FICUS™

Edge Series...

MachLogic - Pro

Multipurpose IIoT Device

INDUSTRY 4.0

- 8 Channel Analog Input
- 8 Channel Digital Input
- 8 Channel Digital Output
- Modbus Reader
- CAN bus Reader
- Cloud Gateway functionality (Two-way Communication)

Sales inquiry:
- 9226512312
- 9284255899
- sales@ficussystems.com

www.ficussystems.com

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Features

How it Works

The device can be programmed for multiple industrial use cases. It has on-board hosted configuration webpage. Enter required details such as mapping tables for input current/voltage, server URLs, credentials, and other details in the configuration file. Upload the file and reboot the device. For more details, contact us.

Industry

- Manufacturing
- Engineering
- Sugar Industry
- Pharmaceutical
- Others

Applications

Suitable for all use cases where you need to read industrial data, communicate data or control your industrial equipment remotely from cloud/server application.

- Cloud Gateway (Two-way Communication).
- Data retrieval (through Modbus/RS485) from devices such as Energy Meter, Flow Meters, PLCs, Chillers, Boilers etc.
- CAN bus interface to read data from devices operating on CAN Bus Protocol such as engines and compressors.
- Analog or Digital data acquisition from industrial units & machines such as Compressors, Pumps, Motors, Boom Barriers, Gates etc.
- Data Logging and Cloud gateway.

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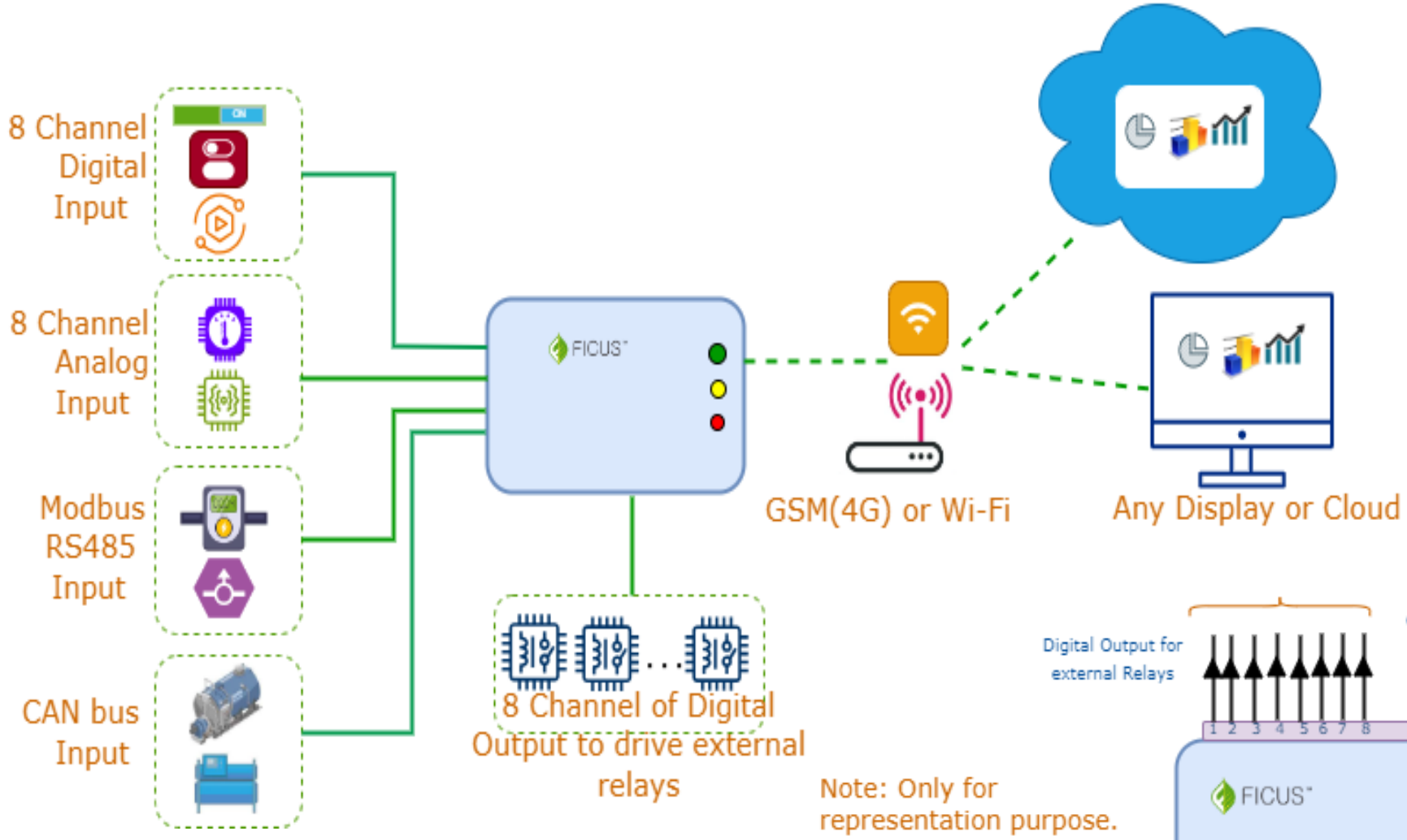
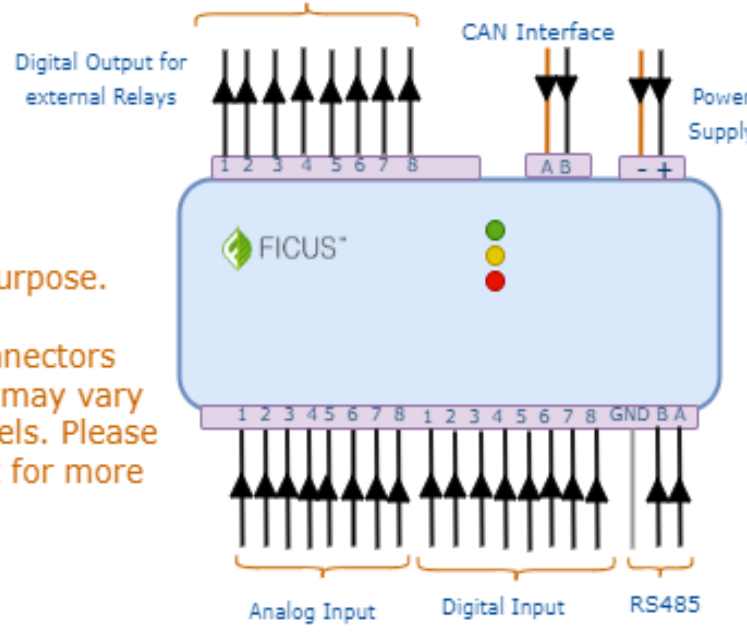
Application Architecture



