



Shenzhen Mooncell Electronics Co., Ltd

# FPGA Receiving Card Series

## C10 Specifications

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## *Updates History*

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<i>File Version</i>	<i>Released Date</i>	<i>Updates Records</i>
<i>V3.0</i>	<i>01/08/2020</i>	<i>First Edition/Release</i>
<i>V3.1</i>	<i>10/08/2020</i>	<i>Pin Definition Edited/Indicator Added</i>
<i>V3.2</i>	<i>07/12/2020</i>	<i>Edited the Pin Definition,Hardware Version and description of its function.</i>

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# 1 Product Overview

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## **Product Introduction**

*Mooncell C10 is a small sized & high-end receiving card that independently researched and developed by Mooncell, it could load 512 pixels, the maximum loading capacity could reach up to 1024 pixels; with its strong processing ability,super reliability and its high competitive price,the product has been widely used and loved by the customers. The size of the C10 Card is quite small: 85mm x 12mm, that's the smallest card of its kind among its rivals in the industry, saving a lot more space, using less external cables, simplifying the design of the led display structure,reducing the difficulty of the design, helping customer to achieve the unprecedented innovative designs; the C10 actually solves quite a few problems: Limited Space,Screen Protection,After Sales Service,Price,etc, which will further provide a competitive advantage for differentiated product design.*

## **Product Features**

- *It features the small size and thickness, saving a lot more space for the narrow cabinet and space of the led strip(bar).*
- *The output features the universal 2.0mm connector, with high stability and reliability.*
- *It features the advanced image processing core, which has greatly improved the performance of the displaying.*
- *With strong Led Driver IC compatibility, supporting the driving of all chips.*
- *It supports a safe upgrading.*
- *It supports arbitrary offset, the contents could be arbitrary rotated, so that to support the connection of the special-shaped led displays.*
- *it supports to read back the configurations from the cabinets.*
- *It reduces the quantity of the cables and connectors that will be used, simplifies the structure design of the led screen. The signal transmission will be via just the 2core Cat5 twisted pair cable,which could combine the wiring of the led display signal and power supply into just one design. And the external cascading connection line changes from the traditional 2 in & 2 out to 1 in & 1 out.*
- *It features a fully enclosed design, simplify the design, improve the EMC and help to pass the EMC Certifications.*

### **Application Scenarios**

*It could be widely used for LED Strip Screens, Film Screens, Glass Screens, Grid Screens, Lighting Screens and other application scenarios with strict space requirements*

## **2 Function Introduction**

### **Enhanced Displayed Results**

<i>Multiple Solutions of the Displayed Effects are Supported</i>	<i>Using it with AutoLED Software, the Refresh and Grey Scale performances are able to take the precedence over other settings.</i>
<i>The Images on the led screen can be rotated 90 degree in a factor of multiple times</i>	<i>Using it with Autoled Software.</i>

### **Enhanced Operability**

<i>Data Port User-Defined is supported</i>	<i>Using it with the Mooncell Autoled Software, you can detect and edit the output data of the receiving cards.</i>
<i>To build up a complicated cabinet is supported</i>	<i>On Autoled Software, there is an 'Advanced Setting', from here you can quickly arrange or structure the 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>

### **Enhanced Hardware Stability**

<i>Hot Backup(Online Backup) is supported</i>	<i>Network Port Backup: The 2 Network Ports on the HUB enhanced the reliability of its series connection by having the main network cable Loop Backup. Whenever a network cable fails, the other one will take the job to keep the led screen running properly.</i>
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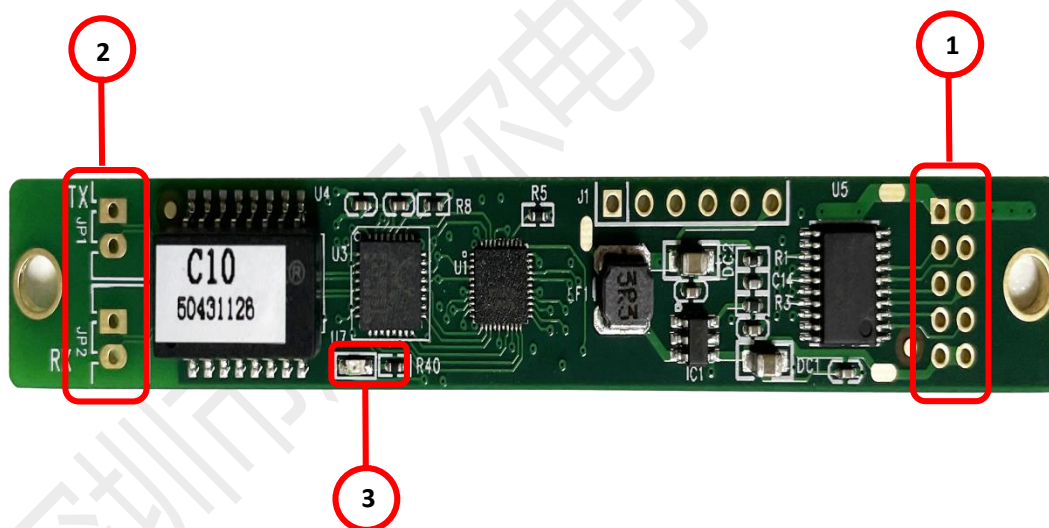
# 3 Product Parameters

