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World OEM Automotive Electronics

Industry Study with Forecasts for **2011 & 2016**

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WORLD OVERVIEW

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INDUSTRY STRUCTURE

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The penetration rates of the latest comfort, convenience and entertainment related electronic equipment in cars built in developing countries is not far behind that in developed countries.

Global demand to rise 7.5% annually through 2011

World demand for automotive electronics for original equipment manufacturer (OEM) use is forecast to advance 7.5 percent per year through 2011 to $153 billion. Demand will rise much more rapidly than light vehicle production itself, as intensity of electronics use per vehicle increases. In developed countries, market maturity in some traditional segments (such as electronic engine controls, transmissions and fuel injection systems) will be more than offset by strong demand for safety, entertainment and communications systems.

Safety, entertainment, power electronics offer best prospects

Consumer unwillingness across the Triad (the US, Western Europe and Japan) to increase spending for the latest electronic systems has throttled back expectations by OEMs regarding some newer technologies such as navigation, wireless and telematics systems becoming standard equipment in lower priced cars. As such, the best growth prospects are emerging in safety (both active and passive safety systems), entertainment electronics (mobile Internet, video and gaming systems), and power electronics (products designed to handle and coordinate the rapidly growing electric power requirements of newer vehicles). Electronics growth in emerging economies is being helped by the rapid transfer of new product designs from Triad markets -- a change from the past, when obsolete designs were used in nascent markets.

Developing markets closing gap with Triad

Growth in emerging markets is being driven by the continued introduction of electronic systems designed to improve safety, efficiency and emissions control. Moreover, the transfer of automotive technology from producers in developed countries is happening at a much faster pace than in the past, especially since many automotive electronic products can be cheaply manufactured in developing countries. Consequently, the penetration rates of the latest comfort, convenience and entertainment related equipment in cars built in developing countries is not far behind that in developed countries.

The developed nations of the world -- led by the United States, Japan and Germany, the three leading global producers of light vehicles -- will continue to account for the majority of demand for OEM auto electronics in 2011. Nevertheless, the trend by leading automakers to site vehicle production globally in order to take advantage of faster growing markets, lower-cost labor supplies, reduced transportation costs and more favorable tariff rates will increasingly cause a shift in the geographic distribution of electronics demand as well -- primarily benefitting developing countries.

Sample Text, Table & Chart

TABLE VI-8

SOUTH KOREA -- OEM AUTOMOTIVE ELECTRONICS DEMAND (million dollars)

Item	1996	2001	2006	2011	2016
Light Vehicle Production (000)					0
$ auto electronics/vehicle					3
OEM Auto Electronics Demand					0
Engine & Drivetrain					0
Safety & Security					0
Comfort/Convenience/Entertainmen					0
Navigation & Instrumentation					0
% South Korea					5
A/P OEM Auto Electronics Demand	1				0

SAMPLE TABLE

ASIA/PACIFIC

Nevertheless, even though South Korea is the third largest m
OEM automotive electronics in the region, it is well behind J

Demand for engine anc uth K
pected to grow 4.4 percent a en by
production levels and by the orean
ers are attempting, especiall for e
Safety and security electron cent p
$2.4 billion as South Korean vehicl
active and passive safety technologies. Demand for comfort, convenience and entertainment electronics will increase at a 7.9 percent annual rate to $1.5 million as upscale-oriented vehicles include greater levels of this content. Finally, the market for navigation and instrumentation electronics will rise 6.8 percent per year to $710 million in 2011 on the strength of new display technologies and the continued electronification of instrumentation.

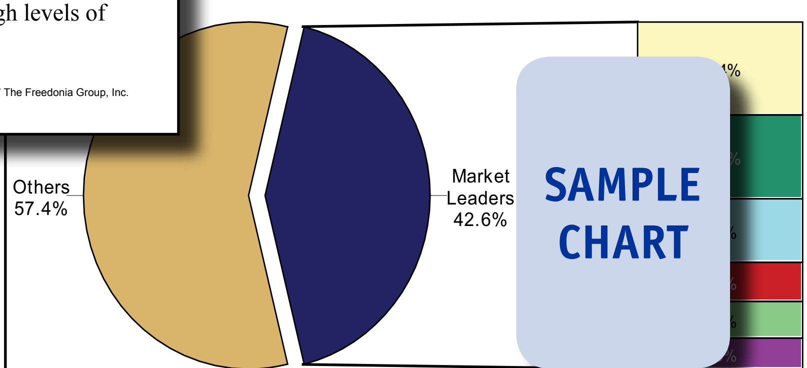
SAMPLE TEXT

Growth in demand in South Korea for automotive electronics has decelerated from its peak growth levels in the 1990s. This is due to a variety of factors, including the maturation of the market for basic electronic systems (such as engine controls and antilock brakes), the Asian financial crisis of the late 1990s and the resulting weak condition of the South Korean automobile industry, which saw several producers (SsangYong, Samsung Motors and KIA) acquired by competitors. Even though light vehicle production is expected to increase through 2011, gains will be a mere fraction of what they were in the 1990s, which will moderate gains in demand for OEM electronics. A development moderating South Korea's reduction in OEM electronics growth is the determined push upmarket by OEMs such as Hyundai and its subsidiary KIA. These companies are attempting to move beyond the entry-level vehicle segment in the United States in part by including high levels of electronic content in their vehicles.

