

BINAR PRODUCTION SYSTEMS

# LP304 GATEWAY

Industrial IoT Gateway

- CAN Master / Slave
- PROFINET Slave
- Ethernet / Wi-Fi
- Binar Wireless System



**New!**

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# LP304 GATEWAY

A powerful industrial IoT Gateway that enables master systems to control equipment on the production shop floor.

Binar has a broad range of products that are used to build efficient support systems for Lean Manufacturing. The gateway acts as a bridge between a master system and the different hardware modules on the shop floor. As an example, a server application or PLC may connect through the gateway and control a Pick to Light system.

Master systems may connect to the LP304 gateway using:

- ETHERNET / Wi-Fi
- CAN
- PROFINET

The gateway has a built in MQTT broker to support very efficient and lightweight message exchanges between devices. The system can communicate via modern protocols such as REST and MQTT to control all kinds of I/O devices including all Binar CAN products such as Pick to Light, BiDisp3 LED Displays, CAN Buttons and Binar Wireless System slaves.

A PLC may connect with the LP304 model PROFINET-CAN and communicates with both CAN-slaves and Binar Wireless System slaves.

With the LP304 CAN-CAN an extra CAN-single bus will be available.

Also, as an option it may be connected as a slave in a Binar system with a LP305 Gateway.

## Binar Wireless System

The LP304 is equipped with the new Binar Wireless System that adds wireless capability to low energy I/O points like Andon buttons, smart tools and more.



TECHNICAL	DATA
Part number	50304 LP304 GW ETH-CAN 50307 LP304 GW CAN-CAN 50308 LP304 GW PROFINET-CAN
Power supply	20-30 VDC
Data transfer	CAN, 1 IN & 1 OUT Ethernet, 1 port Binar Wireless System Option: <ul style="list-style-type: none"><li>• Wi-Fi</li><li>• Extra CAN out</li><li>• PROFINET, 2 ports. PROFINET-RT and IRT functionality spec.2.3, Pre-conformance supporting Class A, B and C, Dual port cut-through switch implemented</li></ul>
Protocols device interface	REST, MQTT
CE	RED & RoHS
Temperature range	0 - 50 °C
Humidity	0 - 95 % non-condensing
Enclosure	IP41
Mounting	Mounted with screws
Weight	650 g
Dimensions	w 150 x h 142 x d 55 mm

BINAR WIRELESS SYSTEM	
Frequency	2.4 GHz
Output	+5 dBm
Type	IEEE 802.15.4
Communication	IPv6, 6lowPAN
Encryption	AES-128
Wireless range open air	50 meters

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2020-04-28LP304V1.01



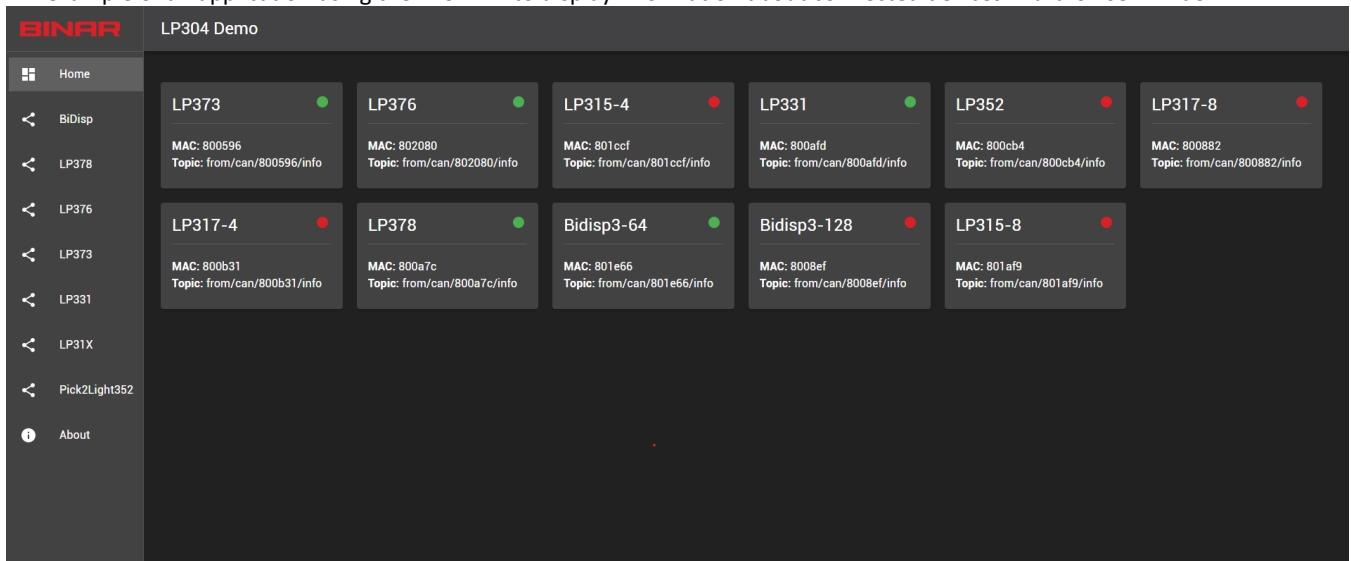
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# LP304 GATEWAY