Wiring Diagram

Note: Only for representation purpose.

Placement of connectors and number IOs may vary on different models. Please check data sheet for more details.



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Specifications

IOs

- Modbus over RS485
- CAN bus
- Analog Input: 8
  - Current (4 mA - 20 mA)
  - Resistive
  - Voltage
- Digital Input: 8
  - Potential Free
- Digital Output: 8
  - Common Positive

Local Storage

- Onboard SD card (8/16GB)
- Data logging on SD card

Power

- DC Input: 24VDC

Display

- Type: Graphic display (Optional)

Configuration

- Configuration Support: Device hosted configuration web page
  (more details in next pages)

Communication

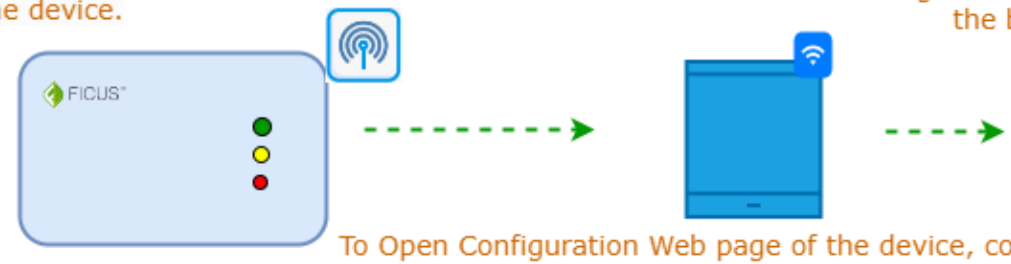
- Cloud Communication
  - Wi-Fi
  - GSM – Supports all types of 4G SIM
- Ethernet Support(Optional)
- Supports Bluetooth
- Open Interface to connect external modules
- Supports MQTT and HTTP(S) protocol

