Nexperia Logic Seminar

For Automotive and Industrial Applications

nexperia

EFFICIENCY WINS.

Logic for Electronic Design Engineers

Does the Dual Source Strategy mean that Nexperia can deliver all Logic Devices at different plants e.g. when one factory has an issue?

Nexperia uses common equipment and processes across factories. This allows us to quickly move device production from one location to another in case of natural disaster, etc. However, while Logic Devices may be qualified to be built at multiple locations, Nexperia may not be actively building at more than one location.

Do you have Ibis and/or VHDL-AMS models for all your logic parts?

IBIS models are available for most Logic devices, listed under "Documents" for your specific device. At this time, we do not have VHDL-AMS models, but we are in the process of developing a method to supply SPICE models.

Due to a demand for Functional Safety ISO26262, can device failure modes and FIT rates be available?

FIT and MTBF data is posted on our public website for most Logic devices. Please contact us directly if you need additional details. FMEA models are available for a logic family basis (ie not for each individual device).

What are the Functions in the High and Low Voltage device families?

For a complete list of all functions available for all logic device families, please see our Product Selection Guide.

Do you have protocol converters, for example from SPI to I2C?

Nexperia will be releasing its first I2C devices soon. At this time we do not have any protocol converters, but this is an interesting product to investigate.

For customers, the lifetime is calculated until 15 years for automotive product?

All Nexperia automotive grade logic devices have a guaranteed 10-year longevity. This information is posted on our website at www.nexperia.com/support/longevity. Please contact your local Nexperia sales representative for extended longevity.

Do you have voltage translator buffers with very reduced skew?

Output skew time is a deviation of timing between several outputs (buffer with multiple outputs). We have one part where skew is specified. For other devices, we can expect that skew is also very small because the channels on one die are very close to each other, meaning they come from one location of a wafer and process variation is very small. Skew from device to device is bigger and should be considered in a design.

Do you have voltage translators with fast output rise time, ie: values < 750ps?

Rise and fall times strongly depend on parasitic capacitances attached to an output. We do not publish output rise and fall times for this reason.

Do your logic products exist in Grade 0?

Grade 0 Automotive is -40 +150C. All Nexperia automotive grade logic devices are Grade 1 (-40 to +125C operation) with a maximum junction temperature of 150C. Please contact your local applications engineer to determine if you thermal solution can support these conditions.

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DQFN - how much thermal shock could sustain in such package without defect of soldering?

Please see our whitepaper on SMT package technology.

How can we access the Logic Application Handbook?

The Nexperia Logic Application Handbook will be available in electronic (PDF) format by October 31, this will be published on Nexperia.com. Printed copies of this manual will be available in January 2021. Other Nexperia Application Handbooks are available online now:

- ESD Application Handbook
- MOSFET Application Handbook

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Scan the QR code and find your regional sales contact!

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