### SMART DATALOGGERS

**APPLICATION EXAMPLES**

**DATA ACQUISITION AND PC-TRANSMISSION**

**PLC REMOTE MANAGEMENT**

**POWER MEASUREMENT, CONTROL AND SUPERVISION**

**IOT REMOTE MONITORING**

**APPLICATION EXAMPLES**

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### SMART DATALOGGERS WITH REMOTE MEASUREMENT AND TELEMETRY FUNCTIONS

#### Z-LOGGER3

- **APPLICATION EXAMPLES**
  - PLC REMOTE MANAGEMENT
  - POWER MEASUREMENT, CONTROL AND SUPERVISION
  - SMART DATALOGGERS
- **FEATURES**
  - I/O slave
  - 100% Made & Designed in Italy
- **GENERAL DATA**
  - **ORDER CODES**
    - STANDARD (ftp, webserver)
    - ADVANCED FUNCTIONS
      - Web Server
      - DIN rail bus system head terminal + 1 slot 35 mm
      - DIN rail bus system 1 slot 35 mm
- **POWER SUPPLY**
  - Single-phase switching power supply 24V @ 1.5A
- **COMMUNICATIONS**
  - ModBUS TCP-IP, MQTT
- **MEMORY**
  - Supplied Micro SD (up to 4 GB) expandable up to 32 GB (dedicated slot)
- **SOFTWARE**
  - Visualization and log data tool for Z-GPRS3, Z-LOGGER3, Z-UMTS
- **STANDARD**
  - CE directive, EN 60950, EN 301489-1, EN 301489-7, EN 60950
- **TECHNICAL DATA**
  - Code Description
  - Standard
  - Kit
  - Parts
  - Accessories
  - Options

#### Z-GPRS3

- **APPLICATION EXAMPLES**
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- **TECHNICAL DATA**
  - Code Description
  - Standard
  - Kit
  - Parts
  - Accessories
  - Options

#### Z-UMTS

- **APPLICATION EXAMPLES**
  - PLC REMOTE MANAGEMENT
  - POWER MEASUREMENT, CONTROL AND SUPERVISION
  - SMART DATALOGGERS
- **FEATURES**
  - I/O slave
  - 100% Made & Designed in Italy
- **GENERAL DATA**
  - **ORDER CODES**
    - STANDARD (ftp, webserver)
    - ADVANCED FUNCTIONS
      - Web Server
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      - DIN rail bus system 1 slot 35 mm
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  - Single-phase switching power supply 24V @ 1.5A
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  - ModBUS TCP-IP, MQTT
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**Note:** Information and specifications are subject to change without notice. Please consult the latest data sheet for the most accurate information.
OVERVIEW

SMART DATALOGGERS WITH REMOTE MEASUREMENT AND TELEMETRY FUNCTIONS

- FIELD MEASUREMENT, DATA COLLECTION, SENSORS / ACTUATORS INTERFACE
- INTEGRATION WITH AUTOMATION SYSTEMS (HMI / SCADA / PLC)
- REMOTE MONITORING, TELEMETRY, ALARM MANAGEMENT
- FLEXIBLE PROGRAMMING AND CONFIGURATION

HIGHLIGHTS

- SYNCHRONOUS / ASYNCHRONOUS ON TRIGGER / COMMANDING
- PROGRAMMING ENVIRONMENT AND CONTROL FUNCTIONS
- BUILT-IN I/O
- SERIAL / ETHERNET COMMUNICATION PROTOCOLS
- TRANSPARENT GATEWAY
- PUBLIC IF / API / SYNDROME SMS SUPPORT
- USB / UEFA SUPPORT
- BATTERY BACKUP
- EXPANDABLE MEMORY UP TO 32 GB

SMART DATALOGGERS

- REMOTE MONITORING, TELEMETRY, ALARM MANAGEMENT
- INTEGRATION WITH AUTOMATION SYSTEMS (HMI / SCADA / PLC)

