

**Infineon**

# Company Information

May 2005



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# Table of contents

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**Market / Company overview**



**Business development 2nd quarter fiscal year 2005**



**Business groups**



**General company information**

**Market**


Company Overview

Business development 2nd quarter fiscal year 2005

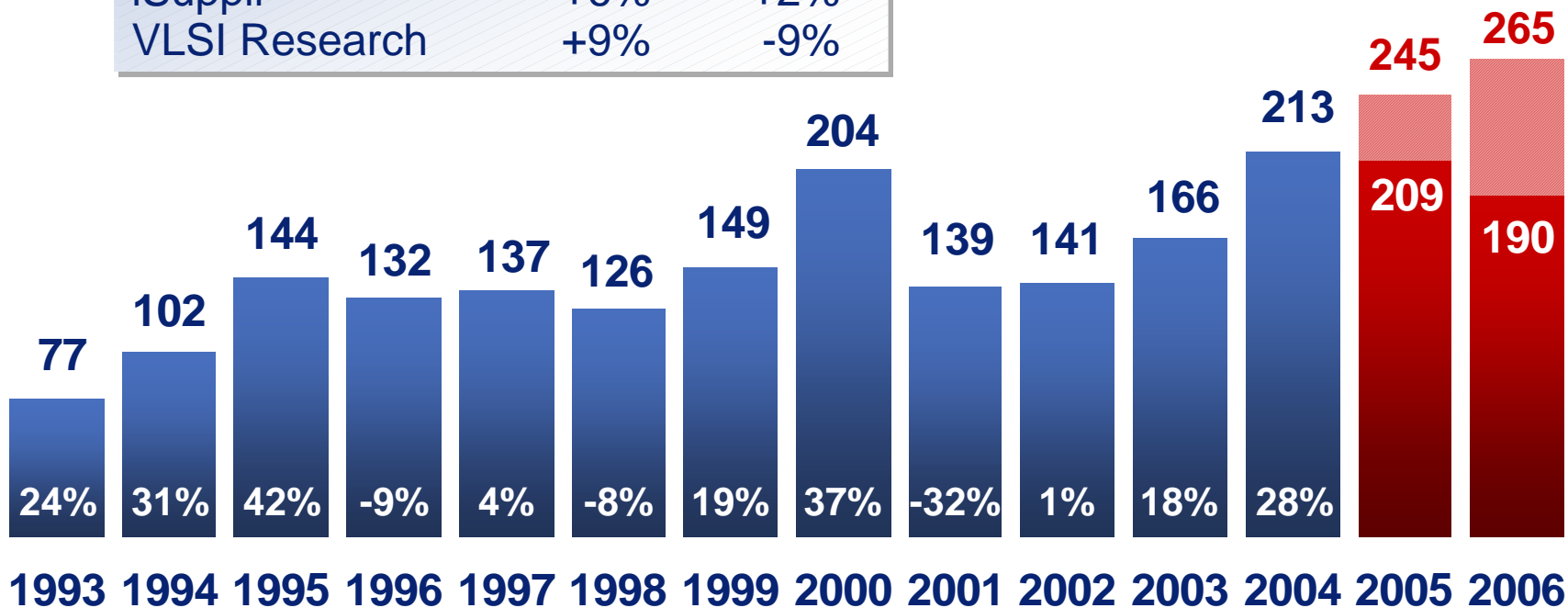
Business groups

General company information

# Semiconductor market development and forecasts

 Forecasts*	2005	2006
IC Insights	-2%	+8%
WSTS**	±0%	+3%
Future Horizons	+15%	+6%
Gartner DQ	+3%	+2%
iSuppli	+6%	+2%
VLSI Research	+9%	-9%

[USD bn]



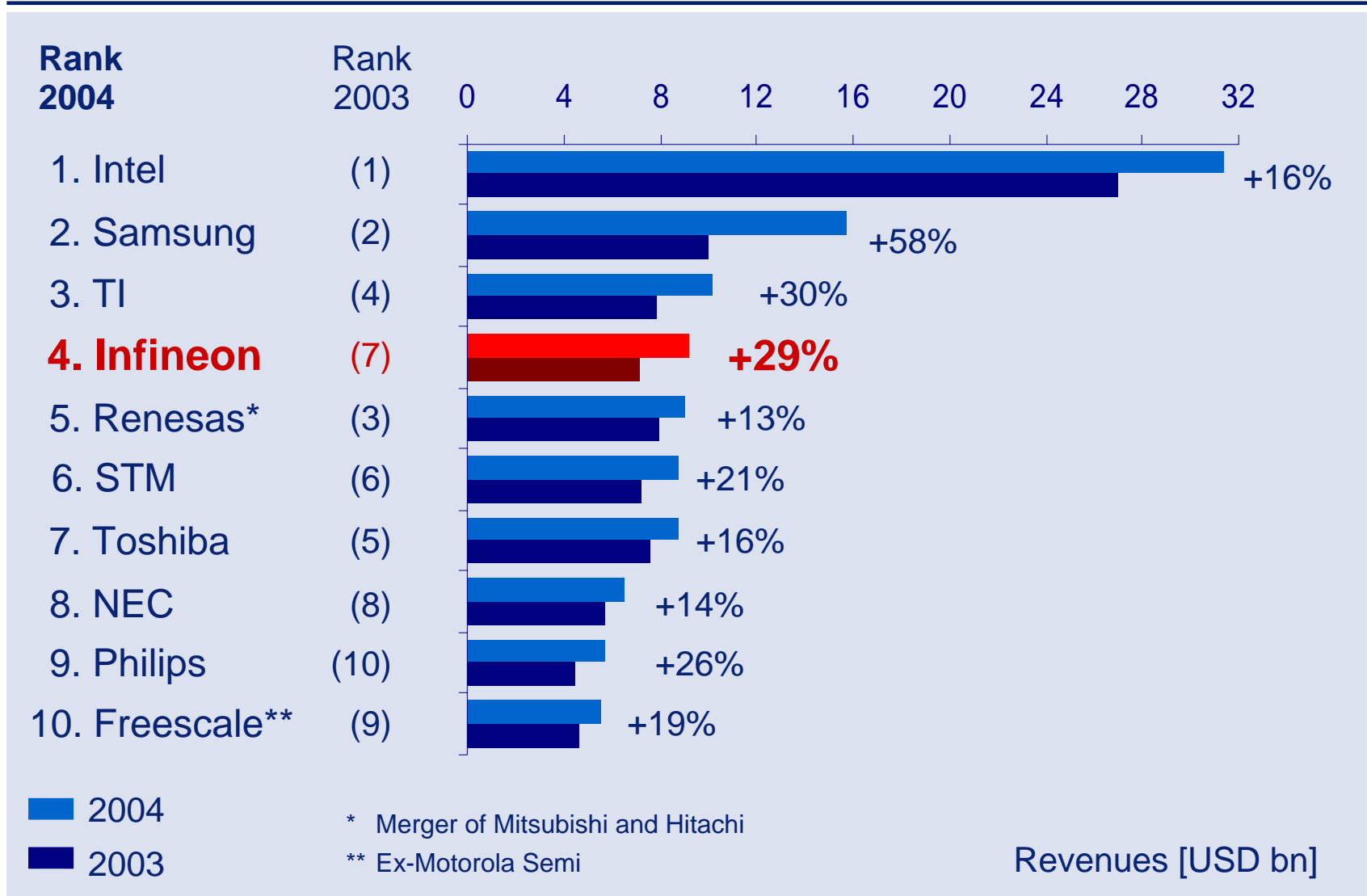
■ Source: WSTS for historical data

\* As of April 20th, 2005

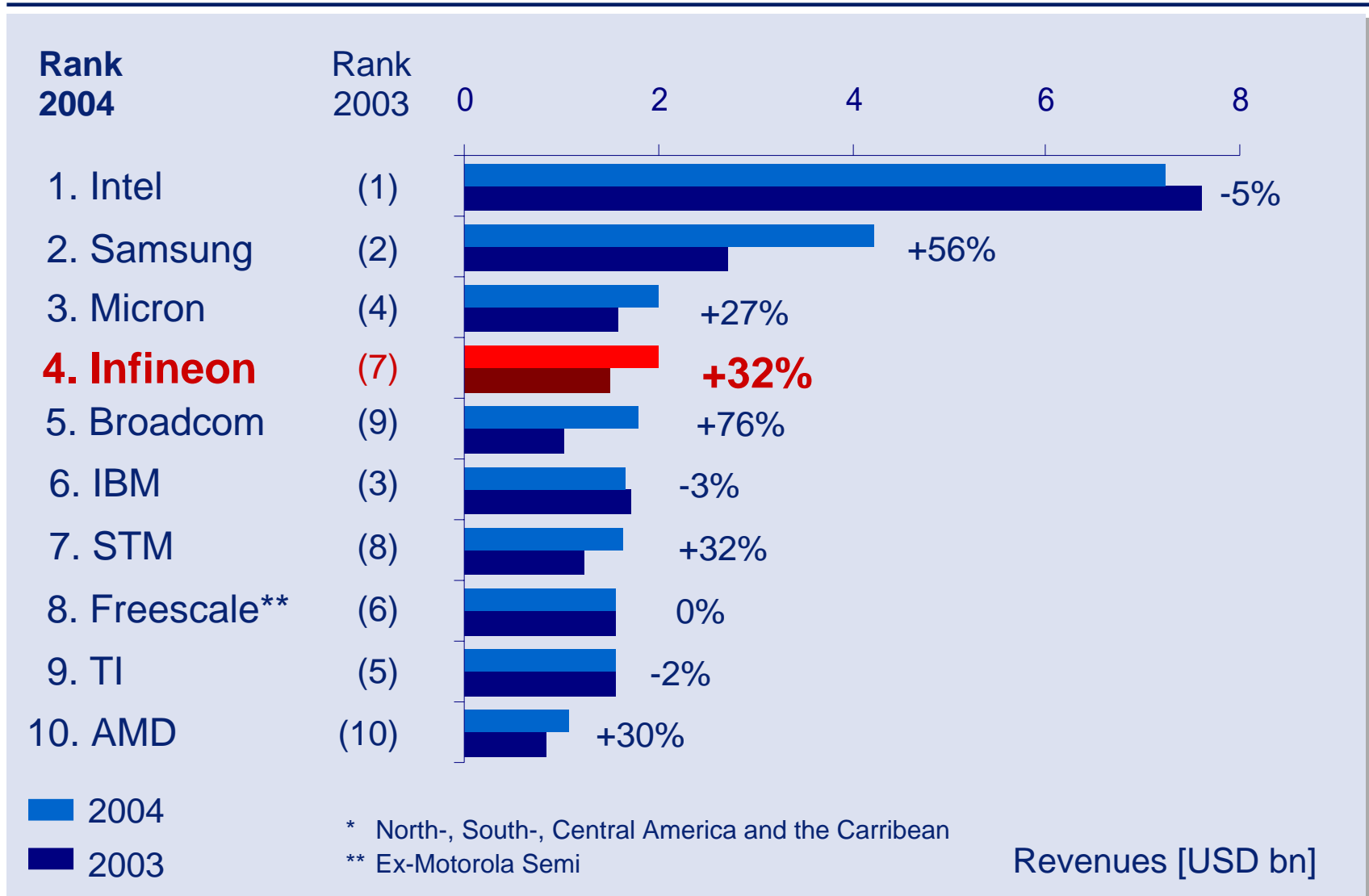
\*\* incl. Update 4Q CY2004

# Worldwide semiconductor ranking 2004 and 2003

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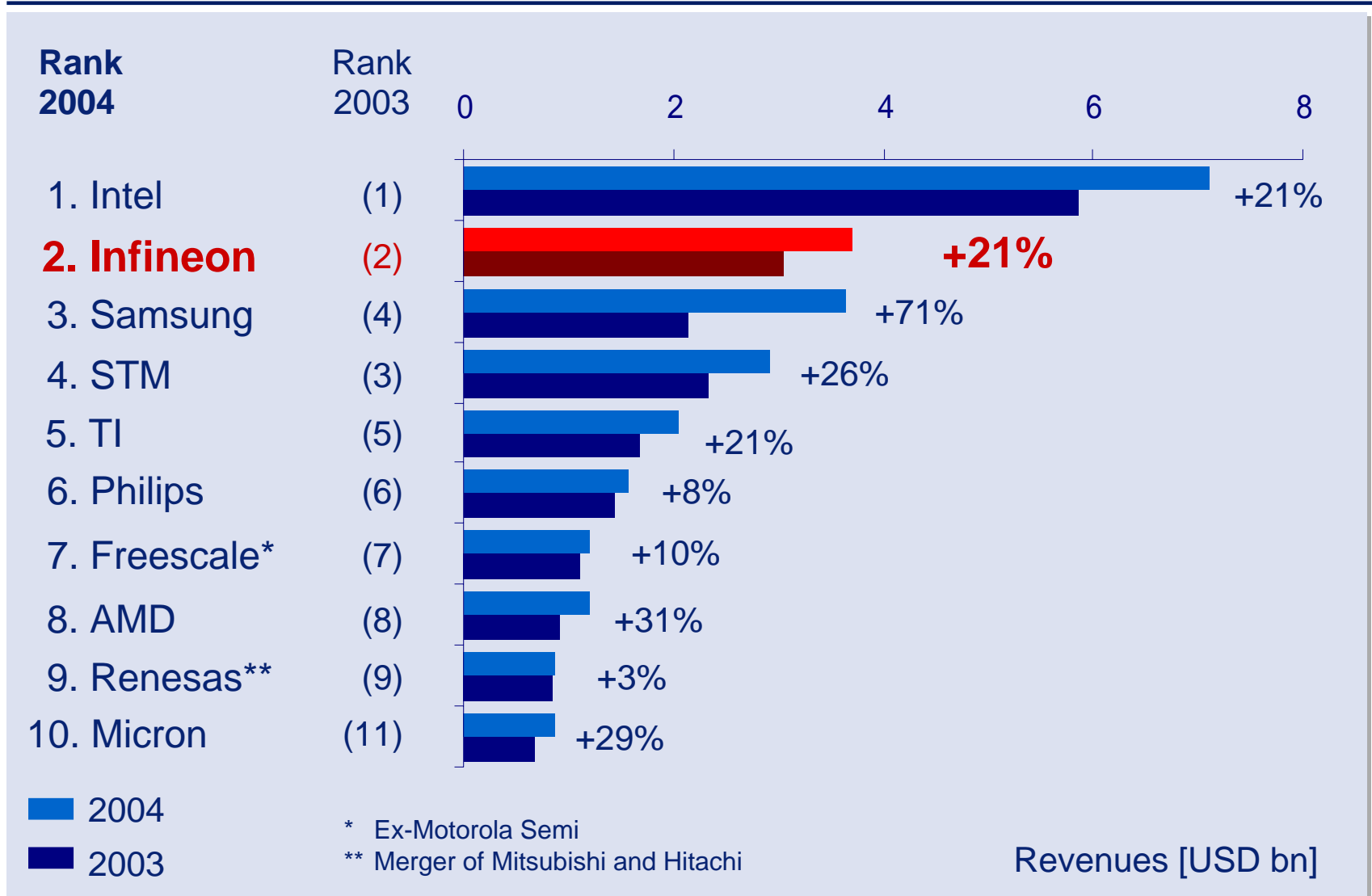


