# "The Eye of IT World"



# DISCLAIMER

This material is made by MCNEX Co., Ltd to provide information for corporate investors and individual investors at the presentation related to IPO. And it is not allowed to take out, copy or distribute this to others.

Attending this presentation is regarded as an agreeing with the policy above, and violating it is against the Securities and Exchange Act.

All those information related with business/financial performance in this material was created by business accounting standards.

"The Forecast information" is not confirmed by each section. These information mean business and financial performance of the company in the future, including the term "Forecast, plan and expectation". The forecast information is effected by change of business environment in the future, it is uncertain naturally, this uncertainty can cause the major differences with applied contents and the actual performance in the future in the forecast information. Furthermore, the forecast is made as of the day(presentation hold) and can be changed without notice according to the market circumstances/strategies since it is based on current market status/strategies.

It shall not be the responsibility of MCNEX(affiliates, counselors and representatives) against any loss from using this material(including fault or other cases)

This document does not recommend offering stocks for subscription or trading securities, any part of this document cannot be the standard or the evidence to decide investment(making contract).

All related investment decision should be made referring to the information out of pre-prospectus of investment or registration of securities submitted to Financial Service Commission only.

# Contents

**Chapter 01. Company Overview** 

**Chapter 02. Core Competencies** 

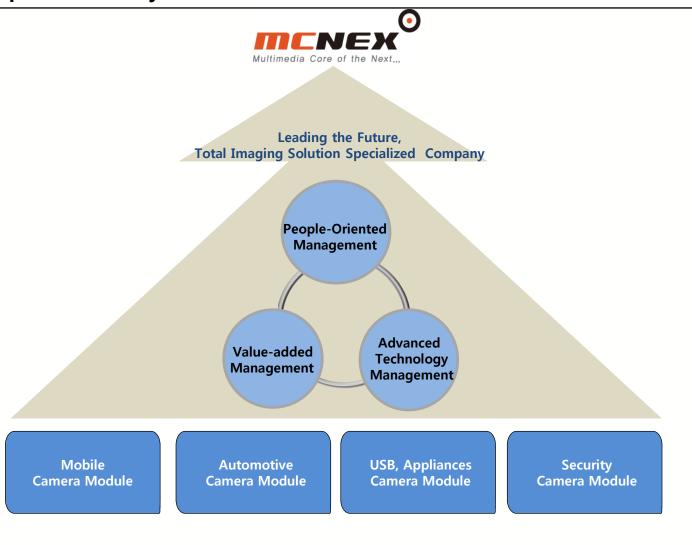
**Chapter 03. Investment Highlights** 

Appendix

# **Chapter01. Company Overview**

- 1. Corporate Identity
- 2. Introduction
- 3. History
- 4. Business Area
- 5-1. Production Mobile Camera Module
- 5-2. Production Automotive Camera Module
- 6-1. Performance
- 6-2. Growth Process in MCNEX China
- 7. Main Revenue by Year

# 1. Corporate Identity



# 2. Company Introduction

#### **Company Overview**

Name	MCNEX Co., Ltd	Establishment	22 <sup>nd</sup> Dec, 2012
CEO	Dong-uk Min	The Number of employees	344 people
Capital	US\$ 2.8 M	Web Site	www.mcnex.com
Business Area	Total imaging solution for mobile, automotive, computer USB, security device and etc	Address	Hanshin IT Tower II, 60-18, Gasan-dong, Seoul

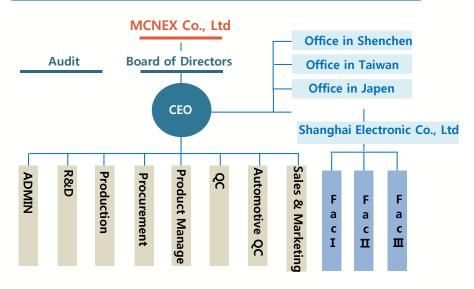
#### **CEO Profile**



CEO Dong-uk Min

- Bachelor's degree for mechanical engineering from Dong-guk Univ.
- Former senior engineer for mobile in Hyundai Electronics
- Former chief engineer for mobile in Pantech and Curitel
- 2006 President award in Electromagnetic day
- 2009 President award in Entrepreneur Festival
- 21st an honored trader award
- 2009 Minister award by Ministry of knowledge economy
- 2010 Designated as a "Small Giants company"
   CEO' in the Blue House
- Current CEO of MCNEX Co., Ltd

#### **Company Organization**



# 3. History

"A Leading Company Specialized in Camera Module, Started from a Small Venture with only 6 Members"

