

BILGE^{PRO}

DATALOGGER
Industrial Panel PC



www.enelsan.com

Wi-Fi | LoRa



General Features

BILGE Pro Industrial Panel PC

BILGE Pro Industrial Panel PC offers innovative wireless solutions in industrial automation processes. It has a wide range of applications, from rivers to dams, underground wells to lakes, irrigation channels to flood control. Additionally, it is effectively used in various sectors, including meteorological stations, hydroelectric power plants, wind and solar energy facilities, wastewater management, coastal design, environmental studies, agricultural irrigation, and SCADA systems.

BILGE Pro analyzes data obtained from connected sensors and generates detailed reports with AI support. The device records data in the desired format and time intervals. Thanks to its built-in 4.5G modem module, it can transmit this data quickly and reliably. By combining both data logger and modem functionalities, it meets multiple needs with a single device.

In terms of connectivity, BILGE Pro is highly flexible, supporting various protocols such as RS-485, RTU Modbus, and 4-20mA. With its built-in GSM modem and LoRa module, it can communicate with IoT devices without requiring a physical connection. These features enable real-time monitoring, data collection, and remote management of sensors located in remote areas. While sensor data is quickly transferred to SCADA systems, users can also issue commands to remote systems and manage processes efficiently.

The extensive application range and flexible communication capabilities of BILGE Pro allow it to easily adapt to diverse industrial requirements. With its high performance and reliability, it becomes an indispensable part of industrial automation.



Physical Characteristics

1 x USB 3.0	4 x Digital/4...20 mA Output
1 x USB 2.0	1 x RJ9H
1 x Type-C	5 x Analog/4...20 mA Input
1 x RJ45	1 x SIM Card Slot
1 x HDMI	1 x Internal Battery Voltage Reading Input (Onboard)
1 x WiFi	5" LCD Touchscreen
6 x Digital Input	1 x Built-in Front Camera
1 x RS-232 (e.g., Modbus RTU)	1 x Charging Voltage Reading Input
2 x RS-485 (e.g., Modbus RTU)	1 x Built-in GSM (Onboard)
1 x Bluetooth 5.0	1 x Solar Panel Voltage Reading Input
1 x External SD Card Slot	1 x Built-in LoRa
1 x 3.5 mm Speaker Jack	1 x Internal Battery
3 x Antenna Port (SMA Connector)	

Compatibility

- Compatible with computers, mobile devices (Android and iOS), and web platforms.
- Fully integrates with all SCADA systems that support RS-485 ModBus RTU.
- Fully compatible with the DSI GÖZBİS system.

Technical Specifications



- Processor**
ARM Quad-core 64-bit 1.8 GHz
- RAM**
2GB/4GB/8GB LPDDR4
- Internal Storage**
32GB / 64GB / 128GB
- WiFi**
Dual-band WiFi (2.4GHz/5GHz)
Supports 802.11 a/b/g/n/ac
- Bluetooth**
BT 5.0
- HDMI**
Version 2.0
- LoRa**
433/868 MHz ISM, -139 dBm sensitivity
1.2kbps-115.2kbps data rate Range: 5km+
Compliant with FCC and ETSI standards
- Internal Battery**
3 Cell 3500mAh / 6 Cell 7000mAh / 9 Cell 10500mAh / 12.6V 18650 Li-ion battery
- Internal GSM**
LTE Cat 4 Module (supports 2G/3G/4G)
Download Speed: 150 Mbps / Upload Speed: 50 Mbps
Frequency range: 900/1800/1900 MHz
- AI Performance**
1 TOPS Supports: Caffe/TensorFlow/TFLite/ONNX/PyTorch/Keras/Darknet
- SD Card**
1 slot (Supports 4GB/8GB/16GB/32GB/64GB/128GB)
Read/Write Speed: 100-90 MB/s
- Touchscreen Display**
5" (Optional: 7" and 10.1")
- Interface**
HDMI 2.0, USB3.0, USB2.0, MIPI DSI, MIPI CSI,
I2C, SPI, UART, ADC, PWM, GPIO, PCIe, I2S, etc.
- Ethernet**
RJ45 Port, 1000 Mbps
- Operating Temperature**
-20 / +60 °C
- Built-in Camera**
2MP camera with recording and photo capabilities upon activation.
1920x1920 pixels, supports JPEG and PNG formats for saving.