# Ranking Americas\*



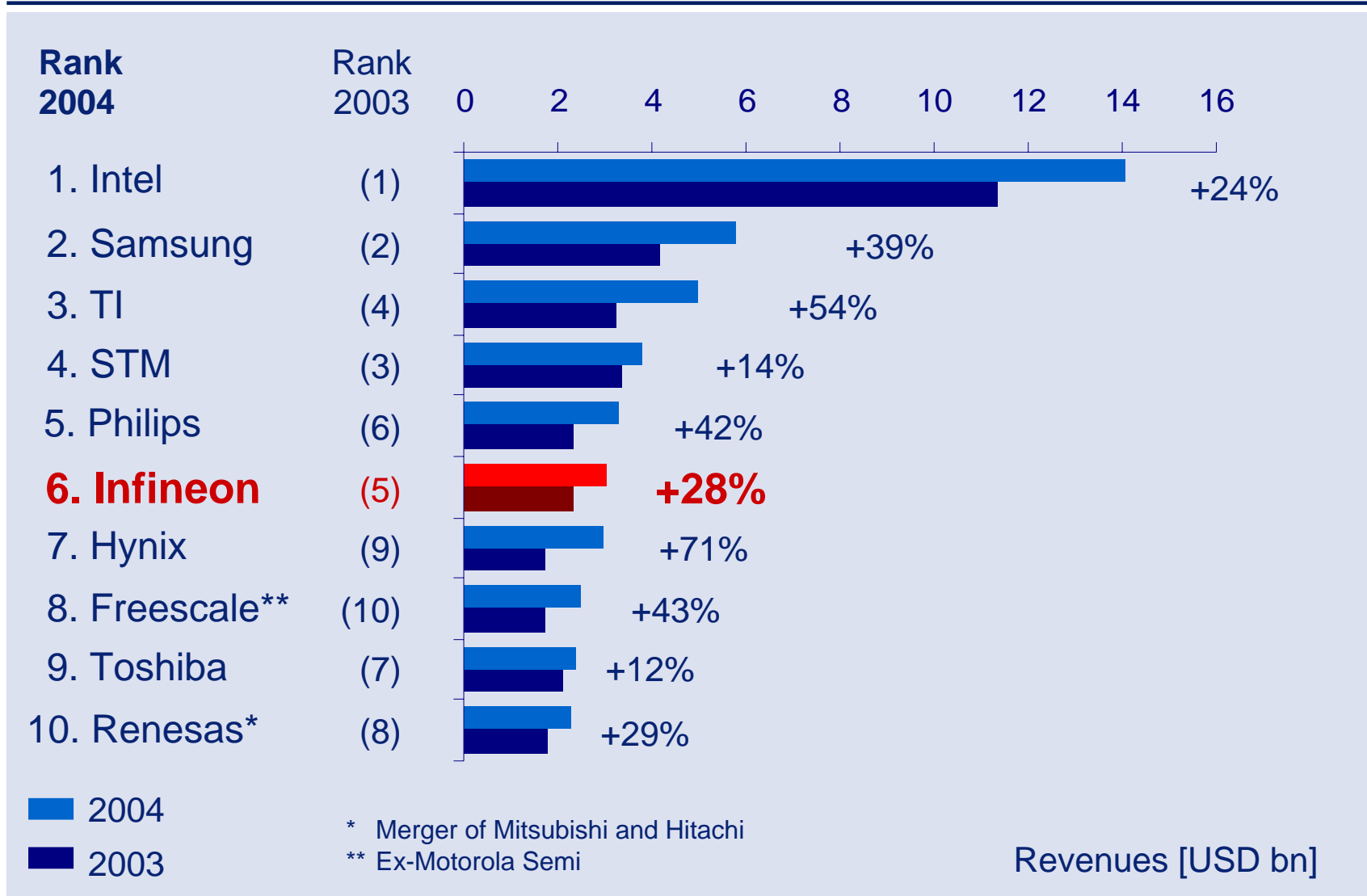
# Ranking Europe

stop thinking  
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# Ranking Asia

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■ 2004  
■ 2003

\* Merger of Mitsubishi and Hitachi  
\*\* Ex-Motorola Semi

Revenues [USD bn]



# Ranking in all targeted applications



\* Application-specific semiconductor  
 Source: Gartner Dataquest (March 2005); iSuppli (March 2005)



Market

**Company Overview**



Business development 2nd quarter fiscal year 2005



Business groups



General company information

## Infineon at a glance

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- Infineon – the No. 4 semiconductor company worldwide
- Revenues of Euro 7.2 billion in the fiscal year 2004; revenues growth of 17% year-on-year
- In second quarter revenues were Euro 1.61 billion, down 12% sequentially
- Approx. 36,000 employees (incl. 7,300 R&D staff) as of March 31, 2005
- Strong technology portfolio with about 41,000 patents and applications; more than 35 major R&D locations worldwide
- Most advanced fab cluster in 300mm production
- Focus on communication, automotive and memory products

# Infineon – Market-oriented business structure

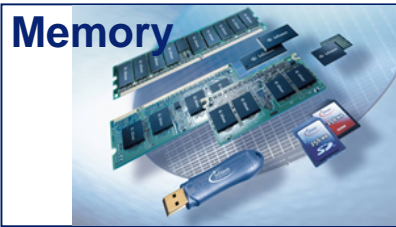
## Business Groups

## Applications



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# Infineon's technology competence



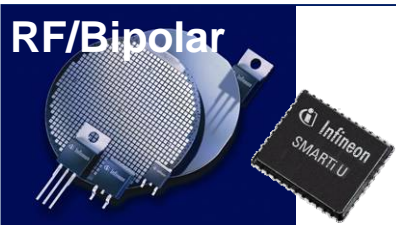
## Memory

**DRAM:** 0.17 $\mu$ m – 0.11 $\mu$ m Trench  
**eDRAM:** 0,17 $\mu$ m Trench  
**Nonvolatile Memory:** 0,17 $\mu$ m TwinFlash  
**Various Future Memory Technologies under review and development**



## CMOS SLE 88CX720P

**Digital CMOS:** CxP, Cyy..., L0zz (Mainstream Platform <180nm incl. RF, AMS)  
**Analog/Mixed Signal:** CxPA, CyNA  
**eNVM:** EEPROM: M3FR (Low Cost), IMEM, C5FR3,  
 OTP: C5OP (Automotive)  
**eFlash/EEPROM:** CxFL (Chip Card), CxFLA, CxFLN (Automotive)



## RF/Bipolar

**RF BICMOS:** BxHFC, B9COPT  
**Bipolar IC:** NF-IC, RF-Bipolar: BxHF, SiGe: B7HFxx, B7HF200, RF Power: BxP  
**Bipolar/Discretes:**  
 Diodes: NF-DI, Tuner: DxT, PIN: DxP, Schottky: DxS  
 RFMOS: HFMOS, LDMOS, LDCAP  
 AF Transistors NF-TR; RF-Transistors HFBxN/P, BxHF, B6HFE, RF Bipolar/SiGE: B7HF



## Power/Analog

**Bipolar:** DOPL, Ax, BIPEP  
**Analog:** SPT170, B6CA  
**Smart Power (BCD):** SPTx (Automotive, EDP)  
**Smart (SmartMOS CD):** SMARTx, MSMARtx, SSMARtx, Opto-TRIAC  
**SiC Devices:** Diode; JEFET (Research)  
**DMOS (OptiMOS):** KSPx, PFET KSNx, EH4, EHmilli, SFETx  
**HV-DMOS (CoolMOS):** EH5/6, APT6, EHATx, EHATDx, EHCx  
**IGBT:** IGBTx, LightMOS, ZIGBT,  
**Fast Recovery Diodes:** FRSTDx (EMCONx)



## MEMS

**Temperature:** D-TEMP  
**Hall:** BxCAS, C9FLRN\_GMR, CxHV  
**Pressure:** BxCSP, PIEZO, TIREPx,  
**Inertia:** GYRO  
**Distance Radar**  
**RF MEMS:** Int. Passives, Filter, RF-Networks  
**Microphone**  
**Opto** OP-DI, OP-TR, B6CP  
**Microfluidic:** Biotechnology: FLOW1



# Comprehensive and sustainable environmental, safety and health concept at Infineon

## Synergy between ecological responsibility and economic success

- EN ISO 14001 multi-site certification
- Efficient resources management in terms of optimized consumption, recovery, recycle and re-use
  - Intelligent waste management and emission reduction
  - Voluntary commitment to reduce green-house gas emissions on global scale
    - Environmental commitments covering development and life-cycle considerations
    - Environmental requirements as part of supply chain management
    - High safety and health standards



**For Infineon environmental responsibility means more than just the fulfillment of legal requirements**



## Green products

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- **IFX is running the project "Green Products" since 1998 according to the EU directives.**
- **More than 50% of the total volume in pieces is already converted to "Green".**
- **The main conversion is in 2004 / 2005.**
- **Information about project, technology and conversion roadmaps are available on the homepage:  
<http://www.infineon.com/greenproduct/index.htm>**



*green*  
**Product**

# Integrated business continuity, disaster recovery and security at Infineon

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## Business Continuity Planning

- Business impact & risk assessment
- Supply chain & manufacturing recovery
- Business continuity plans

- Supply chain security
- IP protection
- Crisis management



## Security Crisis Management



## Information System Security

- IT system security
- IT risk assessment
- Intrusion detection

- Security control centre
- Security technology
- Plant & property protection



## Global Site Security





Market / Company overview

**Business development 2nd quarter fiscal year 2005**

Business groups

General company information

## Business Development in Q2 FY 2005

- Q2 revenues were Euro 1.61 bn, down 12% sequentially. Excluding license income of Euro 118 m realized in Q1 from the settlement with ProMOS, revenues declined 5% sequentially, reflecting reduced revenues of the Communication and Memory Products segments.
- Net loss in Q2 was Euro 114 m, down from net income of Euro 142 m in Q1.
- Second quarter EBIT decreased to negative Euro 117 m from positive Euro 211 m in the prior quarter. EBIT was negatively impacted by a net aggregate charge of Euro 74 m resulting primarily from the reorganization measures in the Communication segment.
- Total revenues for the first half of financial year 2005 were Euro 3.42 bn, up 4% from Euro 3.29 bn in the same period last year.
- Net income for the first half of the 2005 financial year amounted to Euro 28 m, compared to Euro 73 m in the prior year.
- EBIT in the first half of financial year 2005 was Euro 94 m, a decrease from Euro 141 m in the same period last year.

# Business highlights Q2 FY 2005

## Automotive, Industrial & Multimarket

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- Infineon announced ground breaking at its new front-end production plant in Kulim, Malaysia. The fab will primarily produce power semiconductors used in automotive and industrial power applications.
- Infineon expanded its CoolMOS™ product portfolio with a new series of high-performance power transistors. These are designed for power supplies used in computer servers and other high-power-density applications such as telecom equipment and flat-panel displays.
- Together with Giesecke & Devrient, a new production methodology called "Flip Chip On Substrate" (FCOS) for chip-card IC packages was introduced which increase IC packages' robustness.
- Infineon further expanded its microcontroller product offering, including two 32-bit microcontrollers based on the TriCore™ architecture, and a family of application-specific 16-bit microcontrollers that enables cost savings of up to 30% compared to available alternatives.

# Business highlights Q2 FY 2005

## Communications

- Call-on-air with world's first single chip GSM/GPRS Baseband/Quadband RF transceiver device E-GOLDRadio at 3 GSM Cannes attracting customers
- Infineon, Samsung Electronics, Trolltech and Emuzed announced the world's first UMTS/EDGE-smartphone reference design based on Linux operating system
- IFX announced SMARTi PM; a single-chip CMOS-RF-Transceiver for GSM-, GPRS- and EDGE mobile phones, saving 50% board space and 30% component cost
- Design Win claimed for RF Power Transistors PTFA191001E & PTF180301E at Ericsson Cingular project
- Market introduction of ADSL2+ Central Office Chip GEMINAX Pro sets New Standards for Power Consumption and System Costs reducing system cost by 30% Consisting of a 16-channel ADSL2+ Digital Front End (DFE) and a 4-channel Analog Front End (AFE), with integrated low-power Class D line drivers, the GEMINAX PRO chipset reduces power dissipation, footprint and overall system costs by up to 30 percent, in comparison to other chipsets currently available
- Several Design-wins with Amazon-M IFX's integrated ADSL2/2+ transceiver for CPE applications

# Business highlights Q2 FY 2005

## Memory Products

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- The segment is on track with the introduction of its 90-nanometer DRAM trench technology on 300-millimeter wafers, and expects production to start ramping up by mid-2005.
- In the second quarter of fiscal year 2005, Infineon further increased the proportion of higher-density products in its portfolio, and introduced additional leading-edge products. It also started sampling of the 512-Megabit GDDR3 Graphics RAMs.
- As an industry first, Infineon introduced 4-Gigabyte DDR2 modules based on Dual-Die technology for server applications. This technology makes it possible to stack two identical dies in one package, doubling the density without significantly increasing package dimensions. This is crucial for certain applications such as servers and notebooks where footprint and airflow are decisive factors.

# Business Development Infineon, Comparison Q1 FY 2005 vs. Q2 FY 2005, 1st HY 2004 vs. 1st HY 2005

(according to US GAAP in EUR m)	Q1 04/05	Q2 04/05	Change	1st HY 03/04	1st HY 04/05	Change
<b>Net sales</b>	1,816	1,606	(210)	3,294	3,422	128
Growth (%)		(12)			4	
<b>EBIT</b>	211	(117)	(328)	141	94	(47)
<b>Net income / (loss)</b>	142	(114)	(256)	73	28	(45)
<b>Earnings / (loss) per share (EUR)</b>	0.19	(0.15)	(0.34)	0.10	0.04	(0.06)



# Revenue performance and EBIT development (1 of 2)

	Revenue and EBIT				
(according to US GAAP [EUR m])	Q2 03/04	Q3 03/04	Q4 03/04	Q1 04/05	Q2 04/05
<b>Automotive, Industrial &amp; Multimarket</b>					
Revenues	606	669	708	631	634
EBIT	49	74	90	48	36
<b>Communication</b>					
Revenues	390	419	466	414	332
EBIT	15	2	(73)	(19)	(142)
<b>Memory Products</b>					
Revenues	665	811	807	766	633
EBIT	13	(50)	149	196	17

Prior period segment results are reclassified to be consistent with the current period presentation and organizational structure.

# Revenue performance and EBIT development (2 of 2)

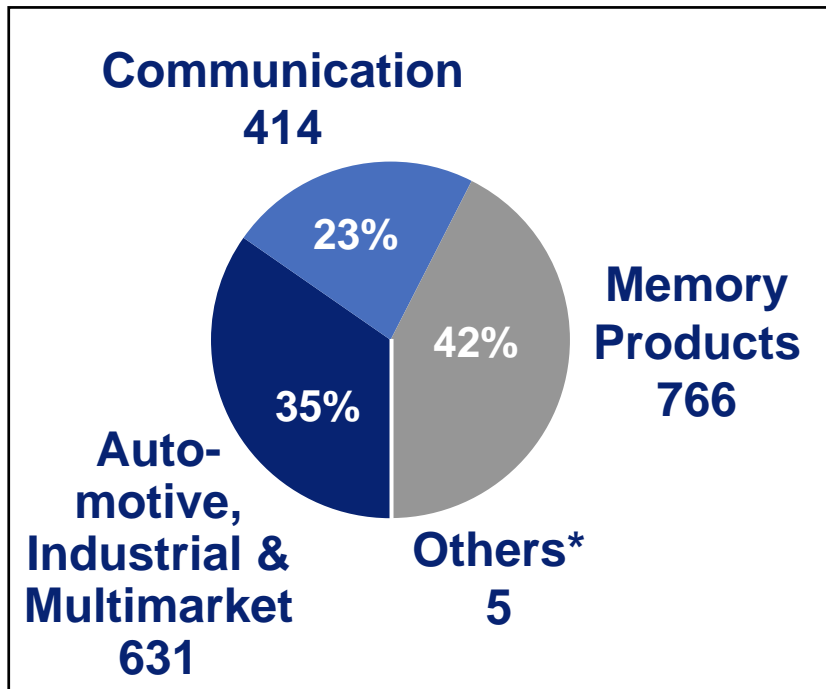
(according to US GAAP [EUR m])	Revenue and EBIT				
	Q2 03/04	Q3 03/04	Q4 03/04	Q1 04/05	Q2 04/05
<b>Others</b>					
Revenues	3	1	3	3	4
EBIT	(21)	(9)	(35)	(2)	11
<b>Corporate &amp; Reconciliation</b>					
Revenues	7	8	9	2	3
EBIT	15	(15)	(18)	(12)	(39)

Prior period segment results are reclassified to be consistent with the current period presentation and organizational structure.