- 03. 2M AF, 3M AF The world's first and the smallest camera module
- 04. Minister award by Ministry of Science and Technology
- 09. Established MCNEX Shanghai Electronics Co., Ltd
- 10. Minister award by Ministry of Industrial and source on electromagnetic day
- 10. President award on Electromagnetic day

2006

11. US\$ 30,000 export award

#### 2008

- 02. Appointed as a technical innovation company
- Shanghai Electronics Co., Ltd.
- 11. Attracted investment from Commercial bank and other five institutes

# 2010

- 03. Established 2<sup>nd</sup> Factory in MCNEX 03. Starting to supply automotive camera module to PEUGEOT CITROEN
  - Launched HOME DVR
  - Completed to research 8M Actuator
  - 12. Invented 8M module

#### 2004

12. Established MCNEX Co., Ltd

#### 2005

- 06. Registered as a venture company Established a lab affiliated with the company
- 07. Invented the world's first 2M camera module
- 11. Invented the world's smallest camera module

#### 2007

- 01. ISO/TS 16949 Certification
- 05. SQ Certification (As a qualified subcontractor from Hyundai Mobis)
- 11. US\$ 10M export award Automotive camera module commercialization (Hyundai Autonet)

#### 2009

- 05. Established a branch office in Japar
- 06 President award in Entrepreneur Festival
- 11. US\$ 50M export award
- 12. Established a branch in Taiwan

#### 2011

- 05. Appointed as one of world class 300 companies
- 06. Established a branch in Japan
- 06. Completed to research 8M module

2012

05. Completed to research

05. Completed to research

13M Actuator

13M module

16M Actuator

16M module

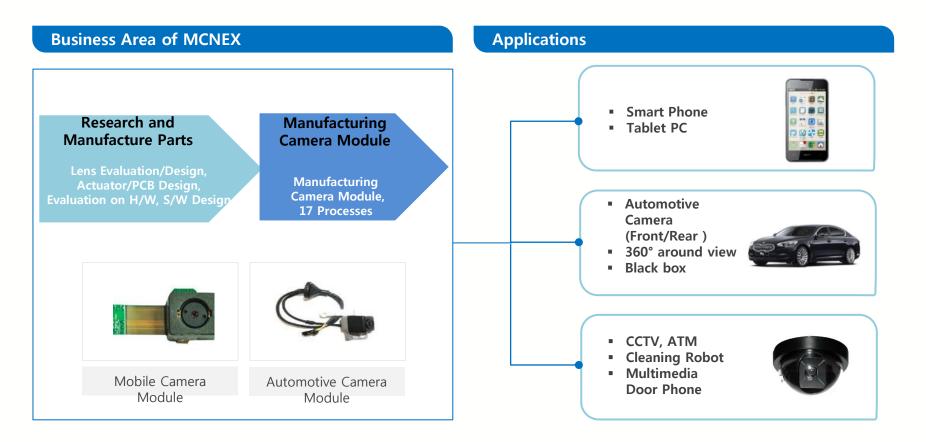
06. Researching

06. Researching

- 08. 1st prize award by Korean Hidden Champion Company
- 11. US\$ 100M export award

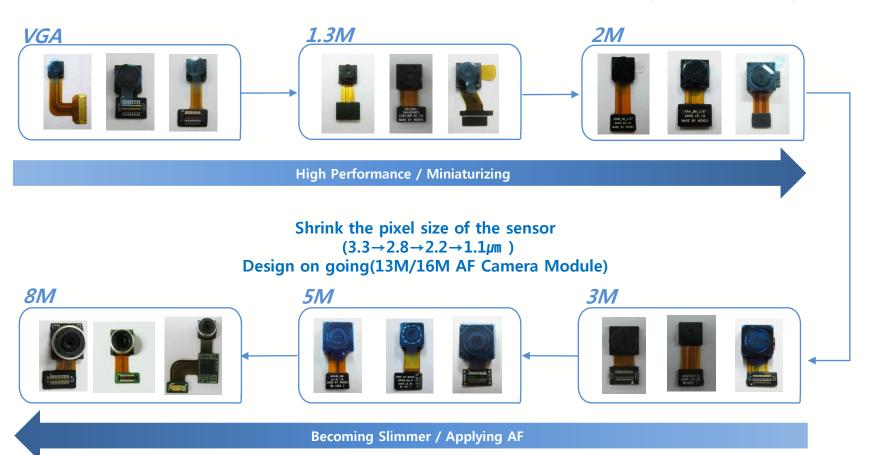
#### 4. Business Area

"Research and Manufacture the Camera (module) for Diverse Applications
: Mobile Phone, Automotive Camera, Security Device and etc"



