



Shenzhen Mooncell Electronics Co.,

FPGA Receiving Card

DY75 Product Specifications

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Updates History

<i>File Version</i>	<i>Hardware Version</i>	<i>Released Date</i>	<i>Updates Records</i>
V3.0	DY75 V1.2	05/08/2021	First Edition
V3.1	DY75 V2.0	25/11/2021	The hardware version is updated to V2.0, the size chart and size parameters are updated, the font format is adjusted, and the product image is updated
V3.2	DY75 V2.0	06/01/2022	The Maximum loading and brightness calibration loading updated to 768×256

1 Product Overview

Product Introduction

*DY75 is a standard receiving card that is fully researched and developed by Mooncell; it adopted 16x HUB75D interfaces; it can supports the maximum 32 groups of the parallel connection data;the maximum loading capacity could reach up to 768*256 pixels; with strong processing ability, supper reliability and high competitive price.*

Application Scenarios

It could be widely used for high-end LED display area that requires high standards; and has significant advantages in application scenarios such as led rental display, TV Broadcast, LED display for respectable Event,High-end project,etc.

2 Function Introduction

Displaying Effect

<p><i>It supports pixel level brightness and Chroma Calibration</i></p>	<p><i>Using it with the Mooncell Calibration Software to calibrate each one of the pixels on its brightness and Chroma. It can effectively eliminate the Chromatic aberration so as to enhance its consistency of the brightness and Chroma to a high level and result in a better displayed effects.</i></p>
<p><i>Multiple Solutions of the Displayed Effects are Supported</i></p>	<p><i>Using it with Monncell AutoLED Software, the Refresh and Grey Scale performances are able to take the precedence over other settings.</i></p>
<p><i>The Images on the led screen can be rotated 90 degree in a factor of multiple times</i></p>	<p><i>Using it with Mooncell AutoLED Software.</i></p>
<p><i>The images can be zoomed in or out</i></p>	<p><i>Using it with Mooncell AutoLED</i></p>

Enhanced Operability:

<p><i>The Receiving Card is Supported to detect its own Sequence number</i></p>	<p><i>Using the Network Port testing function on Mooncell AutoLED Software, the receiving card serial number and the Network Port Information will be displayed on the target cabinet. Users will be able to get to know the locations of the receiving cards as well as its Connection diagram.</i></p>
<p><i>Data Port User-Defined is supported</i></p>	<p><i>Using it with the Mooncell AutoLED Software, you can detect and edit the output data of the receiving cards.</i></p>
<p><i>To build up a complicated cabinet is supported</i></p>	<p><i>On AutoLED Software, there is an 'Advanced Setting', from here you can quickly arrange or structure the</i></p>

	<i>modules at your option.</i>
<i>To structure a complicated Led Screen is supported</i>	<i>On AutoLED Software, there is a “Complicated Led Screen Connection”, from here you can quickly arrange or structure the cabinet modules on your option.</i>

Hardware Stability

<i>Ethernet Cable Backup(Hot Backup)</i>	<i>The main cable will be having the loop connection. If there’s one cable breaks then still there will have another one to make sure the led display work properly.</i>
	<i>Dual receiving cards backup is supported(Dual Circuit backup design) Customized :when the main working receiving card fails, the other one (backup) will take its job to keep the led display working properly.</i>

Smart Software and Hardware Stability

<i>The receiving card can read the configuration data back from where it has been stored</i>	<i>You will be able to do this on Mooncell AutoLED Software.</i>
<i>It supports to detect the error rates of the network cable</i>	<i>On the Mooncell AutoLED Software, you can detect the network cable connectivity in real time to tell the condition of the network cables, so that you can get rid of any errors immediately.</i>
<i>Communication Monitoring Function</i>	<i>On Mooncell AutoLED Software, you can monitor the Working Status of the receiving cards in real time.</i>

