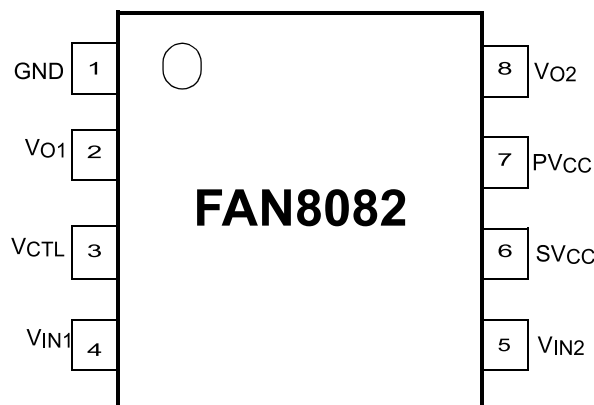


# 7. IC Block Diagrams

## 7-1 Main

### 7-1-1. FAN8082

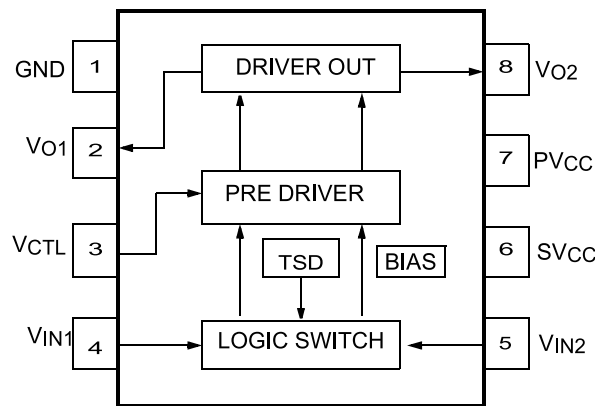
#### Pin Assignments



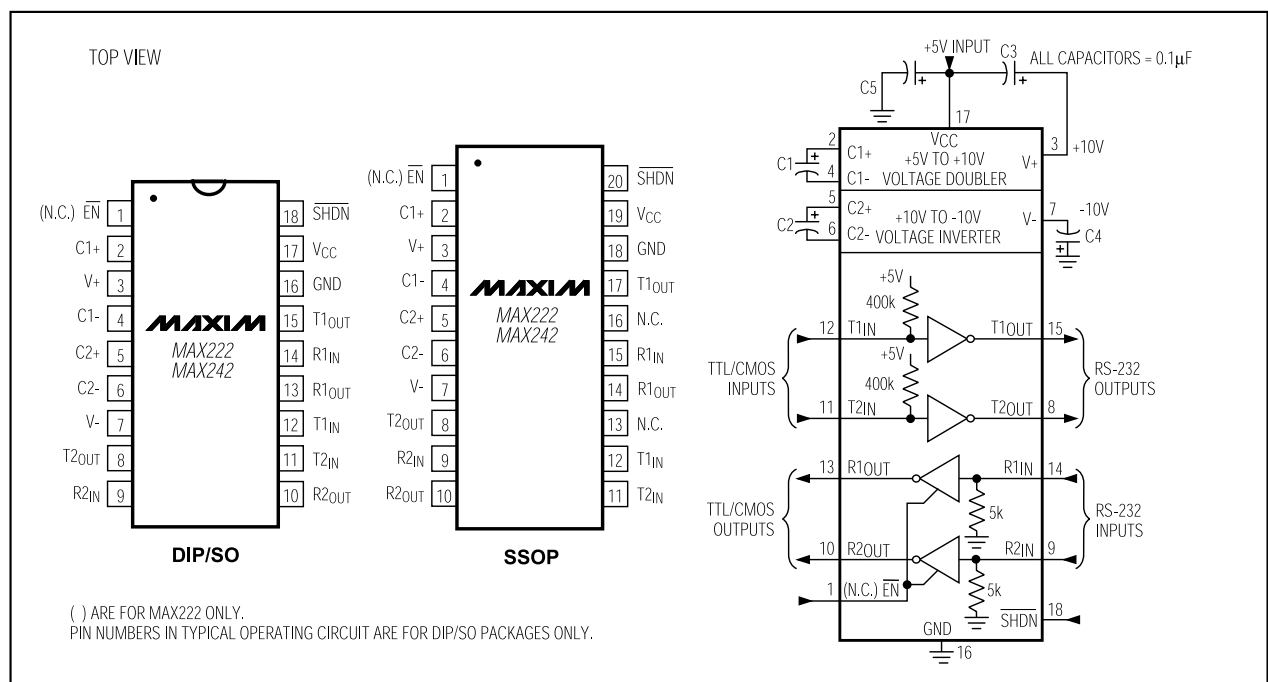
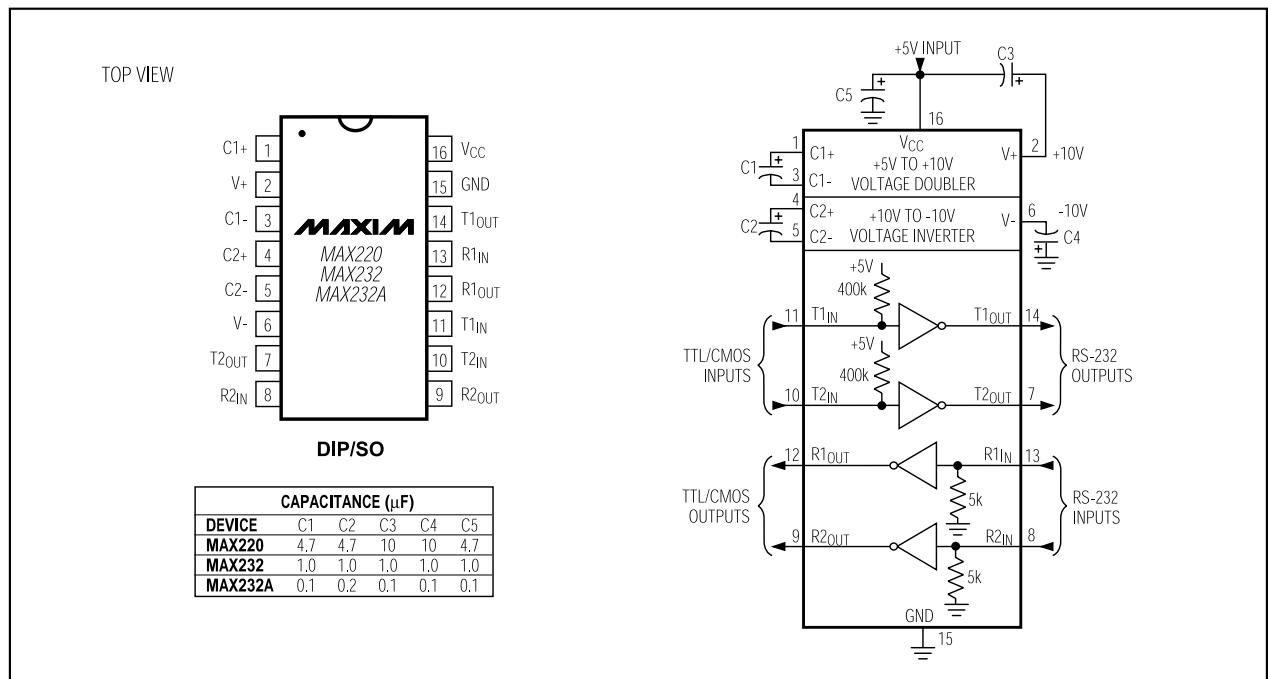
#### Pin Definitions

