# Receiver Card901/911/921/931

# Specification

version 1.0 2012.9.5

## 1. Functions and Features

Receiver Card RV901/911/921/931

RV901/911/921/931 is upgraded from the 8th generation system RV801. Compared with RV801, RV901 has all functions of RV801 and can replace RV801, besides, RV901 is added the following functionality:

1. support 12-bit HDMI colors input (required the 9th generation sending card)
2. using18-bit signal processor, maximum support 18-bit (260,000) gray (each of red, green and blue)
3. Single card maximum supports 1024X256 pixels, and 1024 grades single pixel chromaticity correction
4. Supports single-card color space conversion
5. Support configuration file readback
6. Support program replication
7. Supports hot backup with dual receiver cards for demanding performances screen
8. Supports pixel fault detection (requires a dedicated chip support)
9. Support network cable BER test
10. Support flat cable fault detection
11. Support the cabinet-door monitoring (open/close)
12. Two lines fan-speed monitoring
13. Three lines Voltage monitoring: one for the system, two for cabinet power
14. Temperature monitoring
15. Humidity monitoring (humidity sensor sold separately)
16. Smoke monitoring (smoke module sold separately)
17. In line with EU standards CE-EMC

# 2. RV901Output interface definition

The receiving card has 2 operating modes. In each mode, the 50Pin interfaces output different data. Operating modes are defined as following:

1. Normal mode (default mode)
Support full-color screen, virtual full-color screen and double-color display, each 50-pin interface has 8 groups of full-color / virtual screen data or 16 groups of two-color screen data.
In normal mode, 50pin is defined as follow.

| | | | |
|---|---|---|---|
| 1 | GND | VCC | 2 |
| 3 | GND | VCC | 4 |
| 5 | GND | SR | 6 |
| 7 | G16 | R16 | 8 |
| 9 | G15 | R15 | 10 |
| 11 | G14 | R14 | 12 |
| 13 | G13 | R13 | 14 |
| 15 | G12 | R12 | 16 |
| 17 | G11 | R11 | 18 |
| 19 | G10 | R10 | 20 |
| 21 | G9 | R9 | 22 |
| 23 | G8 | R8 | 24 |
| 25 | G7 | R7 | 26 |
| 27 | G6 | R6 | 28 |
| 29 | G5 | R5 | 30 |
| 31 | G4 | R4 | 32 |
| 33 | G3 | R3 | 34 |
| 35 | G2 | R2 | 36 |
| 37 | G1 | R1 | 38 |
| 39 | D | C | 40 |
| 41 | B | A | 42 |
| 43 | LAT | CLK | 44 |
| 45 | OE | GND | 46 |
| 47 | VCC | GND | 48 |
| 49 | VCC | GND | 50 |

2. 20 group parallels-data mode
Only for full-color screen
In this mode, 50pin is defined as follow.

| | | | |
|---|---|---|---|
| 1 | GND | VCC | 2 |
| 3 | GND | VCC | 4 |

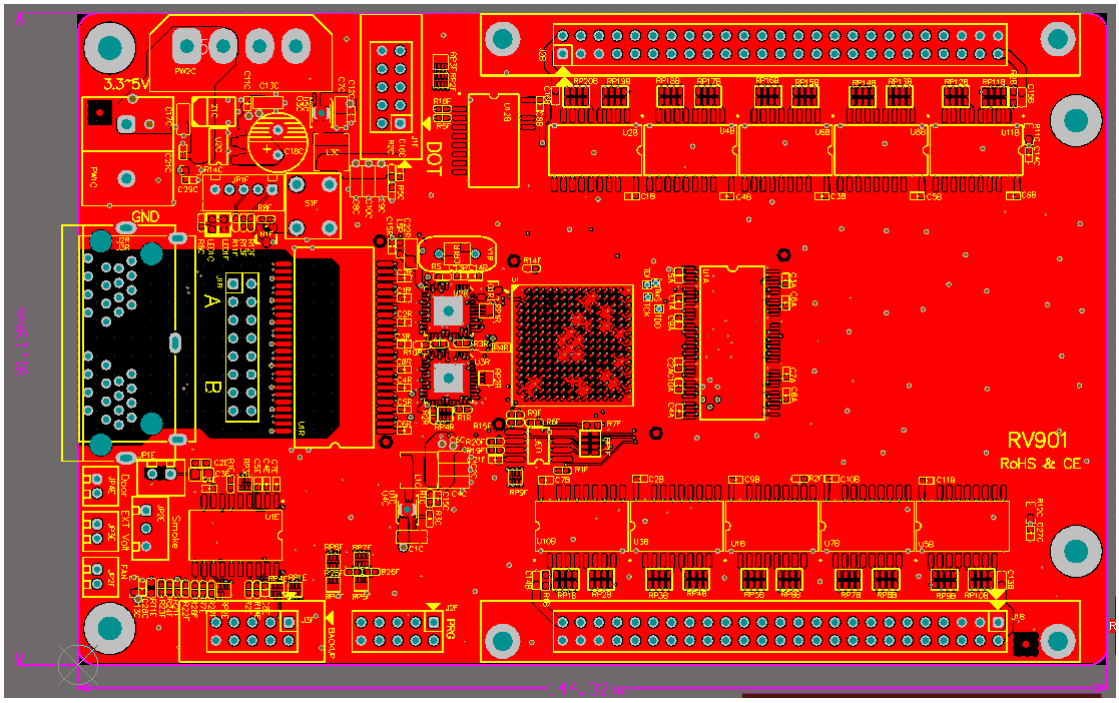
| | | | |
|---|---|---|---|
| 5 | GND | SR | 6 |
| 7 | NC | NC | 8 |
| 9 | B10 | G10 | 10 |
| 11 | R10 | B9 | 12 |
| 13 | G9 | R9 | 14 |
| 15 | B8 | G8 | 16 |
| 17 | R8 | B7 | 18 |
| 19 | G7 | R7 | 20 |
| 21 | B6 | G6 | 22 |
| 23 | R6 | B5 | 24 |
| 25 | G5 | R5 | 26 |
| 27 | B4 | G4 | 28 |
| 29 | R4 | B3 | 30 |
| 31 | G3 | R3 | 32 |
| 33 | B2 | G2 | 34 |
| 35 | R2 | B1 | 36 |
| 37 | G1 | R1 | 38 |
| 39 | D | C | 40 |
| 41 | B | A | 42 |
| 43 | LAT | CLK | 44 |
| 45 | OE | GND | 46 |
| 47 | VCC | GND | 48 |
| 49 | VCC | GND | 50 |

# 3. Model table

RV901 and RV921 are in stock. RV911 and RV931 need make to order.

| Model | RJ45 Direction | output interface type |
|---|---|---|
| RV901 | 90 Degree | interface in front side |
| RV911 | 180 Degree | interface in front side |
| RV921 | 90 Degree | interface at the back side |
| RV931 | 180 Degree | interface at the back side |

# 4. Dimensions




# 5. Working Conditions

| | Average | Minimum | Maximum | Unit |
|---|---|---|---|---|
| limit voltage | | 3 | 6 | V |
| Working Voltage | | 3.3 | 5.5 | V |
| Working Current | 0.8 | | | A |
| Working Temperature | | 0 | 60 | Celsius degree |
| Working Humidity | | 10 | 90 | % |