TRIGGER DATALOGGING

- ASYNCHRONOUS / ON
- SYNCHRONOUS / COMMUNICATION

PROGRAMMING

SENSOR / PHYSICAL POWER SUPPLY
- 11..40 Vdc
- Power failure Safe state backup (Chosen device)

CONNECTORS, CONTROL PANELS
- For triggering: Micro-SD, USB
- Screen button
- Display button

CPU / MEMORIES
- System ARM@32bit, totalizers@32bit, max 2A
- 4-CH Digital input (PNP, NPN, Counters, terminals)
- 2-CH Analog input
- 2-CH Analog output
- RS485 / ModBUS slave COM2 on ModBUS Master

ETHERNET
- Port 1: 10/100 Mbps, Real
- Port 2: 10/100 Mbps, FA, No MDI
- Port 3: Ethernet, FTP, MQTT

POWER REQUIREMENTS
- 12 Vdc
- 11..40 Vdc; 19..28 Vac

COMMUNICATION PROTOCOLS
- MODBUS / IT
- FTP, SMTP, HTTP
- Voice Alarm and DTMF
- 3G+ Worldwide Pentaband
- GSM / GPRS
- On/off button

CONNECTORS, BUTTONS, LEDs
- Slot for Micro SD
- Flash log 8MB
- ARM@32bit

USABILITY
- Android / iOS app
- Menu Languages
- Display
- Screen button

TELEMETRY
- Remote connections management, centralization, remote supervising
- Supervision and programming software, Ethernet interfaces, RS485 Modbus Rtu protocols

DATA VISUALIZATION
- Centralized data
- Historical / Log files
- Sending and receiving emails
- Sending and receiving SMS
- Setting menu and language

DATA VISUALIZATION
- Cloud - IoT solution for data centralization, remote monitoring, multi-user custom interface, powerful security integration with third-party Scada systems, Cloud, databases and web platforms already available in plants.

WHAT IS CLOUD BOX?

Cloud - IoT solution for data centralization, remote monitoring, multi-user custom interface, powerful security integration with third-party Scada systems, Cloud, databases and web platforms already available in plants.

HOW IT WORKS

- Sending commands to industrial modules
- Monitoring data via front panel and computer
- Access to Cloud BOX through custom web pages

Cloud BOX - INDUSTRIAL IOT BOX WITH MICRO SCADA FUNCTIONS

- Remote connections management, multi-user custom interface
- Cloud BOX provides several widgets (input status, chart, bars, text, etc.), i.e. information such as historical data, commands, events management, etc.
- EDILOGIC programmable, through customizable web pages
- Cloud BOX supports development of the control logics (SEAL)
- These modules are supplemented by an embedded Webserver, an App for SMS and Android / IOS app

SEAL
- SYSTEM CONFIGURATION AND LOGIC-MATHMETIC FUNCTIONS

SENAI's advanced dataloggers ensures a flexible programming allowed by dedicated software designed by Seneca for the development of the control logic (SEAL). These modules are supported by the embedded Webserver, an App for SMS commands management, an import and data visualization tool (Graph Factory). Besides, the Cloud BOX ( real time monitoring RTM) communicates via remote, log file analysis, events and alerts log gathering through customizable web pages to widget, SENSOR ensures powerful security integration with third-party Scada systems, Cloud, databases and web platforms already available in plants.

SOFTWARE VISION

- Cloud BOX includes several widgets input status, chart, bars, text, etc., allowing for the remote monitoring of sensors, and signals in real-time.
- The data visualization tool is shared through the Cloud BOX ( real time monitoring RTM) and it can be accessed through the web.
- Cloud BOX provides several widgets (input status, chart, bars, text, etc.), i.e. information such as historical data, commands, events management, etc.
- Cloud BOX supports development of the control logics (SEAL)
- These modules are supplemented by an embedded Webserver, an App for SMS and Android / IOS app

HMI / SCADA FUNCTIONS

- HISTORICAL DATA / ALARMS
- Centralized data
- Historical / Log files
- Sending and receiving emails
- Sending and receiving SMS
- Setting menu and language

