

# PortLinkPro™

## Industrial Communication Gateway

### Seamless Integration for Efficient Port Automation

#### Overview

The **PortLinkPro™ Gateway** is designed to meet the demands of digital port automation by enabling seamless communication between industrial control systems. Developed by **PortLinkPro Technologies (Shanghai) Co., Ltd.**, this gateway facilitates **high-speed data acquisition and command transmission** for industrial equipment, including the **MEMOBUS fieldbus** within **Yaskawa PLC-based CP-215IF systems**.

Supporting a wide range of industrial communication protocols, including **PROFINET, PROFIBUS, MODBUS RTU, Modbus TCP, and CANOpen etc**, the PortLinkPro™ Gateway ensures efficient and reliable data exchange. Optional programming functionalities can also be integrated upon request.

#### Key Features



##### High Performance

- **FPGA-Based Acceleration:** Proprietary FPGA technology seamlessly integrates with CP-215IF, supporting speeds of up to **4 Mbps** for rapid data transmission.
- **Real-time Control:** shixian shishikongzhi

##### Easy Deployment

- **Web-Based Configuration:** Simplified setup via an intuitive web interface allows users to configure **station numbers, baud rates, I/O registers, and IP addresses** for plug-and-play functionality.
- **Compatible with Yaskawa CP-717 Software:** Users can diagnose **MEMOBUS communication errors** through Yaskawa's CP-717 software.



##### Industrial-Grade Durability



- **Built for Harsh Environments:** Engineered with **industrial-grade components**, optimized for **long-term operation** in **port environments**.
- **Wide Operating Temperature:** Functions reliably between **-40°C to 75°C**.
- **Shock & Vibration Resistant:** Meets **IEC60068-2-27** and **IEC60068-2-6** standards.
- **Redundant Power Design:** Enhanced availability with **electrical isolation and protection** for fieldbus ports.

## Ordering Information

Model	Network A	Network B
BK-681	MEMOBUS	PROFINET
BK-683	MEMOBUS	MODBUS TCP
BK-685	MEMOBUS	PROFIBUS DP
BK-687	MEMOBUS	MODBUS TCP
BK-680*	MEMOBUS	MODBUS TCP
BK-686**	CANOpen	MODBUS TCP

\* One-way transmissio

\*\*Programmable control function optional

## Network Interface Features

### MEMOBUS

- Supports **station numbers 1# - 64#**
- Interface speeds: **1 Mbps / 2 Mbps / 4 Mbps**
- **512-word** Input/Output register capacity

### CANOpen

- Compliant with CANOpen DS-301V4.02 & CiA303
- Supports LifeGuard, Heartbeat, NMT functions
- RPDO supports event-driven and periodic output
- Transmission Speeds: 50 kbps - 1 Mbps
- Customizable CAN bus fault handling

### PROFINET IO

- Supports PROFINET I/O RT protocol

### Modbus TCP Server

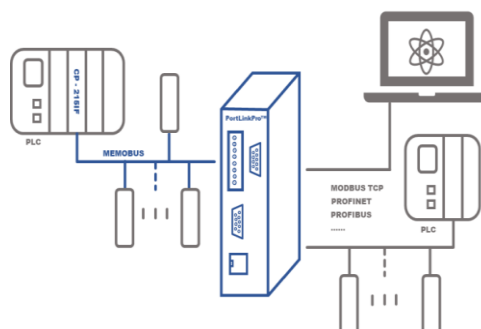
- Max single communication: 125 words
- Max connections: 10
- Supported Function Codes: 01H, 02H, 03H, 04H, 05H, 06H, 0FH, 10H

### PROFIBUS DP (DPV0/DPV1)

- DB-9F Interface: Auto-adaptive speed (9.6 kbit/s - 12 Mbit/s)
- Node Addresses: 0 - 125
- Data Exchange (Cyclic Data): 244-byte input, 244-byte output
- Diagnostic Buffer: 244 bytes
- Parameter Data: 54 bytes max
- Configuration Data: 64 bytes max

