

INTL9511 Product Brief

1. Description

The INTL9511 is a hot-swappable I2C-bus device that enables the insertion of I/O cards into a live backplane without compromising the integrity of the data and clock lines. Its control circuitry ensures that the backplane and the card are not connected until a stop command or bus idle condition is detected on the backplane, avoiding bus contention on the card. Once the connection is established, the INTL9511 provides bidirectional buffering to maintain isolation between the backplane and card capacitances.

When the I2C bus is idle, the INTL9511 can be put into shutdown mode by setting the EN pin low, reducing power consumption. When the EN pin is pulled high, the chip operates in normal mode. Additionally, it features an open-drain READY output pin that signals the connection between the backplane and the card.

The INTL9511 is offered in an MSOP8 package and is designed to operate reliably within a temperature range of -40°C to 85°C.

2. Features

- Supports bidirectional data transfer of I2C bus signals.
- Supports clock stretching, arbitration and synchronization
- Built-in rise time accelerators on all SDA and SCL lines (0.6V threshold) require the bus pull-up voltage and supply voltage (VCC) to be the same
- Active high ENABLE input
- High-impedance SDA and SCL pins when VCC = 0V
- Pre-charge of 1V on all SDA and SCL lines.
- Operating power supply voltage range: 2.3V to 5.5V
- Clock frequency range: 0 Hz to 400 kHz
- ESD protection exceeds 2000V HBM per JESD22-A114, 200V MM per JESD22-A115, and 1000V CDM per JESD22-C101
- Latch-up testing is done to JEDEC Standard JESD78, which ensures the current does not exceed 100mA
- Operating Temperature=-40°C to 85°C
- Available package: MSOP8(3.00 mm x 3.00 mm)

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3. Applications

- Automotive electronics
- Factory Automation
- IT infrastructure (such as servers and storage systems)

- Communication
- Network systems, including switches and routers

4. Functional Diagram

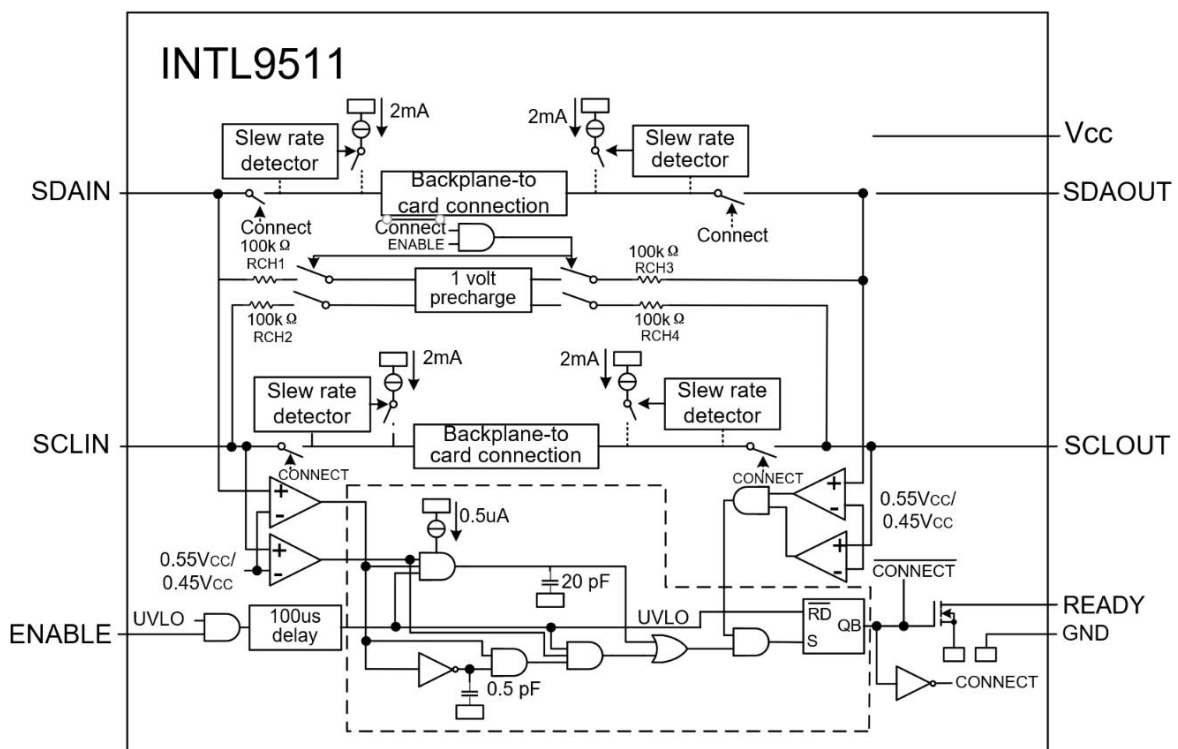


Figure 1 Functional Diagram