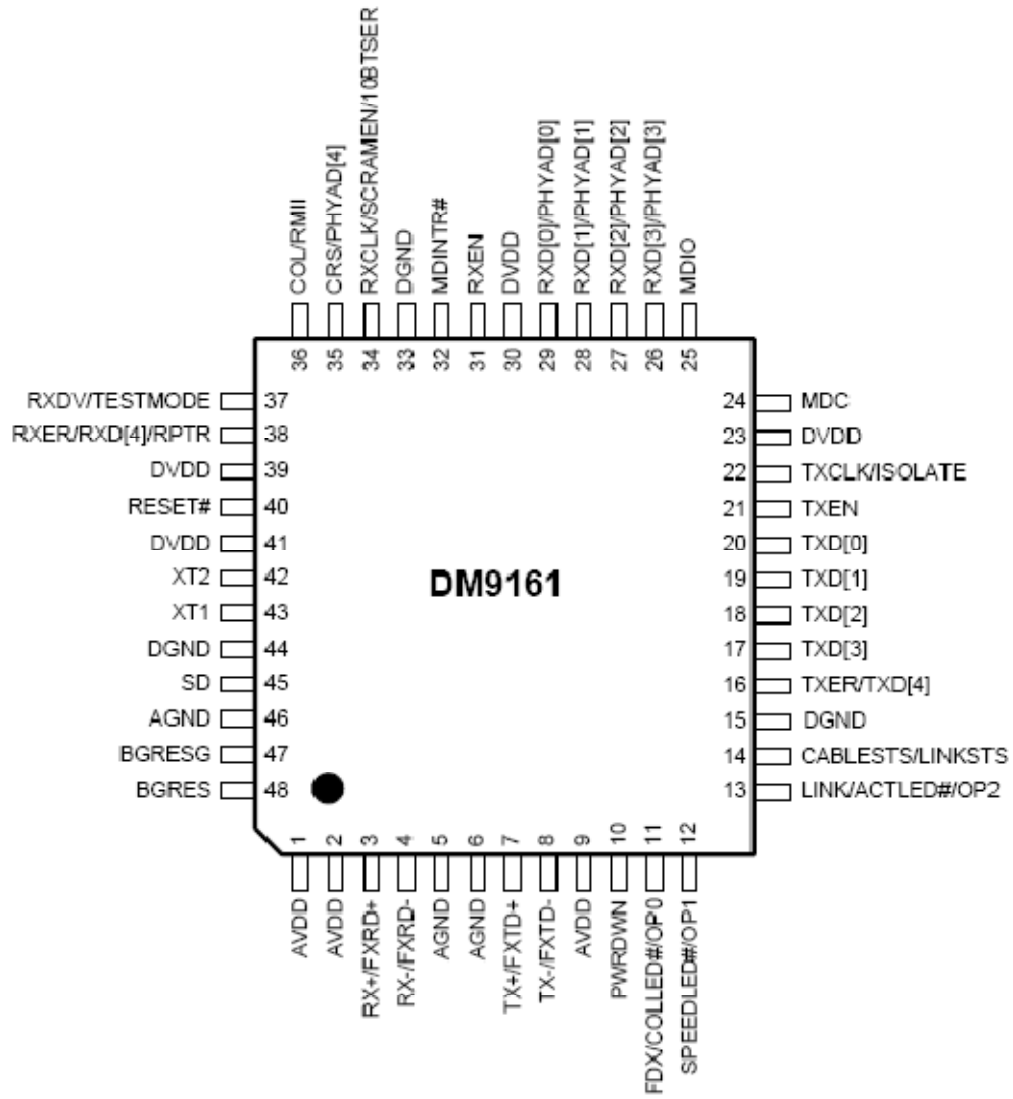
