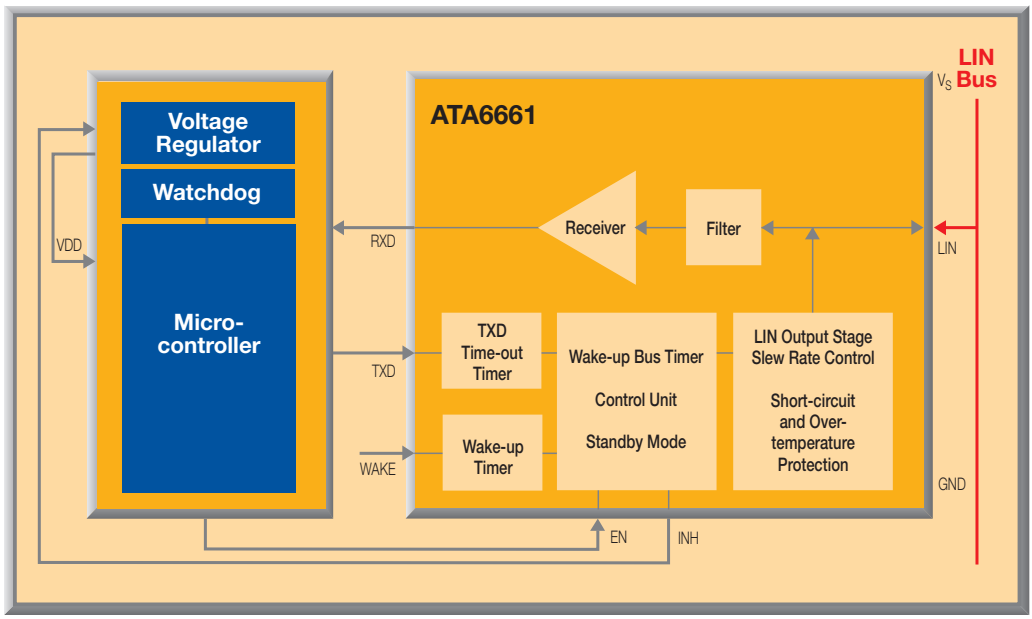
## Benefits

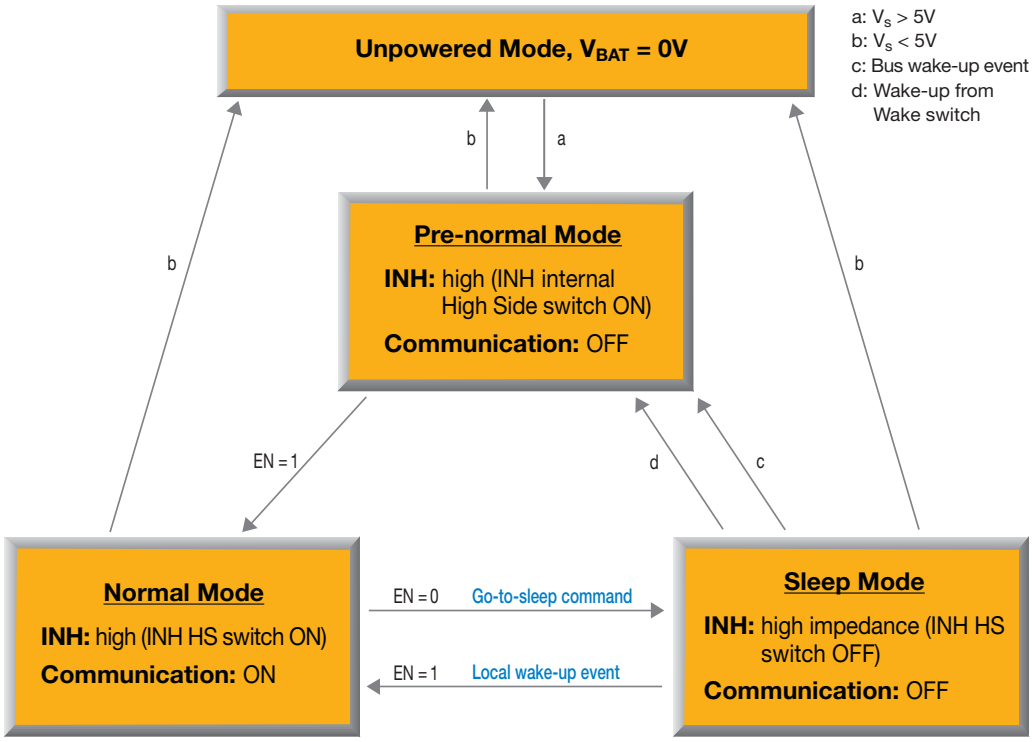
- Industry-leading ESD Protection
- Extended ESD Level (6 kV) at LIN Bus Pin and Supply VS Pin
- Very Low Standby Current During Sleep Mode (10 µA)
- Complies with the New LIN2.0 Standard

## Applications

- Automotive: Body, Safety, Powertrain
- Industrial
- Standard MUX Interface for all Areas




## Modes of Operation




### 1. Normal Mode

This is the normal transmitting and receiving mode. All features are available.

