



Böblingen Factory Closure and Product Transfer Plans

**PL-IP Communication Package
May 2007**



What is this transfer and why?

- ▶ In Q1 2007, NXP announced closure of fab in Böblingen (ICB, formerly PSB), Germany by end of 2007
- ▶ The decision was taken based on backdrop of a low production load as a result of NXP's withdrawal from two under-performing businesses
- ▶ Existing production will be transferred to other factories
- ▶ NXP Product Line Interface Products (PL-IP, also known as R01) parts will be transferred to ICN8-Nijmegen or TSMC-Taiwan
- ▶ A PCN has been sent to all customers affected by this transfer
- ▶ The original PCN issued was not complete and this document summarizes the latest view for NXP PL-IP



Summary ICN8 Nijmegen Netherlands

▶ General

- Very high technical knowledge and professionalism
- Very interested in cooperation with transfer teams and activities
- Fab site perfectly suited for processes selected for transfer
- Experienced in processes like
 - BIMOS
 - Trenchmos

▶ Fab capabilities

- Capability: 0.8 μ to 0.14 μ
- Capacity 500k/year. 20% in Automotive
- Process portfolio comparable to ICB
 - CMOS, HV, BICMOS, PowerMos, LCOS, Image sensors
 - Additionally EE and OTP
- LY overall 98% - 99%. Excellent
- D0: 0,07 D/cm² on critical layers. Comparable to ICB



ICN8: key characteristics



Wafers	200 mm
Cleanroom	12,000 m ²
Capacity	500 kwafers/year
Output	700 mpcs/year
Employees	1000
Technology node	0.14-0.8um
Masks	14-42
Competencies	Digital logic Mixed signal RF Imaging NV memories High power (Bi)CMOS BCDMOS RFCMOS Embedded memory

Automotive



Mobile



Identification



Processes

Summary TSMC Taiwan

▶ General

- Technology leadership
- Manufacturing excellence
- Customer partnerships (including NXP)
- Five application specific platforms:
 - Power ICs, display driver ICs, CMOS image sensors, micro-controllers and RFID

▶ Fab capabilities

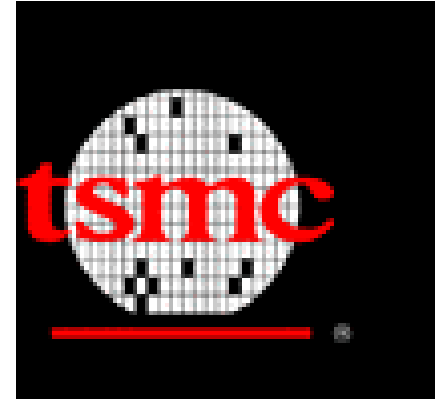
- 0.15 μ to 1 μ (mainstream technologies)
- 0.13 μ to 65nm (advance technologies)
- 11 Fabs around the world
- Largest manufacturer of CMOS logic wafers
- Industry leading yields

Source: http://www.tsmc.com/english/a_about/a05_literature/a0501_brochures.htm (Corporate Overview)



TSMC: key characteristics

- ▶ Technology Leadership
 - 65nm – 1.0 μ
- ▶ Manufacturing Excellence
 - Capacity leader
 - Responsive and flexible
 - Best yields
- ▶ Customer Partnerships
 - 100% dedicated foundry
 - Partnership collaboration
 - Long-term / win-win



Source: http://www.tsmc.com/english/a_about/a05_literature/a0501_brochures.htm (Corporate Overview)

Overall transfer plans

- ▶ NXP PL-IP intends to ensure an uninterrupted supply of product by:
 - Providing transfer schedule
 - Providing full qualification reports
 - Providing samples for customer qualification as needed
 - Building buffer die bank inventory
- ▶ Selected products will be discontinued
 - End-of-Life with life time buy for devices that will not transfer
- ▶ Transfer teams with representatives from all groups involved have been created:
 - IMO (ICB and receiving fab)
 - IMO (Test and Assembly)
 - BL (Design, Test, Product, Quality, Logistics, Marketing/Sales)