## General Technical Specifications

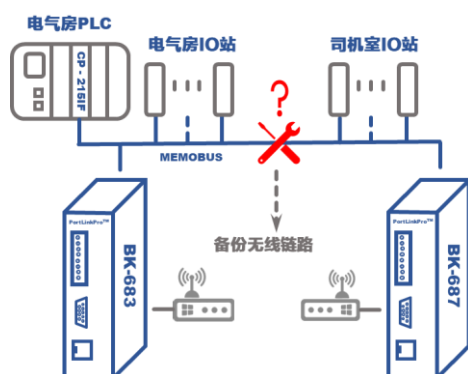
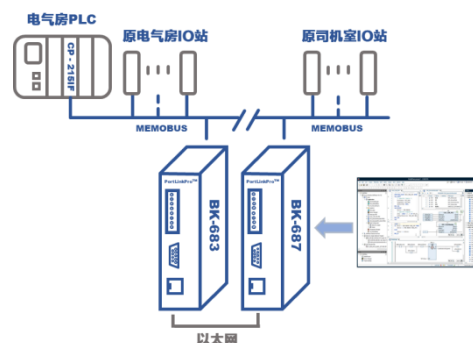
- **Dimensions:** 105 × 52 × 136mm
- **Weight:** 0.8 kg (excluding packaging)
- **Protection Rating:** IP20
- **Mounting:** DIN rail
- **Operating Voltage:** 9-36V DC
- **Power Consumption:** 3W (125mA @ 24VDC)
- **Operating Temperature:** -40°C to 75°C
- **Storage Temperature:** -50°C to 80°C
- **Humidity:** 5% to 95% RH (non-condensing)
- **Shock Resistance:** 15G @ 11ms (IEC60068-2-27)
- **Vibration Resistance:** 5G @ 10Hz - 150Hz (IEC60068-2-6)
- **Electrical Protection:** 15kV ESD, Overcurrent, Lightning Protection
- **Configuration:** 10/100M adaptive RJ45 Ethernet, DB9 RS232 serial port
- **Programming Languages:** C, IEC 61131-3



## Applications

### Remote Crane Control

- ✓ Seamless integration with existing electrical control systems
- ✓ Maps external data to Yaskawa networks
- ✓ No modifications required to existing Yaskawa PLC configurations

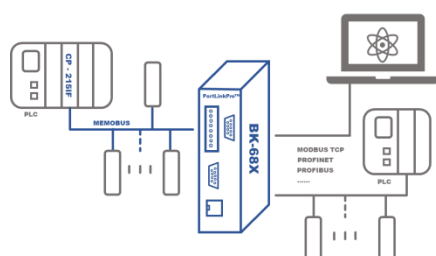
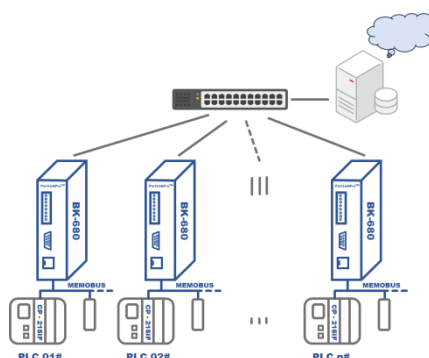


### Emergency Communication

- ✓ Rapid wireless link deployment for crane operator cabins
- ✓ Backup communication path for wired connections
- ✓ No PLC modifications required

### Emergency Communication

- ✓ Quick deployment for Yaskawa PLC data collection
- ✓ One-way transmission ensures security
- ✓ No modifications required to existing PLC configurations



### Protocol Integration for Industrial Automation

- ✓ Easily adds multiple industrial protocols (e.g., PROFIBUS, PROFINET, CAN, MODBUS RTU, MODBUS TCP)
- ✓ Supports third-party device integration (e.g., CANOpen for magnetic position sensors)