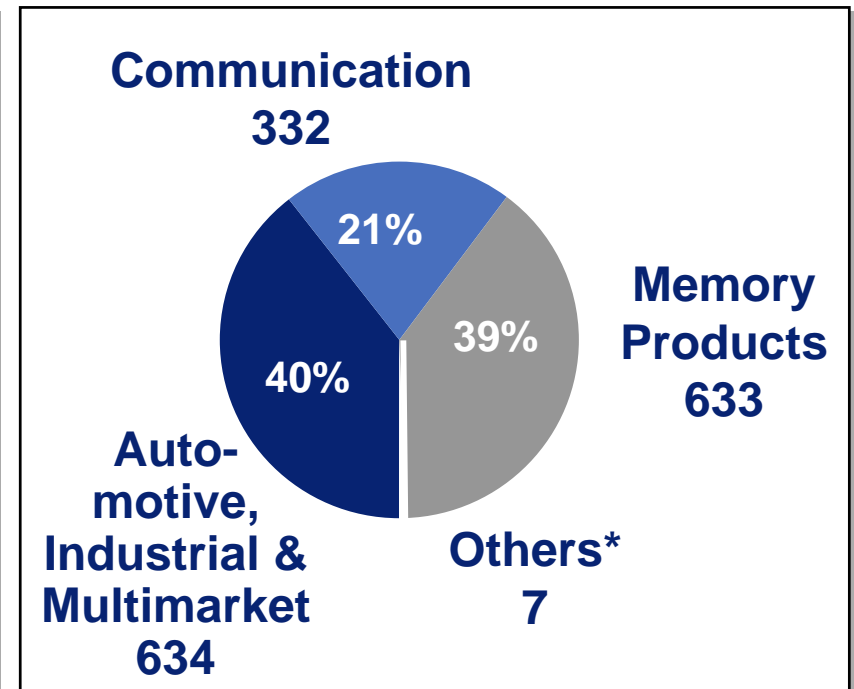
# Sales by segments, 1st quarter FY 2005 and 2nd quarter FY 2005

## Q1 FY 2005



**Total: EUR 1,816 m**

## Q2 FY 2005



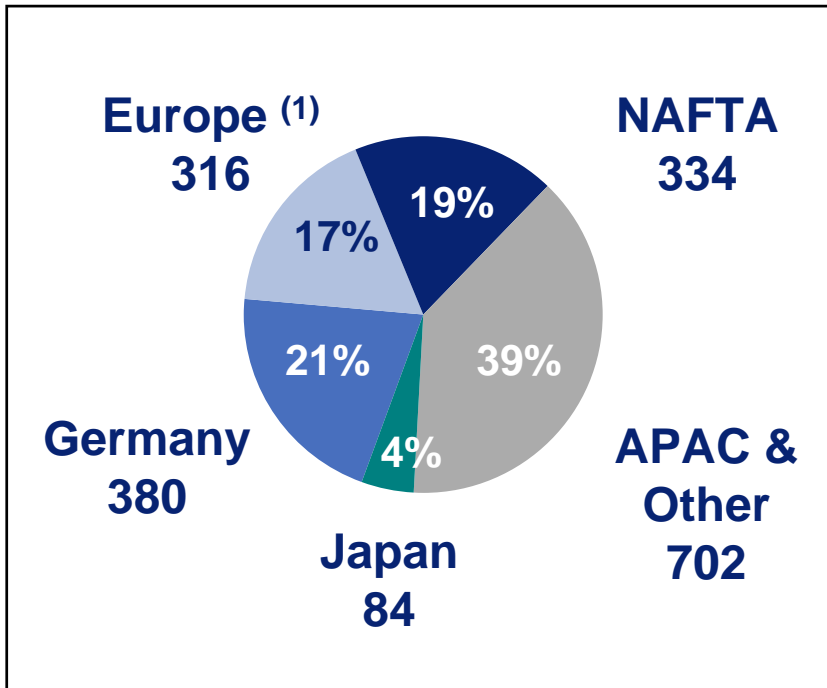
**Total: EUR 1,606 m**

(according to US GAAP)

\* Includes Corporate & Reconciliation and Other Operating Segments

# Sales by region, 1st quarter FY 2005 and 2nd quarter FY 2005

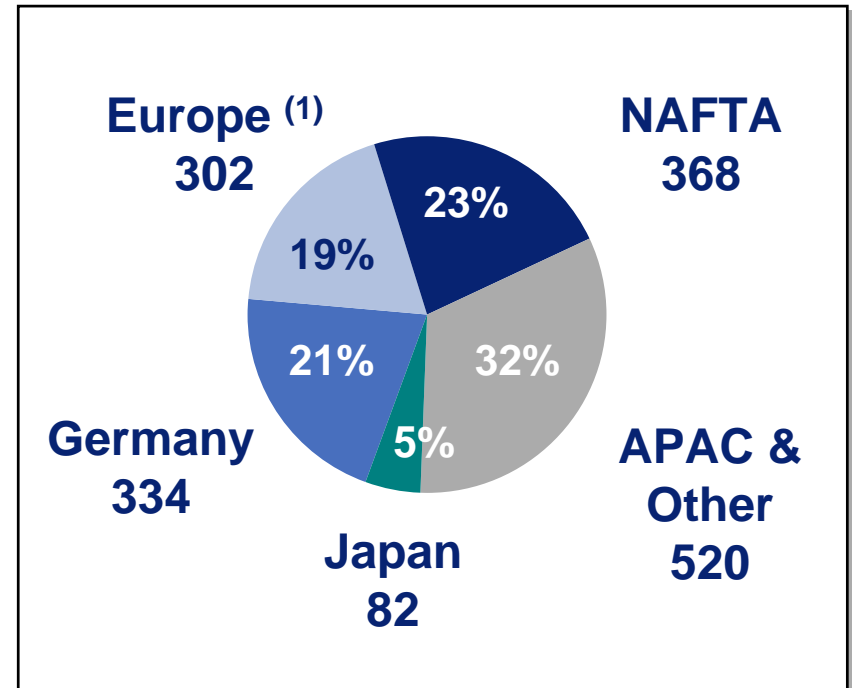
## Q1 FY 2005



**Total: EUR 1,816 m**

(1) Excluding Germany

## Q2 FY 2005

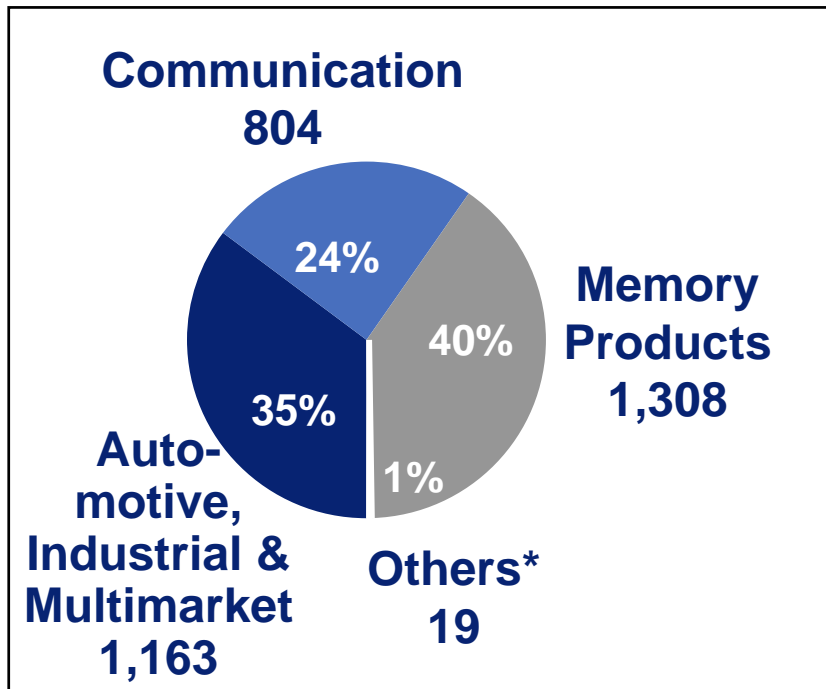


**Total: EUR 1,606 m**

(according to US GAAP)

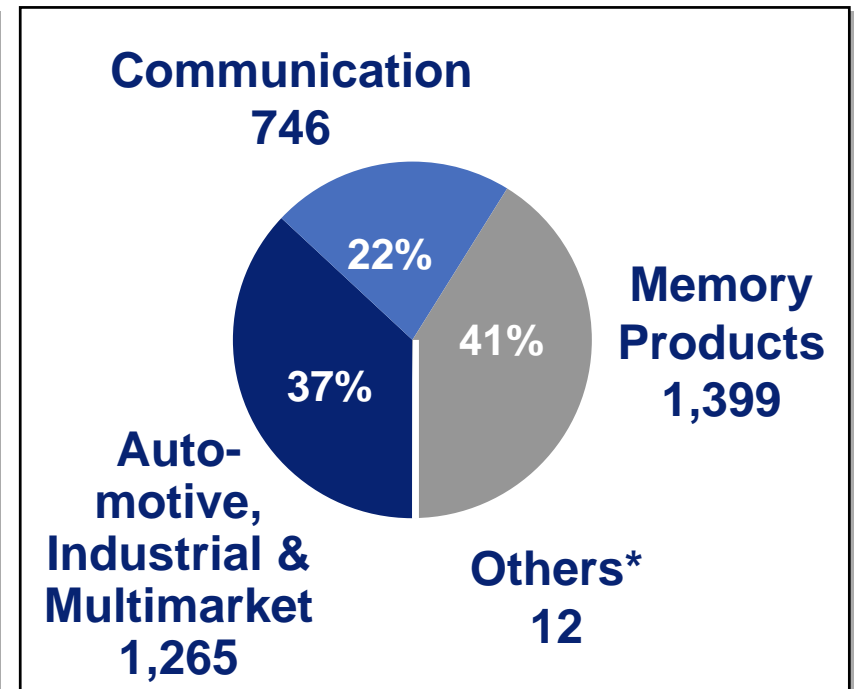
# Sales by segments, 1st HY 2004 and 1st HY 2005

## 1st HY 2004



**Total: EUR 3,294 m**

## 1st HY 2005



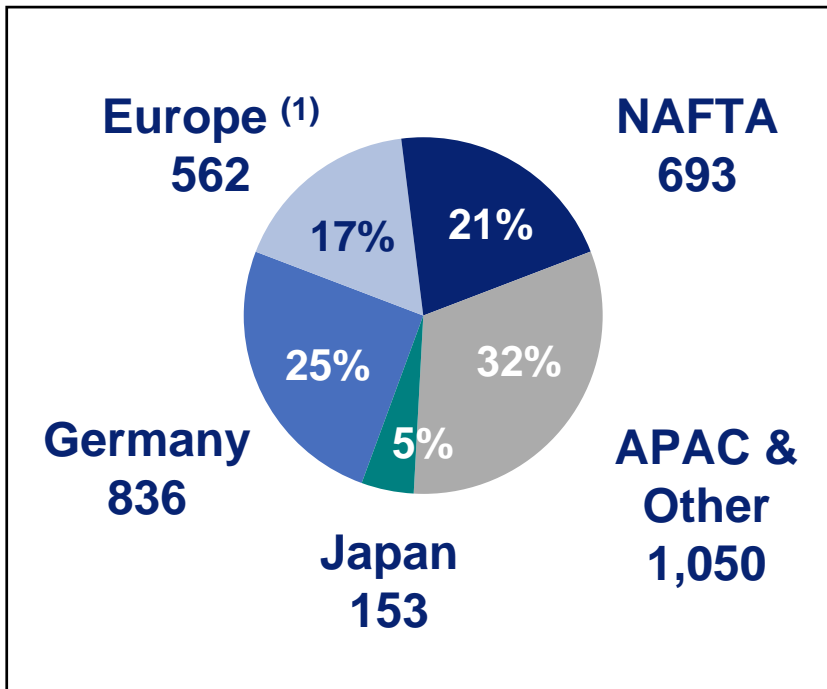
**Total: EUR 3,422 m**

(according to US GAAP)

\* Includes Corporate & Reconciliation and Other Operating Segments

# Sales by region, 1st HY 2004 and 1st HY 2005

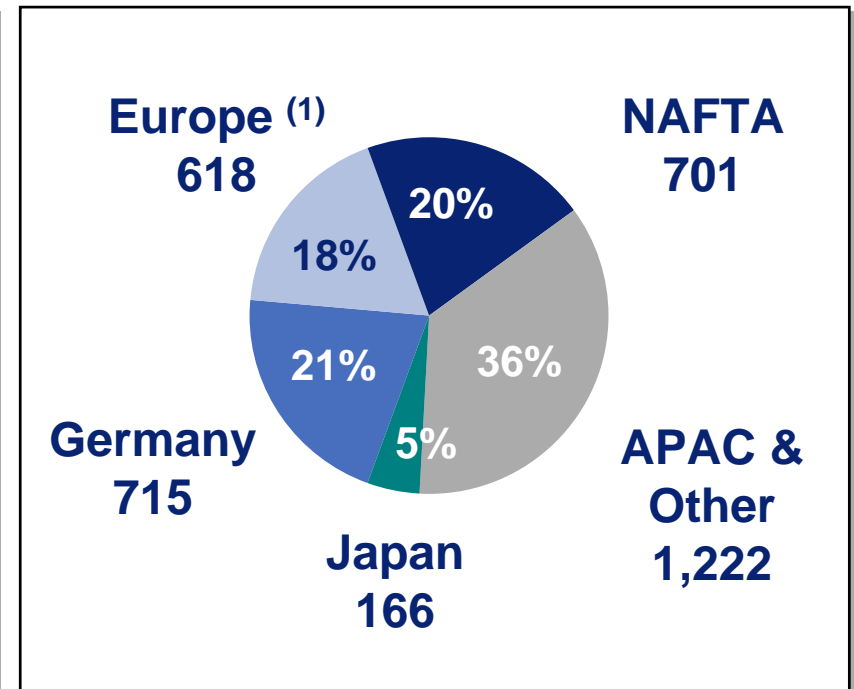
## 1st HY 2004



**Total: EUR 3,294 m**

(1) Excluding Germany

## 1st HY 2005



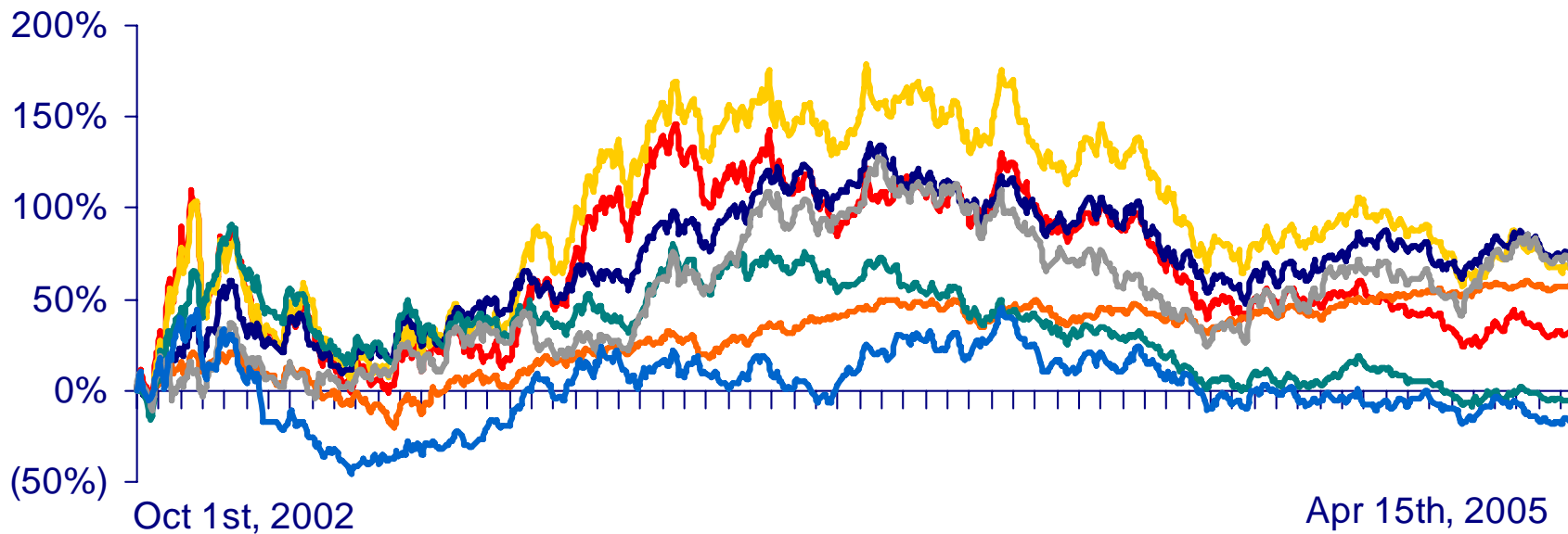
**Total: EUR 3,422 m**

(according to US GAAP)

## Outlook Q3 FY 2005

- Infineon anticipates no major improvement in demand in the Q3 FY 2005. Continued pricing pressure expected, especially for chip-card ICs, memory, and mobile phone products. However, growth in shipments, primarily in Memory Products, should partially offset the impact of pricing pressure on revenues and operating results. Results of operations expected to be negatively affected by further charges related to the planned phase-out of production at Munich Perlach.
- In **automotive business** further growth expected in Q3 FY 2005. But continuing pricing pressure anticipated in its **industrial business**, therefore expecting earnings to decrease slightly in the upcoming quarter. In its **security and chip-card business**, Infineon anticipates continued weakness, in line with the worldwide chip-card market. All in all, the company expects revenues and earnings of the segment to remain stable.
- Revenues of **Communication segment** expected to remain flat or to decrease slightly compared to previous quarter, mainly due to continued weak demand from some customers for mobile phone components. Significant negative EBIT results expected for the Q3 FY 2005. However, Infineon expects its recently initiated efficiency programs to start impacting financial results positively in Q3. Accordingly, the company expects the segment's losses to decrease compared to the second quarter of the financial year.
- For **memory products segment**, Infineon expects an increase in system memory loads and worldwide demand for memories due to the price reductions for DRAMs in the second quarter of financial year 2005. The company's bit shipments are expected to increase at a rate above market growth based on growing capacities at joint venture and foundry partners. The company will continue to focus on the expansion of its product portfolio with higher margin products as these are less exposed to price fluctuations.