Other Specifications

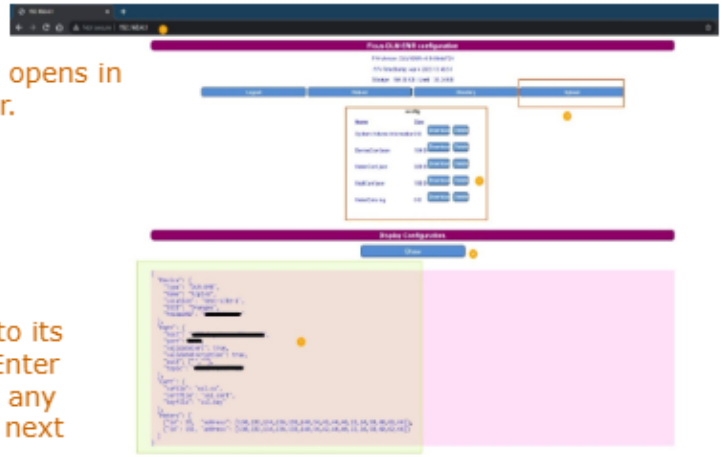
- RTC Support
- Server time/NTP time synchronization
- Configurable Time zone
- LED Indications: 3
- Operating Temp: From -10°C to 70°C
- Humidity: 0% - 90% non-condensing
- Mounting: Wall mounting with Screw
- IP Protection: Two form factors,
  - IP 66
  - IP 20
- Enclosure: Polycarbonate Transparent Cover and ABS Opaque Base
- Color: Light Grey (RAL 7035)

Configuration Web Page

Configuration file and the log files can be accessed via Configuration Webpage hosted on the device.



Configuration Page opens in the browser.



To Open Configuration Web page of the device, connect to its WiFi Hotspot from a mobile, laptop or any other device. Enter credentials to connect to the Wi-Fi. Open 192.168.4.1 on any browser. The configuration web page opens shown in the next image.

Download Data/Log File from Configuration Webpage

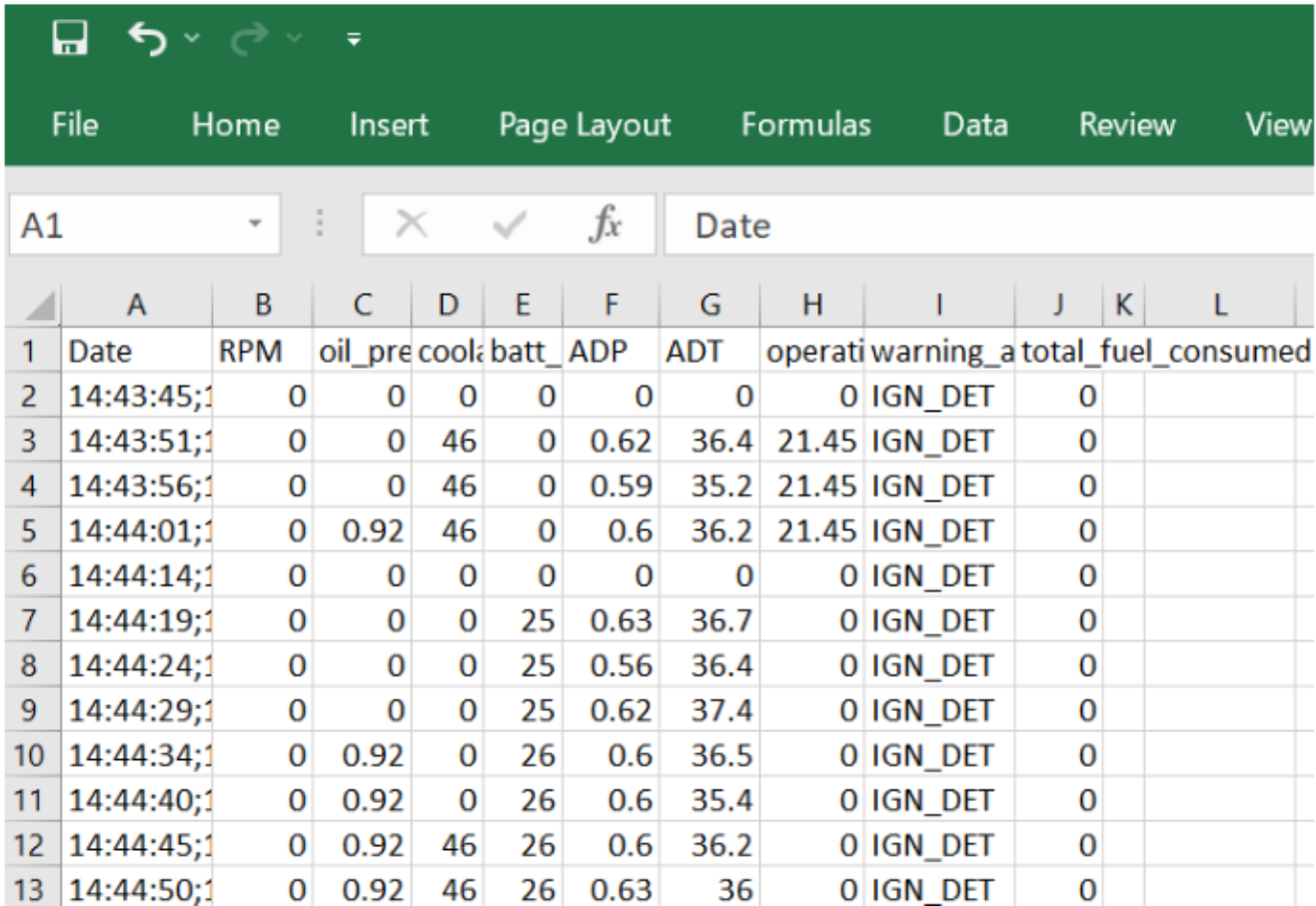
Configuration File can be used for:

