# Server

- Huawei RH2288H v3
- Fujitsu Eternus LT20 S2
- NVIDIA Tesla GPU - Power Brake

# Huawei RH2288H v3

## Manually setting FAN speed

Usage: ipmcset -d fanmode -v <mode> [timeout]
Modes are:
0 auto regulate fan speed, without parameter [timeout]
1 manual regulate fan speed
without parameter [timeout], default timeout(30 seconds)
with parameter [timeout], timeout range <0-100000000>,(0 means max timeout)

Usage: ipmcset -d fanlevel -v <value> [fanid]
Note :
1.Set fan speed level for all fans, without parameter [fanid]
2.Set fan speed level for specific fan, with parameter [fanid]
[fanid] range <1-4>

```
ipmcset -d fanmode -v 1 0
ipmcset -d fanlevel -v 26
```

> Manually setting the fan speed to 26% is sufficient in a controlled environment (22°C) and without GPUs.

# Fujitsu Eternus LT20 S2

## Password Recovery

If you lost your password for Administartor or User you may not reset the password with restoring factory defaults, as network and user settings stay in place.

You can login with Service User and the password "F.CE".

# NVIDIA Tesla GPU - Power Brake

```
nvidia-smi -q | grep HW
        HW Slowdown                       : Active
            HW Thermal Slowdown           : Not Active
            HW Power Brake Slowdown       : Active
```

Your server vendor may block GPUs not on a HCL. HW Power Brake Slowdown on NVIDIA Tesla GPUs is documented with a fixed slowdown of 50% in performance and power limit (see Data Sheet).

You can prevent the system from activating the "HW Power Brake" by blocking PCIe Pin B30. Pin B30 has been a reserved pin for long time. This has changed to Pin B30 being a PWRBRK for emergency power reduction.

| | | | |
|---|---|---|---|
| Emergency Power Reduction Mechanism with PWRBRK Signal ECN<br>This ECN defines two sets of related changes to support an Emergency Power Reduction mechanism and to provide software visibility for this mechanism: 1. The Card Electromechanical Specification is updated to define an optional Emergency Power Reduction mechanism using RSVD pin B30. 2. The PCI Express Base Specification is updated to define an optional mechanism to indicate support for Emergency Power Reduction and to provide visibility as to the power reduction status of a Device. show less | 3.x | ECN | **December 1, 2015** |

Source: https://pcisig.com/specifications/pciexpress/

Tape or use a waterproof marker to block Pin B30. B30 is on the cooler side 30th Pin.

```
nvidia-smi -q | grep HW
       HW Slowdown                       : Not Active
            HW Thermal Slowdown          : Not Active
            HW Power Brake Slowdown      : Not Active
```

| Pin | Side B | Side A | Description |
|---|---|---|---|
| 1 | +12 V | PRSNT1# | Must connect to farthest PRSNT2# pin |
| 2 | +12 V | +12 V | Main power pins |
| 3 | +12 V | +12 V | |
| 4 | Ground | Ground | |
| 5 | SMCLK | TCK | SMBus and JTAG port pins |
| 6 | SMDAT | TDI | |
| 7 | Ground | TDO | |
| 8 | +3.3 V | TMS | |
| 9 | TRST# | +3.3 V | |
| 10 | +3.3 V aux | +3.3 V | Aux power & Standby power |
| 11 | WAKE# | PERST# | Link reactivation; fundamental reset [23] |
| Key notch | | | |
| 12 | CLKREQ#[24] | Ground | Clock Request Signal |
| 13 | Ground | REFCLK+ | Reference clock differential pair |
| 14 | HSOp(0) | REFCLK− | Lane 0 transmit data, + and − |
| 15 | HSOn(0) | Ground | |
| 16 | Ground | HSIp(0) | Lane 0 receive data, + and − |
| 17 | PRSNT2# | HSIn(0) | |
| 18 | Ground | Ground | |
| PCI Express x1 cards end at pin 18 | | | |
| 19 | HSOp(1) | Reserved | Lane 1 transmit data, + and − |
| 20 | HSOn(1) | Ground | |
| 21 | Ground | HSIp(1) | Lane 1 receive data, + and − |
| 22 | Ground | HSIn(1) | |
| 23 | HSOp(2) | Ground | Lane 2 transmit data, + and − |
| 24 | HSOn(2) | Ground | |
| 25 | Ground | HSIp(2) | Lane 2 receive data, + and − |
| 26 | Ground | HSIn(2) | |
| 27 | HSOp(3) | Ground | Lane 3 transmit data, + and − |
| 28 | HSOn(3) | Ground | |
| 29 | Ground | HSIp(3) | Lane 3 receive data, + and − |
| 30 | PWRBRK#[25] | HSIn(3) | "Power brake", active-low to reduce device power |
| 31 | PRSNT2# | Ground | |
| 32 | Ground | Reserved | |