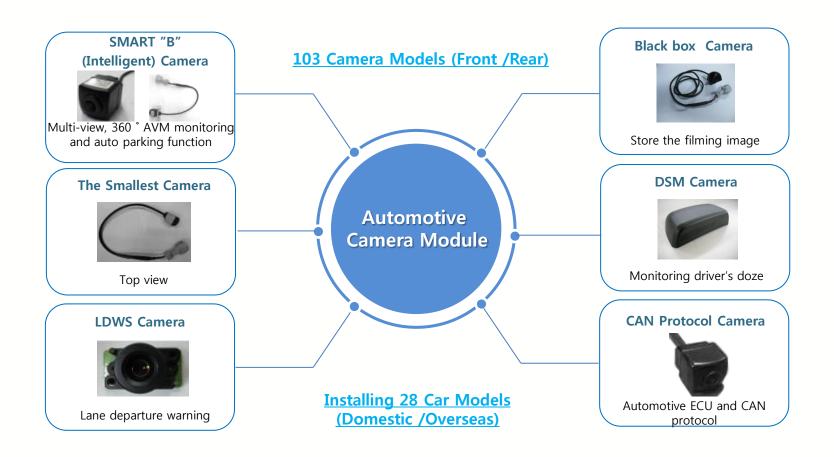
#### 5-1. Production Overview - Mobile Camera Module

"Research and Manufacture the Advanced Camera Module (VGA-16M AF)



#### 5-2. Product Introduction – Automotive Camera Module

"Manufacture Automotive Camera Module (Front/Rear and Black box)"



# **Mass Production Models 1/2**

Image	Model name	Front camera	Back camera
	Citroen DS5 2011.06		
	EQUUS Limousine 2009.08		
	EQUUS 2009.02		
	Genesis 2007.12		
	Veracruz 2007.11		

lmage	Model name	Front camera	Back camera
	HG Grandeur 2010.12		
	Volvo Excavor 2010.04		
	Opirus 2009.05	Ď	
	Mohave 2007.11		
-0-0	Sorrento 2009.04		
0 0	Grand carnival 2008.06		9
	K5 2010.05		Para

# **Mass Production Models 2/2**

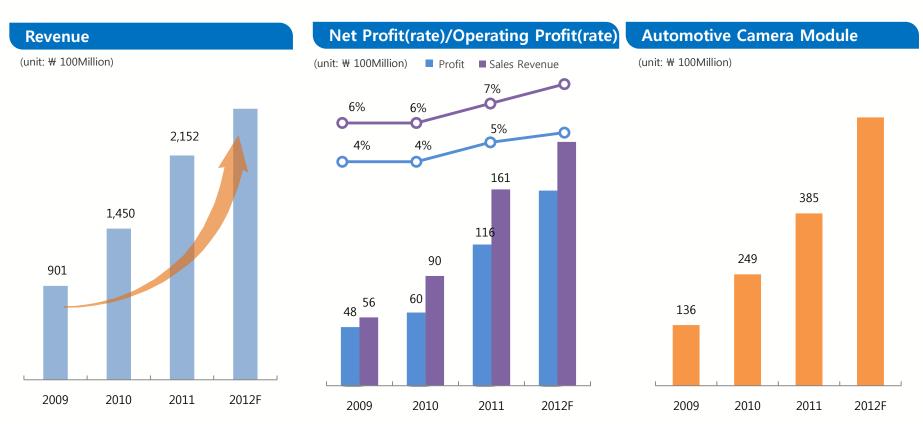
Image	Model name	Front camera	Back camera
	Grandeur 2008.10		
	Tucson 2009.07		2
	Sonata 2009.10		
	Avante 2009.07		
	Chairman 2010.12		
	Rexton 2010.12		

lmage	Model name	Front camera	Back camera
00=	Sportage 2010.04		
	Carens 2009.07		•
	Ceed 2010,04		
	Venga 2010,05		
	Forte 2009.08		
	Soul 2008.09		
	Morning 2009,06		2.
biteres	Korando C200 2010.01		

