



Hi-Speed USB-to-SATA Controller Application Note

REV.

1.1

SHT

1 of 1

SUBJECT

Supported I2C Serial EEPROM and SPI Serial Flash

PRODUCT NUMBER/NAME

PL-2571B Hi-Speed USB-to-SATA Bridge Controller

Scope and Purpose:

This application note provides a list of supported external serial memory for the PL-2571 (Chip Rev B). The PL-2571 uses external serial memory (EEPROM or Flash) to store the Vendor ID, Product ID, Device Release Number in device descriptor, Attributes and Max Power setting in configuration descriptor, Strings of String Descriptor and some chip operation mode configuration. A new version external firmware can also be stored or updated in this memory when this memory size is large enough. If the external serial memory is not present, PL-2571 will use settings in the internal ROM. Two types of serial interface are supported, the one is SPI (Serial Peripheral Interface) and the other is I2C compatible interface.

- **No external memory:** This case is not recommended. The chip will use the default configuration in the internal ROM and run the firmware in the internal ROM. Firmware upgrade is not possible. The chip will send default Vendor ID, Product ID, chip operation settings, and other default configuration. Product serial number will not be sent.
- **I2C Serial EEPROM:** This case uses I2C serial EEPROM to store chip configuration data or configuration data with new firmware. If the I2C serial EEPROM size (like AT24C256) is large enough, a new version firmware can be stored therefore new firmware upgrade is possible. If new version firmware is stored in the EEPROM, new firmware will be loaded while system startup.
- **SPI Serial Flash:** This is the recommended case. It behaves the same as the I2C serial memory with this chip. But the transfer speed of SPI interface is faster than I2C interface. The SPI interface is a four-pin interface but this chip uses only three pins to communicate with. Therefore, the DI and DO are shorted or short by a serial 240-ohm resistor is better.

PL-2571 (Chip Rev B) Tested I2C Serial EEPROM List		
Maker	Model No.	Density
ATMEL	AT24C256	256Kbit
CSI	CAT24WC02	2Kbit

Note: I2C EEPROM that are 256Kbit (50KHz) or below should be compatible. For 400KHz speed, it may depend on EEPROM specification.

PL-2571 (Chip Rev B) Tested SPI Serial Flash List		
Maker	Model No.	Density
ATMEL	AT25F512B	512Kbit
EON	EN25P05	512Kbit
Macronix	MX25L512C	512Kbit
Chingis	PM25LV512 / PM25LV010	512Kbit / 1Mbit
SST	SST25VF512	512Kbit
ST Micro	M25P10AV	1Mbit

Note: Please contact Prolific FAE for the latest Manufacturing Kit (MFG Kit) program for supporting the above list.

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