Metta Star

Endless Possibilities

FPGA Receiving Card

BH 712

Product Specifications

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CONTENT

1. Product Overview

Product Introduction –

BH 712 is a receiving card that fully researched and developed by **METTA STAR**; it adopted 12xHUB75E interfaces; it can supports the maximum 24 groups of the parallel connection data; the maximum loading capacity could reach up to 512*384 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

It supports pixel level brightness and Chroma Calibration –
Using it with the METTA STAR 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.

Multiple Solutions of the Displayed Effects are Supported –
Using it with MS COMMANDER Software, the Refresh and Grey Scale performances are able to take the precedence over other settings.

The Images on the led screen can be rotated 90 degree in a factor of multiple times –
Using it with MS COMMANDER Software.

The images can be zoomed in or out –
Using it with MS COMMAMDER Software.

Enhanced Operability

The Receiving Card is Supported to detect its own Sequence number – Using the Network Port testing function on MS COMMANDER 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.

Data Port User-Defined is supported – Using it with the MS COMMANDER Software, you can detect and edit the output data of the receiving cards.

To build up a complicated cabinet is supported – On MS COMMANDER Software, there is 'Advanced Setting', from here you can quickly arrange or structure the modules at your option.

To structure a complicated Led Screen is supported – On MS COMMANDER Software, there is a "Complicated Led Screen Connection", from here you can quickly arrange or structure the cabinet modules on your option.

Hardware Stability

Ethernet Cable Backup(Hot Backup) – 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.

The receiving card can read the configuration data back from where it has been stored – You will be able to do this on MS COMMANDER Software.

It supports to detect the error rates of the network cable – On the MS COMMANDER 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.

Dual Power Supplies Backup is supported – Two Power Supplies can be connected simultaneously and the working status can be detected. Whenever there's a power supply failure, it can be detected, the system then will automatically decrease the brightness of the led screen so that it can still keep working properly.

It supports to detect the voltage, Temperature and Power (customized) – It will detects the voltage status of the receiving cards .The operating temperature of the receiving cards could be detected. The power status of the power supplies could be detected.

3. Product Parameters

RGB Parallel	Data Ports/Interfaces/QTY	Driver IC	The Maximum Loading Capacity (Pixels)	Loading Capacity After lightness Calibrating (Pixels)	Loading Capacity after Color Calibrating (Pixels)
24 Groups	HUB75E/12	Conventional	512*32O	512*256	256*32O
		PWM	512*384	512*256	256*32O

Basic Parameters –

- Single Network Pot Cascading Quantity –≤1OOOPCS
- Scanning Lines Supported – 1-64 Scan

