

SenseLive X7050DD

Wi-Fi Serial Server –

**RS-485 to 802.11b/g/n with Modbus
RTU↔TCP, MQTT/JSON & HTTP Gateway**

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Product Overview

The SenseLive X7050D is a cost-effective, guide-rail or wall-mountable Wi-Fi serial server. It transparently bridges one RS-485 port to wireless LAN (802.11b/g/n), with support for TCP/UDP, Modbus RTU↔TCP gateway, MQTT/JSON and HTTP GET/POST. Advanced edge features include data translation, threshold alarms, change-triggered upload, custom registration/heartbeat packets, and a 10 000-register Modbus cache. Configuration and firmware updates are managed via SenseLive_Config.exe

Key Features

Mounting Options

- Guide-rail (35 mm DIN-rail) or integrated wall-mount lugs

Power & Isolation

- 9-24 V DC via 3.5 mm terminal block; reverse-polarity protection

Wireless Connectivity

- 802.11 b/g/n (2.412-2.484 GHz); AP/STA/peer-to-peer modes
- WEP64/128, TKIP, AES or Auto encryption

Serial & Network Protocols

- RS-485 (A/B/GND; up to 32 nodes, built-in 120 Ω termination)
- TCP Server/Client, UDP, multicast, virtual COM port



- Modbus RTU ↔ TCP gateway; ZLMB preconfigured table mode
- MQTT (JSON payload); HTTP GET/POST client; raw TCP/UDP passthrough

Diagnostics & Management

- LEDs for Power, LINK (TCP/UDP), ACT (data direction), WIFI status
- SenseLive_Config.exe desktop tool for discovery, parameter editing, virtual COM, FOTA

Applications

- Industrial IoT & automation data acquisition
- SCADA & PLC integration
- Power, water & environmental monitoring
- Access control & security systems
- Smart factory & IIoT edge gateway

Technical Specifications

Parameter	Specification
Ethernet	
Wi-Fi Standard	802.11 b/g/n (1-150 Mbps)
Frequency Range	2.412-2.484 GHz
TX Power	18 dBm (802.11b); 16 dBm (802.11g); 12-14 dBm @ HT20 MCS7
RX Sensitivity	-88 dBm @ 11 Mbps (CCK, 8 % PER); -75 dBm @ 54 Mbps (OFDM, 10 % PER); -70 dBm @ HT20 MCS7 (10 % PER)
Serial Interface	
Port	RS-485 (3.5 mm terminal: A, B, GND)
Baud Rate	4 800-921 600 bps
Data Bits	7-8
Parity	None, Odd, Even, Mark, Space
Flow Control	None
Network Protocols	IPv4, TCP, UDP, DHCP, DNS, ARP, ICMP, MQTT, HTTP, Modbus TCP, NTP
Modbus Cache	Up to 10 000 registers; first query uncached; auto-purge after 5 s inactivity
Edge Storage	Alarm & change logs in flash
Power Input	9-24 V DC via 3-pin terminal (min. 3 W)
Current Draw	~30 mA @ 12 V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-45 °C to +100 °C
Humidity	5-95 % RH (non-condensing)

Dimensions (L×W×H)	37.6 × 83.6 × 89.2 mm
Mounting	35 mm DIN-rail guide-way
Antenna Port	50 Ω SMA female (default suction-cup; optional stick antenna)
Indicators	PWR (green), LINK (green/blue), ACT (green/blue), WIFI (green/blue)

Hardware & Interfaces

- **Front Panel**
 - Power input & RS-485 terminal block; reset button; WIFI antenna jack
- **LED Indicators**
 - **POWER:** steady green = power on
 - **LINK:** green blinking = running; blue = TCP/UDP link established
 - **ACT:** green flash = Ethernet→RS-485; blue flash = RS-485→Ethernet
 - **WIFI:** green/blue indicating AP/STA status & traffic

Configuration & Management

- **SenseLive_Config.exe Desktop Tool**
 - Auto-discover across subnets; create virtual COM ports; bulk parameter editing; FOTA
- **Virtual COM Port**
 - Legacy serial apps operate transparently via network

- **Custom Registration & Heartbeat**

- Configure fixed or MAC-based registration packets; periodic heartbeats to detect link loss

Advanced Software Features

- **Modbus Gateway**

- Transparent RTU↔TCP; ZLMB preconfigured mapping; multi-host collision avoidance

- **MQTT & JSON Conversion**

- Direct RTU/DLT-645 to JSON payloads; supports major cloud brokers

- **HTTPD Client Mode**

- Serial→HTTP GET/POST; hex/ASCII transcoding

- **NTP Synchronization**

- Timestamp serial data; improve log accuracy

- **Peer-to-Peer Wi-Fi**

- AP/STA pairing for device-to-device communication

Ordering & Accessories

- **Model**

- X7050D - RS-485 to Wi-Fi serial server

- **Included**

- Device; quick-start guide; DIN-rail clips; suction-cup antenna

- **Optional**

- Wall-mount brackets; stick antenna (1.5 m/3 m); 12 V DC/1 A adapter