# Relative performance of IFX stock since the beginning of fiscal year 2003



- Infineon Technologies (XETRA)
- Infineon Technologies (New York)
- Micron Technologies
- ST Microelectronics
- Texas Instruments
- SOX
- DAX



Market / Company overview



Business development 2nd quarter fiscal year 2005



**Business groups**



General company information

# Infineon – Business groups

**AIM**



**Automotive, Industrial  
& Multimarket**

**COM**



**Communication**

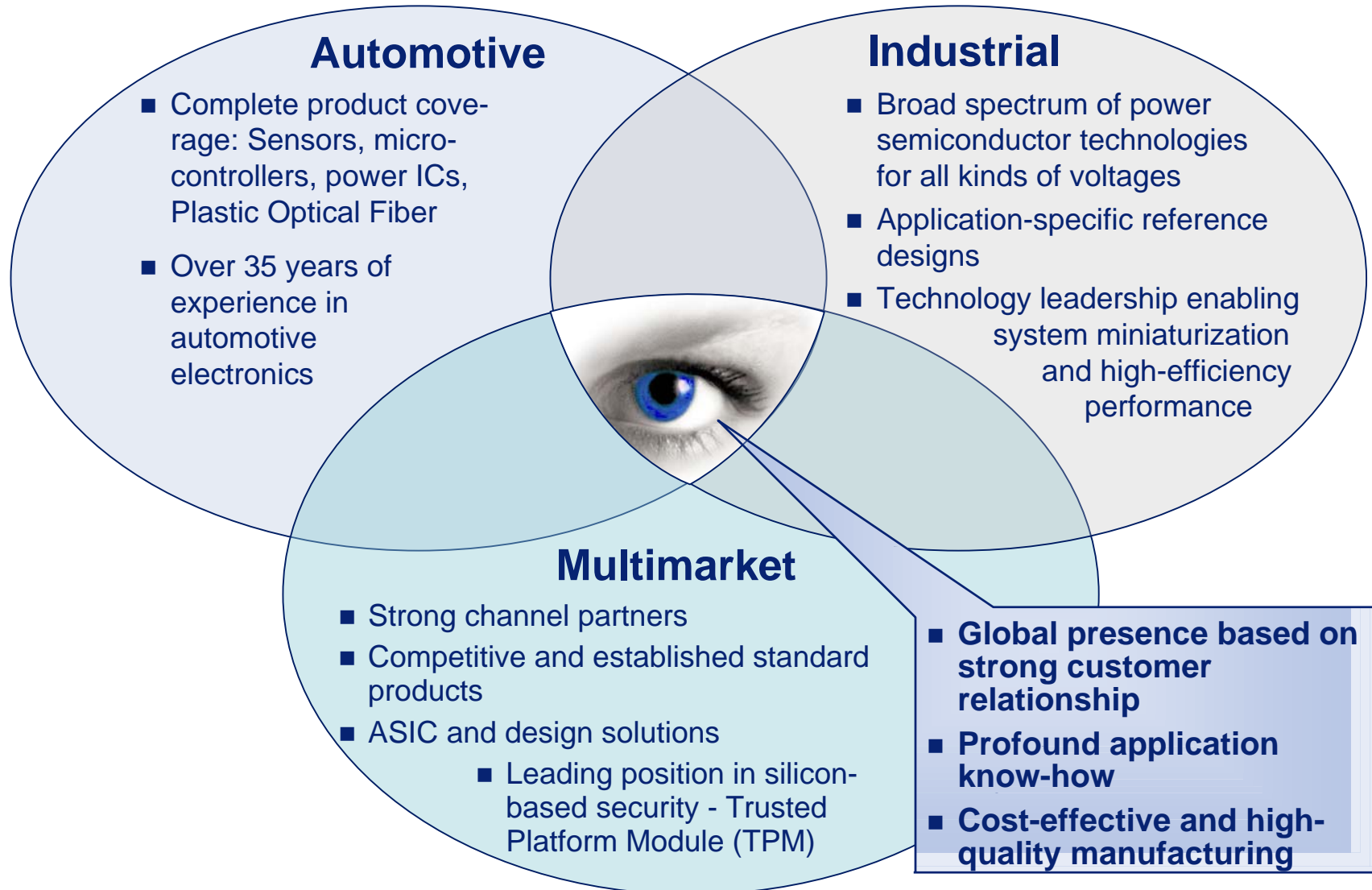
**MP**



**Memory Products**



# AIM business focus



# Automotive Semiconductor Solutions

## Combining sensing, computing and actuating



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		Sense	Compute	Actuate
<b>Powertrain</b> - Diesel Engine Mgmt. - Gasoline Engine Mgmt. - Transmission Control - Starter / Alternator		<ul style="list-style-type: none"> <li>■ Pressure Sensors</li> <li>■ Hall Sensors</li> </ul>	<ul style="list-style-type: none"> <li>■ 16 bit <math>\mu</math>C</li> <li>■ 32 bit TriCore<sup>®</sup> (<math>\mu</math>C + DSP)</li> </ul>	<ul style="list-style-type: none"> <li>■ MOSFETs</li> <li>■ IGBTs</li> <li>■ Regulators</li> <li>■ Transceivers</li> <li>■ Smart Power</li> <li>■ System ICs</li> </ul>
<b>Safety Management</b> - ABS / Traction Control - Suspension - Airbag + Restraint Systems - Power Steering - Tire Pressure Monitoring		<ul style="list-style-type: none"> <li>■ Pressure Sensors</li> <li>■ Hall Sensors</li> <li>■ RF ICs</li> </ul>	<ul style="list-style-type: none"> <li>■ 8 bit <math>\mu</math>Cs</li> <li>■ 16 bit <math>\mu</math>Cs</li> <li>■ 32 bit TriCore<sup>®</sup> (<math>\mu</math>C + DSP)</li> </ul>	<ul style="list-style-type: none"> <li>■ Diodes</li> <li>■ Transistors</li> <li>■ MOSFETs</li> <li>■ Regulators</li> <li>■ Transceivers</li> <li>■ Smart Power</li> <li>■ System ICs</li> </ul>
<b>Body &amp; Convenience</b> - Light Control - Heating, Ventilation, Air Condition - Door & Seat - Smart Battery Terminal		<ul style="list-style-type: none"> <li>■ Hall Sensors</li> <li>■ Temp. Sensors</li> <li>■ RF ICs</li> </ul>	<ul style="list-style-type: none"> <li>■ 8 bit <math>\mu</math>Cs</li> <li>■ 16 bit <math>\mu</math>Cs</li> </ul>	<ul style="list-style-type: none"> <li>■ Diodes</li> <li>■ Transistors</li> <li>■ MOSFETs</li> <li>■ Regulators</li> <li>■ Transceivers</li> <li>■ Smart Power</li> </ul>
<b>Infotainment</b> - Telematics - Navigation - Multimedia - Car Audio - Dashboard		Microcontrollers, Wide Range (GSM/GPRS) and Short Range (Bluetooth, WLAN) communication solutions, GPS, High Frequency ICs, CAN/MOST Transceivers, Plastic Optical Fibres, Multimedia Cards, Power ICs, Security ICs		

# Advanced sensors, controllers and RF ICs for Tire Pressure Monitoring Systems (TPMS)



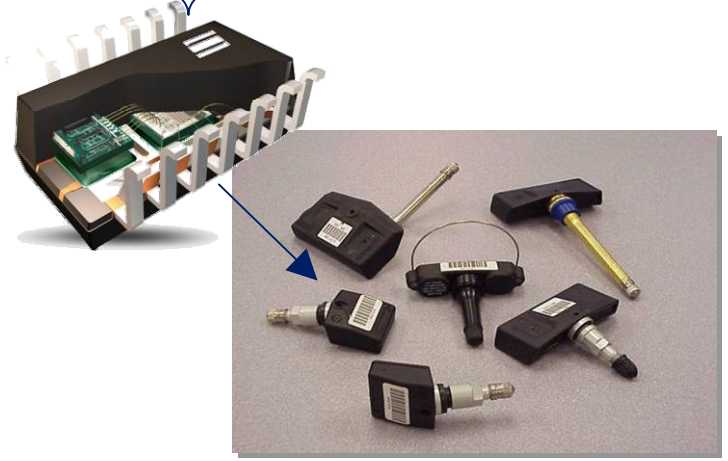
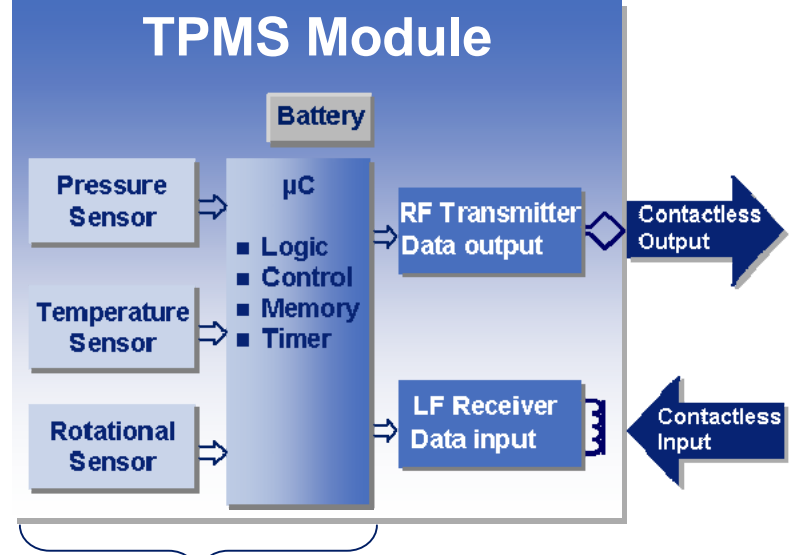
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■ Infineon utilizes its combined wireless and automotive know-how to build a leading position in Tire Pressure Monitoring Systems

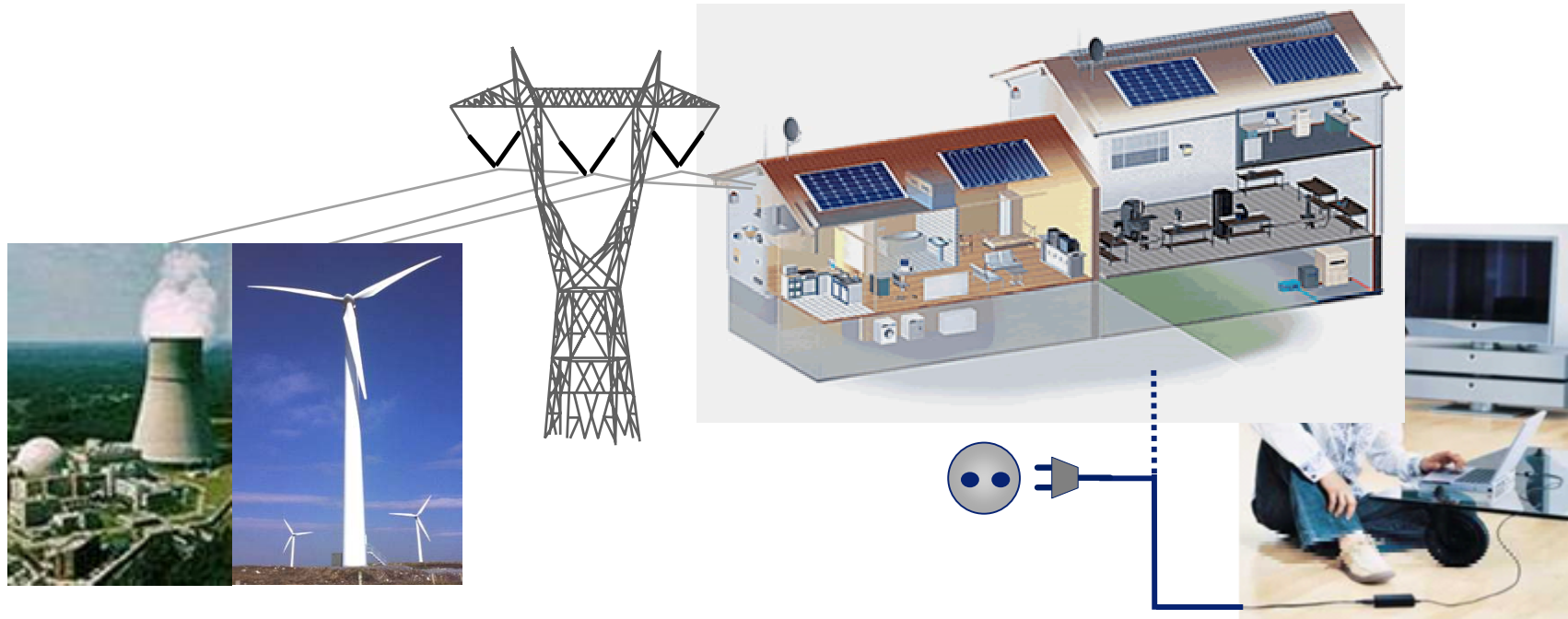
- Key solutions include:
  - Leading edge Pressure, temperature and rotational sensors
  - High-performance microcontrollers
  - Broad range of transmitter, receiver and transceiver ICs

- Our core competencies in sensors:
  - Advanced signal processing
  - Strong technical support expertise

- Key sensor trends:
  - Further integration of functionality through advanced signal processing
  - Increased robustness
  - Standardized signal transmission concepts



# Power semiconductors, power modules and microcontrollers for the whole energy supply chain



## Power Distribution

Key Products:

- Thyristors and diodes
- IGBT- and bipolar modules
- 8- and 16-bit microcontrollers
- 32-bit TriCore<sup>®</sup> microcontrollers (incl. DSP)

## Energy Treatment

Key Products:

- Thyristors and diodes
- IGBT- and bipolar modules

## Power Management (Supplies and Drives)

Key Products:

- Discrete Power
- Power Control ICs
- 8- and 16-bit microcontrollers
- 32-bit TriCore<sup>®</sup> microcontrollers (incl. DSP)