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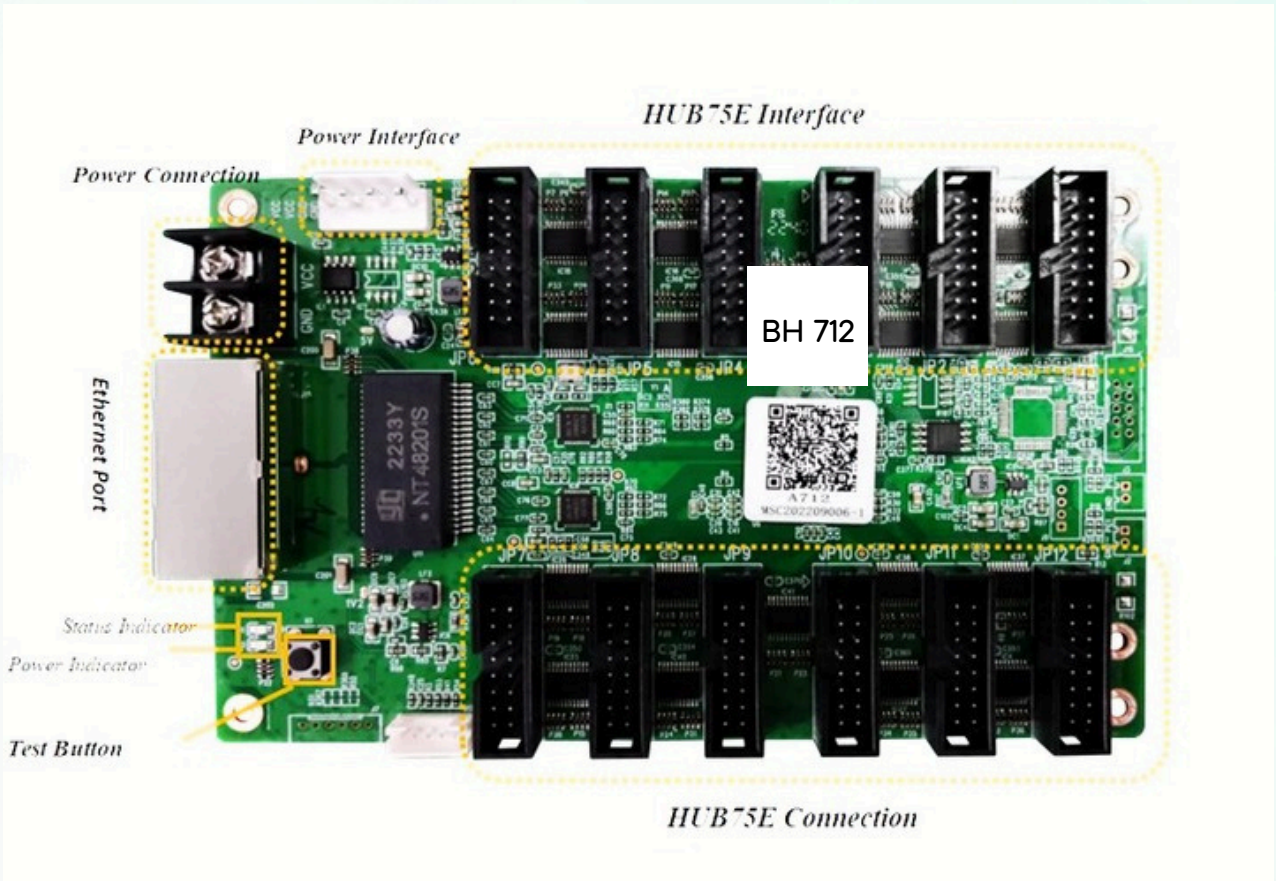
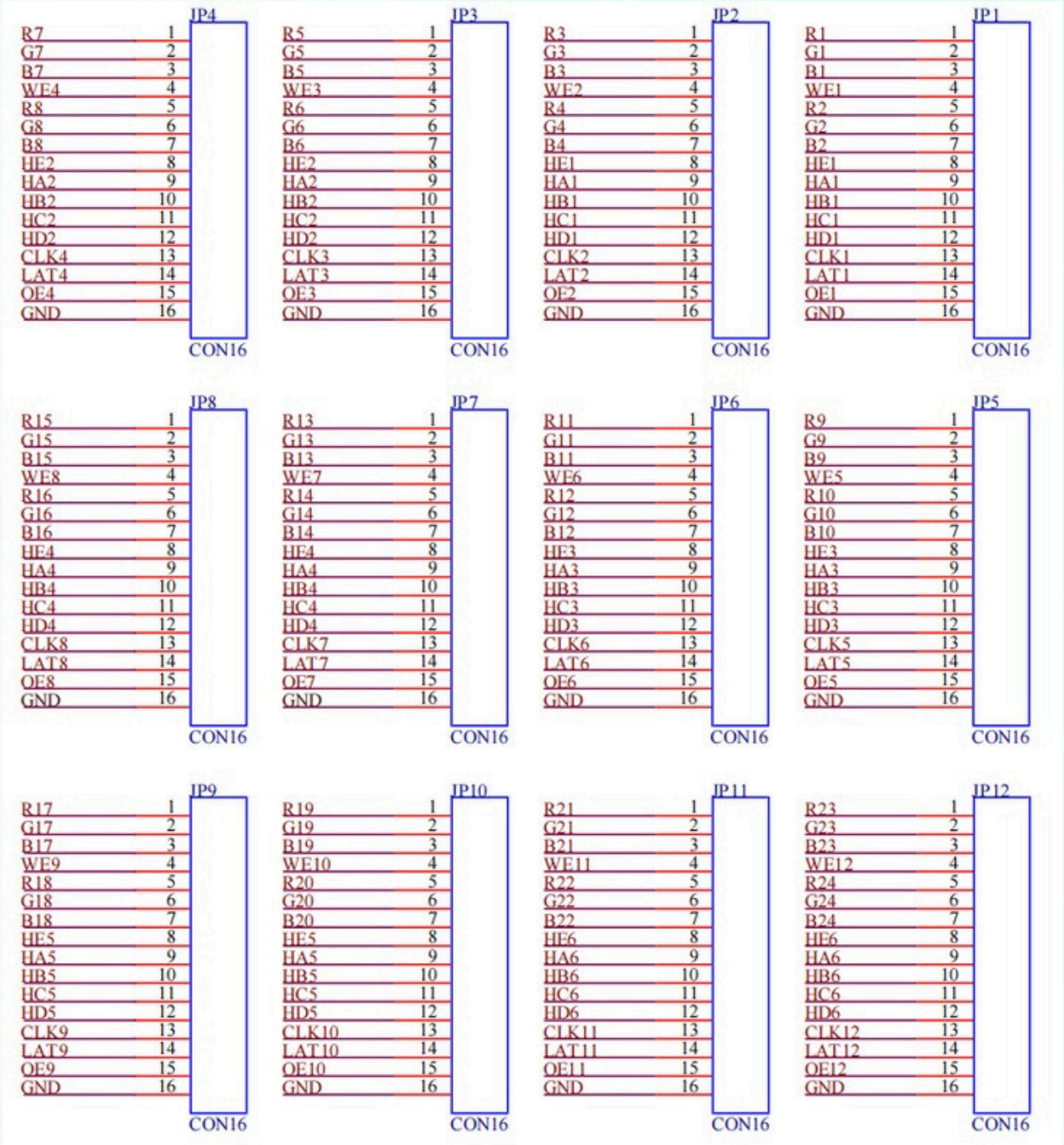
Hardware Introduction