## REST API

The LP304 Gateway exposes a REST API (Application Programming Interface) this allows custom front end applications such as a web interface to be built, Swagger Interactive API documentation is also included which provides the ability to test the API calls in a browser. The API can communicate with Binar devices such as BiDisp3, LP317 I/O box, LP376 among others, and collect information from them such as I/O state, status and device information as well as provide the opportunity to manipulate some of the connected devices end points.

An example of an application using the REST API to display information about connected devices in a browser window.



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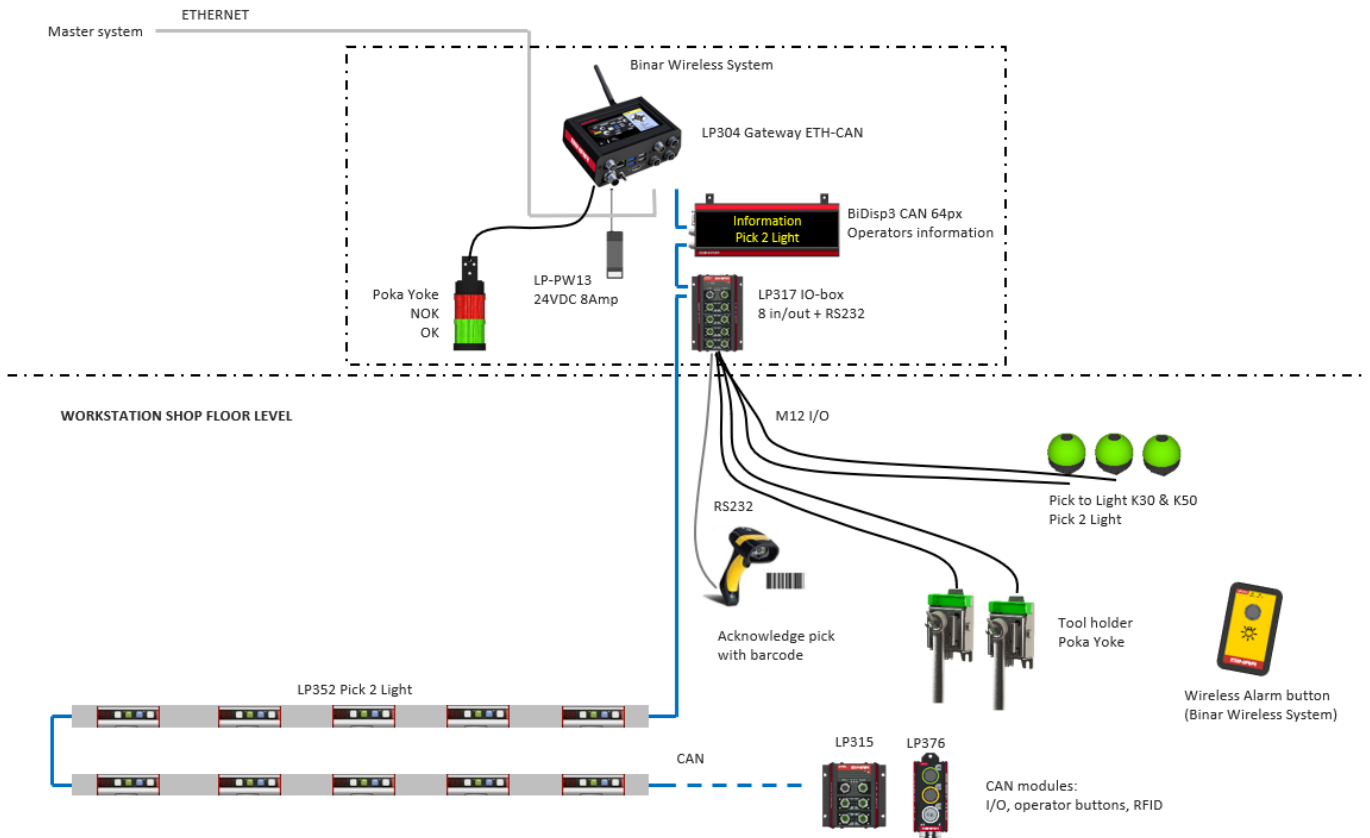