### 2. Sleep Mode

In this mode, the transmission path is disabled and the device is in low-power mode. Supply current from $V_{BAT}$ is typically 10 µA. When a wake-up signal from the LIN bus or via pin WAKE is detected, the device switches to pre-normal mode. If EN switches to high, normal mode is activated.

### 3. Pre-normal Mode

At system power-up, the device automatically switches to pre-normal mode. It switches the INH pin to a high state, to the $V_S$ level. The microcontroller of the application will then confirm the normal mode by setting the EN pin to high.

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**Literature Requests**
www.atmel.com/literature

**Web Site**
www.atmel.com

## Ordering Information

| Extended Type Number | Package | Remarks |
|---|---|---|
| ATA6661-TAQY | SO8 | 4k Tape & reel, Pb-free |
| ATA6661-TAPY | SO8 | 1k Tape & reel, Pb-free |

## LIN Family Overview

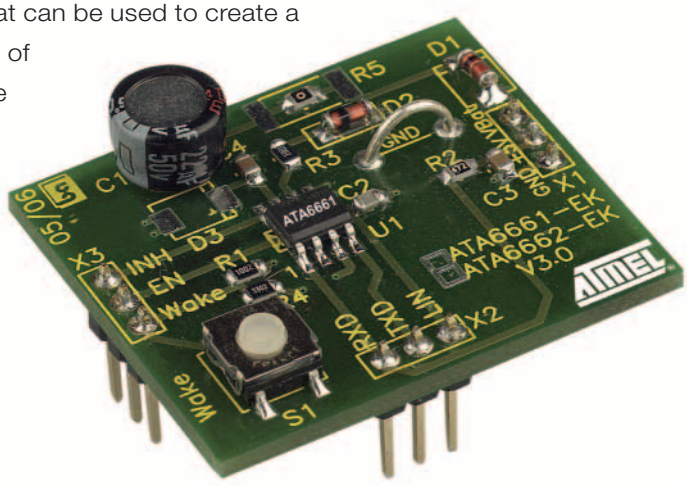
| Part Number | Description | Features | Supply/ Operating Voltage (V) | Load-dump Protection at LIN Pin (V) | Operation Modes | Package | Tools |
|---|---|---|---|---|---|---|---|
| **ATA6661** | Stand-alone LIN Transceiver | LIN Interface | 40/18[1] | 60 | Pre-normal mode<br>Normal mode<br>Sleep mode | SO8 | Datasheet<br>Appnote<br>Software<br>Development Board |
| **ATA6620** | System Basis Chip (SBC) | LIN Interface + Voltage Regulator | 40/18[1] | 60 | Pre-normal mode<br>Normal mode<br>Sleep mode<br>Silent mode | SO8 | Datasheet<br>Appnote<br>Software<br>Development Board |
| **ATA6621** | System Basis Chip (SBC) | LIN Interface + Voltage Regulator + Watchdog | 40/18[1] | 60 | Pre-normal mode<br>Normal mode<br>Sleep mode<br>Silent mode | QFN20 | Datasheet<br>Appnote<br>Software<br>Development Board |
| **ATA660x** | System MCM ATA6621 + AVR Microcontroller | LIN-Interface + Voltage Regulator + Watchdog + AVR (ATmega 88/164/ 324/644) | 40/18[1] | 60 | Pre-normal mode<br>Normal mode<br>Sleep mode<br>Silent mode | QFN48/64 | Datasheet<br>Appnote<br>Software<br>Development Board<br>Standard AVR Tools |

[1] with restrictions, operating voltage as high as 40V is possible (lower baud rate, etc., see application note)

## Tools

Atmel® provides various cost-effective support tools to ease the development of a LIN network. A development board for the ATA6661 is available. It has been designed to give designers a quick start with the IC and for prototyping and testing of new designs. There are some placeholders on the board, so the designer can easily adapt various parameters to individual requirements. Furthermore, a LIN2.0 ANSI C software library, including an AVR® microcontroller, is available for LIN slave nodes. Atmel also provides ActiveX components that can be used to create a simple PC program for emulation of the LIN master node. Using these hardware and software components, it is very easy to create and test a LIN network without much (financial) effort. The tools can be downloaded at

http://www.atmel.com/dyn/products/tools.asp?family_id=606.



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