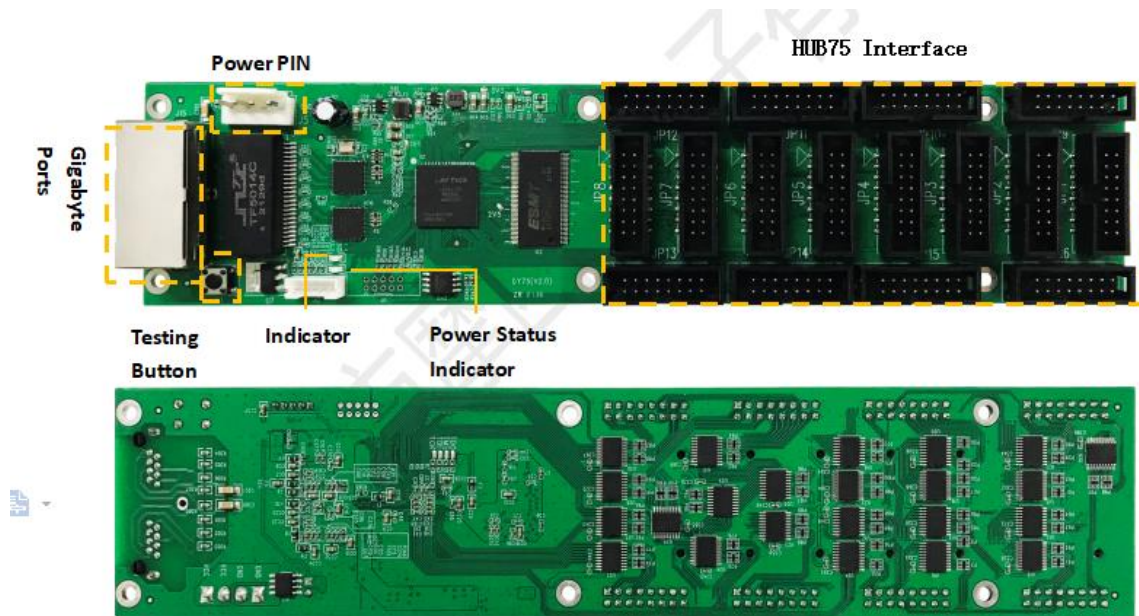
3 Product Parameters

Basic Parameters

RGB Parallel	The Maximum Loading Capacity(Pixel s)	Loading Capacity After lightness Calibrating (Pixels)	Loading Capacity after Color Calibrating(Pixels)
32 Groups	768*256	768*256	512*160

Single Network Pot Cascading Quantity	Scanning Lines Supported		
≤1000PCS	1-64 Scan		

Hardware Introduction



Output Port Definition

Port Definition of the 32 Groups of parallel connection data

R1	1
G1	2
B1	3
GND	4
R2	5
G2	6
B2	7
GND	8
OUT_A1	9
OUT_B1	10
OUT_C1	11
OUT_D1	12
OUT_CLK1	13
OUT_LA1	14
OUT_OE1	15
GND	16

CON16

R3	1
G3	2
B3	3
GND	4
R4	5
G4	6
B4	7
GND	8
OUT_A1	9
OUT_B1	10
OUT_C1	11
OUT_D1	12
OUT_CLK2	13
OUT_LA2	14
OUT_OE2	15
GND	16

CON16

R5	1
G5	2
B5	3
GND	4
R6	5
G6	6
B6	7
GND	8
OUT_A2	9
OUT_B2	10
OUT_C2	11
OUT_D2	12
OUT_CLK3	13
OUT_LA3	14
OUT_OE3	15
GND	16

CON16

R7	1
G7	2
B7	3
GND	4
R8	5
G8	6
B8	7
GND	8
OUT_A2	9
OUT_B2	10
OUT_C2	11
OUT_D2	12
OUT_CLK4	13
OUT_LA4	14
OUT_OE4	15
GND	16

CON16

R9	1
G9	2
B9	3
GND	4
R10	5
G10	6
B10	7
GND	8
OUT_A3	9
OUT_B3	10
OUT_C3	11
OUT_D3	12
OUT_CLK5	13
OUT_LA5	14
OUT_OE5	15
GND	16