## Basic Parameters

Serial Connection Data ( RGB ) /Parallel	The maximum Loading capacity (pixels)	Loading Capacity After lightness Calibrating (Pixels)	Loading Capacity after Color Calibrating(Pixels)
1 Group	512 Pixels	-	-

Single Network Pot Cascading Quantity	Scanning Lines Supported		
≤256PCS	1-2 Scan		

## Hardware Introduction

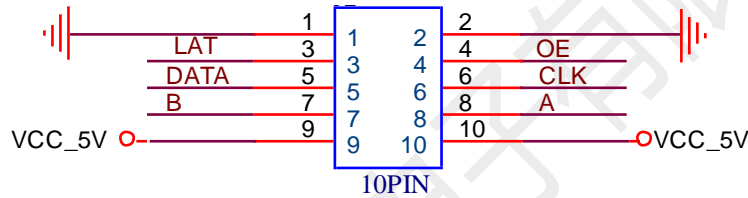


**Ports Illustrations**

#	Position	Illustrations
1	J2	To transfer the signal to the led screen.(output)
2	JP1	Signal Input Interface, the signal will be inputted from the splicer MTB(SH)100
	JP2	Signal Output Interface,the signal will be cascading outputted to the next receiving card.
3	D1	Status Indicator

**Output Ports Definition**

**Definition of the Port**



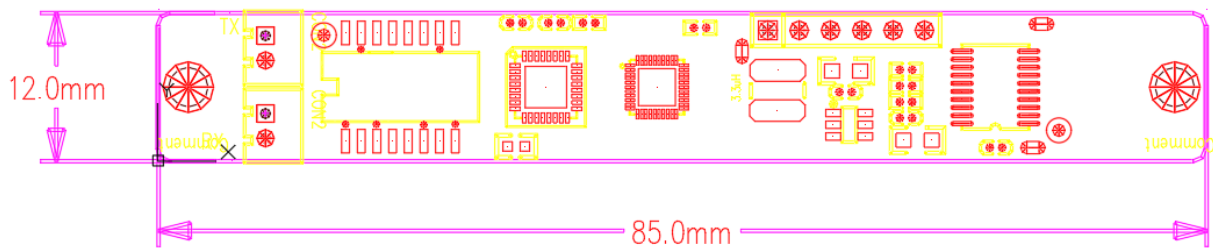
**J2 Definition Illustration**

Illustration	Definition	PIN	PIN	Definition	Illustration
Grounding	GND	1	2	GND	Grounding
Latch Signal	LE	3	4	OE	Display Enable
Serial Connection Data	DATA	5	6	CLK	Serial Connection Clock
Line Decoding Signal	B	7	8	A	Line Decoding Signal
5V	VCC	9	10	VCC	5V

## Indicator Illustration

Indicator	Position	Status	Illustration
Status Indicator (Green)	D1	Flickering Slowly at a constant speed	The receiving card is working properly, The Ethernet Cable Connection is fine, No DVI Signal Input
		Flickering Fast at a constant speed	The receiving card is working properly, The Ethernet Cable Connection is fine, with DVI Signal Input
		It goes out	No Gigabit Ethernet Signal
		2 flashes at an interval of 4S	The receiving card enters the boot state
Power Indicator (Red)	D2	Long Lasting On	The receiving card is normally powered

## Dimensions





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## 4 *Product Specifications*

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### *Specifications*

<i>Electric Parameters</i>	<i>Input Voltage</i>	<i>DC3.5-5.5V</i>
	<i>Rated Current</i>	<i>0.4A</i>
	<i>Rated Power</i>	<i>2W</i>
<i>Operating Environment</i>	<i>Operating Temperature</i>	<i>-20 °C - 75 °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>85mm X 12mm</i>	
<i>Net Weight</i>	<i>10g</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*