| Pin Number | Pin Name | I/O | Pin Function Description |
|------------|----------|-----|--------------------------|
| 1          | GND      | -   | Ground                   |
| 2          | VO1      | O   | Output 1                 |
| 3          | VCTL     | I   | Motor speed control      |
| 4          | VIN1     | I   | Input 1                  |
| 5          | VIN2     | I   | Input 2                  |
| 6          | SVCC     | -   | Supply voltage (Signal)  |
| 7          | PVCC     | -   | Supply voltage (Power)   |
| 8          | VO2      | O   | Output 2                 |

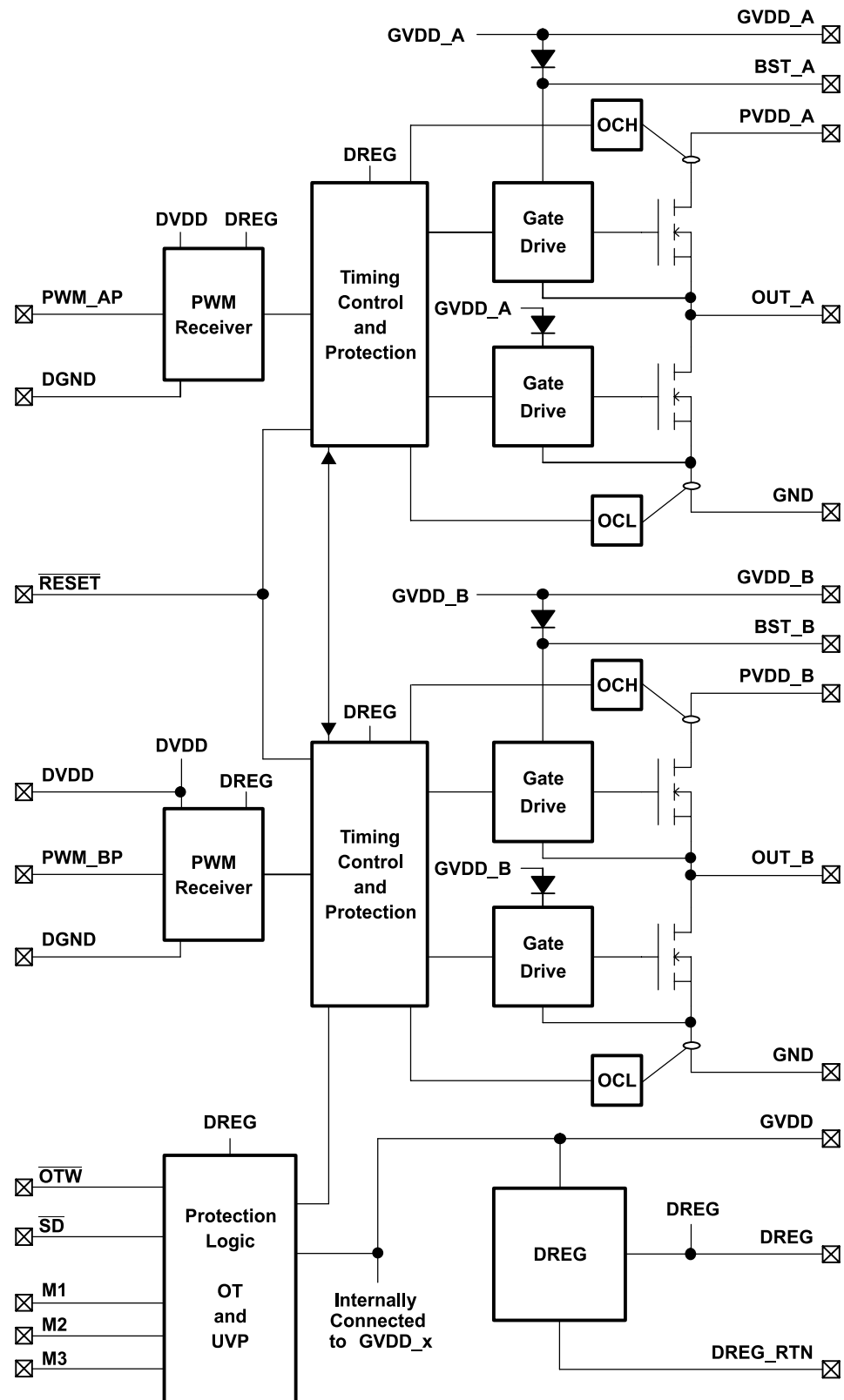
#### Internal Block Diagram



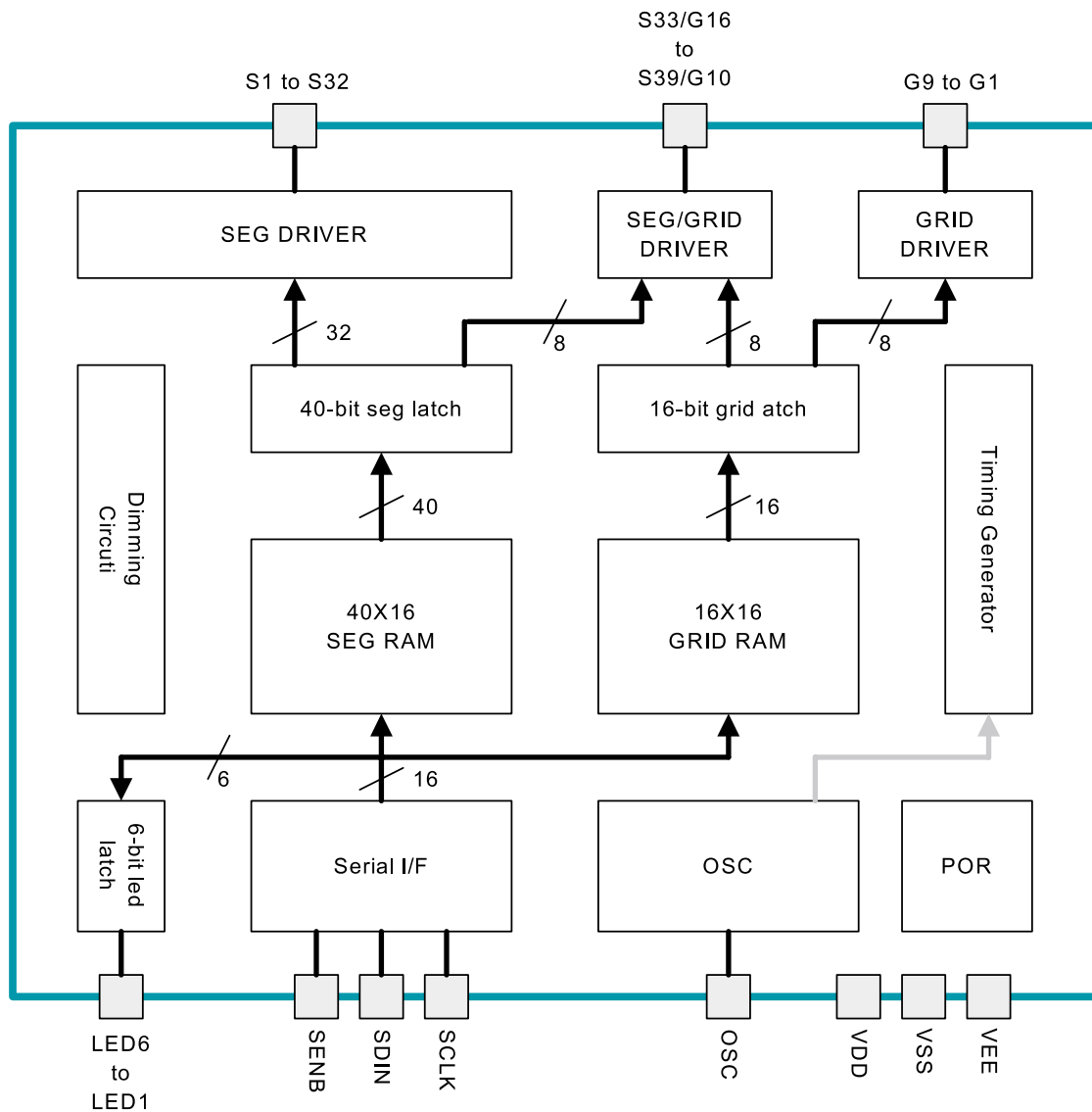
## 7-1-2. MAX232



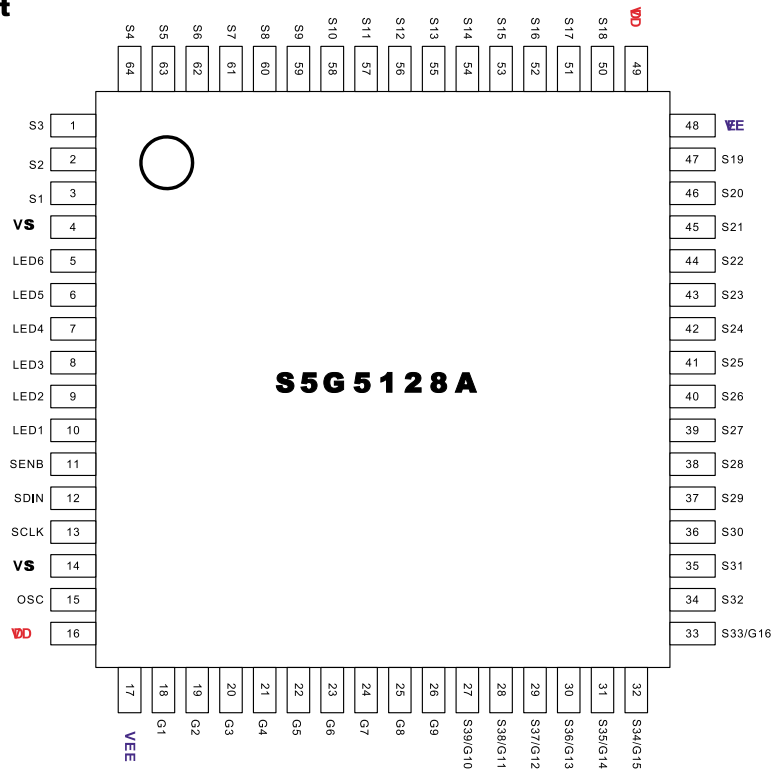
## FUNCTIONAL BLOCK DIAGRAM



## Block Diagram



## Pin Assignment

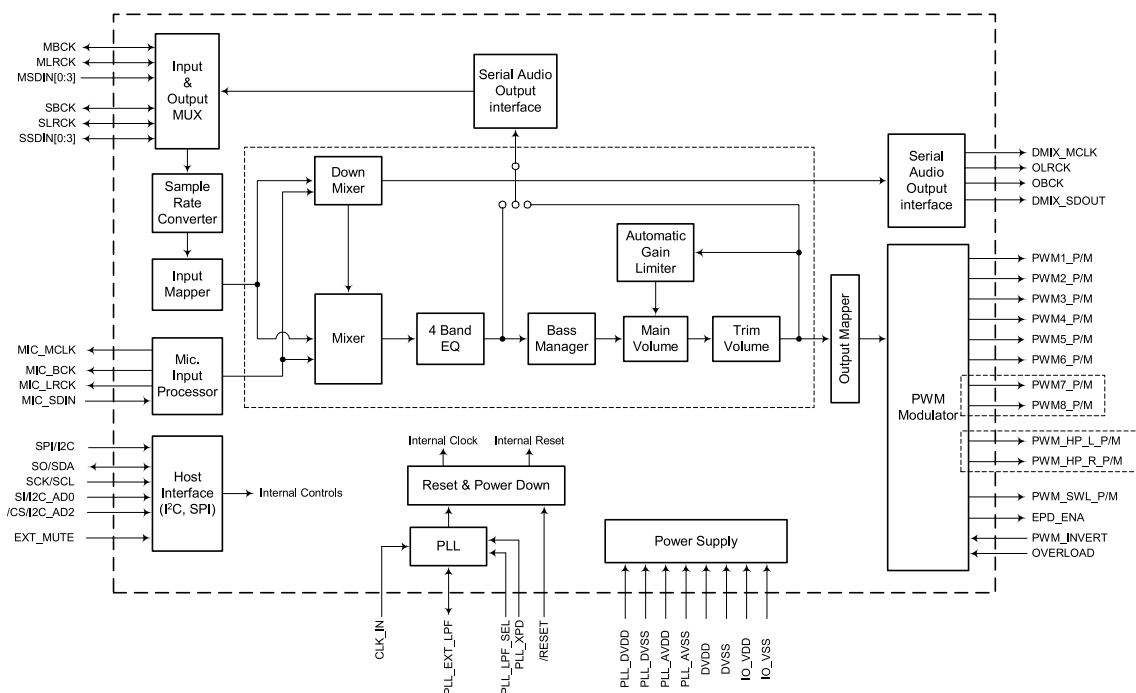


## Pin Description

| Pin No.  | Name               | Function                                                                                                                                          | IN/OUT |
