w1_ds2406 kernel driver

Supported chips:

- Maxim DS2406 (and other family 0x12) addressable switches

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Description

The w1_ds2406 driver allows connected devices to be switched on and off. These chips also provide 128 bytes of OTP EPROM, but reading/writing it is not supported. In TSOC-6 form, the DS2406 provides two switch outputs and can be provided with power on a dedicated input. In TO-92 form, it provides one output and uses parasitic power only.

The driver provides two sysfs files. state is readable; it gives the current state of each switch, with PIO A in bit 0 and PIO B in bit 1. The driver ORs this state with 0x30, so shell scripts get an ASCII 0/1/2/3 to work with. output is writable; bits 0 and 1 control PIO A and B, respectively. Bits 2-7 are ignored, so it's safe to write ASCII data.

CRCs are checked on read and write. Failed checks cause an I/O error to be returned. On a failed write, the switch status is not changed.