# Power Conversion Applications and Products



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## Discrete Power

## Power ICs

## Micro-controllers

**Power Supplies**

- AC/DC
- DC/DC



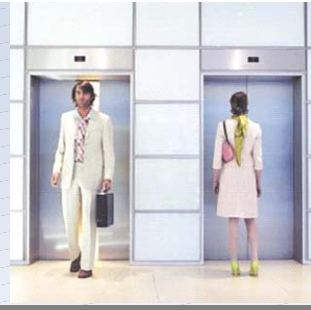
- CoolMOSTM
- thing!™ (SiC Schottky Diode)
- Highspeed IGBT
- OptiMOS®

- PWM & PFC ICs
- CoolSET™
- Integrated Switch
- Gate Driver

- 8 bit μCs
- 16 bit μCs
- 32 bit TriCore® (μC + DSP)

**Drives**

- Consumer Drives
- General Purpose Drives



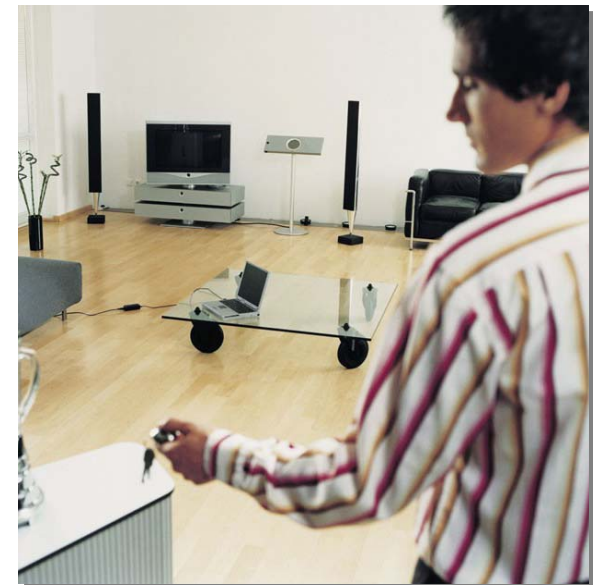
- EmCon™
- Trench Stop IGBT
- Fast IGBT

- PWM & PFC ICs

- 8 bit μCs
- 16 bit μCs
- 32 bit TriCore® (μC + DSP)

# Power conversion with smart semiconductor solutions for saving resources

- thinQ!<sup>TM</sup> Silicon Carbide Schottky diode in 300 & 600V for fastest switching
- CoolMOS<sup>TM</sup> high voltage super-junction MOSFET for superior power handling capability
- OptiMOS<sup>TM</sup> P-channel MOSFETs for battery- and power-management
- OptiMOS<sup>TM</sup> 2 power MOSFETs in high-performance packages for optimal price-performance-ratio
- CoolSET<sup>TM</sup> for standby supply
- CoreControl<sup>TM</sup> PWM controllers and gate drivers for core and peripheral supplies
- PWM / PFC ICs for high efficiency



# Chip Card and Security applications

## Infineon is well-positioned to serve the key growth markets

### Contact-based chip cards

### Contactless chip cards, RFID

### Security ICs



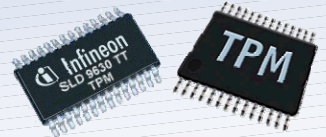
**Communications**  
Prepaid  
Mobile



**Payment**  
Credit/Debit, e-purse  
Transport, Ticketing



**Identification**  
ePassport, national ID  
Social, Access  
RFID, e-Government



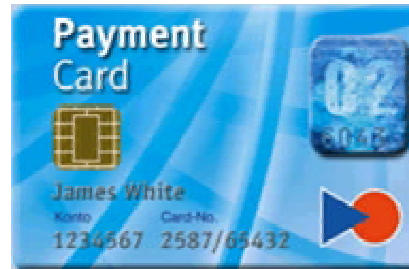
**Entertainment**  
Pay-TV, Gaming  
Video/Audio



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# Challenges and developments in the banking market

## Chip Card Security expands the value chain for banks



**Demand for Chip Security**

### Substitution of Magstripe Banking cards

Minimum requirement of EMV  
mandate by VISA and  
Mastercard

### More Added Value for Banks and Customers

Contactless interface for  
comfort / public transportation  
EMV DDA, loyalty applications,  
e-purse, etc.

### Banks will be the Trust Centers of Tomorrow

Secure Home Banking  
PKI / digital signature enabled  
by the Bank  
(e.g. as Job Card, Health Care  
Card, Citizen Card, etc.)



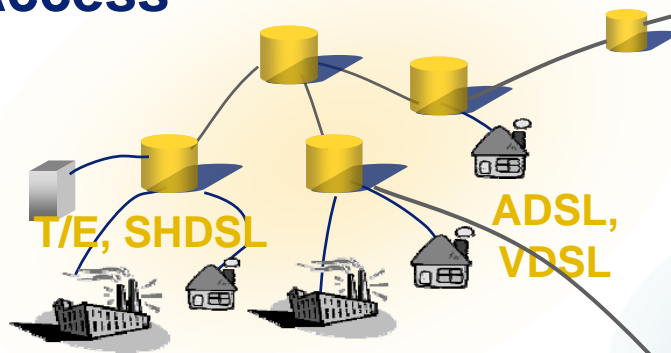
# Wireline Communications – Supplying solutions to the "net"

## Metro Ethernet Access

- Complete Ethernet over Sonet solutions
- Driving all IP networks



## Access



GB-Ethernet/  
Ethernet over Sonet

## Broadband CPE



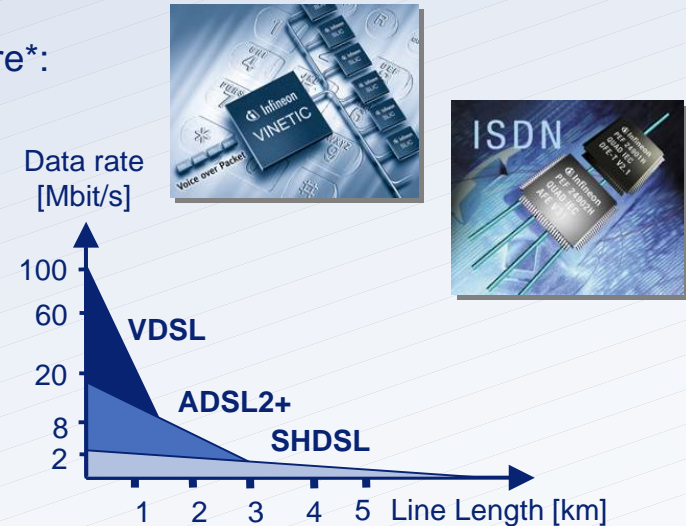
- Complete Broadband Access solutions for both ends of the copper wire based on a complete portfolio (xDSL, ATM, Ethernet, E1/T1, POTS)
- Driving the transition from ATM to IP in Access networks

# Wireline Communications – Focus areas

## Access

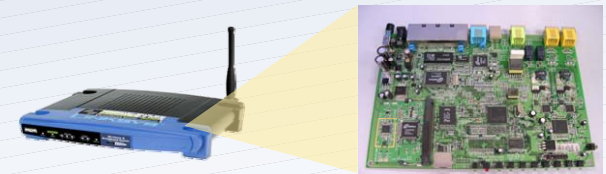
- Leading market position in Standard Telecom infrastructure\*:  
No. 1 in T/E carrier, No. 1 in Analog Linecards
- Complete xDSL CO/CPE portfolio:
  - Leading position in SHDSL and VDSL
  - Aggressively gaining market share in ADSL2/+
- First Integrated Voice Data solution, fully integrated splitter and VoIP option
- Significant deployment of IFX based ADSL2+ DSLAMs and early availability of an ADSL2+ modem chipset

\* Gartner, June 2004



## CPE (Customer Premise Equipment)

- Entry in the Digital Home market by combining IFX DSL and packetized Voice solutions with ADMteks strong Home Router technology and market position



## Optical Networking

- Focus on **Metro Enterprise Access**
- Early market lead in EoS (Ethernet over Sonet)



# Wireless Communications – Focus areas

stop thinking  
Never

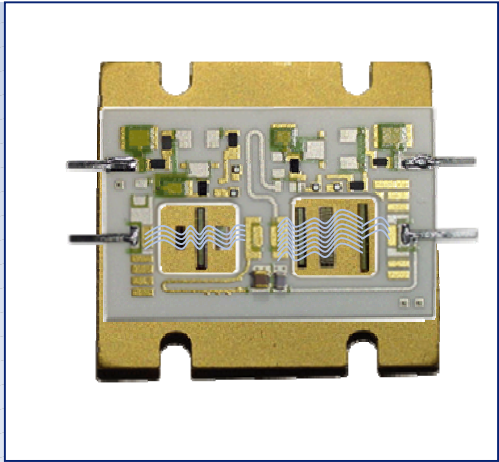
## Cellular Systems

- Among top-3 suppliers for GSM ICs
- Secure and extend market leadership for cellular RF engines
- Achieve best in class cost position by RF CMOS
- Offering complete system kits for worldwide 2 / 2,5 / 3G standards



## Wireless Infrastructure

- Product offerings for radio base stations including RF modules, RF ICs and RF Power Transistors & modules
- No. 2 in high-power RF transistors
- State of the art RF power LDMOS technology and thermally enhanced packaging

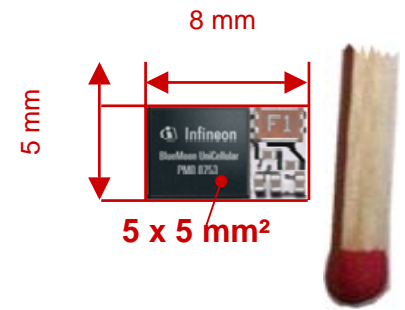


# Wireless Communications – Focus Areas

## Short Range Wireless

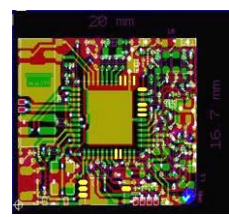
- Leading position in DECT/WDC. Developing new CMOS single chip
- Strong position in Bluetooth with new Enhanced Data Rate solution
- "Hammerhead": first CMOS single chip A-GPS solution in cooperation with Global Locate
- Developing low power W-LAN solution for mobile applications

### Bluetooth



## Tuner Systems

- Leader in the terrestrial market segment with the digital Tuner "TUA6034"
- Focus on the portable and mobile segments with new low power digital tuners for Laptop / PC and Mobile Phone applications with TUA6041 (alignment free) and TUA6045
- Continue to supply and service the analog tuner market segment





# Access solutions for future family communications portal

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**Entertainment:**  
"Family watches Videos"



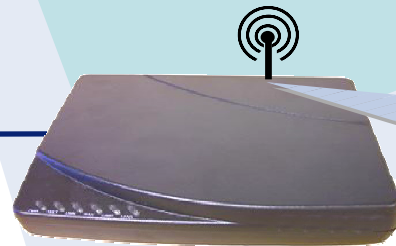
**Home Office:**  
"Mother is doing home-banking"



**Kids:**  
"Fun and Homework"



**One Box Handles Everything!**



**Residential Gateway**

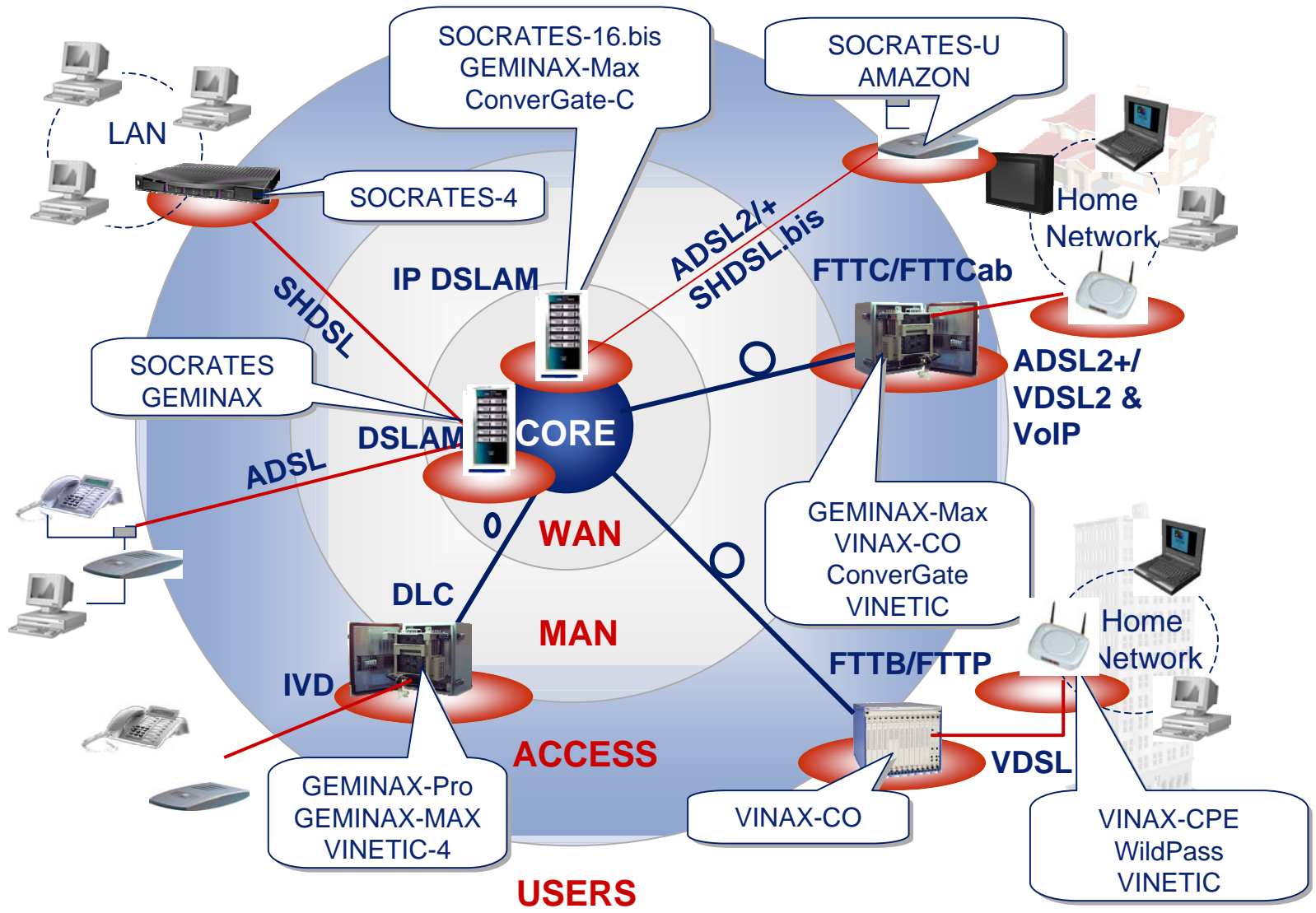
- Communication Processor
- Broadband DSL
- Switching
- Voice Processing
- WLAN
- Security
- ....