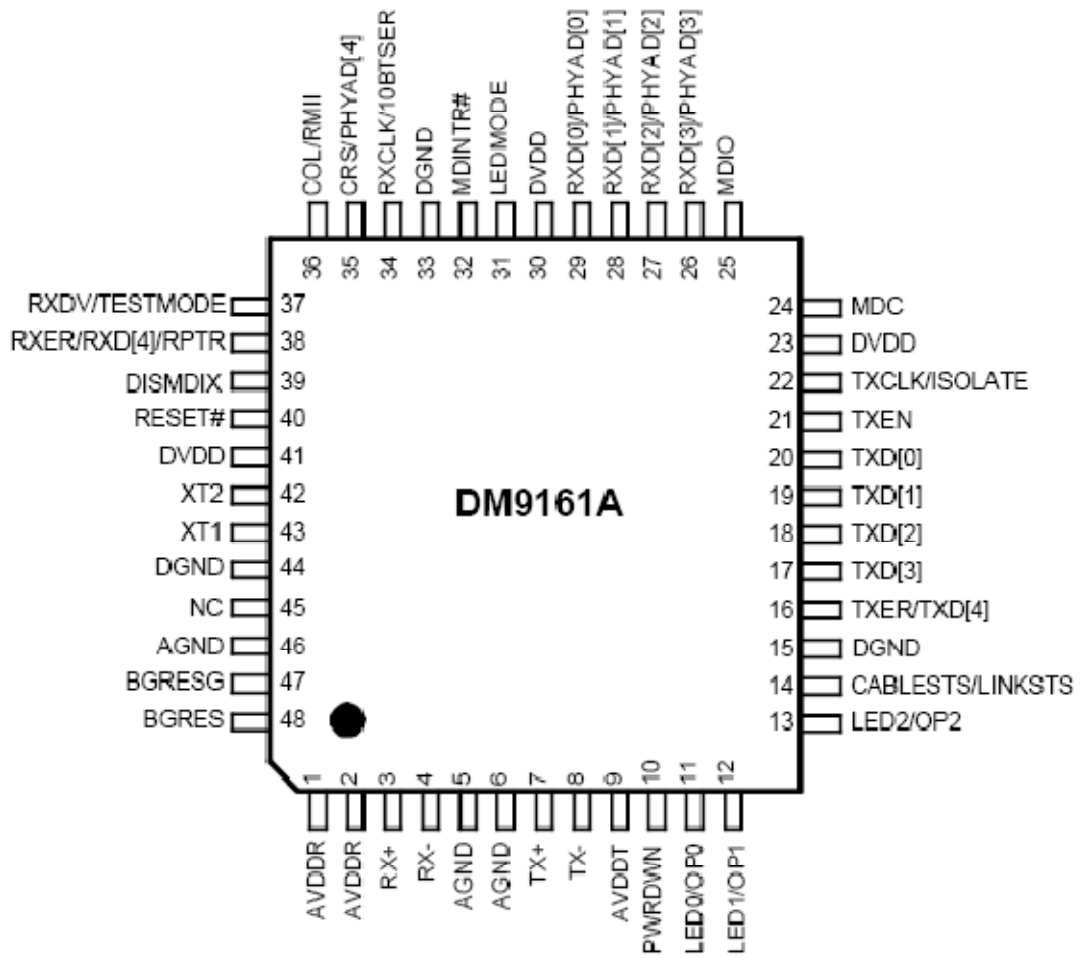