|----------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1 to 3   | S3 to S1           | Segment driver output pins (segment only). This is P-ch open-drain output with pull-down resistor                                                 | O      |
| 5 to 10  | LED6 to LED1       | 6 LED driver output ports. This is a CMOS output pin.                                                                                             | O      |
| 11       | SENB               | Serial Interface Enable<br>All shifted data is latched into the corresponding register at the rising edge of SENB.                                | I      |
| 12       | SDIN               | Serial Interface Data IN<br>Input serial data at the rising edge of the shift clock.                                                              | I      |
| 13       | SCLK               | Serial Interface Clock<br>Reads serial data at the rising edge when SENB is low                                                                   | I      |
| 15       | OSC                | Connected to an external resistor or an RC oscillator circuit.                                                                                    | I/O    |
| 18 to 26 | G1 to G9           | Grid driver output pins (Grid only). This is push-pull cmos output.                                                                               | O      |
| 27to 33  | S39/G10 to S33/G16 | Segment or Grid driver output pins. These pins are selectable for segment or grid driving. This is P-ch open-drain output with pull-down resistor | O      |
| 34 to 47 | S32 to S19         | Segment driver output pins (segment only). This is P-ch open-drain output with pull-down resistor                                                 | O      |
| 50 to 64 | S18 to S4          | Segment driver output pins (segment only). This P-ch open-drain output with pull-down resistor                                                    | O      |
| 16,49    | VDD                | Positive power ( Internally connected )                                                                                                           | PWR    |
| 4,14     | VSS                | Ground ( Internally connected )                                                                                                                   | GND    |
| 17,48    | VEE                | Negative power for driving VFD Panel ( Internally connected )                                                                                     | PWR    |