#### 6-1. Business Performance

# "The Revenue increase (48%) in 2011, Compare to the Previous Year"

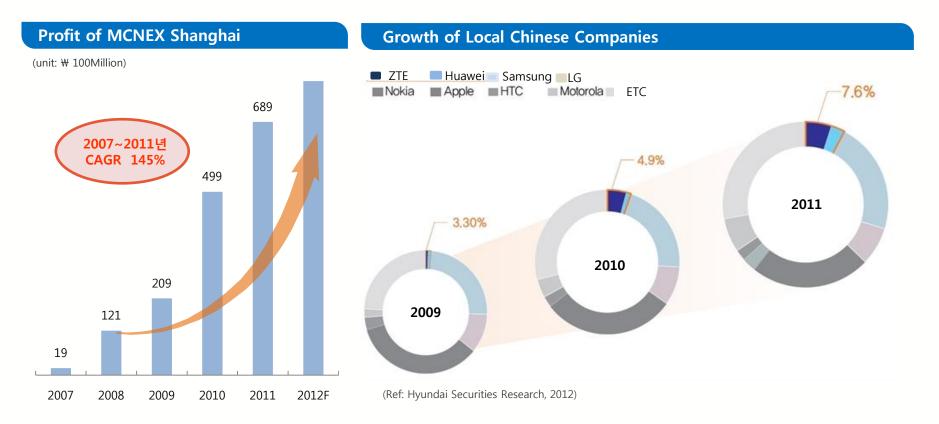
• Stable Profit-Making and Revenue Increase due to Sales Growth of Automotive Camera and Camera Modules(5M/8M) for Smartphone



# 6-2. Growth of MCNEX Shanghai

#### "Sales Growth due to the Rapid Growth of Major Mobile Companies in China"

• Chinese Companies: ZTE(5<sup>th</sup>), Huawei(7<sup>th</sup>) in Global Top 10, OPPO(15<sup>th</sup>), GIONEE(25<sup>th</sup>)

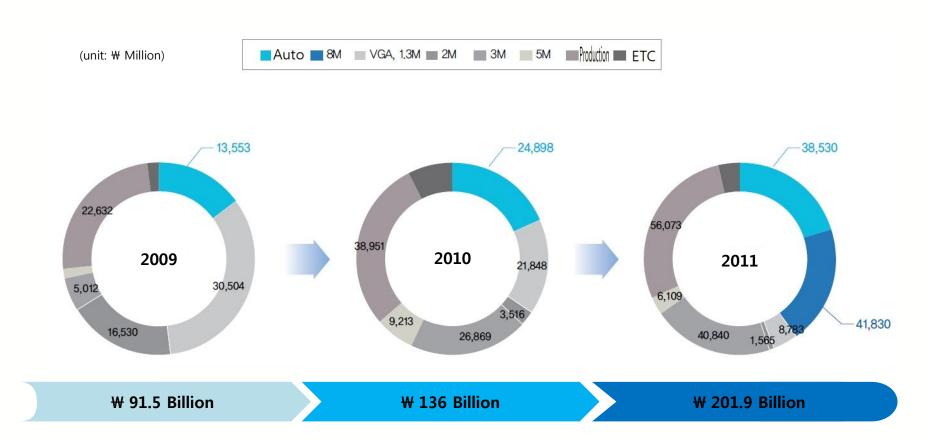


# The 3<sup>rd</sup> Factory Built in May, 2012(Planning the 4<sup>th</sup> Factory in 2013)



#### 7. Annual Revenue Portfolio

"Automotive Camera Module Revenue Increase(₩24.9 B in 2010 → ₩38.5 B in 2011), 8M High-Resolution Camera Module Revenue increased as ₩41.8 B"



# **Chapter02. Core Competencies**

- 1-1. Core Technologies
- 1-2. Automotive Camera Technology
- 1-3. Intelligent Automotive System Technology
- 2. R&D
- 3. Production CAPA and Global Sites
- 4. Strong Market Share Worldwide
- 5. Wide range of Sales Portfolio

# 1-1. Core Technologies

#### "From H/W to S/W, Providing a Total Image Solution of MCNEX"

- Patented VCM (Auto Focus mechanism: Key part) on MP, Designing a specialised automotive lens etc.
  - Static OVERLAY
  - Dynamic OVERLAY using CAN telecommunication

#### **Image OVERAY**

- System programming based on RTOS
  - Processing/Merging Image (4 Ch)
     Automotive paring system
    - Automotive paring system
      - Network Interface
        - Embedded UI control
        - Face RecognitionMotion Recognition
        - 3D w/ Single sensor
        - Low voltage decig
        - Low-voltage design
        - EMI Filtering design
           FSD Protective design
      - ESD Protective design
      - Integrated/Micro design
        - PCB design



# Mechanical design (including lens design)

- Waterproof/Humidity Protection
- Heat control design
- Humidity Control
- COMPACT lens design
- Wide angle lens design