# Infineon's access solutions for power communication networks worldwide



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# Successful integration of RF CMOS into the baseband: Sampling RF/baseband SoC for GSM/GPRS

## Infineon's single-chip demo-phone at 3GSM '05



### Integrates:

- RF transceiver SMARTi SD2
- Baseband E-GOLDlite

### Advantage over two-chip solution:

- 30% less board space
- 30% lower bill of material



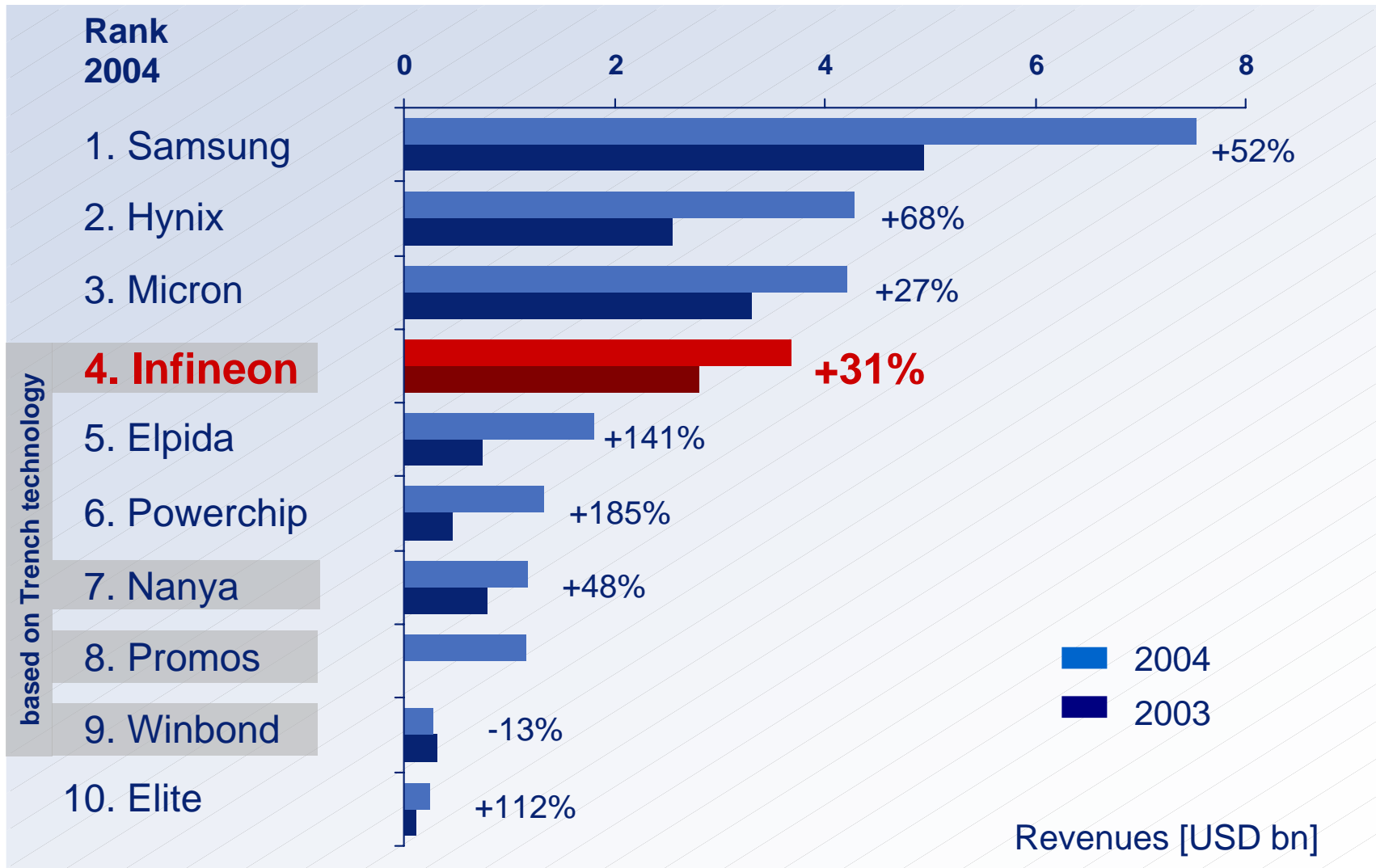
### Supports:

- Up to GPRS class 12
- 1.3 Megapixel Camera
- Dual color display
- Polyphonic ringer
- MP3 playback



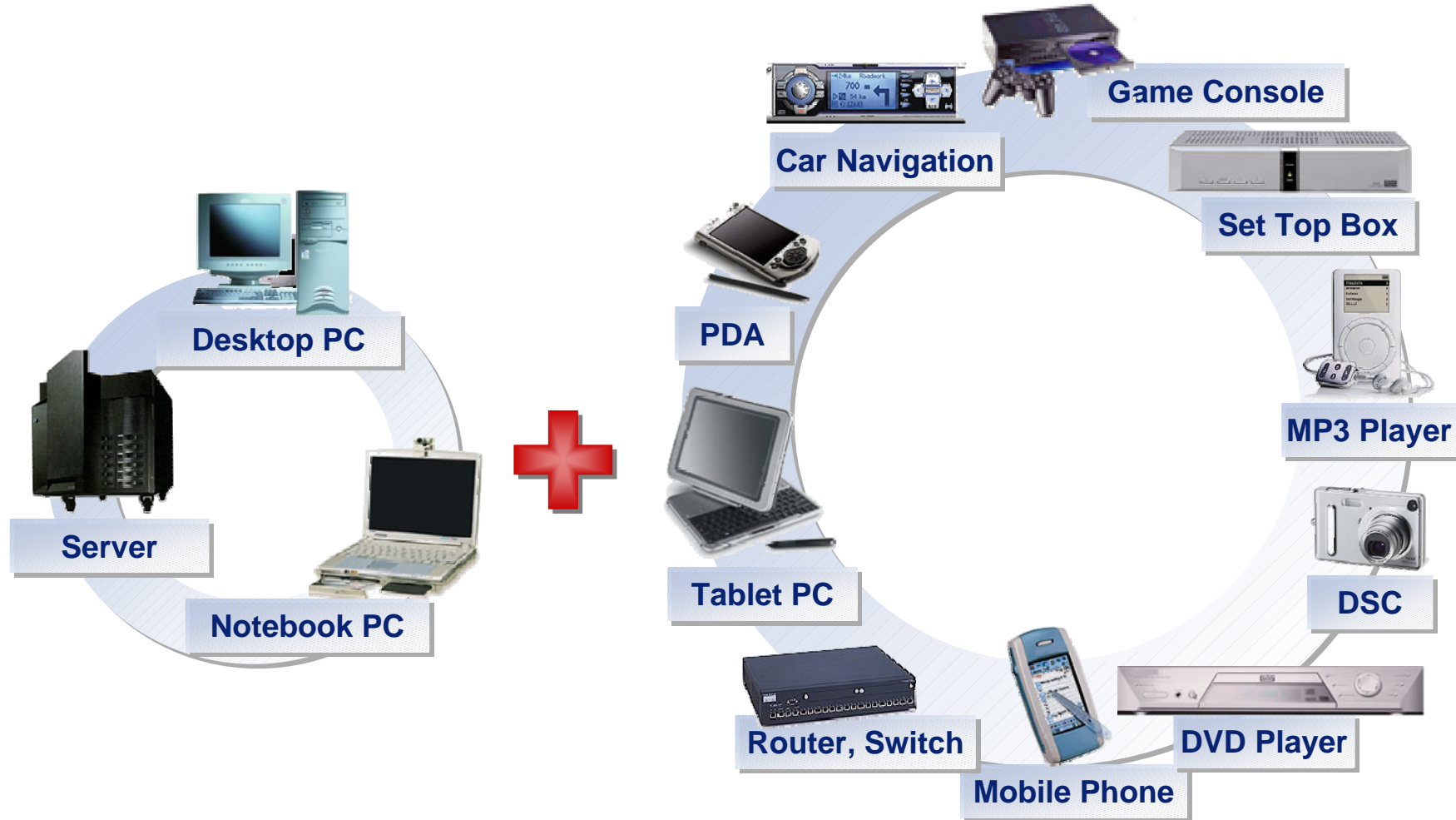
# Worldwide DRAM revenue ranking 2004 and 2003

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Source: iSuppli, March 2005

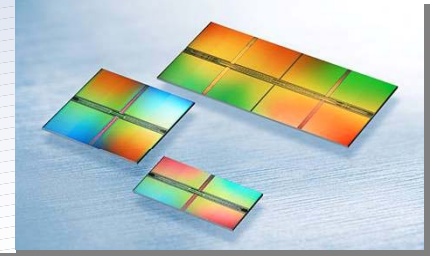
# The market place – New memory applications



# MP – Strengths

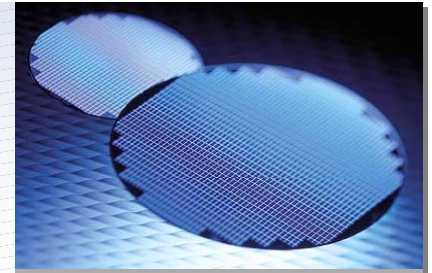
## Technology leadership

- More than 80% of capacities converted to 110nm technology
- 512M DDR based on 90nm technology validated by Intel
- First product prototype on 70nm technology



## Manufacturing leadership

- Most advanced global fab cluster
- Leader in manufacturing on cost efficient 300mm wafers



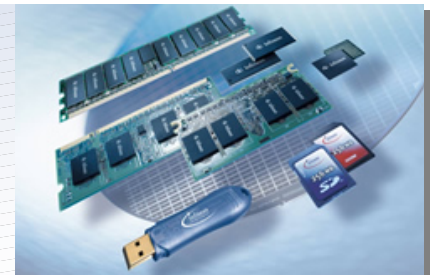
## Strong technology and manufacturing alliances

- Joint technology development to improve economies of scale
- Improve market position with reduced capital requirements
- Flexible capacity increase through foundries



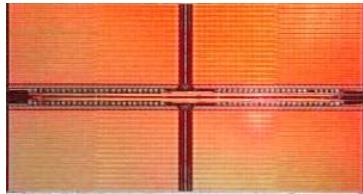
## Expanding product portfolio

- Expanding module portfolio for mobile PCs and infrastructure
- Increasing focus on consumer and specialty DRAMs
- Including expanded portfolio for NAND-compatible Flash



# DRAM technology roadmap

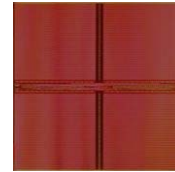
## 2004 – 110nm



256M DDR 110nm

- More than 80% of capacity converted to 110nm by end of September 2004
- Best wafer with more than 93% yield
- First DRAM technology to use 193nm lithography

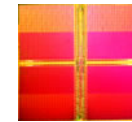
## 2005 – 90nm



512M DDR 90nm

- Key innovations:  
Bottle shaped trench  
New cell layout
- IFX is 2nd manufacturer to have 90nm-based product validated by Intel
- Start of ramp-up planned for mid 2005

## 2006 – 70nm



512M DDR2 70nm

- First prototype on 300mm available



# DRAM fab cluster

## DRAM Fab Cluster

**Frontend**



**Dresden**  
200 + 300mm



**Richmond**  
200 + 300mm



**Inotera**  
300mm



200 + 300mm



200 + 300mm

**Identical Technology Roadmaps**

**Global Process Synchronization and Quality Control**

**Best Practice Sharing and Fast Ramps**

**Backend**



**Dresden**



**Porto**



**Malacca**



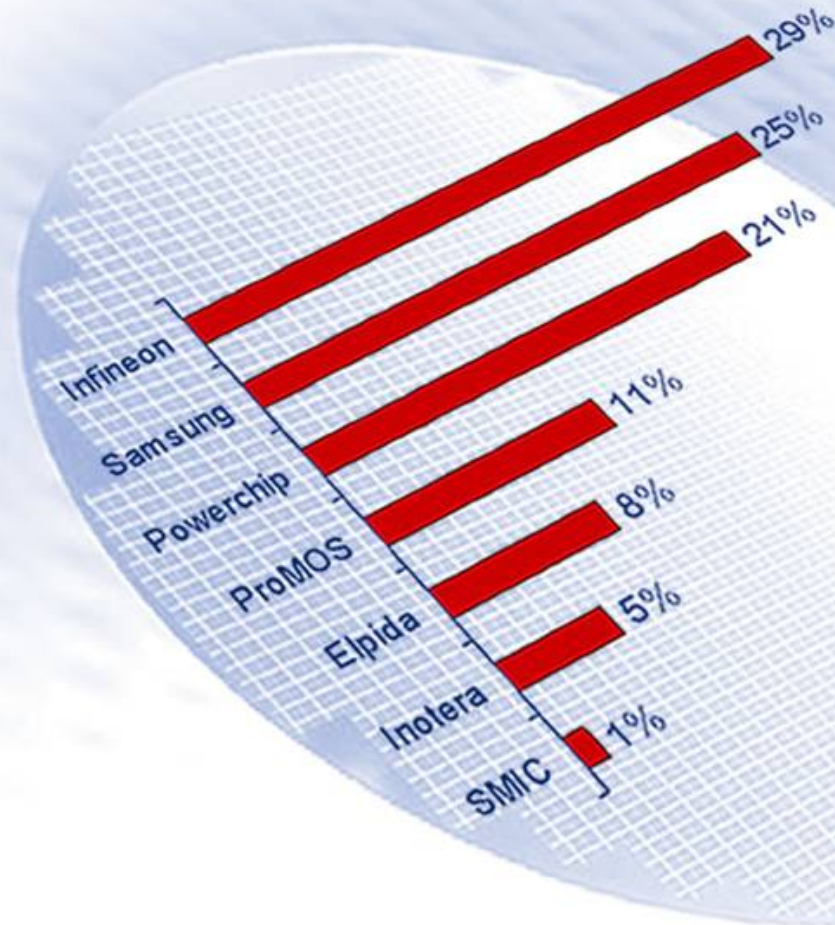
**Suzhou**




**One (virtual) Fab to the Customer**

## Leader in 300mm DRAM manufacturing

### 2004 Annual 12-inch Wafer Production Market Shares



# The new organization of Memory Products: Focus on applications and market segments

Business Units	Computing	Graphics	Consumer & Mobile		Flash
Application (Selection)	<ul style="list-style-type: none"> <li>■ Desktop PC</li> <li>■ Notebook PC</li> <li>■ Server</li> <li>■ Workstation</li> <li>■ Storage</li> <li>■ Networking</li> </ul>	<ul style="list-style-type: none"> <li>■ Graphics</li> <li>■ Game Console</li> <li>■ Game Handhelds</li> </ul>	<ul style="list-style-type: none"> <li>■ Mobile Phones</li> <li>■ Set-Top-Box</li> <li>■ DVD Players &amp; Recorders</li> <li>■ DSC</li> <li>■ MP3 Players</li> <li>■ Car Navigation</li> <li>■ PDA</li> <li>■ Digital TV</li> <li>■ Peripherals</li> </ul>	<ul style="list-style-type: none"> <li>■ Desktop PC</li> <li>■ Notebook PC</li> <li>■ Workstation</li> </ul>	<ul style="list-style-type: none"> <li>■ Mobile Phones</li> <li>■ DSC</li> <li>■ MP3 Players</li> <li>■ USB Drive</li> <li>■ PDA</li> <li>■ Flash cards</li> </ul>
Drivers	<p>Replacement Performance Internet Infrastructure Bandwidth Data Warehouse</p>	<p>Performance Digital Lifestyle 3D picture New games</p>	<p>Mobility Digital Lifestyle Low-Power Info Mgmt. Content Download</p>	<p>Performance Emerging markets White boxes</p>	<p>Data Storage Digital Lifestyle Mobility</p>

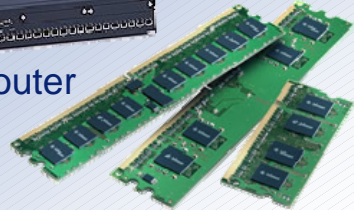


# Computing portfolio

## Applications



Router



Modules



Desktop PC  
Workstation  
Notebook PC  
Sub-Notebook PC



High-End Workstation  
Server

## Product Features

- Interfaces: SDR, DDR, DDR2
- Densities: 128Mb – 1Gb
- Organizations: x4, x8, x16
- Packages: TSOP, FBGA
- Speeds: PC133 – DDR2-533






- Interfaces: SDR, DDR, DDR2
- Formfactors: Unbuffered, SO-DIMM, MicroDIMM
- Densities: 128MB – 2GB
- Speeds: PC2100 – PC2-4200

- Interfaces: SDR, DDR, DDR2
- Formfactors: Registered, FB-DIMM
- Densities: 128MB – 4GB
- Speeds: PC2100 – PC2-4200



# Graphics portfolio

Graphics Segment	Features	Products
<b>High end</b>	<p>High speed: 500 – 800 MHz</p> <p>High bandwidth: x32</p> <p>Low operating current</p>	 <p>512M &amp; 256M GDDR3</p>
<b>Mainstream</b>	<p>Advanced speed: 300 – 500 MHz</p> <p>FBGA package</p> <p>Bandwidth: x16</p> <p>Operating voltage 1.8V-2.0V</p>	 <p>256M DDR2 (+512M)</p>
<b>Value</b>	<p>Mainstream speed: 200 – 300 MHz</p> <p>TSOP package</p> <p>Bandwidth: x16</p> <p>Operating voltage 2.5V</p>	 <p>256M DDR (+512M)</p>