Output Port Definition

Port Definition of the 24 Groups of parallel connection data –



JP1-JP12 PIN Definition -

Illustration	Definition	PIN#	PIN#	Definition	Illustration
RGB Data Output	R	1	2	G	RGB Data Output
	B	3	4	GND	GND
	R	5	6	G	RGB Data Output
	B	7	8	HE	Line Decoding Signal
Line Decoding Signal	HA	9	10	HB	
	HC	11	12	HD	
Shift Clock Output	CLK	13	14	LAT	Latch Signal
Display Enable (Remarks 1)	OE	15	16	GND	GND

Remarks 1:
Pin # 15 is the display enable pin. And When using the PWM chip it will be the GCLK Signal.

- **JP11 PIN Definition –**

Definition	PIN#	PIN#	Definition
+5V	1	2	GND
FLS_CS	3	4	FLS_DO
FLS_CLK	5	6	FLS_DI
PROGRAM_B	7	8	mCONF_DONE
GND	9	1O	+5V

- **J12 Indicator PIN Definition:**

PIN#	1	2	3	4	5
Definition	GND/KEY-	KEY+	LEDR-	VCC/LED+	LEDG-

- **J14 Socket PIN Definition:**

PIN#	1	2	3	4
Definition	VCC	VCC	GND	GND

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 Tunes	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

