



Application Note 105

Demo Board Current Consumption

KS8995M/KS8995X

General Description

When the system designer needs to create a power budget for choosing voltage regulators or for designing power circuits, numbers for the worst-case current consumption per voltage rail as measured on the KS8995M/X demo board are extremely useful.

Voltage Rail	Max. Current Consumption	Worst Case
3.3V	110mA	All five ports link at 100BT
2.5V	520mA	All five ports link at 10BT
1.8V	160mA	All five ports link at 100BT

Table 1. KS8995M/X Demo Board Current Consumption

Operation and Measurement Conditions

The KS8995M/X operates using three different voltage rails: 3.3V, 2.5V, and 1.8V.

It can also operate using two separate voltage supplies by using 2.5V as the digital VDDIO; however, this means that the MII ports cannot be used.

The measurements shown in Table 1 are for the worst-case current consumption per voltage rail. They were taken at room temperature with a traffic generator fully loading all five ports.

Note that the worst-case current consumption for the 2.5V rail is in 10BT mode. This is because most of the current draw from the 2.5V rail is from the Ethernet transceivers. The 10BT draws more current than 100BT for the transceivers.

Keep in mind that these numbers are for the total power consumption for these voltages on the entire board, which includes current drawn by the LEDs and the EEPROM. The LEDs and EEPROM draw up to 80% of the 3.3V current shown in Table 1.

Current consumption numbers for the KS8995M/X are given in the KS8995M/X data sheet.

Please contact your local Micrel FAE or salesperson if you have any questions.

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