

7MP1200 Powerline Communication Module

Data Sheet

7inova Technology Limited

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一. Introduction

7MP1200 power communication module is designed based on QUALCOMM QCA7550 main chipset. With the characteristics of high integration and small size, it can provide power line transmission speeds up to 1300Mbps with stable operation and reliable performance.

The 7MP1200 power communication module provides users with DC12V power interface, PLC communication interface, universal GPIO interface, working status indication interface and network interface.

二. Feature

1. Supports up to 64 nodes;
2. Support IEEE802.3i, IEEE802.3u, IEEE802.3ab standards;
3. Support HomePlug AV, HomePlug AV2, IEEE1901, IEEE1905.1;
4. Transmission of data over existing power lines, providing transmission rates up to 1300 Mbps;
5. 10/100/1000Mbps adaptive Ethernet interface;
6. Support 300m transmission distance (within the same power meter);
7. Support 128-bit AES encryption to ensure network data transmission security;
8. Support any operating system, including Mac, Linux
9. Support PLC DC access, with lightning protection.
10. Flexible application of GPIO interface
11. Both the ethernet port and 12V power supply support pin and socket connecting way. Customers can choose freely.

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三. Typical Application

电力线传输网络安防监控系统拓展图

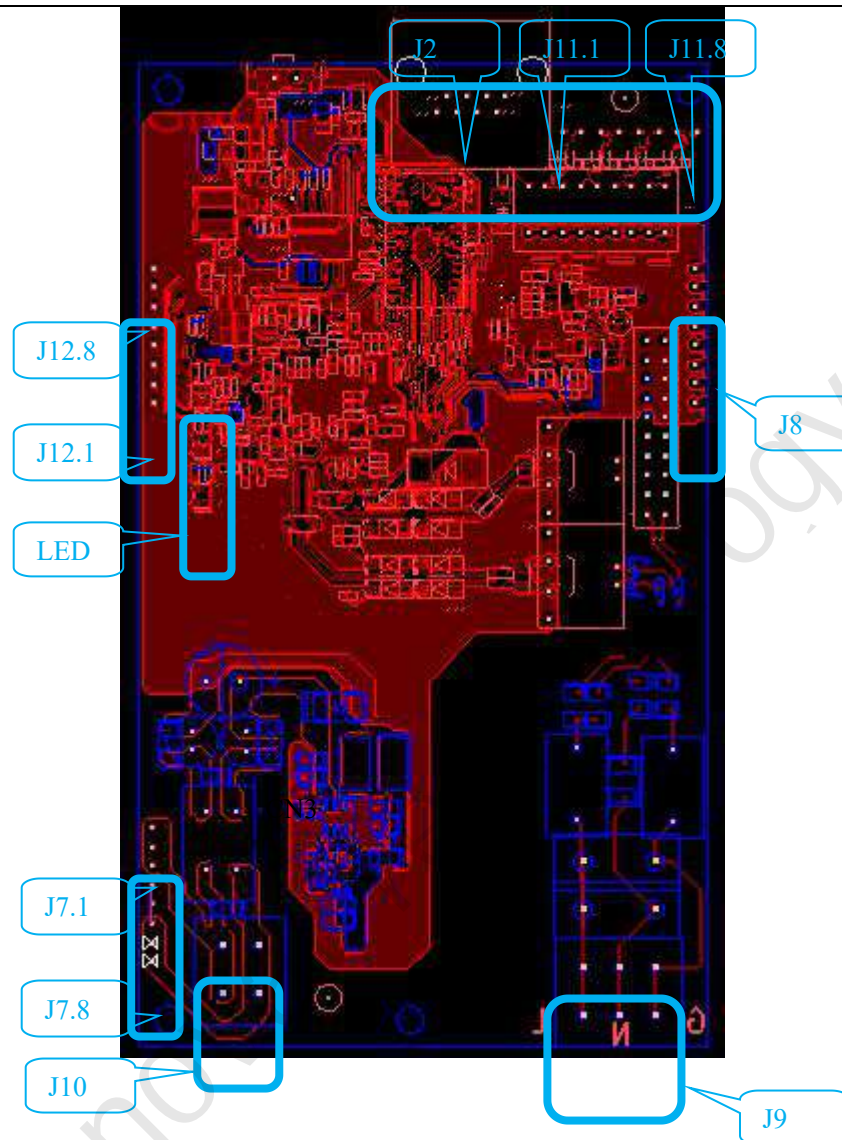


四、 Pin Definition

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五、 Pin Function Details

J7 and J10: DC12V input interface (AC 12V/0.3A)

Pin Number	Definition	Input/Output	Pin Function Description
J7.1,J7.2,J7.3	12V -	\	12V+
J7.6,J7.7,J7.8	12V +	\	12V-

J9: PLC communication interface (Support DC direct connect)
This interface provides lightning protection

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Pin Number	Definition	Input/Output	Pin Function Description
1	L	\	Fire line
2	N	\	Neutral Line
3	G	\	Ground Line

J12: GPIO interface (J12 pin sequence is shown in the figure above)

Pin Number	Definition	Input/Output	Pin Function Description
1	GPIO0	Input/Output	QCA7550 GPIO Pin
2	GPIO1	Input/Output	QCA7550 GPIO Pin
3	GPIO4	Input/Output	QCA7550 GPIO Pin
4	GPIO6	Input/Output	QCA7550 GPIO Pin
5	GPIO7	Input/Output	QCA7550 GPIO Pin
6	GPIO8	Input/Output	QCA7550 GPIO Pin
7	GPIO9	Input/Output	QCA7550 GPIO Pin
8	GPIO10	Input/Output	QCA7550 GPIO Pin