TECHNICAL DATA

- Device type
- Compact / fanless
- Dimensions (wxhxd)
- Intel Celeron J1900 2.0 GHz Quad-Core
- Processor
- Intel 211 AT Gigabit LAN
- Standard network card
- WiFi
- 2.4Ghz and 5Ghz
- USB host
- 4x USB 2.0
- Memory
- 4GB DDR3L 1600 MHz RAM
- 64GB mSATA SSD
- Operating system
- Linux Ubuntu
- Software
- Seneca's technology standards
- Operating system
- Linux Ubuntu
- Software
- Seneca's technology standards
- Operating system
- Linux Ubuntu
- Software

SMART DATALOGGERS

- Advanced dataloggers 2-GPRS3, 2-LOGGERS and 2-UMTS allow to meet increasing data collection needs as well as real-time analysis and IT systems integration, as well as meet the growing needs of Industry 4.0 and Internet of Things. These dataloggers, designed to fulfill remote monitoring, data logging and alarm management, are equipped with built-in features, such as data logging, supervision and programming software, Ethernet interfaces, RSART Modbus Rtu protocols, 2G/3G Modern and 3G+ worldwide Pentaband communication protocols

- 2-GPRS3, 2-LOGGERS and 2-UMTS are high performance units and are configured as a Master unit of Seneca Z-PLC Line remote IO system. These modules ensure powerful security integration with third party systems thanks to Seneca's technological standards. These modules are equipped with 2G / 3G+ SMS / GPRS / GNSS / GPS / GLONASS receiver, 2G / 3G+ modem support different types of SIM. These dataloggers are equipped with 8 MB of Flash memory and Micro SD card slot up to 32 GB.

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HIGHLIGHTS

OVERVIEW

SMART DATALOGGERS WITH REMOTE MEASUREMENT AND TELEMETRY FUNCTIONS

• FIELD MEASUREMENT, DATA COLLECTION, SENSORS / ACTUATORS INTERFACE
• INTEGRATION WITH AUTOMATION SYSTEMS (HMI / SCADA / PLC)
• REMOTE MONITORING, TELEMETRY, ALARM MANAGEMENT
• FLEXIBLE PROGRAMMING AND CONFIGURATION

SMART DATALOGGERS WITH REMOTE MEASUREMENT AND TELEMETRY FUNCTIONS

SMART DATALOGGERS WITH REMOTE MEASUREMENT AND TELEMETRY FUNCTIONS

OVERVIEW

HIGHLIGHTS

BUILD-IN I/O

DATA RESIDENCY

ALARM MANAGEMENT VIA API / FTP

SENDING EMAIL / FTP / FILE

PROGRAMMING

SENECA's advanced dataloggers ensures a flexible programming allowed by dedicated software designed by Seneca for the development of the control logic (SEAL). These modules are supplemented by an embedded industrial Ethernet, IP based on SIP or HTTP, for high flexibility, and by the new device management system, which allows for the creation of multi-user custom dashboards, or the management of complex PLC-based systems. The new Seal feature, based on the latest IP standards, allows for remote access to the datalogger, enabling the integration of Industry 4.0 and IoT concepts. These dataloggers are equipped with 8 MB of Flash memory and Micro SD card slot up to 32 GB.

PHONE SUPPORT

• 11..40 VDC
• Power failure
• Battery backup (1hour lifetime)

POWER SUPPLY

• Micro USB B

CONNECTORS, BUTTONS, LED'S

• 2-CH Analog Input
• Configurable Slave/Slave
• Richards@32bit, max 30Hz
• IDC10 (rear) for I/O

MODULES / IT COMMUNICATION PROTOCOLS

• BLE

Wi-Fi

• 802.11 a/b/g/n

ETHERNET

• Intel 211 AT Gigabit LAN

SENDING EMAILS

• Fill-out form

SENDING COMMANDS

• Embedded SIM card

REMOTE CONNECTION

• Wall mount or DIN rail

Backup Battery

• 64GB mSATA

DATA VISUALIZATION

• Case

Dimensions (wxhxd)