# Consumer portfolio

## Applications



Digital TV



Digital Still Camera (DSC)



Set-Top Boxes



Printer



DVD Player / Recorder

## Product Features

Long-term product support with:

- Interface: x16, x32
- Density: 64M – 256M
- Speed: 133 – 166MHz
- Voltage: 3.3V



- Interface: x8, x16
- Density: 128M – 512M
- Speed: 333 – 400 MHz
- Voltage: 2.5V

- Interface: x16
- Density: 256M – 1G
- Speed: 533 – 800 MHz
- Voltage: 1.8V





# Mobile portfolio

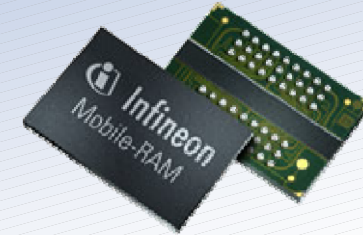
## Applications



## Product Features

### MOBILERAM

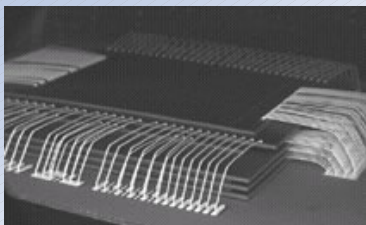
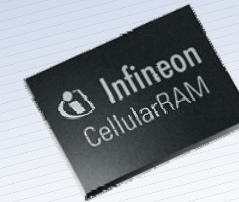
- Small form factor
- Ultra low power



Mobile Phone

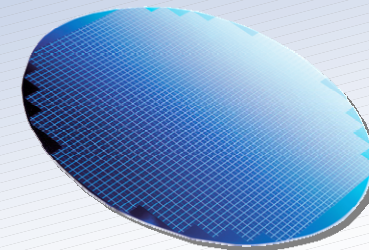
### CellularRAM™

- SRAM Performance
- High memory density
- Low DRAM cost level



Multi Chip Package

- Tested Mobile-RAM and CellularRam dies
- MCP specific pad layout



# Flash product portfolio

## Products

## Applications

### Flash Cards

- High volume growth segment
- Initial Products: SD-Card and MultiMediaCard



### Flash Components

- NAND-compatible 512Mbit Flash in a TSOP-package



# Second Brand for DRAM products

## Applications & Market

- Address Whitebox PC market through distribution partners
- Large share and strong growth potentials of Whitebox market especially in emerging economies such as Eastern Europe, Latin America and South East Asia



## Product Features

- Desktop PC
  - DDR unbuffered DIMMs
  - DDR2 unbuffered DIMMs



- Notebook PC
  - DDR SO-DIMMs
  - DDR2 SO-DIMMs





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Market / Company overview

Business development 2nd quarter fiscal year 2005

Business groups

**General company information**



# Infineon organization



# Infineon has 36,044 employees worldwide\*

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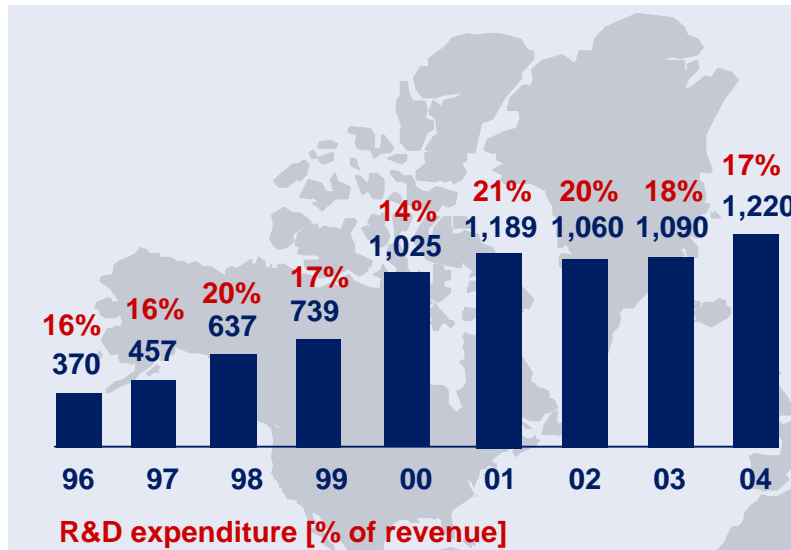


\* as of March 31st, 2005

\*\* incl. ESAS MA

# Continuous investment in R&D

**R&D Spending  
FY 1996-2004 [EUR m]**



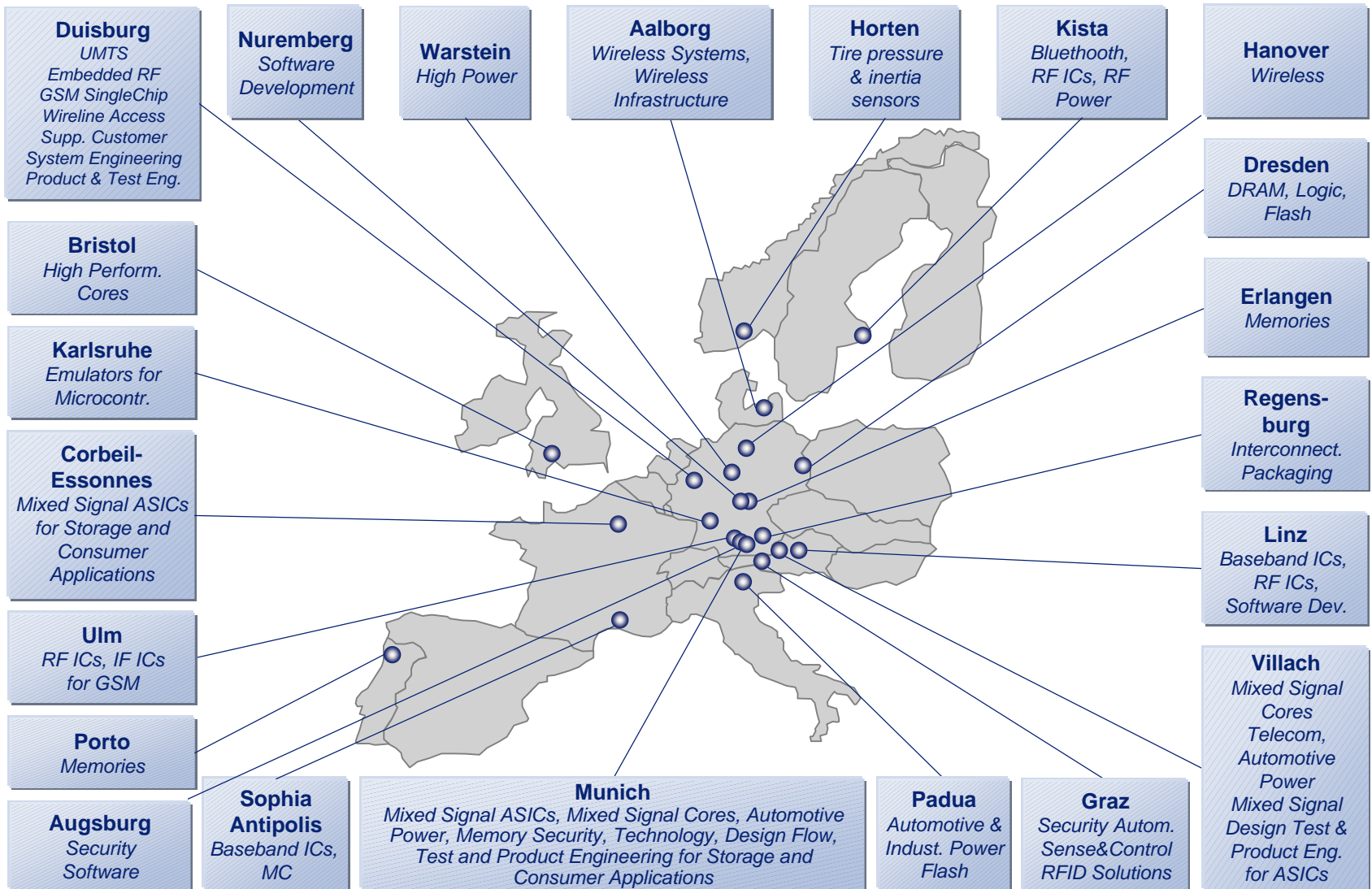
**No. of Patents and Patent  
Applications (FY 1996-2004)**



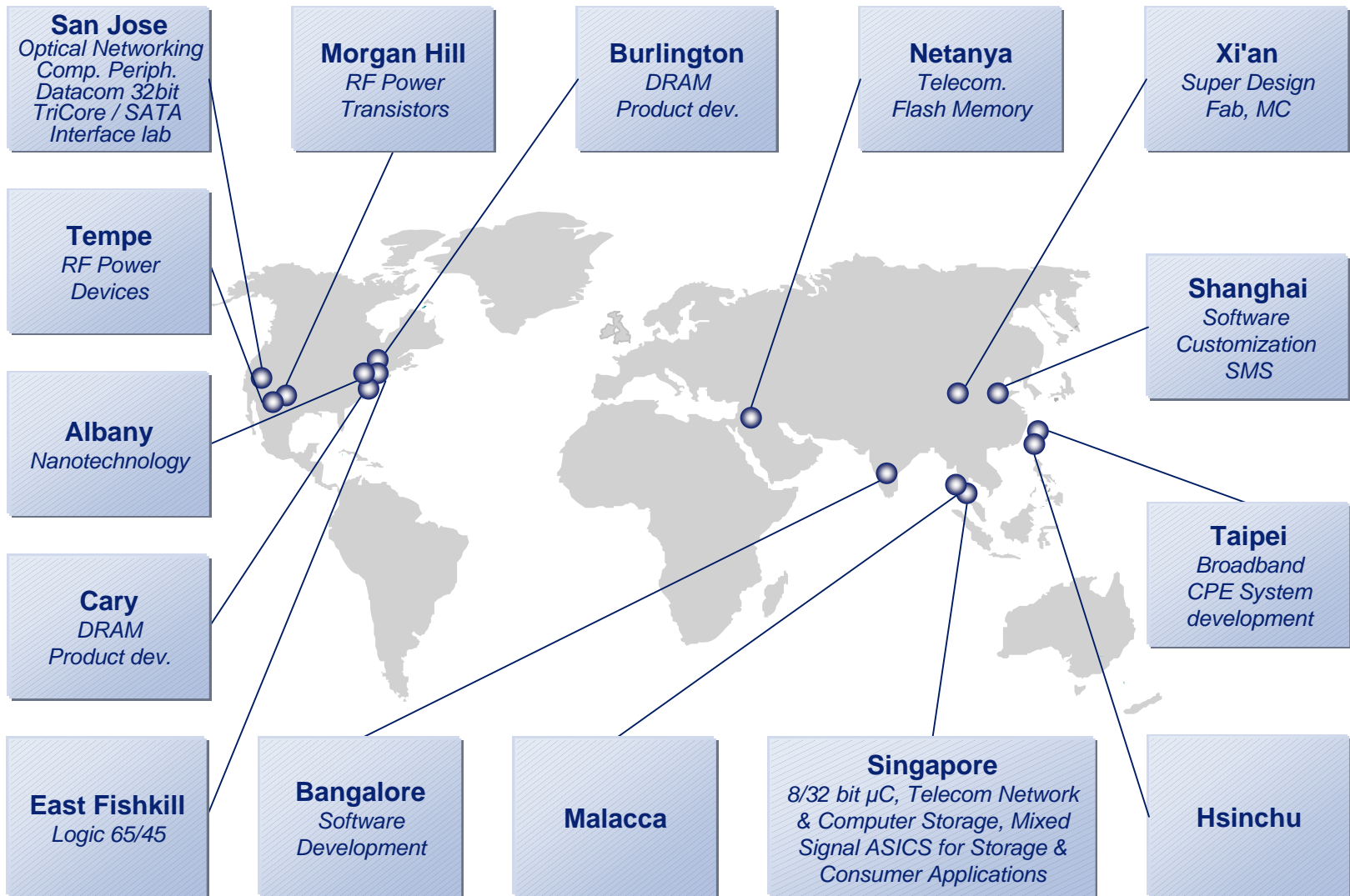
- About Euro 1.2 billion for R&D expenditure in FY 2004
- More than 35 major R&D locations worldwide
- 7,300 R&D employees
- Currently about 41,000 patents / patent applications

# Infineon – R&D network in Europe

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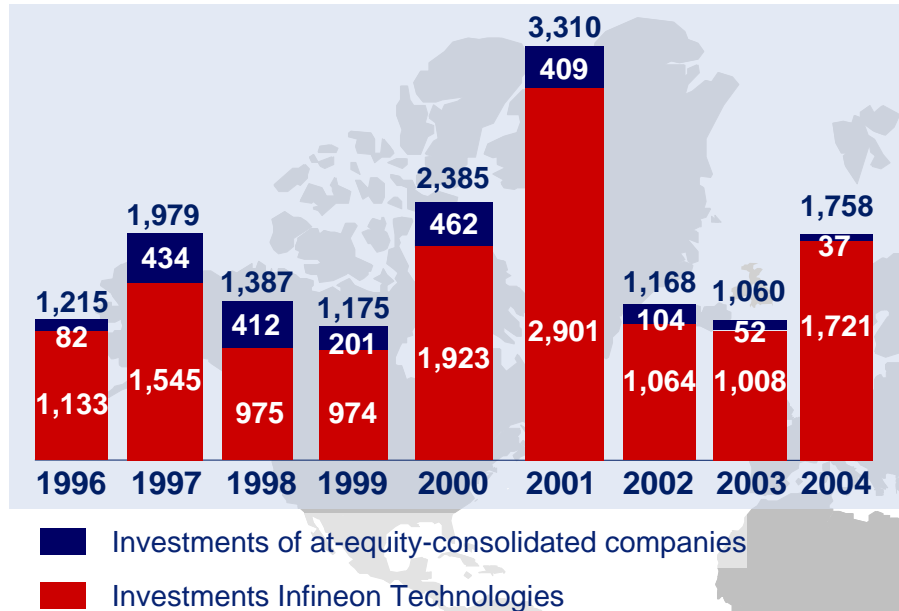
# Infineon – Worldwide R&D network (excluding Europe)