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# LP304 GATEWAY

50304 LP304 GW ETH CAN  
**ETHERNET/Wi-Fi to CAN + BWS**  
**System overview, an example:**

-  Ethernet
  -  CAN (Single)
  -  I/O 4IN or 2IN/2OUT
  -  Power 24VDC 8Amp
-  Binar Wireless System



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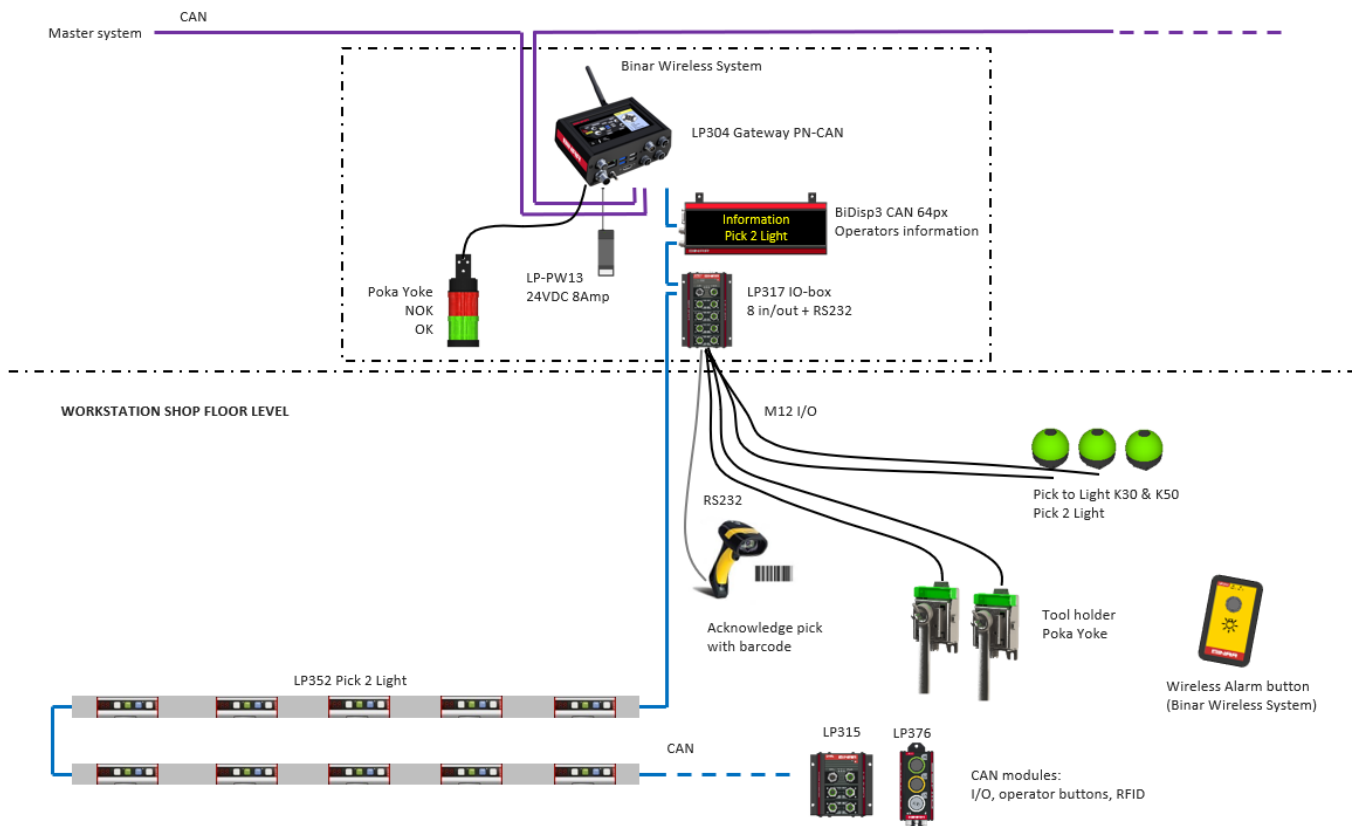
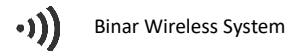
# LP304 GATEWAY