0..40°C

OPERATING TEMPERATURE

185x48x165 mm

DIMENSIONS (WXHxD)

12VAC

supply voltage

0..10V

Input voltage

30Hz

Sampling time

2.0 GHz Quad-Core

Processor

Intel Celeron J1900

Intel 211 AT Gigabit LAN

M.2 22110 SATA USB

USB controller

32110 SATA USB

Mode

3x 50-pin ports, 1x USB ports

Monitoring mode

Dashboard, 3 in 3 widget

Data export

to csv file

Log, alarms, events

Yes

Sending tools

Csv

TECHNICAL DATA

Communications management with third-party Scada systems, Cloud, databases and web-platforms already available in plants.

SMART DATALOGGERS WITH REMOTE MEASUREMENT AND TELEMETRY FUNCTIONS

SOFTWARE SUPPORT

HISTORY / DATA / ALARMS

• Centralized data storage and alarms

HISTORICAL DATA / ARCHIVE

• Cloud service for data upload

DATA STORAGE

• Remote supervision interface.

SUPERVISION

• Desktop applications (widgets, graphs)

DATA VISUALIZATION

• Remote commands

SENDING COMMANDS

• Sending commands by SIM data blocks or firewall

EXPORTING DATA

• Trend data visualizations

LOG FACTORY

• Global tags

TOTALIZERS

• Max 200

LOG FILES STORAGE AND VISUALIZATION

• Yes

SENECA SMS

• Android / iOS APP for sending and customizing SMS

THIRD PARTY SYSTEMS

• Android / iOS APP for sending and customizing SMS

THIRD-PARTY SCADA SYSTEMS, CLOUD, DATABASE AND WEB PLATFORMS

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SMART DATALOGGERS WITH REMOTE MEASUREMENT AND TELEMETRY FUNCTIONS

OVERVIEW

Advanced dataloggers Z-GPRS3, Z-LOGGER3 and Z-UMTS allow to meet ever-increasing data collection needs as well as real-time analysis and IoT systems. These devices can be used in any industrial or civil environment, including remote areas or monitoring points. They have been designed with the latest technology to meet the needs of Industry 4.0 and Internet of Things. These dataloggers, designed to fulfill remote measuring and control functions, can be used in a wide range of applications. The hardware presented is designed by Seneca, the leading provider of IoT, telematics, and automation solutions.

TECHNICAL DATA

1. **Overview**
   - **Smart Dataloggers with Remote Measurement and Telemetry Functions**
     - **Flexible Programming and Configuration**
     - **Integration with Automation Systems (HMI / SCADA / PLC)**

2. **Trigger Datalogging**

3. **Synchro/Comm Communication**

4. **Programming**
   - **Modbus / IT Protocols**
   - **Built-in I/O**
   - **MicroSD Card Upto 32 GB**

5. **Battery Backup**
   - **2G / 3G+**
   - **GNSS/Modem**
   - **MicroSD Card up to 32 GB**
   - **Public IP / APN / DynDNS**

6. **Alarm Management**
   - **Via SMS/DTMF**
   - **Built-in Modem**
   - **3G+ Worldwide Pentaband**
   - **Quad Band (Z-GPRS3)**

7. ** featuring**
   - **On/off button**
   - **Voice Alarm and DTMF**
   - **3G+**
   - **GNSS/Modem**

8. **Power Supply**
   - **11..40 Vdc**
   - **19..28 Vac**

9. **Ethernet Interfaces**
   - **Intel 211 AT Gigabit LAN**
   - **64GB mSATA SSD**

10. **Processor**
    - **Intel Core i3 3.30 Ghz**

11. **Dimensions**
    - **185x48x165 mm**

12. **Operating Temperature**
    - **0..40°C**

13. **Conformity**
    - **CE, ROHS**

14. **Data Export**
    - **Max 5.000 Data points**
    - **Max 200 Data Series**