CON16

R11	1
G11	2
B11	3
GND	4
R12	5
G12	6
B12	7
GND	8
OUT_A3	9
OUT_B3	10
OUT_C3	11
OUT_D3	12
OUT_CLK6	13
OUT_LA6	14
OUT_OE6	15
GND	16

CON16

R13	1
G13	2
B13	3
GND	4
R14	5
G14	6
B14	7
GND	8
OUT_A4	9
OUT_B4	10
OUT_C4	11
OUT_D4	12
OUT_CLK7	13
OUT_LA7	14
OUT_OE7	15
GND	16

CON16

R15	1
G15	2
B15	3
GND	4
R16	5
G16	6
B16	7
GND	8
OUT_A4	9
OUT_B4	10
OUT_C4	11
OUT_D4	12
OUT_CLK8	13
OUT_LA8	14
OUT_OE8	15
GND	16

CON16

R9	1
G9	2
B9	3
GND	4
R10	5
G10	6
B10	7
GND	8
OUT_A3	9
OUT_B3	10
OUT_C3	11
OUT_D3	12
OUT_CLK5	13
OUT_LA5	14
OUT_OE5	15
GND	16

CON16

R11	1
G11	2
B11	3
GND	4
R12	5
G12	6
B12	7
GND	8
OUT_A3	9
OUT_B3	10
OUT_C3	11
OUT_D3	12
OUT_CLK6	13
OUT_LA6	14
OUT_OE6	15
GND	16

CON16

R13	1
G13	2
B13	3
GND	4
R14	5
G14	6
B14	7
GND	8
OUT_A4	9
OUT_B4	10
OUT_C4	11
OUT_D4	12
OUT_CLK7	13
OUT_LA7	14
OUT_OE7	15
GND	16

CON16

R15	1
G15	2
B15	3
GND	4
R16	5
G16	6
B16	7
GND	8
OUT_A4	9
OUT_B4	10
OUT_C4	11
OUT_D4	12
OUT_CLK8	13
OUT_LA8	14
OUT_OE8	15
GND	16

CON16

R17	1
G17	2
B17	3
GND	4
R18	5
G18	6
B18	7
GND	8
OUT_A5	9
OUT_B5	10
OUT_C5	11
OUT_D5	12
OUT_CLK9	13
OUT_LA9	14
OUT_OE9	15
GND	16

CON16

R19	1
G19	2
B19	3
GND	4
R20	5
G20	6
B20	7
GND	8
OUT_A5	9
OUT_B5	10
OUT_C5	11
OUT_D5	12
OUT_CLK10	13
OUT_LA10	14
OUT_OE10	15
GND	16

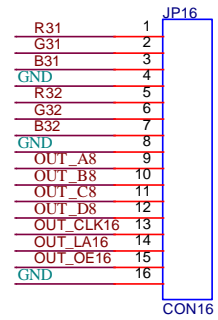
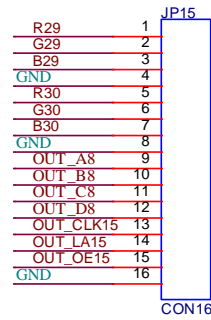
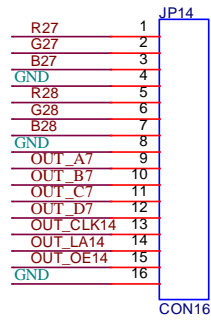
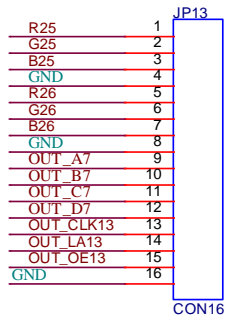
CON16

R21	1
G21	2
B21	3
GND	4
R22	5
G22	6
B22	7
GND	8
OUT_A6	9
OUT_B6	10
OUT_C6	11
OUT_D6	12
OUT_CLK11	13
OUT_LA11	14
OUT_OE11	15
GND	16