- Lens SHADING correction
- Auto Exposure correction
- Gamma correction
- Auto White Balance correction
- Colour correction
- Fine Image tuning
- Magnetic Circuit design with Minimum Leakage
- TILT Minimizing design
- Separate Connector design
- Closed mechanical design
- VE design

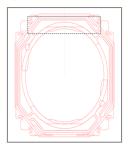
#### **MCNEX Actuator**

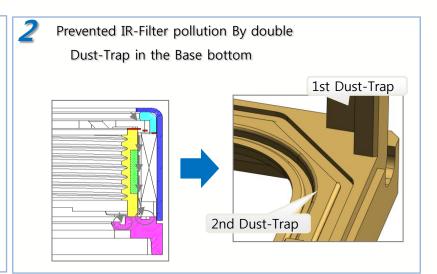
Make contortion deformation minimized for preventing Plate Spring deformation by Spring design

→ It makes driving shape of top/bottom spring and stepped preload length fit for Minimized moving TILT

(On registering a Patents of MCNEX)







3. Tight specification on Major features and Excellent accuracy comparing with others

No	Item	MCNEX	Н со.
1	Starting Current (Position Difference)	0°: 25 ~40 mA 90°: 15 ~30 mA 180°: 10 ~25 mA	0°: 25 ~45 mA
2	Hysteresis	Under 7 µm	Under 20 µm
3	Tilt	Initial Tilt :Under 15' Maximum Tilt :Under 20'	Max Tilt : Under 20'



# 1-2. Automotive Camera Technologies

"Application: All kinds (Front/Rear camera, Black box & Alert system etc)."

Kia K9 (Released on May 2012): 5 ea installed



360° Surround view 4ea

Lane Departure 1ea

#### **Auto Parking**

Parallel parking available with one button

#### Rear view camera

 Detects objectives behind and assists parking

#### Blind Spot Detection

Micro cameras inside Rear view mirror detects following cars

#### **Lane Departure Warning System**

· Giving an alert on crossing a lane

#### Front view camera

• Detects objectives in front

#### Adaptive camera

 Displaying an Image in accordance w/ signal lights

#### **Dozing-off detection**

 Auto air-conditioning monitoring a driver's eye's movements Night Vision

Detects objectives in front w/ Infrared lamp

# 1-3. Intelligent automotive system

#### "Leading Technologies by developing Cruise control system in a national project"

• Safe driving to the destination with the information of GPS, Radar, Laser sensor, various sensor, control system, camera.

#### **Adaptive Cruise Control (ACC)**

 Autonomous driving system with cameras/sensors detecting other cars by controlling speed of a car according to the distance with cars in front



All around view/Intelligent automotive camera system based on Light

#### Lane Departure Warning/ control system

- Lane Keeping system: Detecting Lane Departure using a camera in front of a car
- Keep the distance using a radar installed on the front of a car



#### **Pre-Crash Safety (PCS)**

 Integrated Safety maximizing system (Radar with Camera: Avoid an injury by controlling seat belt, window, air-bag etc if a car crash is expected after processing traffic around a car

#### **Collision Avoidance System(CAS)**

 Avoids an accident detecting the speed of cars around by integrating a radar and camera

#### 2. R&D

# "Strong R&D with expertise in various area"

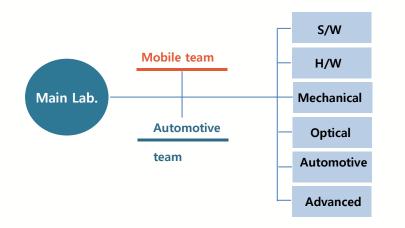
# R&D researchers: 30% of the whole employee



#### **Recent Patent Pending**

Contents	Date	Application
Displaying the road in front of a car	2010.11.24	Display
Auto Focus camera module	2011.04.14	Mobile Phone
Parking Assistance overlaying Image	2011.04.15	Automotive camera
Parking Assistance using a camera	2011.04.15	Automotive camera
Auto Focus camera module	2011.05.30	Mobile Phone camera
Parking Assistance calculating tilted roads	2011.06.21	Automotive camera

#### **Organization**



#### 3. Production CAPA and Global Sites

"Maximum: 11.25M ea/m Worldwide"







2011

2012 (FCST)

5.5M → 11.25M

Factory	Application	Production
Korea	Mobile	1,000K
Kolea	Automotive	250K
China	Mobile	10,000K
Total	otal 11,250K	