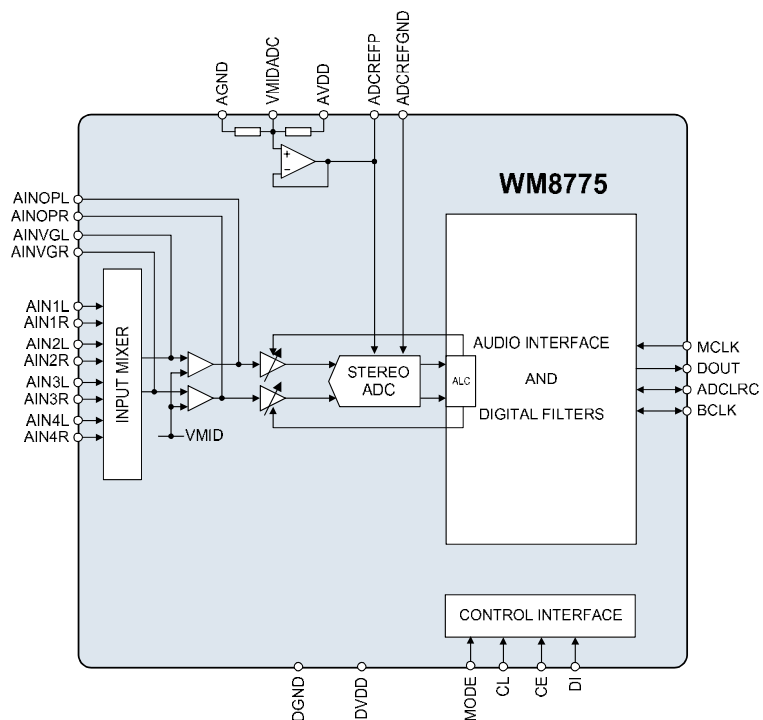
## 7-1-5. PS9808

### Functional Block Diagram



## 7-1-6. WM8775

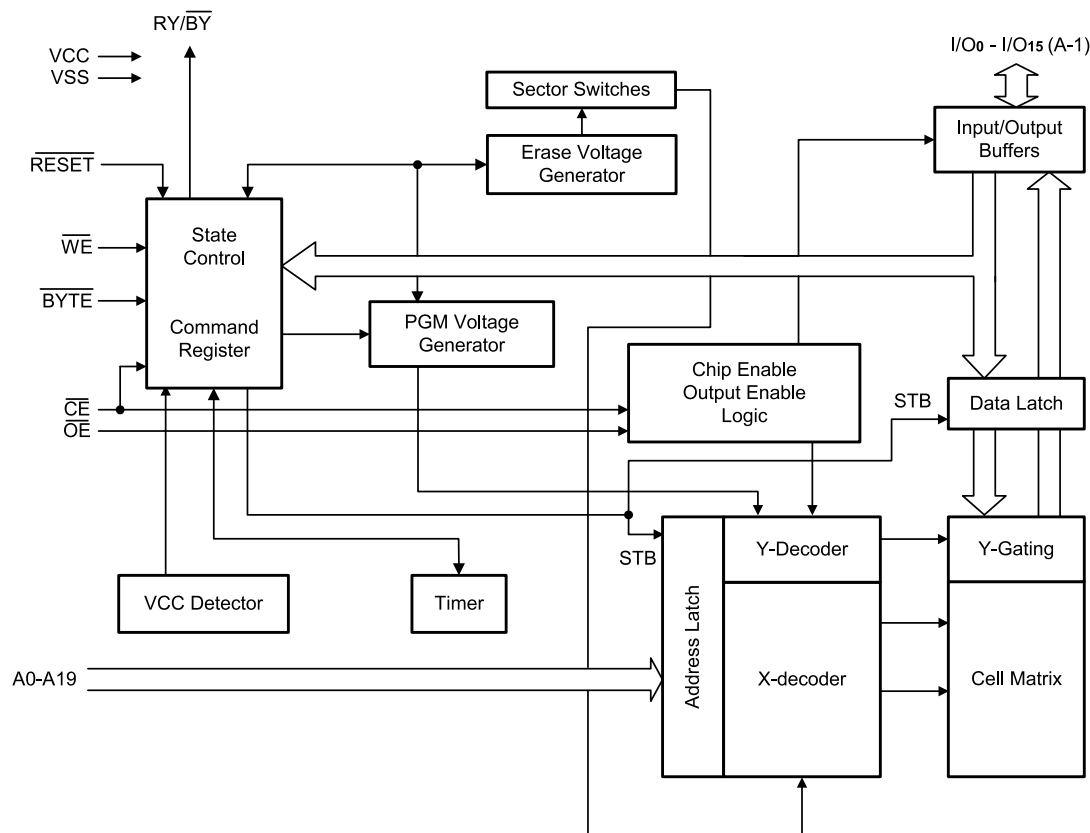
### BLOCK DIAGRAM



## 7-2 DVD

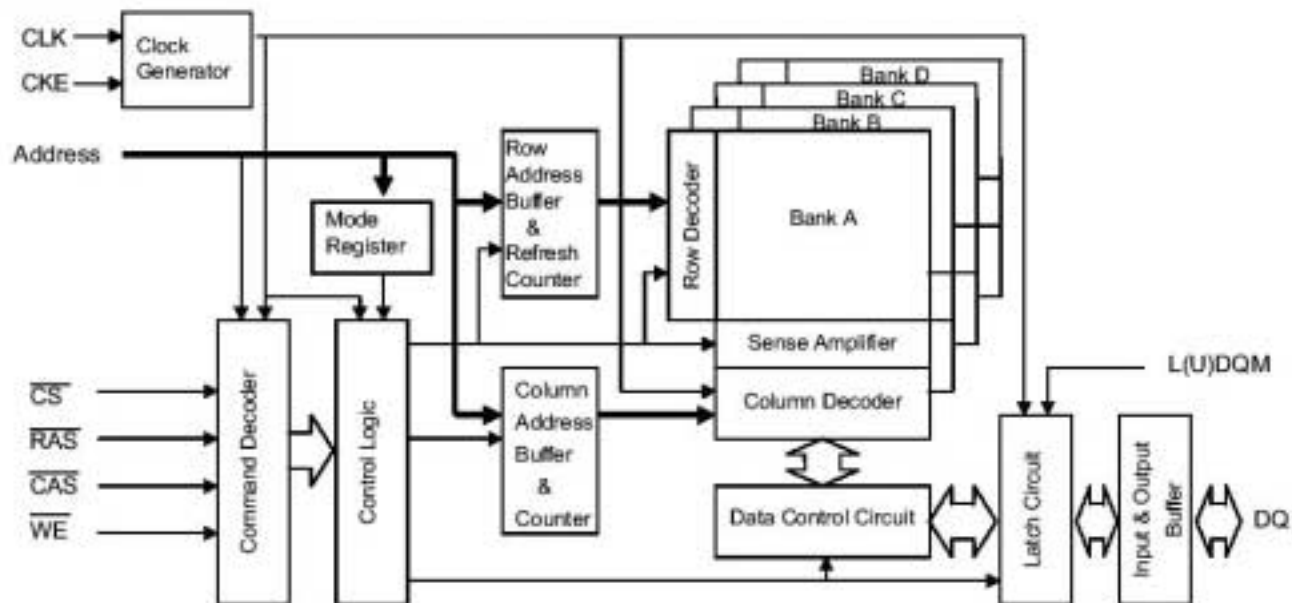
### 7-2-1. A29L160

Block Diagram

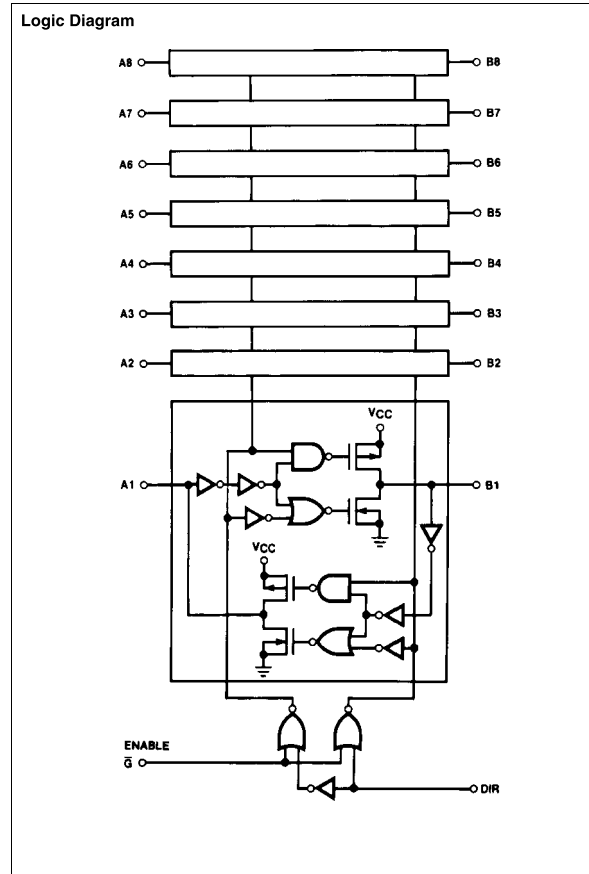


### 7-2-2. ESMT\_M12L128168A

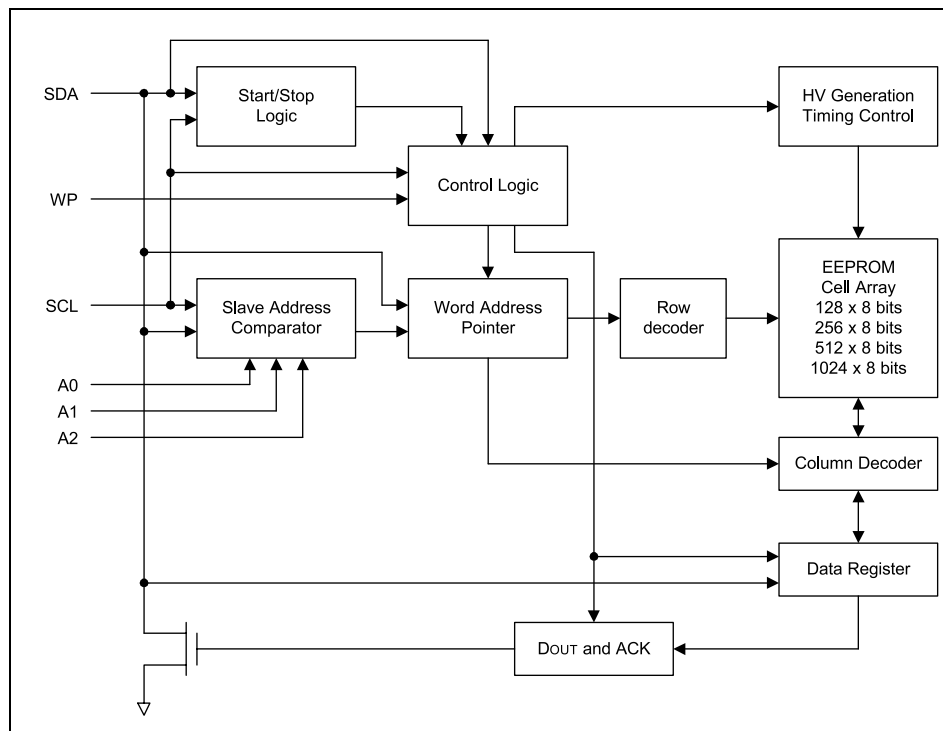
BLOCK DIAGRAM



### 7-2-3. 74HCT245



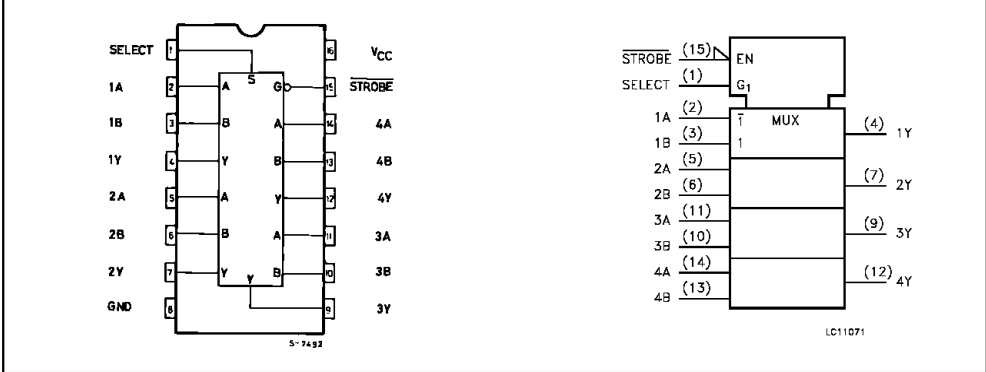
### 7-2-4. S524C20D21\_20D41



S524C20D11/20D21/80D41/80D81 Block Diagram

### 7-2-5. STM\_74LCX157

#### PIN CONNECTION AND IEC LOGIC SYMBOLS

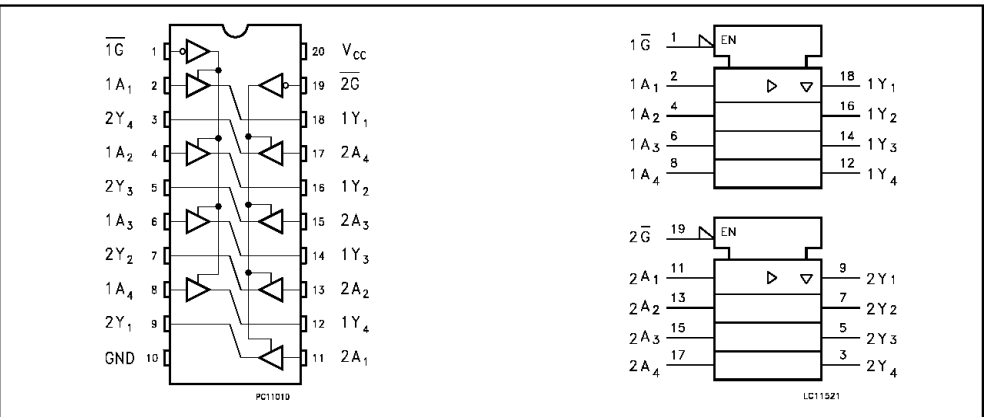


#### PIN DESCRIPTION

| PIN No       | SYMBOL          | NAME AND FUNCTION         |
|--------------|-----------------|---------------------------|
| 1            | SELECT          | Common Data Select Inputs |
| 2, 5, 11, 14 | 1A to 4A        | Data Inputs From Source A |
| 3, 6, 10, 13 | 1B to 4B        | Data Inputs From Source B |
| 4, 7, 9, 12  | 1Y to 4Y        | Multiplexer Outputs       |
| 15           | STROBE          | Strobe Input              |
| 8            | GND             | Ground (0V)               |