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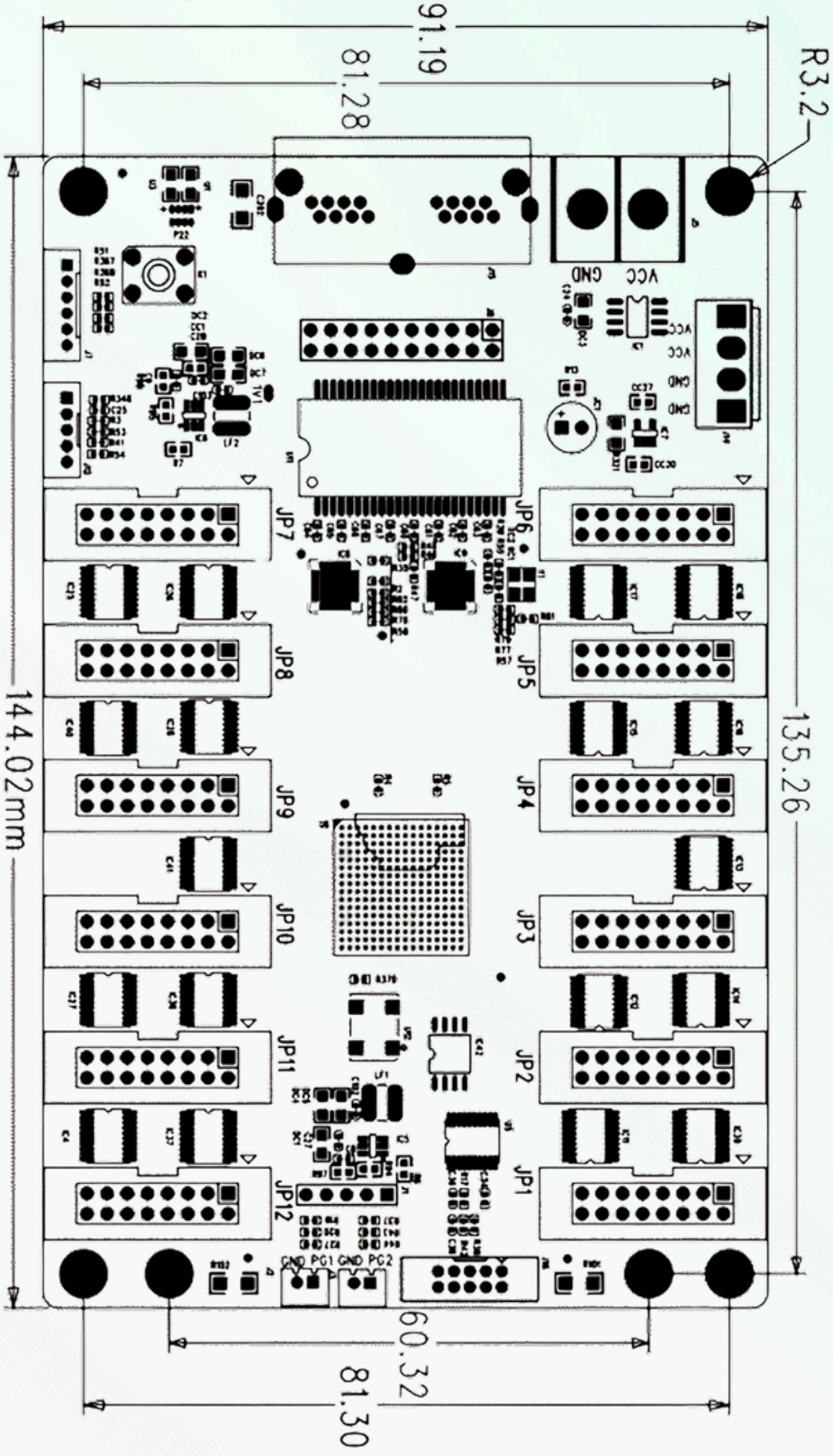
Dimensions -



4.Product Specifications

Specifications

Electric Parameters	Input Voltage	DC3.5-5.5V
	Rated Current	O.6A
	Rated Power	3W
Operating Environment	Operating Temperature	-20°C - 70°C
	Operating Humidity	10%RH-90%RH
Storage Environment	Temperature	-25°C～125°C
Dimensions	144.02mmX91.19mm	
Net Weight	100.8g	
Certifications	It conforms to RoHS and CE-EMC standards.	

PRECAUTIONS –

- **Safety: Follow standard safety practices when working with electrical equipment, such as wearing appropriate protective gear and avoiding contact with exposed electrical connections.**
- **The testing (debugging) and installation should be done by the qualified professionals.**

THANK YOU FOR CHOOSING METTA STAR PRODUCT.

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