2009

2010

2011

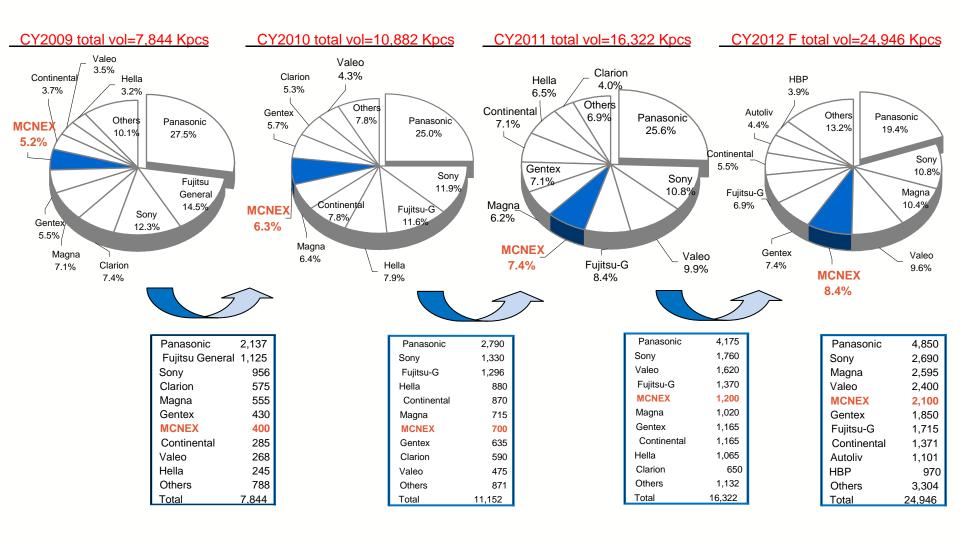
# 4. Strong Market Share worldwide

Taiwan 191



Japan 297

#### **Automotive Camera Total Tier2 Maker share**



# 5. Wide range of Sales Portfolio

"Providing products in various business (mobile phone, automotive, security, etc) to Global Top-Tier customers"

• 39 customers worldwide (The biggest customer has 20% among total customers: avoiding a risk)

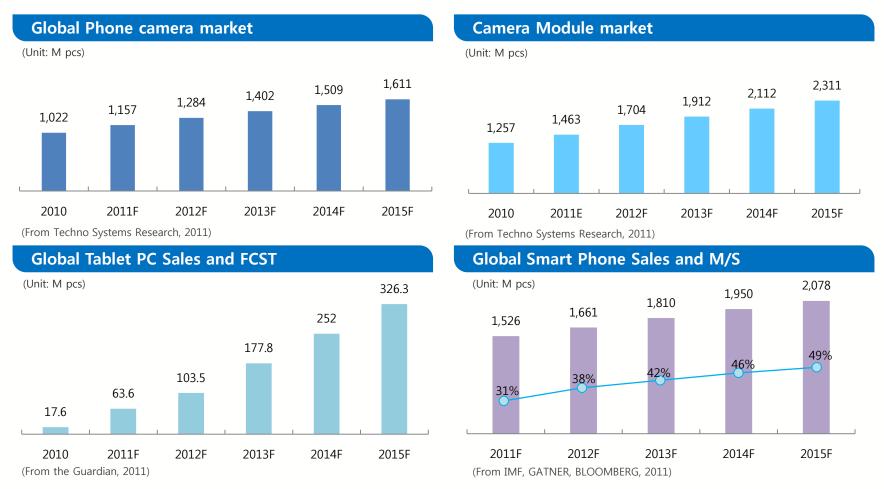


# **Chapter03. Investment Highlights**

- 1-1. Market Growth mobile camera module
- 1-2. Market Growth Automotive camera module
- 2. Ongoing-development of new products
- 3. Automotive camera policy
- 4. Expanding in overseas market
- 5. Vision

#### 1-1. Market Growth - Mobile camera module

"Growing demand of Camera module for fast-growing Smart phone/Tablet PC market"



#### 1-2. Market Growth – Automotive camera Module

"Rapid growing market due to installing Automotive camera mandate/increase"







# (Unit: 1,000 pcs) 27,260 17,624 7,579 2009 2010 2011F 2012F 2013F (From Techno Systems Research, 2011)

#### **Automotive camera Mandate Policy/Regulation**

Region	Date	Contents	
US ·	2014	From June 2014, All new cars should have rear cameras	
US ·	2012	Additional points are available, if you install a warning sensor camera (Start/Crash).	
2011		Fine on a car with high-beam headlamps	
EU	2013	(Start)Should install a warning sensor camera Should have an air-breathing engine	
	2016	(Start) Should install a warning sensor camera	
Japan	2015	On discussion about the safety system(sensor camera) of a large vehicle	