| 16           | V <sub>CC</sub> | Positive Supply Voltage   |

### 7-2-6. STM\_74LCX244

#### PIN CONNECTION AND IEC LOGIC SYMBOLS



#### PIN DESCRIPTION

| PIN No         | SYMBOL          | NAME AND FUNCTION       |
|----------------|-----------------|-------------------------|
| 1              | 1G              | Output Enable Input     |
| 2, 4, 6, 8     | 1A1 to 1A4      | Data Inputs             |
| 9, 7, 5, 3     | 2Y1 to 2Y4      | Data Outputs            |
| 11, 13, 15, 17 | 2A1 to 2A4      | Data Inputs             |
| 18, 16, 14, 12 | 1Y1 to 1Y4      | Data Outputs            |
| 19             | 2G              | Output Enable Input     |
| 10             | GND             | Ground (0V)             |
| 20             | V <sub>CC</sub> | Positive Supply Voltage |

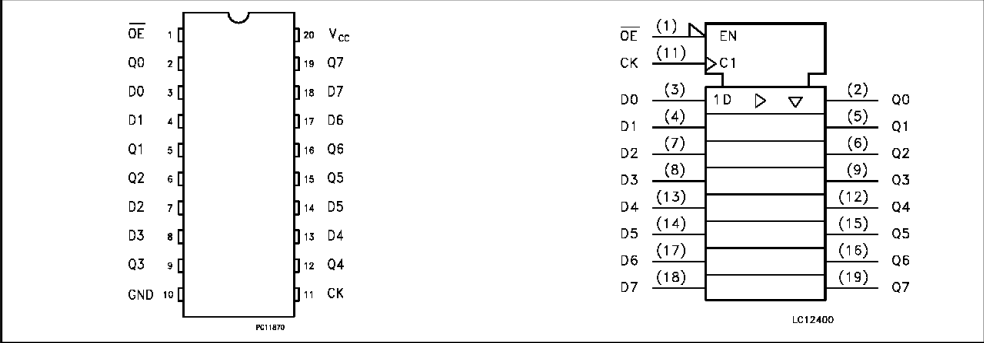
#### TRUTH TABLE

| INPUT |                | OUTPUT         |
|-------|----------------|----------------|
| G     | A <sub>n</sub> | Y <sub>n</sub> |
| L     | L              | L              |
| L     | H              | H              |
| H     | X              | Z              |

X : Don't Care  
Z : High Impedance

8-2-7. STM\_74LCX374

PIN CONNECTION AND IEC LOGIC SYMBOLS



PIN DESCRIPTION

| PIN No                     | SYMBOL          | NAME AND FUNCTION                        |
|----------------------------|-----------------|------------------------------------------|
| 1                          | OE              | 3 State Output Enable Input (Active LOW) |
| 2, 5, 6, 9, 12, 15, 16, 19 | Q0 to Q7        | 3-State Outputs                          |
| 3, 4, 7, 8, 13, 14, 17, 18 | D0 to D7        | Data Inputs                              |
| 11                         | CK              | Clock Input (LOW to HIGH edge triggered) |
| 10                         | GND             | Ground (0V)                              |
| 20                         | V <sub>CC</sub> | Positive Supply Voltage                  |

TRUTH TABLE

| INPUT |    |   | OUTPUT    |
|-------|----|---|-----------|
| OE    | CK | D | Q         |
| H     | X  | X | Z         |
| L     |    | X | NO CHANGE |
| L     |    | L | L         |
| L     |    | H | H         |

X : Don't Care  
Z : High Impedance

## 7-3 MICOM PORT ASSIGNMENT

### HT-DS100N MICOM PORT

(LC877448)