CON16

R23	1
G23	2
B23	3
GND	4
R24	5
G24	6
B24	7
GND	8
OUT_A6	9
OUT_B6	10
OUT_C6	11
OUT_D6	12
OUT_CLK12	13
OUT_LA12	14
OUT_OE12	15
GND	16

CON16



JP1-JP16 PIN Definition :

PIN#	1	3	5	7	9	11	13	15
Definition	R0	B0	R1	B1	A	C	CLK	OE
PIN#	2	4	6	8	10	12	14	16
Definition	G0	GND	G1	E	B	D	LAT	GND

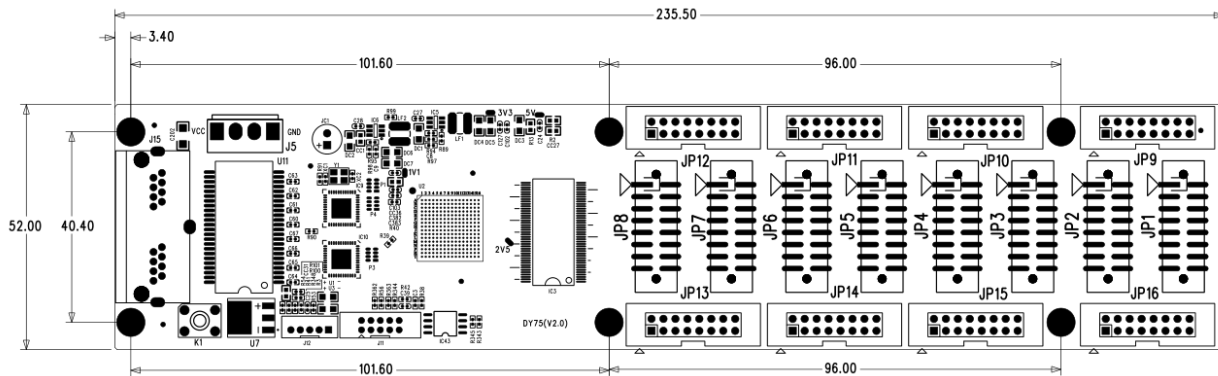
J12 Definition:

PIN#	1	2	3	4	5
Definition	GND\KEY-	KEY+	LEDR-	3V3\LED+	LEDG-

Indicator Illustration

Indicator	Position	Status	Illustration
Status Indicator (Green)	U1	Flickering Slowly at a constant	The receiving card is working properly, The Ethernet Cable Connection is fine, No DVI Signal Input
		Flickering Fast at a constant	The receiving card is working properly, The Ethernet Cable Connection is fine, with DVI Signal Input
		It goes out	No Gigabit Ethernet Signal
		Fast Flickering 3 Times	The receiving card is working properly, The Ethernet Cable Loop Connection is fine, DVI Signal Input
Status Indicator	U3	Long Lasting On	Power is On

Dimensions



4 Product Specifications

Specifications

<i>Electric Parameters</i>	<i>Input Voltage</i>	<i>DC3.5-5.5V</i>
	<i>Rated Current</i>	<i>0.6A</i>
	<i>Rated Power</i>	<i>3W</i>
<i>Operating Environment</i>	<i>Operating Temperature</i>	<i>-20 °C - 70 °C</i>
	<i>Operating Humidity</i>	<i>10%RH-90%RH</i>
<i>Storage Environment</i>	<i>Temperature</i>	<i>-25 °C ~125 °C</i>
<i>Dimensions</i>	<i>235.5mmX52 mm</i>	
<i>Net Weight</i>	<i>106.7g</i>	
<i>Certifications</i>	<i>It conforms to RoHS and CE-EMC standards.</i>	

Precautions

1. The testing (debugging) and installation should be done by the qualified professionals
2. Anti-Static, Water-Proof and Dust-Proof Required