# 2. Ongoing-development of new products

"A leading company in IT industry makes a progress by ongoing technology development"

# **Extending Application** Tablet PC **ATM** High-end **Function** Slim Intelligent Smart Phone Automotive Intelligent camera

#### **Mobile application camera Module**

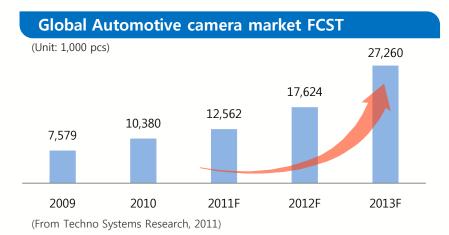
- 8M,13M,16M (Micro VCM/Camera Module) development
- Micro 3D input sensor module (Design/Production/MP)
- Developing UI for a smart device
- Laptop, Tablet PC application: FULL HD camera Module development
- 3D camera Module development
- IP camera Module development
- IPTV camera Module development
- Home DVR system development/MP
- Wi-Fi surveillance camera development

#### **Automotive camera Module**

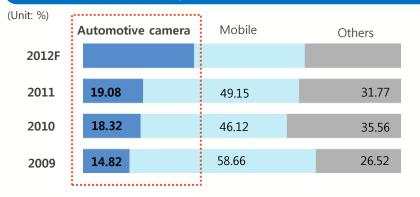
- Black Box application
- Measuring the tilt of the road Micro Laser camera Module on MP
- Intelligent camera Module system based on camera technology
- NIGHT VISION camera Module
- High-speed Serial Digital wire camera Module
- Image Distance Recognition camera
- SXGA Image processing/ECU integrated SoC
- High resolution Automotive Mega camera Module
- PAS application camera
- VGA/MEGA LDWS camera
- 360° around monitoring camera/system

# 3. Benefit from Automotive camera policy

"Demand of Automotive camera increases due to camera mandate regulation"



#### Automotive camera portion in total revenue



#### **Automotive camera mandate**



#### MONEY & CO.

TRACKING THE MARKET AND ECONOMIC TRENDS THAT SHAPE YOUR FINANCES

START SOMETHING

# Federal regulators push to require rearview cameras in cars by 2014

By Tiffany Hsu

February 28, 2012 8:52 a.m.

By 2014, every new passenger car on the road will have a rearview camera, if federal regulators have their way.

The final draft of the rule, which the National Highway Traffic Safety Administration is expected to send to Congress on Wednesday, would require automakers to install the backup function.

And it's not just to prevent curb-hopping and love-tapping. Each year, 228 people die after being struck by passenger vehicles going in reverse – including about two children a week, according to the New York Times.

Accidents caused by drivers backing up also injure 17,000 people annually.

The mandate to build in cameras and viewing screens – first proposed in 2010 – could cost automakers between \$160 and \$200 for each car, or as much as \$2.7 billion total each year.

The camera is currently standard on fewer than half of model-year 2012 vehicles.

Automakers unveiled an assortment of other preventative safety features at the L.A. Auto Show in November.

Infiniti showed off its backup collision intervention technology, which not only beeps when its sensors detect potential obstacles but also automatically brakes to avoid a crash.

A similar function from Ford offers blind-spot warnings. Cadillac has a virtual bumper feature that stops the car before it hits anything.

#### 4. Growth in overseas market

"Strategic Penetration into new market (US/EU) by opening an office, attending a show, etc"



Shanghai Asia Eletronic show in 2009

2012



ISC West in 2010

2014

2013



Global TransporTech in 2011

2016

2017



Chrysler Automotive camera Exhibition in 2012

~2020

2018

	AK.				
us	Hire a sales rep. f	or promotion	Initial sales to Motorola, RIM, Apple		Strengthen Customer relationship
China	Open Beijing office	6	Get an approval as a new supplier		
EU	Penetration into France, Germany , etc through Tier1			Open an office (Berlin)	Strengthen Customer relationship

2015

Taiwan

5M/8M AF Promotion on Moto , Foxconn

Surveillance camera , CCTV/MVR2, IPTV

India/S. America

Surveillance camera, CCTV/MVR2, IPTV

Penetration into
S. America
including a factory

#### 5. Vision

#### "USD 1 Billion of Sales in 2020"

- Stable Biz Portfolio
- → Smart Phone camera Module, Automotive camera, Security camera/USB camera Module

- Competitive product/service
- → Focusing on R&D
- → Providing Image related total solution

- Penetration into overseas market/Increase export
- → Increase an export (camera module for mobile device/Car) to strategic key countries

- Revenue/Profit increase
- → Strategic/close Customer relationship with global Top companies
- → Increase profit through cost optimising

- Benefit from Policies
- → Automotive camera is becoming a mandate of car.