1. To configure device parameters such as set/trigger points, Mapping tables, program variables etc.

2. Download Data/Log files.

Configuration File Template

```
DeviceType = "ELECTONICS CONTROLLER";
DeviceName ="REGULATION CONTROLLER";
DeviceLocation ="TRAIL 1";
Machine_model ="DM 500 W";
Machine_serial_number ="307890313";
CRANK_TIME_SEC =5;
LOGGING_FREQUENCY_SEC =30;
LCD_CONTRAST=3;
LOW_PRE_HIGH_PRE_EN=1;
FULL_SCALE_A0 =7;
FULL_SCALE_A1 =40;
FULL_SCALE_A2 =7;
FULL_SCALE_A3 =7;
FULL_SCALE_A4 =7;
FULL_SCALE_A5 =7;
FULL_SCALE_A6 =150;
FULL_SCALE_A7 =7;
ALARM_DURATION_SEC = 30;
RPM_CHANGE_FACTOR =0.25;
MAX_ADP =20.0;
MAX_ARP=2.50;
ADP_BLEED_RANGE =1.0;
UPPER_RPM_LIMIT = 1900;
LOWER_RPM_LIMIT = 1250;
ENGINE_SHUTDOWN_LIMIT =1000;
AVERAGE_SAMPLE_SIZE = 600;
ARP_TABLE_ROW_SIZE =19;
ADP_TABLE_ROW_SIZE = 21;
```



File Home Insert Page Layout Formulas Data Review View

A1 | Date

	A	B	C	D	E	F	G	H	I	J	K	L
1	Date	RPM	oil_pre	coola	batt_	ADP	ADT	operati	warning_a	total_fuel_consumed		
2	14:43:45;1	0	0	0	0	0	0	0	IGN_DET	0		
3	14:43:51;1	0	0	46	0	0.62	36.4	21.45	IGN_DET	0		
4	14:43:56;1	0	0	46	0	0.59	35.2	21.45	IGN_DET	0		
5	14:44:01;1	0	0.92	46	0	0.6	36.2	21.45	IGN_DET	0		
6	14:44:14;1	0	0	0	0	0	0	0	IGN_DET	0		
7	14:44:19;1	0	0	0	25	0.63	36.7	0	IGN_DET	0		
8	14:44:24;1	0	0	0	25	0.56	36.4	0	IGN_DET	0		
9	14:44:29;1	0	0	0	25	0.62	37.4	0	IGN_DET	0		
10	14:44:34;1	0	0.92	0	26	0.6	36.5	0	IGN_DET	0		
11	14:44:40;1	0	0.92	0	26	0.6	35.4	0	IGN_DET	0		
12	14:44:45;1	0	0.92	46	26	0.6	36.2	0	IGN_DET	0		
13	14:44:50;1	0	0.92	46	26	0.63	36	0	IGN_DET	0		