50307 LP304 GW CAN-CAN

CAN to CAN + BWS

System overview, an example:

-  CAN (Main)
-  CAN (Single)
-  I/O 4IN or 2IN/2OUT
-  Power 24VDC 8Amp
-  Power 24VDC 4Amp



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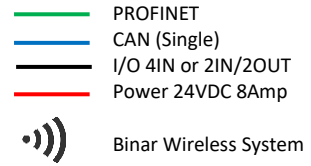


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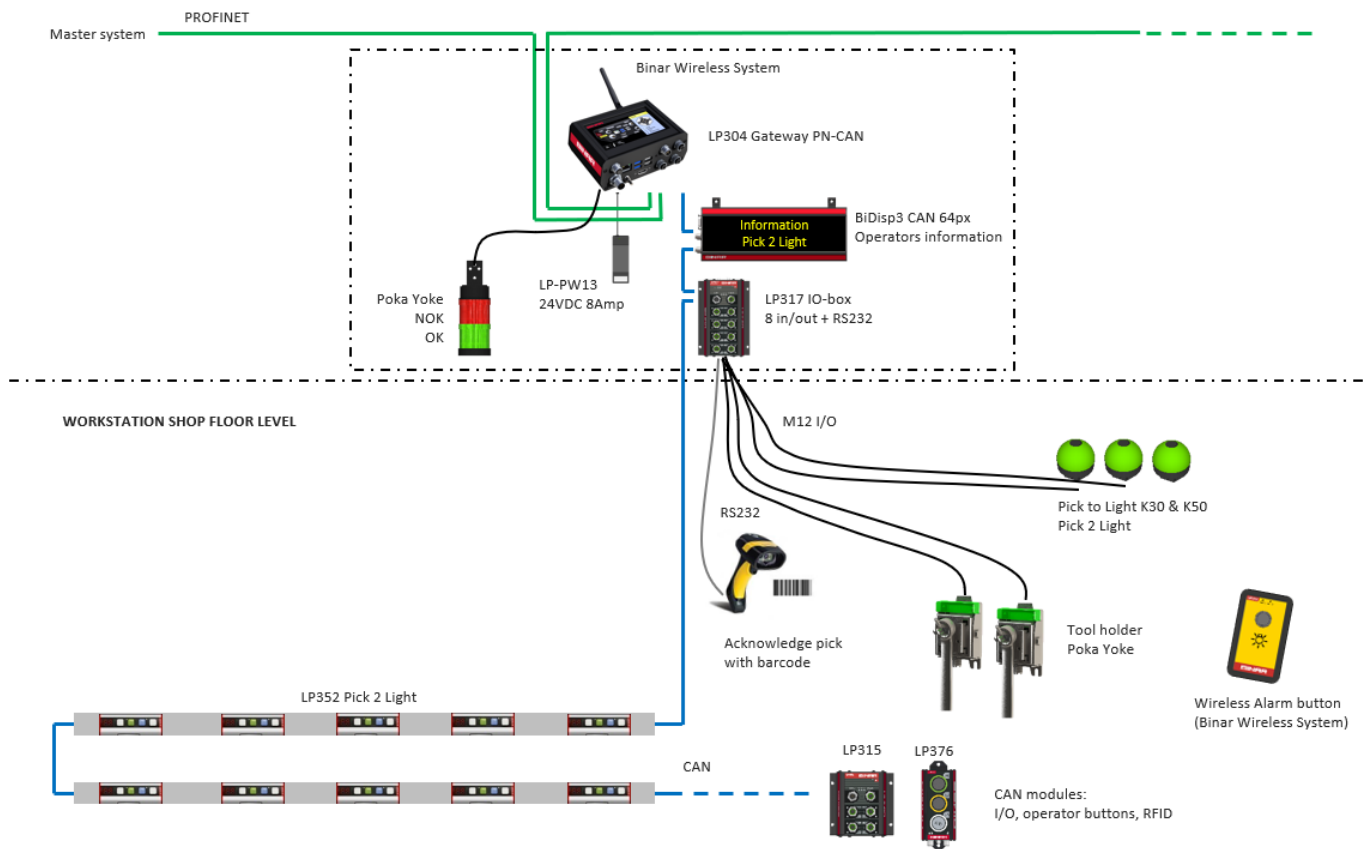
# LP304 GATEWAY