Discontinuation notice

The notification regarding the closing of our Böblingen wafer fab is being sent through our PCN distribution process. Specifically, you will receive:

- 1- The listing of Böblingen products that will be discontinued. These products will also appear in our DN59, which is planned to be issued June 30.*
- 2- The designated fabs to which the non-discontinued products will be transferred.*
- 3- The last time buy and last time delivery dates for the discontinued products. The dates are October 1, 2007 and March 31, 2008 respectively.*
- 4- The last time ordering conditions for the discontinued products.*

- Discontinued and /G devices can continue to be ordered after the Oct 1st order and shipped after the March 31st cut off dates for as long as buffer die bank is still available. All products are subject to prior sales and orders placed by Oct 1st have priority.

- /G at the end of a part number signifies that the part number was always built with Pb Free package. Since NXP has been shipping Pb Free packages since 2005 these /G part numbers are no longer needed and the Order Acceptance Indicator (OAI) will be changed to no when the ICB die bank is depleted. Customer currently ordering /G devices should move to the base part number (e.g., PCA9557PW/G becomes PCA9557PW) as soon as practical (e.g., now or when ICN8 die is qualified).



Transfer schedule

- ▶ The attached PDF file of the transfer schedule provides information on the transfer activities. **The information will be updated monthly.**
- ▶ Columns in PDF file.
 - Commercial Type = part number
 - 12NC = NXP order code for the commercial type
 - Comments - four different categories of transfer activities:
 - Transfer = move from ICB to new fab as listed.
 - Dual Source = will only manufacture in one fab now since ICB will shut down.
 - End of Life – Life Time Buy = The customer needs to redesign to the recommended replacement device or place orders on the discontinued device prior to Oct 1st to reserve die. NXP will continue to ship as long as we have ICB die bank.
 - /G or Pb always ships with ICB die = Special case where the base device will transfer but the /G or Pb part number will continue shipping with ICB die until die bank depletion. Customers should move to the base device as soon as practical (e.g., now or when the ICN8 or TSMC die is qualified).
 - Transfer Fab – either ICN8 or TSMC.
 - Estimated New Fab Sample Date – when samples from the transfer fab will be available from NXP.
 - Estimated New Fab Qual Package Date – when device comparison data between ICB and the transfer fab will be available
 - Estimated New Fab Release Date – when NXP has approved production of the commercial type in the transfer fab.
 - Estimated Logistics Changeover or PCB Die Depletion Date – this is the date when the transfer devices will start to be manufactured with transfer fab die instead of ICB die. We are currently planning for 6 months between new fab release and logistics changeover. If the device will not be transferred this is the estimated date when all ICB die will be consumed. This date is subject to change based on the amount of ICB die bank produced and depletion rates.
 - Recommend Replacement – if the commercial type will be transferred “Same Part Number” is listed, otherwise the recommended commercial type to move to, if available, is listed.
 - Recommended Customer Action – five different categories:
 - Paper Qual Recommended – the process at the transfer fab is the same as at ICB so there should be no changes in the device characteristics or performance so, if required, you should only have to look at the qual package.
 - Drop in Replacement – in most cases this is listed when the older version is being discontinued and we recommend that the newer version be used which should be a drop in replacement. As required, you should only have to check in your application with transfer fab samples and also review the paper qual.
 - Redesign or Place Life Time order – there are some differences in the recommended replacement device so you will need to evaluate if the replacement will work in your application and migrate to this device or if not, place a life time buy order for the device that is currently being used.
 - Place Life Time order – there is no replacement. Place a life time order for the device that is currently being used.
 - Now one fab source – No Action required – these devices were already qualified and in production at two different fabs. No customer action is required.



FAQ

- ▶ Who do I contact if my product(s) is not included in any of these lists?
 - Please work through your distributor or NXP sales account manager
- ▶ When will samples or qual report be available for my product(s)?
 - Look on the attached PDF spreadsheet
- ▶ Who do I contact for samples or qual report for my product(s)?
 - Please work through your distributor or NXP sales account manager
- ▶ When will the product transition from ICB to transfer fab die for my product(s)?
 - Look on the attached PDF spreadsheet