157

CHART VIII-1

EM AUTO ELECTRONICS MARKET SHARE, 2006 ($106.3 billion)



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Sample Profile, Tables & Forecast

"Demand for OEM automotive electronics in South Korea is forecast to increase 6.3 percent per year to $7.7 billion in 2011, accounting for 14 percent of total regional demand. This rate of growth represents a deceleration from the gains posted from 2001 through 2006, due in large part to the expected slowing of new light vehicle production growth in the country."

--Section VI, pg. 156

TABLE VI-7

SOUTH KOREA -- MACROECONOMIC & LIGHT VEHICLE INDICATORS

Item	1996	2001	2006	2011	2016
Population (million persons)					
GDP/capita					
Gross Domestic Product (bil 2005$)					
light vehicle sales/mil $ GDP					
Light Vehicle Sales (000)					
net exports					
Light Vehicle Production (000)					

SAMPLE TABLE

COMPANY PROFILES

Johnson Controls Incorporated
5757 North Green Bay Avenue
Milwaukee, WI 53201
414-524-1200
http://ww

Sales: $
Employ

Key Pro ... digital compass,
cellular

SAMPLE PROFILE

John ... automotive systems, and facility management and controls. The Company operates through three segments: Building Efficiency, Automotive Experience and Power Solutions.

The Company competes in the world OEM automotive electronics ...stry through the Automotive Experience segment, which gener... sales of $18.3 billion in FY 2006. Of the segment's FY 2006 ...s, North America accounted for 44 percent, Europe represented 48 ...cent and Asia accounted for eight percent. The Automotive Experi... segment designs and manufactures interior systems and products ...passenger cars and light trucks, including vans, pick-up trucks and ...ts utility vehicles. According to Johnson Controls, the segment's ...petitors encompass Lear Corporation (US), Magna International ...rporated (Canada) and Faurecia SA (France). In FY 2006, the ...mpany's three largest customers were General Motors Corporation ...), Ford Motor Company (US) and DaimlerChrysler AG (Germany), ...ch collectively accounted for 32 percent, or about $10.3 billion, of ...nson Controls' total sales.

CHART III-4

STANDARD FEATURES IN BEST-SELLING CARS BY SELECTED COUNTRIES, 2006

Country	Australia	United States	Germany	China	India	Brazil
Best Selling Vehicle	Holden Commodore Omega	Toyota Camry	VW Golf			
Base Model MSRP (US$)	$25,620	$19,275	$22,500			
Engine & Drivetrain						
Base Model Standard Equipment	3.6L V6	2.4L IL4	1.4L IL4			
Valve Train	16 valve	24 valve	16 valve			
Transmission	4-spd A/T	5-spd A/T	6-spd M/T			
3-Way Cat Converter	yes	yes	yes			
Electronic Ignition	yes	yes	yes			
Electronic Throttle Control	yes					
Flex Fuel System						
Port Fuel Injection	yes	yes	yes	yes	yes	

SAMPLE CHART

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Other Studies

Advanced Lighting

US demand for advanced lighting will grow nearly 14% annually through 2011. Gains will be driven by energy efficient compact fluorescent lamps (CFLs), improved light emitting diode (LED) technology, and popular high intensity discharge headlamps for motor vehicles. Building applications will be the fastest growing market. This study analyzes the $2.3 billion US advanced lighting industry, with forecasts for 2011 and 2016 by product and market. It also evaluates market share and profiles major players.

#2197 .... 06/2007..................... $4400

World Lighting Fixtures

Global lighting fixture demand will grow 5.1% yearly through 2010 based in part on a shift toward higher-end types (e.g., electronic ballasts, HID lighting, LEDs, fiber optics). Fastest gains will occur in developing areas, particularly China and India. Remodeling and retrofit activities will drive growth in developed markets. This study analyzes the $71.5 billion world lighting fixture industry to 2010 and 2015 by product, market, world region and 22 countries. It also details market share and profiles major players.

#2145 .... 12/2006..................... $5400

Wheelchairs & Other Personal Mobility Devices

US demand for personal mobility devices will grow 5% annually through 2010. The aging population will benefit wheelchairs and related products, especially powered scooters and lifts. Commercial vehicles will lead gains among other devices as golf cars and in-plant personnel carriers are adapted for general commercial use. This study analyzes the $2.4 billion US personal mobility device industry to 2010 and 2015 by product and market. It also evaluates company market share and profiles major producers.

#2112 .... 10/2006..................... $4200

World Security Equipment

World security equipment demand will grow 8% yearly through 2010, based in part on rising urbanization and improved price/performance for advanced electronics. Digital CCTV recorders, biometrics and contraband detectors will lead gains. The US will remain the top market; developing regions will grow the fastest. This study analyzes the $58 billion world security equipment industry to 2010 and 2015 by product, market, world region and for 19 countries. It also details market share and profiles major players.

#2085 .... 08/2006..................... $5500

Advanced Flat Glass

US demand for advanced flat glass will rise 5.9% annually through 2010. Growth factors include the emergence of smart glass and other technologies and strong gains in protective laminated glass. The best prospects are for solar control flat glass and other advanced flat glass products (e.g., heads-up display windscreens, self-cleaning glass). This study analyzes the $5.8 billion US advanced flat glass industry to 2010 and 2015 by product and market. It also evaluates market share and profiles major players.

#2074 .... 08/2006..................... $4200

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