AVIC LEGIOBOX

Devices for the Internet of Things

LEGIOBOX IoT DEVICE PHILOSOPHY

To ensure that your IoT solution will work worry-free for many years, Avic has put all its experience and creativity in its comprehensive range of LegioBox devices: from its compact and rugged enclosure to its flexible and clever interface configuration scheme.

IoT DEVICES FOR ANY JOB

All LegioBox devices are built from the same set of function blocks, sharing a common design base of tried-and-tested modules. Avic supplies IoT devices with the most widely used functions from stock, but can also rapidly create application-specific designs from its IoT device building block library.

Working out-of-the box, the tight integration of the LegioBox IoT devices with the Avision IoT Platform makes their operation and management as simple as possible. Generic functions such as device management, secure communication, data storage and processing have been put to the test in many solutions, giving you the peace of mind that your device will not fail on you.

With Avic's LegioBox devices, your IoT solution will work flawlessly, and deliver the results that you seek to achieve.

Standard

- IoT devices with the most common interfaces
- Deliverable from stock

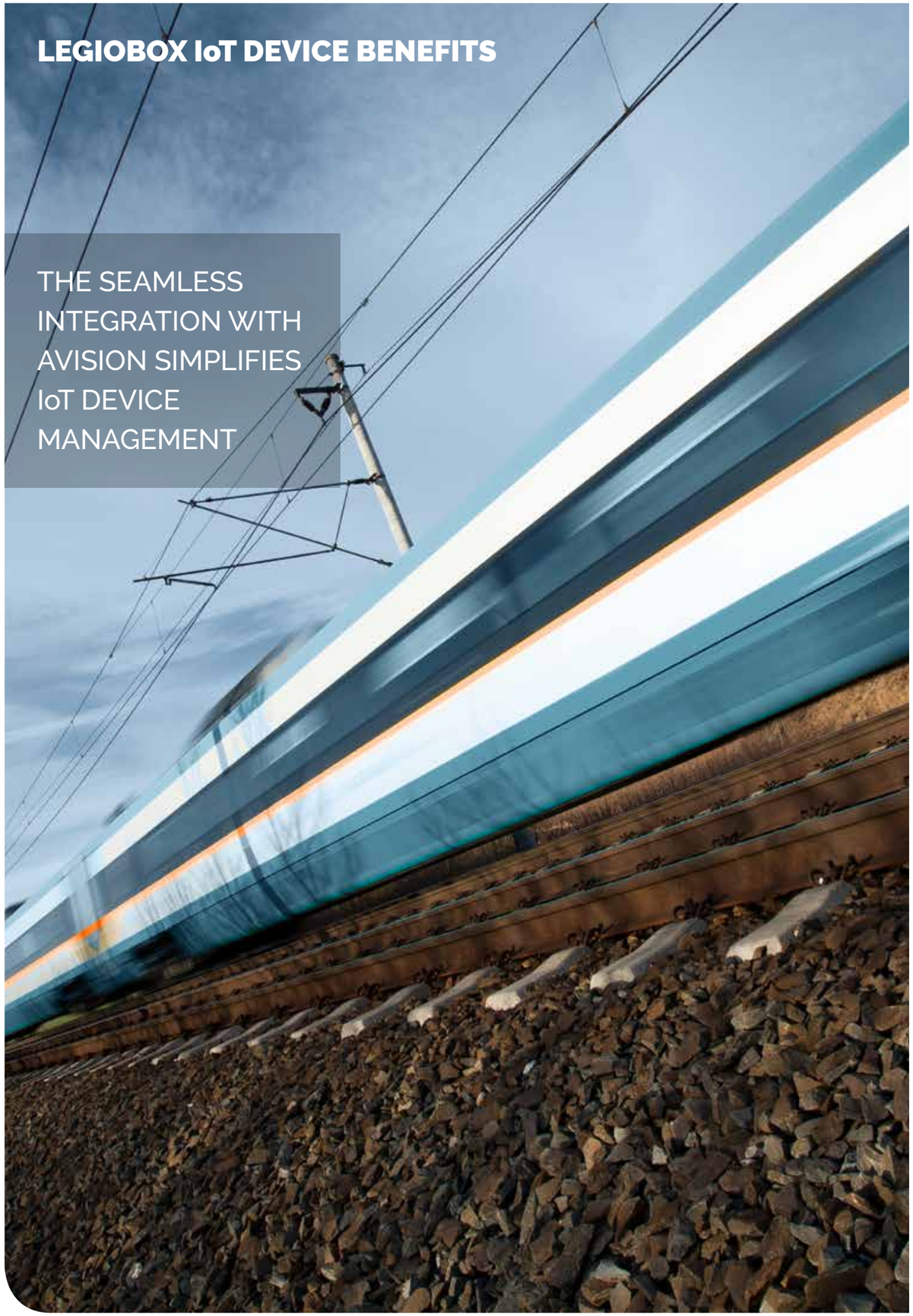
Customized

- IoT devices with a selectable set of interfaces
- Deliverable with short leadtimes

Tailor-made

- IoT devices built to specification
- Short implementation cycles

LEGIOBOX IoT DEVICE BENEFITS



THE SEAMLESS INTEGRATION WITH AVISION SIMPLIFIES IoT DEVICE MANAGEMENT

AT THE HEART OF IoT

Devices are the workhorse of the Internet of Things. Without devices, there is no IoT. Because every application has its own specific requirements, finding a suitable IoT device can be quite an ordeal. The Avic LegioBox devices very likely will prove to be the perfect fit for your IoT solution.