How to change between DM9161, DM9161A and DM9161B

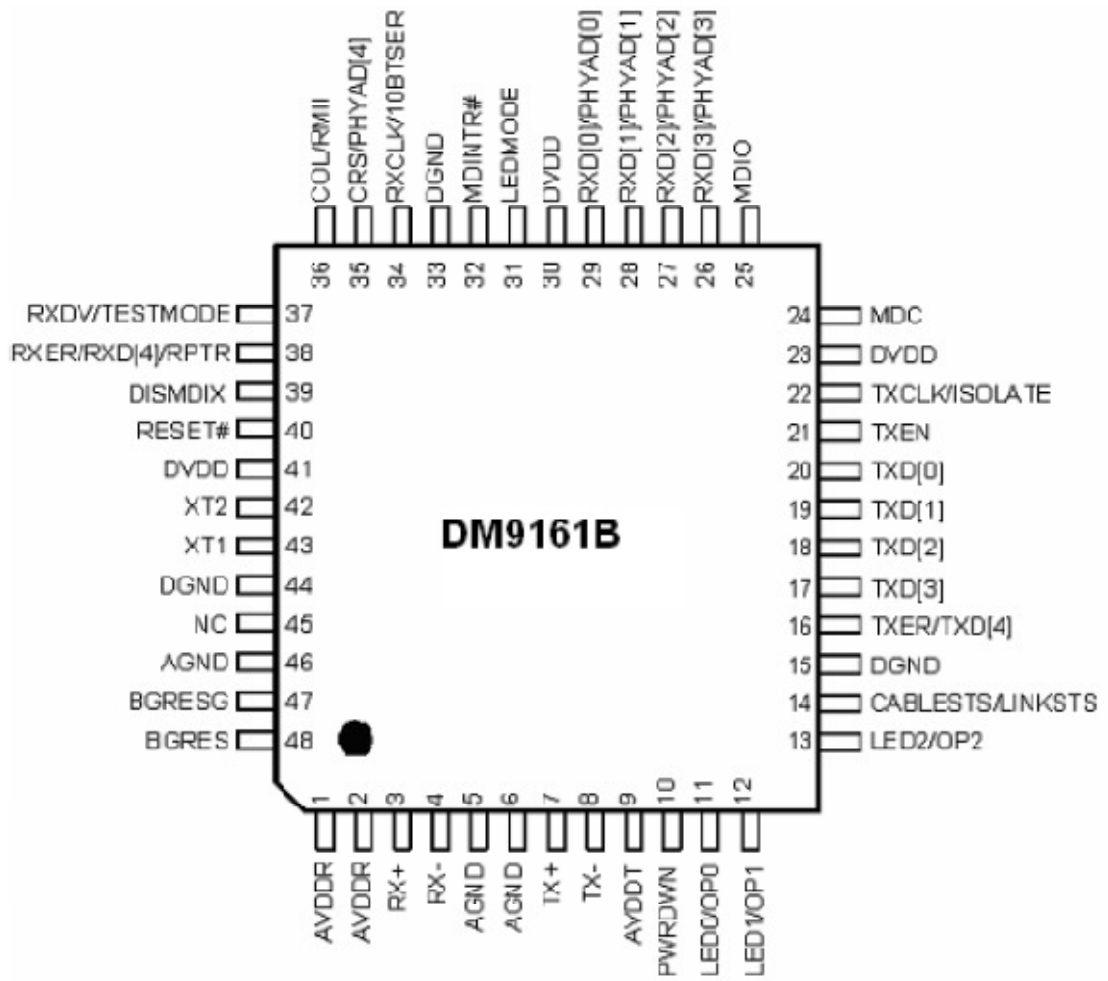
1. Block diagram of DM9161



2. Block diagram of DM9161A



3. Block diagram of DM9161B



4. Hardware difference table

| Pin number | DM9161E | DM9161A | DM9161B |
|------------|------------|-------------|-------------|
| 1, 2 and 9 | 3.3V input | 2.5V output | 1.8V output |
| 39 | DVDD | DISMDIX | DISMDIX |

- a. For DM9161E, pin 1, 2, 9 and 39 connects to DVDD, 3.3V directly.
- b. For DM9161A and DM9161B, pin 1, 2 and 9 are bound together to provide transformer center tap a bias voltage.