# World-class manufacturing sites on 3 continents

## Investments FY 1996-2004 [EUR m]

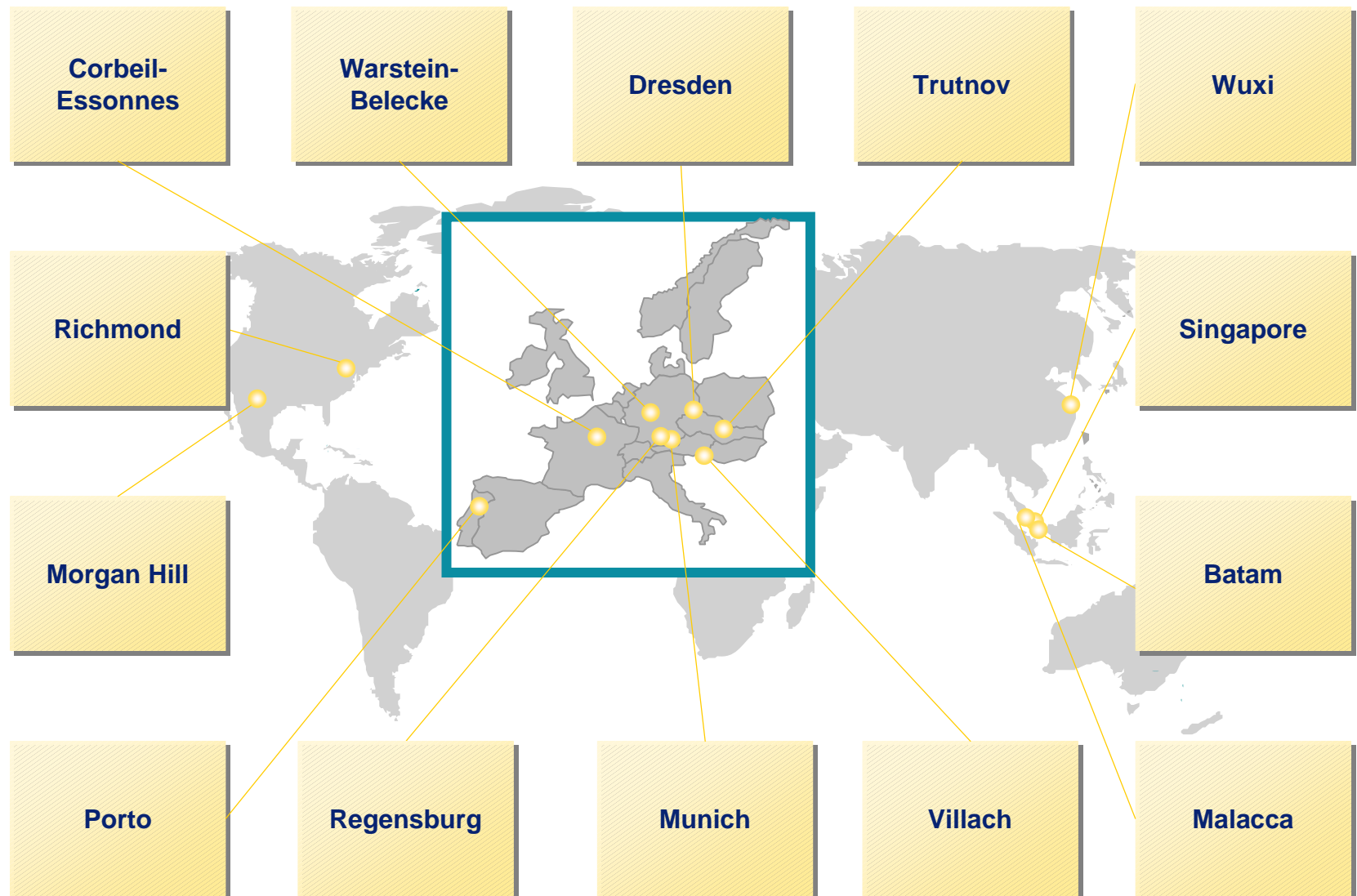


## 8/12" Production Sites

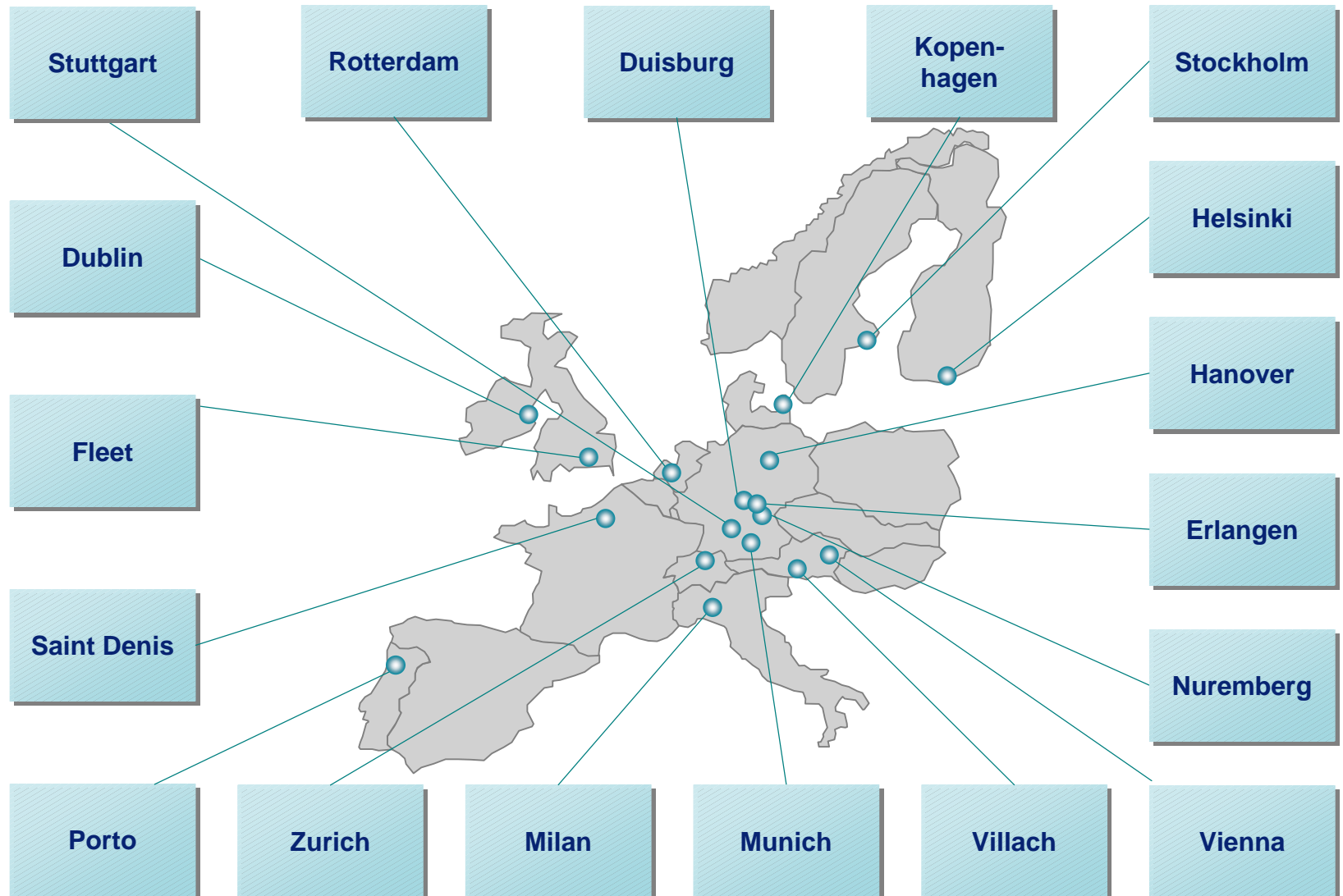
- 1996** Dresden (Germany) opened (DRAM and Logic)
- 1998** Richmond (Virginia, USA) opened (DRAM)
- 1999** ALTIS (Essonnes, France) JV with IBM founded (Logic)
- 2001** Dresden (Germany) 300mm module opened
- 2003** Inotera Memories (Taiwan), JV with Nanya: 300mm module opened
- 2004** Expansion Richmond to 300mm production

**More than 10 production sites (wafer manufacturing, assembly and testing)**

# Infineon production sites



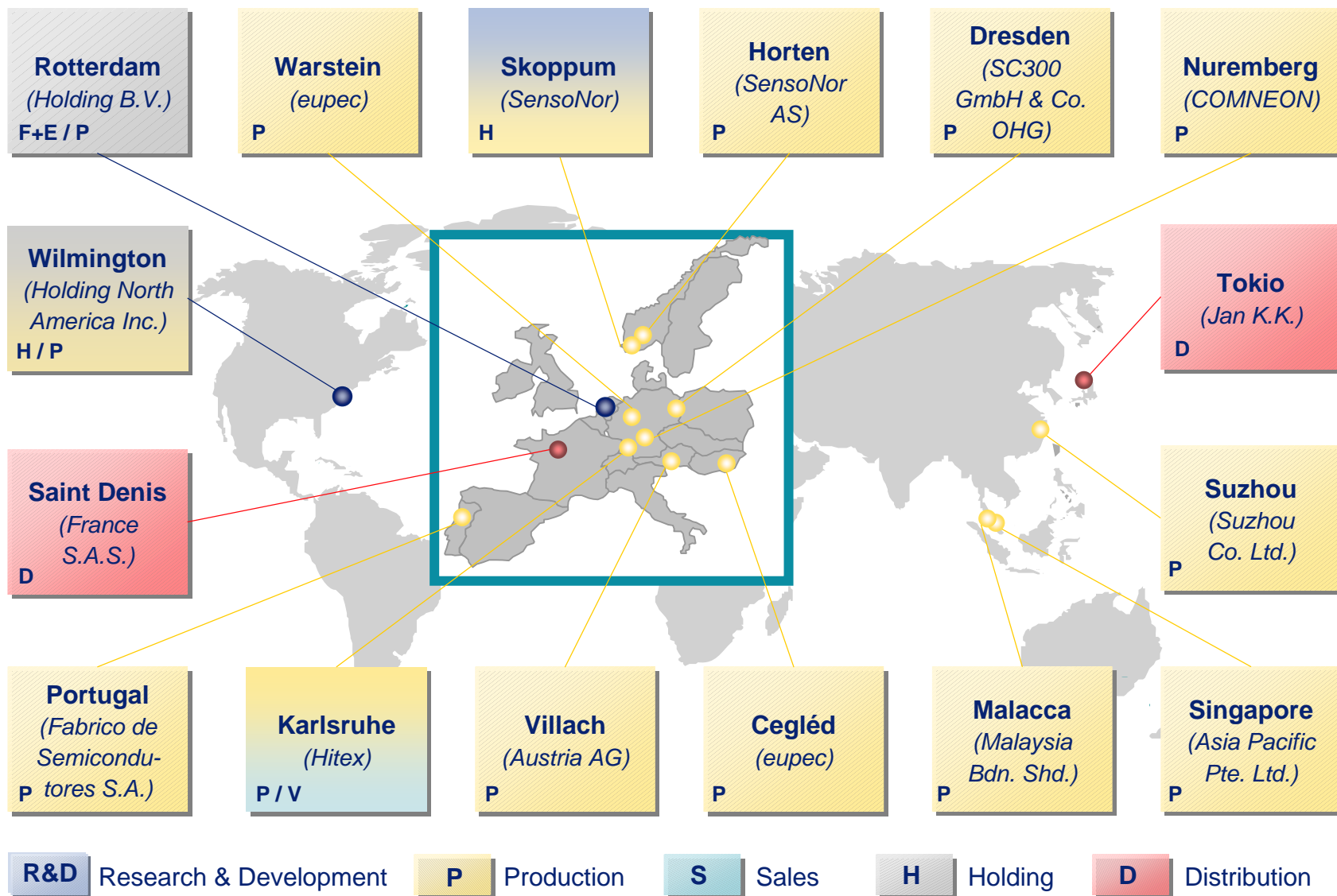
# Infineon sales offices in Europe



# Infineon sales offices worldwide (excluding Europe)

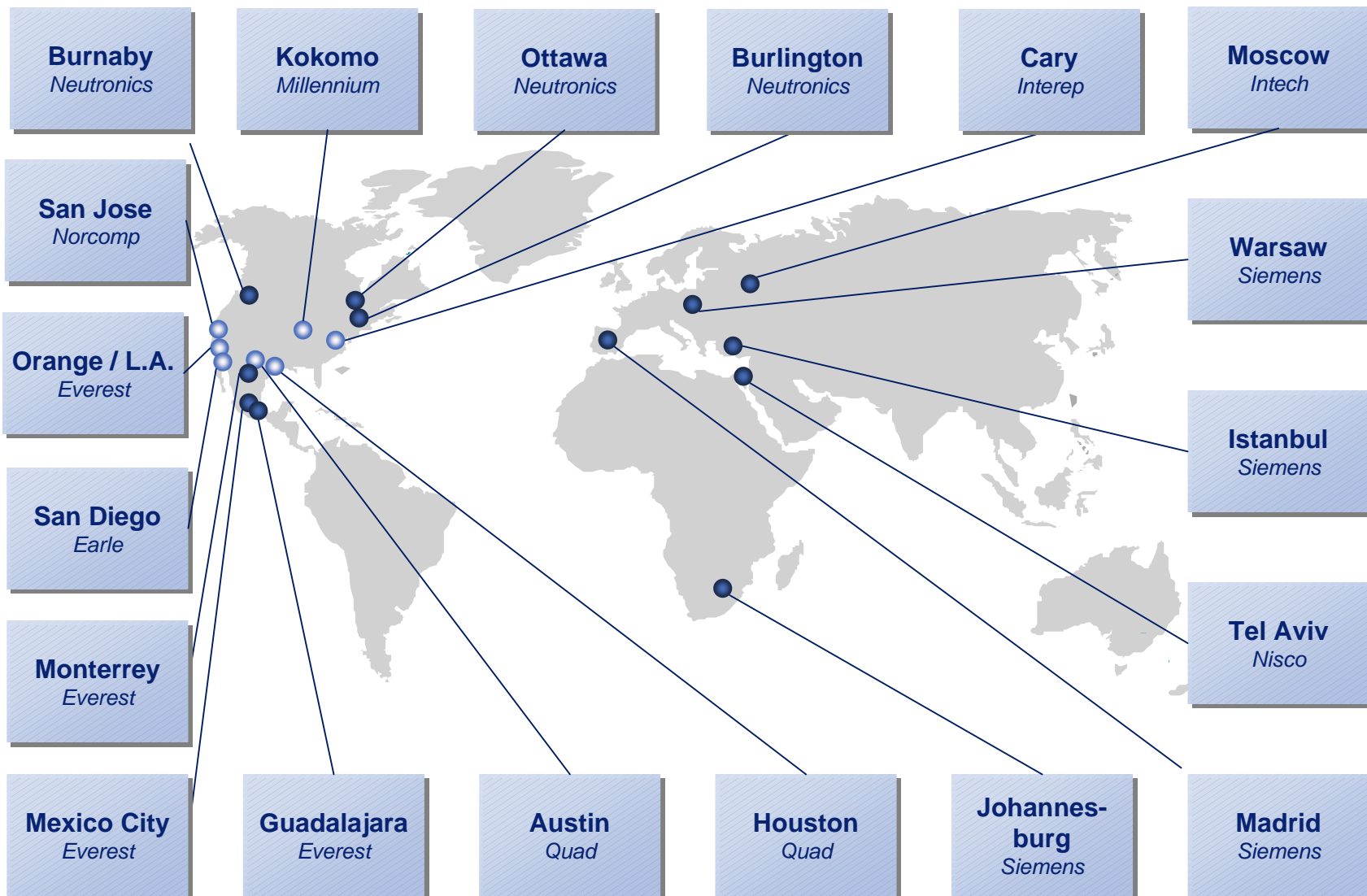


# Infineon's principal subsidiaries





# Infineon representative offices worldwide



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# Infineon – partner of the worldwide electronics industry

## Automotive, Industrial & Multimarket

### Main Customers

- Autoliv
- Axalto
- Bosch
- Conti AS
- Delphi
- Delta
- Denso
- Gemplus
- Gieseke & Devrient
- Hella
- JCAE
- Kostal
- Lear
- Motorola
- Oberthur Card Systems
- Siemens
- TRW
- Visteon

## Communication

- Alcatel
- DBTel
- Ericsson
- Fujitsu
- Huawei
- Konka
- Lucent
- Matsushita
- NEC
- Nokia
- Siemens
- Sony-Ericsson
- Vtech
- ZTE

## Memory Products

- Acer
- Cisco
- Dell
- Fujitsu
- Siemens
- HP
- IBM
- Kingston
- Lenovo
- NEC
- Sony
- Sun

- Main channel partners:  
Arrow, Avnet, Fujitsu Devices, Silicon Applications
- Electronic Manufacturing Services:  
Celestica, Flextronics, Foxconn, Jabil, Sanmina-SCI, Solectron

# Expanding global network: Selected partnerships\*

Technology Development	Chip- & Software Development	Manufacturing	System Integration & Solutions
<ul style="list-style-type: none"> <li>■ <b>AMTC</b> (together with AMD &amp; DuPont)</li> <li>■ <b>Nanya</b></li> <li>■ <b>IBM</b></li> <li>■ <b>Chartered</b></li> <li>■ <b>Samsung</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>StarCore</b> (together with Agere &amp; Motorola)</li> <li>■ <b>InterDigital</b></li> <li>■ <b>Emuzed</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>SMIC</b></li> <li>■ <b>Winbond</b></li> <li>■ <b>Inotera</b> (together with Nanya)</li> <li>■ <b>Altis</b> (together with IBM)</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>SAP</b></li> <li>■ <b>Huawei</b></li> <li>■ <b>Broadcom</b></li> <li>■ <b>Richtek</b></li> </ul>

\* some of almost 40 Infineon alliances as per September 2004



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