15. **Sampling Time**
    - **>1 sec**

16. **Log, Alarms, Events**
    - **Yes**
    - **Yes**

17. **Real-time Visualization**
    - **No**

18. **Monitoring Tools**
    - **Cloud BOX**

19. **Transmission Protocols**
    - **HTTP, HTTPS, FTP**

20. **Password**
    - **Up to 200**

21. **Baud Rate**
    - **9600, 57600, 38400**

22. **Modbus/IT**
    - **Modbus MODBUS TCP**

23. **RS232**
    - **RS4985/ModBUS**

24. **RS485**
    - **RS422**

25. **I/O**
    - **USB 2.0**
    - **Micro USB B**

26. **Input/Output**
    - **Up to 64 Inputs/Outputs**
    - **Up to 10**

27. **Memory**
    - **Micro SD Expansion Upto 32 GB**

28. **Linux**
    - **Monolinux**

29. **Operating System**
    - **Multitasking RTOS**

30. **Software**
    - **ARM@32bit**

31. **Protocols**
    - **ftp, smtp, ModBUS TCP-IP**

32. **Http Interface**
    - **Ethernet Interface**

33. **Writing/Reading**
    - **IME**

34. **Reading**
    - **IME**

35. **Operation**
    - **IME**

36. **Communication**
    - **IME**

37. **Software**
    - **IME**

38. **Remote Connections**
    - **IME**

39. **Data Visualization**
    - **IME**

40. **Sending Commands**
    - **IME**

41. **Third Party Systems**
    - **IME**

42. **What is Cloud BOX?**
    - **IME**

43. **How it Works**
    - **IME**

44. **History Data / Alarms**
    - **IME**

45. **Communication**
    - **IME**

46. **DATA VISUALIZATION**
    - **IME**

47. **SENDING COMMANDS**
    - **IME**

48. **REMOTE CONNECTION**
    - **IME**

49. **SENDING EMAILS**
    - **IME**

50. **Third Party Data Sequencing**
    - **IME**

51. **Technical Data**
    - **IME**

52. **Overview**
    - **IME**

53. **Communication**
    - **IME**

54. **Requirements**
    - **IME**

55. **Hardware**
    - **IME**

56. **Connecting Devices**
    - **IME**

57. **Remote Connections**
    - **IME**

58. **Communication**
    - **IME**

59. **Cloud BOX - Industrial IoT Box with Micro SCADA Functions**
    - **IME**

60. **SENECA’s advanced dataloggers ensure a flexible programming allowed by dedicated software designed by Seneca for the development of the control logic (SEAL). The modules are supplied by an embedded Webserver on a Linux OS to manage the dataloggers several inputs (plant, tank, line...) or events and alarms log archiving through customizable web pages by widget. SENECA ensures several security features for SM_2.**

61. **General Features**
    - **IME**

62. **Micro SD Expansion**
    - **IME**

63. **Linux**
    - **IME**

64. **Communication**
    - **IME**

65. **Battery Backup**
    - **IME**

66. **MicroSD Card Upto 32 GB**
    - **IME**

67. **Built-in USB**
    - **IME**

68. **Ethernet Interface**
    - **IME**

69. **Personality**
    - **IME**

70. **Alarm Management**
    - **IME**

71. **Getting Started**
    - **IME**

72. **Monitoring**
    - **IME**

73. **Power Supply**
    - **IME**

74. **External Oscillator**
    - **IME**

75. **Frequency**
    - **IME**

76. **Input/Output**
    - **IME**

77. **Data Export**
    - **IME**

78. **Sampling Time**
    - **IME**

79. **Log, Alarms, Events**
    - **IME**

80. **Real-time Visualization**
    - **IME**

81. **Communication**
    - **IME**

82. **Transmission Protocols**
    - **IME**

83. **Software**
    - **IME**

84. **Hardware**
    - **IME**

85. **Connecting Devices**
    - **IME**

86. **Remote Connections**
    - **IME**

87. **Communication**
    - **IME**

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