RUGGED, RELIABLE, AND ENERGY-EFFICIENT

The Avic LegioBox IoT devices are designed for operation in harsh environments with ample protection against the roughest conditions, and minimal power consumption. Hooking up sensors has been made as simple as possible with standardized connectors.

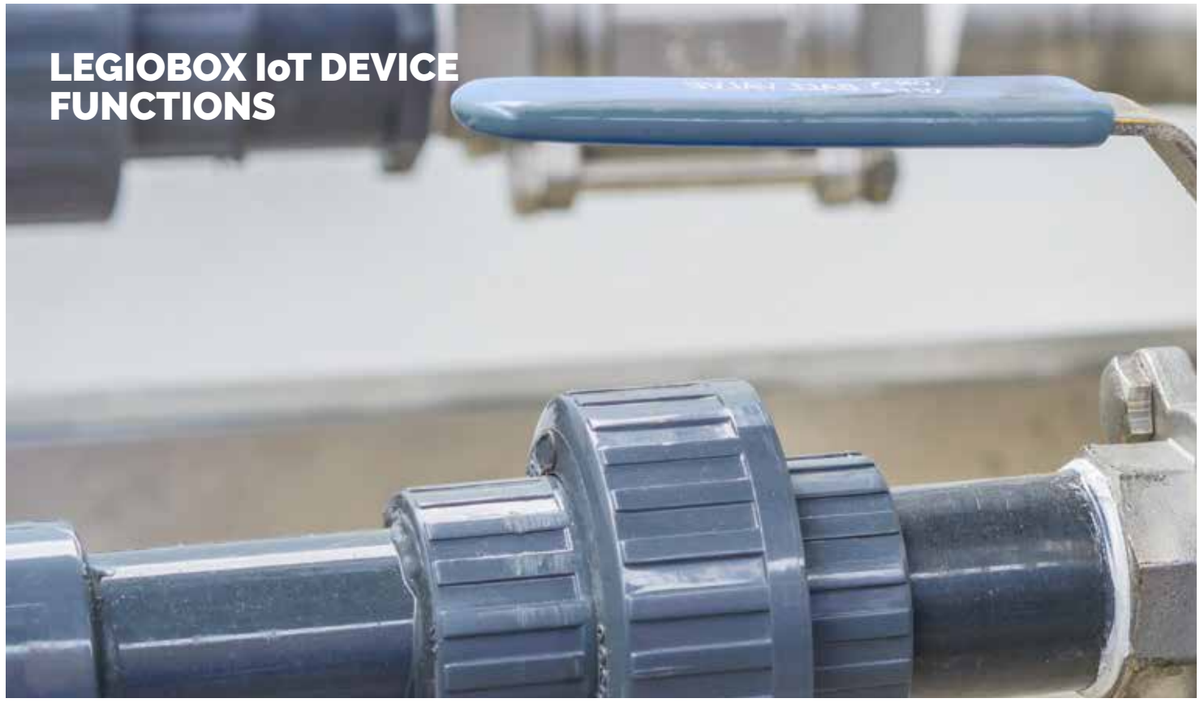
WIDE CHOICE OF FUNCTIONS

Whatever functionality your IoT solution demands, the LegioBox IoT devices will meet the requirements. Avic's smart device design allows virtually any arrangement of functions.

SEAMLESS INTEGRATION WITH AVISION

Perhaps the greatest advantage that LegioBox devices have to offer is the close integration with the Avision IoT Platform, letting you define the functional behavior without any programming. Out-of-the-box, a LegioBox device will work plug&play, and can be managed directly from your IoT solution to produce the value that needs to be delivered.

LEGIOBOX IoT DEVICE FUNCTIONS



THE PERFECT FIT FOR ANY SOLUTION

All LegioBox IoT devices share a common base of functional entities, to support a wide variety of applications.

The various function blocks are designed to be combined as needed. The most common configurations are supported by the standard LegioBox IoT devices, that can be altered for customized solutions. Taking it one step further, new function blocks can be integrated to create tailor-made IoT devices.

CELLULAR

Secure and reliable mobile networking connectivity gives you total independence of local communication infrastructure

WIRELESS

Locally connecting and managing many, many devices is made simple with the AVIC wireless WISE RF networking function.

SERIAL DATA

Industry-standard data protocols such as ModBus are supported through serial RS232 and RS485 interfaces.

NETWORKING

LAN and WiFi interfaces provide fast connectivity in case of a locally present IT network infrastructure.

MEASUREMENT

Analog and digital sensor interfaces make it possible to measure any physical quantity that your solution requires.