Q&A

# Perfect Choice MCNEX!! Thank you!!

More information: www.mcnex.com www.mcnexplus.com

# Appendix.

- 1. IPO Information
- 2. Financial Statement

# 1. IPO Information

IPO Summary	
IPO Price	₩16,200 ~ 18,600
Number of Stocks	800,000
Expected Price	₩12.96 B ~ 14.88 B
Nominal Value	₩500
Market Capitalization (expected)	₩9.49 B ~ 1,08.96 B
Demand Forecasting Date	9 <sup>th</sup> ~ 10 <sup>th</sup> July, 2012
Subscription Date	16 <sup>th</sup> ~ 17 <sup>th</sup> July, 2012
Payment Due	19 <sup>th</sup> July, 2012
Expected Date for Being Listed	25 <sup>th</sup> July, 2012
Underwriter	Korea Investment Co., Ltd

Stakeholders		
	No. of Stocks	Percentage of Shareholding
Main Stakeholders	2,029,918	34.7%
The Korea Development Bank	436,344	7.4%
Employee Ownership(Existed)	106,900	1.8%
Other Stakeholders	2,485,199	42.4%
Number of IPO Stocks	800,000	13.7%
Total Number of Stocks after IPO	5,858,361	100%

\*\*Main Stakeholders: Keeping Securities for one year after Being Listed

Operating Plan for IPO Funding	
	Amount
Facility	₩3.3 B
Operating	₩2.6 B
R&D	₩5.9 B
Total	₩118 B

# 2. Summarized Financial Statement (Additional)

#### **Financial Status Table**

(unit : ₩ Million)

	1 Q, 2012	2011	2010
Accounting Standards		K-IFRS	
Current Assets	62,615	72,194	65,170
Fixed Assets	37,095	36,576	27,600
Total Assets	99,710	108,770	92,770
Current Liabilities	55,619	66,671	69,612
Fixed Liabilities	5,976	6,723	2,543
Total Liabilities	61,595	73,394	72,155
Capital	2,475	2,383	1,782
Capital Surplus	11,880	10,501	3,824
Other Capital	268	370	878
Retained Earnings	23,461	22,101	14,120
Profit Reserve	31	21	11
Total Capital	38,115	35,376	20,615

#### **Income Statement**

(unit: ₩ Million)

	1 Q, 2012	2011년	2010년
Accounting Standards		K-IFRS	
Sales	38,912	201,921	135,908
Sales Cost	33,791	176,740	118,236
Gross Profit	5,121	25,181	17,672
Selling and Administrative Expenses	2,713	12,663	9,912
Operating Income	2,408	12,518	7,760
Non-operating Income (Banking Profit)	55	725	63
Non-operating Expense (Non-Financial Expense)	956	4,034	2,786
Income before Income Taxes	1,507	9,209	5,037
Income Taxes Expenses	83	1,160	494
Net Income	1,424	8,049	4,543

# 2. Summarized Financial Statement (Consolidated)

#### **Financial Status Table**

(unit: ₩ Million)

	1 Q, 2012	2011	2010
Accounting Standards		K-IFRS	
Current Assets	89,902	102,020	80,144
Fixed Assets	36,751	36,582	24,803
Total Assets	126,653	138,602	104,947
Current Liabilities	77,388	90,034	79,383
Fixed Liabilities	6,141	6,985	3,382
Total Liabilities	83,529	97,019	82,765
Capital	2,475	2,383	1,782
Capital Surplus	11,880	10,501	3,824
Other Capital	268	370	878
Retained Earnings	1,294	1,523	417
Profit Reserve	27,176	26,785	15,270
Total Capital	31	21	11

#### **Income Statement**

(unit : ₩ Million)

	1 Q, 2012	2011	2010
<b>Accounting Standards</b>		K-IFRS	
Sales	35,552	215,298	145,091
Sales Cost	30,748	184,985	125,363
Gross Profit	4,804	30,313	19,728
Selling and Administrative Expenses	3,036	14,210	10,685
Operating Income	1,768	16,103	9,043
Non-operating Income (Banking Profit)	69	2,168	649
Non-operating Expense (Non-Financial Expense)	1,298	4,999	3,135
Income before Income Taxes	539	13,272	6,557
Income Taxes Expenses	83	1,689	655
Net Income	456	11,583	5,902



**Investor Relations 2012** 