50308 LP304 GW PROFINET-CAN

**PROFINET** to CAN + BWS



## System overview, an example:



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# LP304 GATEWAY

## Accessories

PART NO	DESCRIPTION	WHEN TO USE
51326	Power Supply LP-PW11 24VDC 4Amp	To supply CAN bus single with power.
xxxxx	Wi-Fi dongle	To connect through Wii
35423	Wi-Fi & Binar Wireless antenna	When wireless connection to LAN is required. To connect with Binar Wireless slaves such as wireless Andon buttons, Poka Yoke Tools and more.
50151	Binar Wireless Antenna incl Ext cord and bracket	When LP304 needs better wireless signal.
50138	8-pole I/O splitter cable.	Makes it possible to connect 2 standard I/O devices with M12 5 pin In and Out

## Connectors

### 1. I/O CONNECTOR:

4 IN, 2 OUT. M12, 8 poles

### 2. Ethernet:

RJ45

### 3. CAN:

3A: IN or 24VDC max 4Amp, M12 5 pin male A code

3B: OUT, M12 5 pin female A code

### 4. USB:

4A: USB 2.0

4B: USB 3.0

### 5. HDMI:

### 6. Power in:

24VDC, Max 4Amp. M12, 4 pin T code

## Optional

### 7. LP304P PROFINET:

7A IN & 7B OUT, M12 4 pin female D code

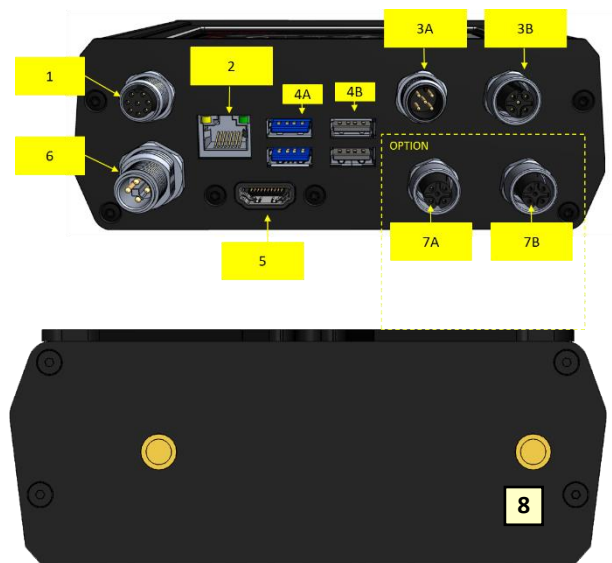
### LP304C CAN:

7A 24VDC, Max4Amp M12 5 pin male A code

7B CAN OUT M12 5 pin female A code

At LP304C the single CAN bus must be power supplied separately in 3A with LP-PW 11 part no 51326

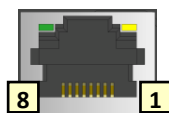
### 8. External Binar Wireless System antenna



## CONNECTORS

### RJ45

8/8 Modular-contact



Pin	Signal
1	Transmit +
2	Transmit -
3	Receive +
6	Receive - (4,5,7,8 nc)



### CAN OUT

5 pin M12 female A code

Pin	Signal
1	Shield
2	+24V
3	0V
4	CAN high
5	CAN low



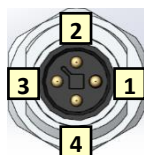
### Option: PROFINET

4 pin M12 female D code

Pin	Signal
1	TX+
2	RX+
3	TX-
4	RX-

### POWER IN

4 pin M12 male T code



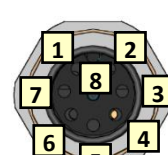
Pin	Signal
1	+24 V
2	NC
3	0V
4	NC



### CAN IN

5 pin M12 male A code

Pin	Signal
1	Shield
2	+24V
3	0V
4	CAN high
5	CAN low



### I/O CONNECTOR

8 pin M12 female A code

Pin	Signal
1	+24V
2	In1/Out1
3	0V
4	In2
5	+24V
6	In3/Out2
7	0V
8	In4

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