LED: status indicator, indication of module operating status

LED No.	Indicator	Description
1	LAN	Green On: Lan Connected; Blinking:Data in transmission
2	DATA	Green On: Powerline Connected; Blinking: Data in transmission
3	POWER	Green On: Power On; Blinking: Pairing

J11: 1000Mbps ETH Port, Compatible with RJ45 Output (J11 pin sequence is shown in the figure above)

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Pin Number	Definition	Input/Output	Pin Function Description
1	RD0-	Input/Output	Network receiving signal-
2	RD0+	Input/Output	Network receiving signal+
3	TD0-	Input/Output	Network receiving signal-
4	TD0+	Input/Output	Network receiving signal+
5	RD1-	Input/Output	Network receiving signal-
6	RD1+	Input/Output	Network receiving signal+
7	TD1-	Input/Output	Network receiving signal-
8	TD1+	Input/Output	Network receiving signal+

J8 can choose to provide a fixed effect

六、 Electrical Characteristics

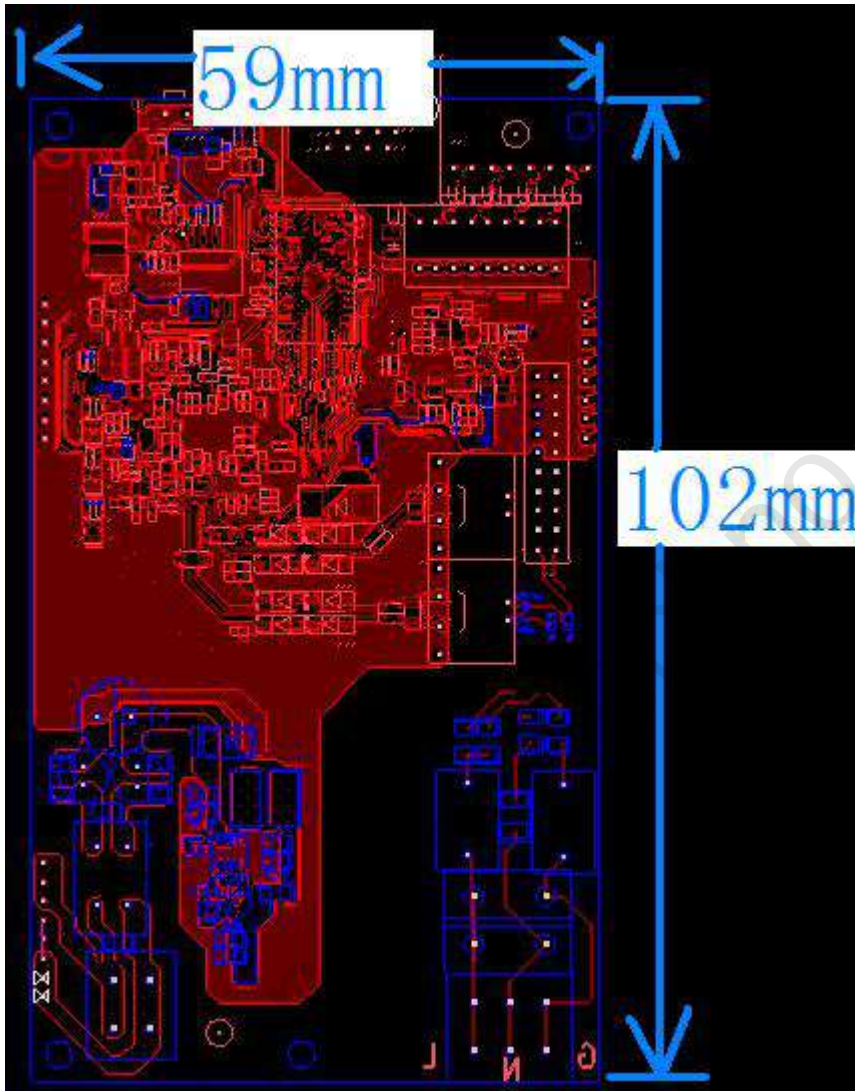
	Min	Typical	Max	Unit
12V Working Voltage	11.76V	12V	12.24	V
12V Working Current	\	0.3	\	A

七、 Module Size

Front Side:

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八、 Specifications

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Hardware Parameter	
Model	7MP1200
Standards	HomePlug AV , HomePlug AV2 , IEEE1901 , IEEE1905.1 , IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab
	TCP/IP, IGMP, CSMA/CA, QoS
Modulation	OFDM (1024/256/64/16-QAM,QPSK,BPSK,ROBO)
Frequency	2-68MHz
TransferSpeed (PHY)	1300Mbps
Interface	DC Power port, LAN port, GPIO port, PLC Communication Port
LED Indicator	Power, Data, LAN
OS	Windows 98SE/ME/2000/2003/XP/Vista, Windows7, Linux, Mac OS
Transfer Distance	300meter (Same power meter)
Coverage Range	5000 Square Feet
Security	128-bit AES encrypted
Working Voltage	DC-12V-0.3A
Power Consumption	≤3.5W
Size	59x102x15mm (LxWxH)
Weight	60g
Environment	
Working Temperature	0°C~70°C
Storage Temperature	-20°C~70°C
Working Humidity	10%~90%RH No condensation
Storage Humidity	5%~90%RH No condensation