

Investment Highlights

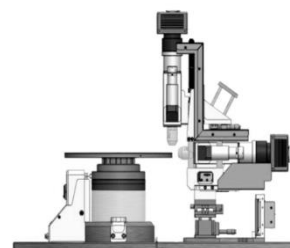
- **Development and manufacture of patterned semiconductor wafer defect inspection tools:** Our company specializes in the development and manufacture of patterned semiconductor wafer defect inspection equipment. It first succeeded in the localization in Korea in 2014 and was acknowledged for its technical power through joint development with Fraunhofer IPMS-CNT in Germany, the world's top semiconductor device manufacturing technology powerhouse.
- **Advancing into the global market:** According to Semiconductor Equipment and Materials International (SEMI), the total size of the front-end-of-line patterned wafer micro defect inspection equipment market is estimated to reach USD 3.6 billion (KRW 4 trillion) in 2019. This market is expected to annually grow by about 6.4%, and its value will reach about USD 4.5 billion (KRW 5 trillion) by 2023. At present, the US company KLA Corporation has at least a 90% market share of the front-end-of-line patterned wafer defect inspection equipment market.

Products and Services

Product and Technology



AEGIS Series,
Based on Nextin's innovative 2D
imaging technology



Twins
integration module

- **Major features of key technology**
 - Apparatus for examining the pattern image of a semiconductor wafer: The separated-type mirror of a mirror unit that segments the patterned wafer image widthwise, which is generated by lighting, is utilized for the image-detecting element to accurately adjust the alignment of the segmented wafer image with the appropriate area. This thereby increases the inspection precision and facilitates setting, maintenance, and repair work.
 - Image processing technology: The image is processed by automatically extracting detailed regions, which are meant as units subject to inspecting die images and classifying detailed regions with the same characteristics into the same types. This can ensure more efficient die inspection and reduce costs.
 - Method of correcting the defect location using predetermined wafer image targets: Predetermined wafer image targets are used to remove factors that influence defect location errors caused by the mechanical properties of the existing inspection equipment, thereby reducing mechanical inaccuracy and increasing measurement precision.
- **Competitiveness of key technology:** The semiconductor device manufacturing process is generally divided into the front-end-of-line and the back-end-of-line. There are numerous vision inspection equipment manufacturers in Korea, but our company is a unique one that has successfully developed front-end-of-line patterned wafer defect inspection equipment. Traditional semiconductor powerhouses such as the United States and Japan gain a competitive advantage in the front-end-of-line equipment, and they are strengthening the leadership in the industry through their accumulated original technologies. Korean companies are focusing on the back-end-of-line inspection equipment, which has a relatively low technical barrier, because of the lack of the original technologies. However, the front-end-of-line equipment takes up at least 80% of the semiconductor equipment market, so it is crucial to localize the front-end-of-line equipment.

History of the Company

- October 2015: Signed a strategic investment agreement with AP Systems; attracted the fifth investment of KRW 2.2 billion
- November 2015: Selected as a 2015 new growth engine business by the Ministry of Trade, Industry and Energy (SK Hynix)
- November 2015: Acquired ISO 9001:2015 quality management systems

Company Profile

Date of foundation	<ul style="list-style-type: none">July 2010
Investment performance	<ul style="list-style-type: none">October 2015: Signed a strategic investment agreement with AP Systems
Listed or unlisted	<ul style="list-style-type: none">Unlisted
Patents and certificates	<ul style="list-style-type: none">Completed the registration of 15 patents and the application for three patents related to the development and manufacture of patterned semiconductor wafer image inspection device, including a patent for apparatus to examine the pattern image of semiconductor wafer using separated mirror-type image divider (No. 10-1403469)

Business Plans

(Unit: USD million)

Division	2019 (Forecast)	2020 (Forecast)	2021 (Forecast)
Sales	14.64	25.42	34.24
R&D	3.07	3.51	4.11

- Sales plan:** The growing demand for semiconductors will lead to steadily increasing sales. Furthermore, for at least five years after sales, the sales of services related to the maintenance of the equipment will continue to be generated because the software needs to be changed whenever the inspection process changes during the period of use. As a result, a total of sales will reach USD 34.24 million by 2021.
- Investments required:** To keep pace with changing and evolving semiconductors, our company is planning to invest USD 3.07 million in 2019, USD 3.51 million in 2020, and USD 4.11 million in 2021 in updating software and conducting tests. Given that investment in future facilities has been completed, our focus will be on investment in R&D.

Investment Requirements

Investment Structure	<ul style="list-style-type: none">Minority (Financial Investment)
Amount	<ul style="list-style-type: none">USD 8 million
Region	<ul style="list-style-type: none">North America, China, Europe