Camera Monitoring System

Image Quality

Supports 2/4/8 MP

Motion Detection

On/Off with 4 configurable zones

Operating Conditions

-40° C ~ +60° C / Less than 95% relative humidity

Night Vision

WDR (120dB) / Day/Night (ICR)
3DNR, AWB, AGC, BLC / 8 IR LEDs for night vision

Field of View

180°

Recording

Supports 720p, 1080p, 1440p, 2160p

Protection

IP67-rated

Communication

RTSP & MJPEG & TCP/UDP

SD Card

Supports 16GB, 32GB, 64GB, 128GB, and 256GB SD cards

Internal Battery

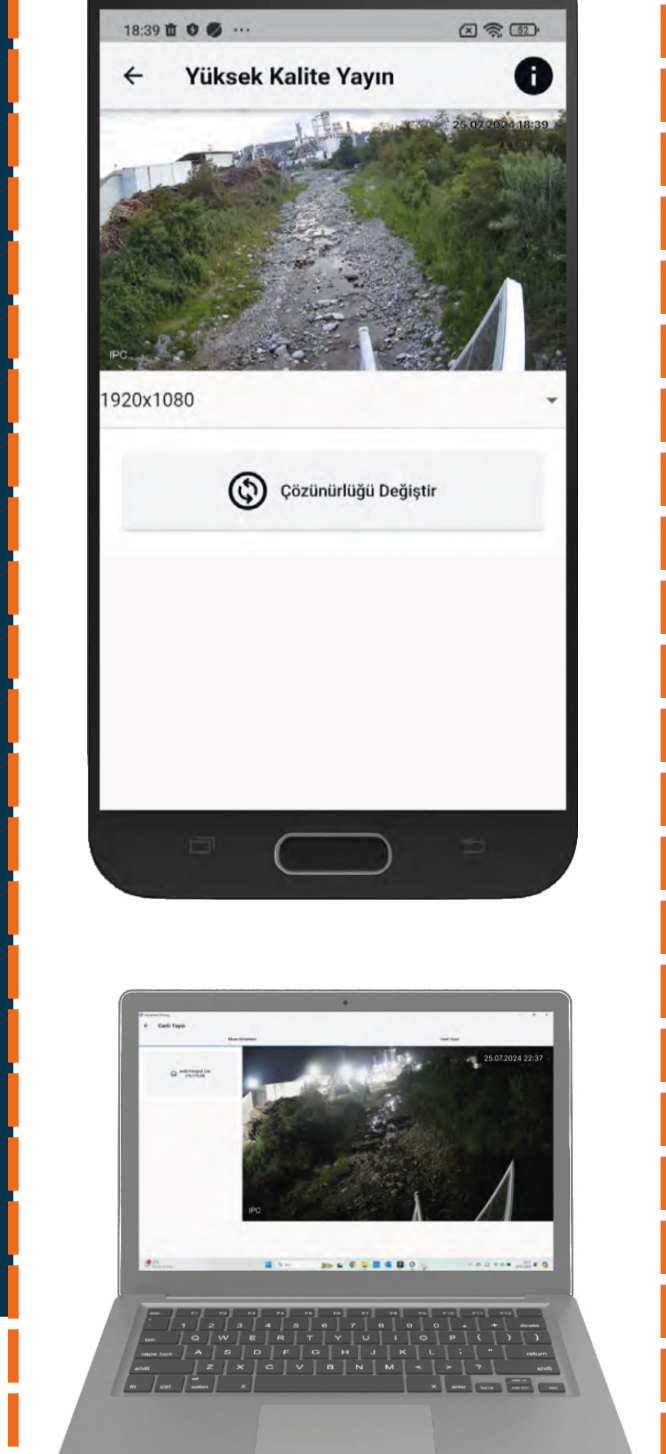
10,500 mAh

Socket Connections

RJ45, USB, Wireless Audio Input/Output, Power, Alarm Input/Output

Interface

Displays date, time, sensor information, and AGI location/details



Enclosure
Material: Metal
Dimensions: 244.1 mm x 79 mm x 75.9 mm
Net Weight: 0.815 kg



Enclosure
Material: Metal
Dimensions: 166.2 mm x 70 mm x 70 mm
Net Weight: 0.48 kg