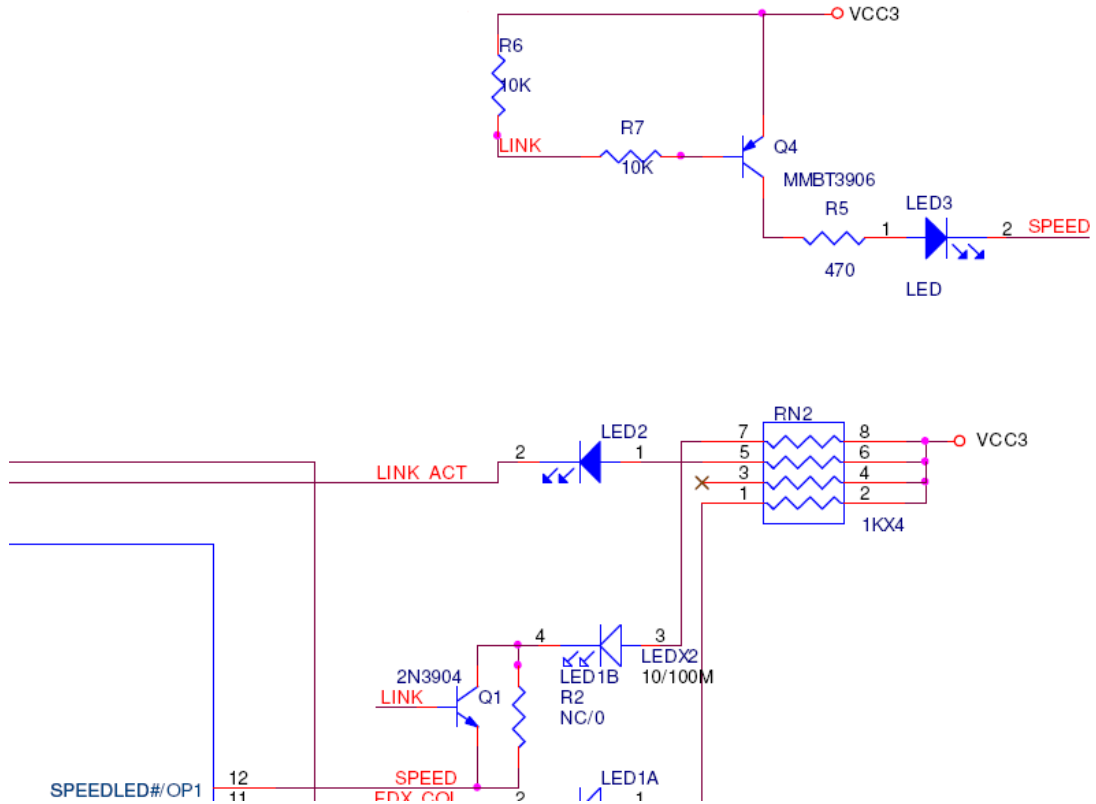
5. Registers difference between DM9161 series

| Register | Name | DM9161E | DM9161A | DM9161B |
|-------------------|--|----------|----------------------------|---------------|
| 01H (w/o link) | Basic Mode Status Register | 0x7809 | 0x7849 | 0x7849 |
| 03H | PHY ID Identifier Register #2 | 0xb880 | 0xb8a0 | 0xb8b0 |
| 14H | Specified Config Register | Reserved | 0x0080/0x0000 | 0x0080/0x0000 |
| | | | Due to Auto-MDIX switching | |
| 18H (EVB) | Davicom Hardware Reset Latch State Register | 0x14e1 | 0xe4e1 | 0xe4e1 |
| 1CH | | Reserved | Reserved | 0x0003 |
| 1DH | Power Saving Control Register | Reserved | Reserved | 0x0000 |

Application: If customer will check register 03H to validate PHY working or not, DM9161 series have different value for each version and the code should be modified for each to each.

6. Special Modification to DM9161B, LED mode = 1

The LED1, Speed LED, will be turn on even there is no link. So, the modification should be done as fellow.



The net LINK is connected Pin 14 and SPEED is connected to pin 12.

a. Pin 14 pulled low

| IC | R2 (0 ohm) | Q1 (2N3904) | R5, R6, R7, Q4, LED3 |
|---------|------------|-------------|----------------------|
| DM9161A | On | Off | Off |
| DM9161B | Off | On | Off |

b. Pin 14 pulled high

| IC | R2 (0 ohm) | Q1 (2N3904) | R5, R6, R7, Q4, LED3 |
|---------|------------|-------------|----------------------|
| DM9161A | On | Off | Off |
| DM9161B | Off | Off | On |