rev3

2004.10.07 박 C

| NO | PORT | NAME    | I/O | TYPE | FUNCTION           | NO  | PORT | NAME    | I/O | TYPE | FUNCTION            |
|----|------|---------|-----|------|--------------------|-----|------|---------|-----|------|---------------------|
| 1  | P06  | P-TXD   | 0   |      | P-TXD              | 51  | PC5  | OPT I6  | I   |      | OPTION IN6          |
| 2  | P07  | P-STB   | 0   |      | P-STB 52           |     | PC6  | OPT I7  | I   |      | OPTION IN7          |
| 3  | P10  | P-RESET | 0   |      | PACK RESET         | 53  | PC7  | OPT I8  | I   |      | OPTION IN8          |
| 4  | P11  | P-ACK   | I   |      | PACK ACK           | 54  | VDD2 | VDD2    |     |      | VDD 5V              |
| 5  | P12  | WM-CE   | 0   |      | CE(WM8775)         | 55  | VSS2 | VSS2    |     |      | GND                 |
| 6  | P13  |         |     |      |                    | 56  | PD0  | OPT I9  | I   |      | OPTION IN9          |
| 7  | P14  |         |     |      |                    | 57  | PD1  | OPT I10 | I   |      | OPTION IN10         |
| 8  | P15  |         |     |      |                    | 58  | PD2  | OPT I11 | I   |      | OPTION IN11         |
| 9  | P16  | CK      | 0   |      | PS/WM/TU/WL CLK    | 59  | PD3  | OPT I12 | I   |      | OPTION IN12         |
| 10 | P17  | DO      | 0   |      | PS/WM/TU/WL DATA   | 60  | PD4  | OPT I13 | I   |      | OPTION IN13         |
| 11 | RES  | RESET   | I   |      | MICOM RESET        | 61  | PD5  | OPT I14 | I   |      | OPTION IN14         |
| 12 | XT1  | XT1     | I   |      | NC(PULL UP)        | 62  | PD6  | OPT I15 | I   |      | OPTION IN15         |
| 13 | XT2  | XT2     | 0   |      | NC(OPEN)           | 63  | PD7  | OPT I16 | I   |      | OPTION IN16         |
| 14 | VSS1 | GND     |     |      | GND                | 64  | PE0  |         |     |      |                     |
| 15 | CF1  | CF1     | I   |      | 10MHZ OSC IN       | 65  | PE1  |         |     |      |                     |
| 16 | CF2  | CF2     | 0   |      | 10MHZ OSC OUT      | 66  | PE2  |         |     |      |                     |
| 17 | VDD1 | VDD1    |     |      | VDD 5V             | 67  | PE3  | SCART-M | 0   |      | SCART MUTE          |
| 18 | P80  | AD1     | I   | AD   | KEY A/D 1          | 68  | PE4  | V-SW1   | 0   |      | A/V SW1             |
| 19 | P81  |         |     |      |                    | 69  | PE5  | V-SW2   | 0   |      | A/V SW2             |
| 20 | P82  | P-SENS  | I   |      | POWER SENSE        | 70  | PE6  |         |     |      |                     |
| 21 | P83  |         |     |      |                    | 71  | PE7  |         |     |      |                     |
| 22 | P84  |         |     |      |                    | 72  | PF0  |         |     |      |                     |
| 23 | P85  |         |     |      |                    | 73  | PF1  | LED3    | 0   |      | P/ON LED(Active"L") |
| 24 | P86  |         |     |      |                    | 74  | PF2  | VFD-CE  | 0   |      | CE(LC75725)         |
| 25 | P87  |         |     |      |                    | 75  | PF3  |         |     |      |                     |
| 26 | P70  | RDS-CK  | I   | INT  | RDS CLK/DAB REQ    | 76  | PF4  |         |     |      |                     |
| 27 | P71  | P-RXD   | I   | INT  | PACK RXD           | 77  | PF5  |         |     |      |                     |
| 28 | P72  |         |     |      |                    | 78  | PF6  | TI-RST  | 0   |      | RESET(TAS5112) CD   |
| 29 | P73  | REMO    | I   | INT  | REMOCON            | 79  | PF7  | LED2    | 0   |      | Volume DIMMER       |
| 30 | PA0  | P-ON    | 0   |      | POWER ON           | 80  | PL6  |         |     |      |                     |
| 31 | PA1  |         |     |      |                    | 81  | PL5  | EVR IN  | I   |      | VOLUME UP           |
| 32 | PA2  | T-DI    | I   |      | TUNER DATA IN      | 82  | PL4  | EVR IN  | I   |      | VOLUME DOWN         |
| 33 | PA3  | ST      | I   |      | STEREO             | 83  | PL0  |         |     |      |                     |
| 34 | PA4  | TUNED   | I   |      | RDS-IN             | 84  | PL1  |         |     |      |                     |
| 35 | PA5  | RDS-IN  | I   |      | TUNED              | 85  | PL2  |         |     |      |                     |
| 36 | PA6  | T-CE    | 0   |      | TUNER CE           | 86  | PL3  |         |     |      |                     |
| 37 | PA7  |         |     |      |                    | 87  | P30  |         |     |      |                     |
| 38 | PB0  |         |     |      |                    | 88  | P31  |         |     |      |                     |
| 39 | PB1  |         |     |      |                    | 89  | VSS3 | VSS3    |     |      | GND                 |
| 40 | PB2  |         |     |      |                    | 90  | VDD3 | VDD3    |     |      | VDD5V               |
| 41 | PB3  |         |     |      |                    | 91  | P32  |         |     |      |                     |
| 42 | PB4  |         |     |      | 92                 |     | P33  |         |     |      |                     |
| 43 | PB5  | TI-RST  | 0   |      | RESET(TAS5112)     | 93  | P34  |         |     |      |                     |
| 44 | PB6  | TI-SD   | I   |      | SHUT DOWN(TAS5112) | 94  | P35  | PS-DI   | I   |      | SO(PS9818)          |
| 45 | PB7  |         |     |      |                    | 95  | P00  | CLK     | 0   |      | VFDCLK              |
| 46 | PC0  | OPT 01  | I   |      | OPTION IN1         | 96  | P01  | DATA    | 0   |      | VFD DATA            |
| 47 | PC1  | OPT 02  | I   |      | OPTION IN2         | 97  | P02  | TI-RST  | 0   |      | RESET(TAS5112) AB   |
| 48 | PC2  | OPT 03  | I   |      | OPTION IN3         | 98  | P03  | PS-CS   | 0   |      | CS(PS9818)          |
| 49 | PC3  | OPT 04  | I   |      | OPTION IN4         | 99  | P04  | PS-RST  | 0   |      | RESET(PS9818)       |
| 50 | PC4  | OPT 05  | I   |      | OPTION IN5         | 100 | P05  | EXT-M   | 0   |      | EXT MUTE(PS9818)    |

<UPDATE CONNECTION>

|   |    |       |
|---|----|-------|
| 6 | 5  | CLK   |
| 5 | 4  | DATA0 |
| 4 | 3  | DATA1 |
| 3 | 17 | VDD   |
| 2 | 14 | GND   |
| 1 | 11 | RESET |

<PACK CONNECTION>

|           |       |
|-----------|-------|
| DVD-PACK  | MICOM |
| P-RXD <-- | P-TXD |
| P-TXD --> | P-RXD |
| P-ACK <-- | P-STB |
| P-STB --> | P-ACK |

FRONT<--->SUB PCB