	**142,857**

별도

(단위: 백만원)

	2017	2018	2019	2020
유동자산	55,648	55,790	136,299	124,173
현금및현금성자산	20,662	10,227	42,423	34,557
매출채권	14,251	18,299	33,096	18,137
재고자산	18,840	19,740	24,222	22,484
비유동자산	38,923	41,993	46,416	64,230
유형자산	29,306	30,119	29,192	38,595
무형자산	105	54	36	18
자 산 총 계	**94,571**	**97,783**	**182,715**	**188,403**
유동부채	25,309	26,119	43,065	44,442
단기차입금	20,000	19,400	27,000	36,000
비유동부채	4,228	5,643	1,676	2,166
부 채 총 계	**29,538**	**31,761**	**44,740**	**46,608**
자본금	3,870	3,870	5,312	5,312
주식발행초과금	26,969	26,969	52,031	52,002
이익잉여금	31,650	32,638	78,461	82,311
자 본 총 계	**65,034**	**66,022**	**137,975**	**141,795**

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Condensed income statement

Consolidated

(Unit : million KRW)

	2017	2018	2019	2020
Revenue (Sales)	**76,594**	**81,504**	**210,283**	**103,178**
Cost of sales	53,973	54,106	122,835	62,686
Gross profit	22,620	27,398	87,448	40,492
Selling general administrative expenses	24,538	27,164	29,186	33,139
Operating income(loss)	**(1,917)**	**234**	**58,262**	**7,353**
Profit (loss) before tax	(3,788)	1,951	58,388	8,195
Net income	**(1,786)**	**2,584**	**46,065**	**8,229**

Separate standards

(Unit : million KRW)

	2017	2018	2019	2020
Revenue (Sales)	**76,535**	**81,406**	**210,242**	**103,172**
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Profit (loss) before tax	(4,514)	1,945	59,436	8,480
Net income	**(2,338)**	**2,641**	**47,026**	**8,422**

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Condensed statement of financial position

Consolidated

	2017	2018	2019	2020
Current assets	57,247	57,027	137,422	126,477
Cash and cash equivalents	21,923	11,073	44,259	40,068
Accounts receivable	14,626	18,969	33,138	14,847
Inventory asset	18,840	19,740	24,222	22,484
Non-current assets	38,809	42,125	46,945	64,248
Property, plant and equipment	29,597	30,476	30,161	39,292
Intangible assets	766	782	738	746
Total assets	**96,056**	**99,152**	**184,367**	**190,725**
Current liabilities	24,807	25,369	42,847	45,404
Short-term debt	20,000	19,400	27,000	36,000
Non-current liabilities	4,302	5,736	2,211	2,463
Total liabilities	**29,110**	**31,105**	**45,059**	**47,867**
Capital	3,870	3,870	5,312	5,312
Paid-in capital in excess of par value	26,969	26,969	52,031	52,002
Retained earnings	33,937	34,868	79,731	83,388
Total equity	**66,946**	**68,047**	**139,308**	**142,857**

Separate standards

	2017	2018	2019	2020
Current assets	55,648	55,790	136,299	124,173
Cash and cash equivalents	20,662	10,227	42,423	34,557
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Total equity	**65,034**	**66,022**	**137,975**	**141,795**

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Thank you.

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