EVENT / STATE

Digital inputs can be used to monitor states, or to detect and count the occurence of relevant events.

CLIMATE

Integrated ambient sensors measure actual environmental conditions: pressure, temperature, as well as humidity.

CONTROL

Digital device outputs can be activated to implement local intelligent control functions to enhance your solution.

MOTION

Integrated accelero-meters detect three-dimensional motion, shock and vibration, to determine moving object conditions.

POSITION

A full-featured GNSS geo-location receiver, that supports geo-fencing, keeps track of your IoT device on the map.

DATA STORAGE

The LegioBox has sufficient memory to store application data, and can also be equipped with an SD memory card.

MONITORING

The LegioBox device monitors signal levels automatically using configurable threshold values, and generates alarms.

USER INTERFACE

Visual indicators and buttons provide a basic form of user interaction that can be tailored to the needs of the solution.

POWER OPTIONS

The LegioBox device can be powered from various mains and battery voltage sources, and has an integrated UPS.

TIMEKEEPING

The continuously running real-time clock is synchronized at regular intervals to provide accurate timing data.

PLUG & PLAY

LegioBox devices are built for plug&play operation: right out of the box they enable ease-of-use and rapid deployment.

Avic LegioBox **SolarGate**

The LegioBox SolarGate is Avic's solar-powered IoT device, targeted at solutions that need to operate independently of, or supported by external power supplies. When the ambient light is sufficient, the integrated photovoltaic panel charges the LegioBox SolarGate internal battery that ensures uninterrupted operation. Various cellular interfaces are available to meet the application communication bandwidth requirements.

Many different sensor types in varying combinations can be connected to the LegioBox SolarGate, as well as digital inputs and serial interfaces. The LegioBox SolarGate runs entirely stand-alone from its integrated power sources, and also generates all sensor supply voltages. Using Avic's WISE wireless networking protocol, additional sensor nodes such as the LegioBox PicoWise can be connected.

The LegioBox SolarGate works reliably under harsh and ever-changing weather conditions, protected by its ruggedized and UV-resistant enclosure. Mounting accesories are available to ensure that the LegioBox SolarGate is securely installed during operation.

PRODUCT FEATURES

- Cat-M1/NB-IoT cellular interface with 2G-fallback
- WISE wireless networking
- GNSS geo-localization
- Integrated solar panel
- Solar-charged battery
- SD card storage memory
- Ruggedized IP-66 enclosure
- Sensor supply voltage generation
- High-precision 24-bit analog-to-digital conversion
- Push-in terminal connectors

SENSORS AND INTERFACES

- Pt-1000 temperature sensor interface
- 4-20mA sensor intrerfaces
- 0-10VDC sensor interface
- Digital inputs
- RS-232 data communication port
- RS-485 data communication port
- SDI-12 conmmunication port
- Internal barometer and thermometer
- Internal elative humidity sensor
- Internal accelerometer

ELECTRICAL DATA

Power supply	Solar- or auxilary-charged internal battery
Auxilary charging voltage	20-32 VDC input voltage
Sensor supply voltage	14 VDC, max. 120mA (output)
Rechargeable battery types	6.0V 8Ah, sealed lead acid chemistry (AVIC-approved types only)
Current consumption	15 µA | 0.28 mA | 1.5 A (stand-by | average | peak)

MECHANICAL DATA

Dimension (l x w x h)	315 x 205 x 90 mm
Weight	3.5 kg, incl. battery pack
Enclosure material	ASA, UV-resistant

ENVIRONMENTAL DATA

Operating temperature	-30°C/+80°
Storage temperature	-45°C/+85°
Ingress protection class	IP-66
Mechanical impact class	IK-08 (casing only)

WIRELESS COMMUNICATION PERFORMANCE

Receive sensitivity	-110dBm ($BER10^{-3}$)
Transmit power	25mW/14dBm
Frequency / bitrate	868 MHz / 5 kpbs
Communication range	600 meter

REGULATORY COMPLIANCE

Electromagnetic comp.	EN 61000-3-2, 61000-2-2, 61000-6-3, 61000-6-1
Safety	EN 62368-1
Radio communication	EN 300-220, 301-489

PRODUCT SELECTION GUIDE

PRODUCT VERSION		COMMUNICATION						POWER		SENSORS AND INTERFACES								
Application areas	Ordering code	Cat.M1/NB-IoT/2G	GPRS/2G	RS232	RS485	Serial TTL	WISE RF	Solar panel	Internal battery	0-10VDC	Pt-1000	4-20mA	Digtal-input	Enviornmental	GNSS receiver	Accelerometer	SDI-12	Camera/PIR
Telemetry I	SG00170	-	●	-	●	-	●	●	●	2	6	4	4	●	●	-	-	-
Telemetry II	SG00322	-	●	-	-	-	●	●	●	2	6	4	4	-	-	-	-	-
Telemetry I	SG00173	●	-	-	●	-	●	●	●	2	6	4	4	●	●	-	-	-

Avic LegioBox **NanoGate**

The LegioBox NanoGate is a compact and highly energy-efficient, yet powerful IoT device with a comprehensive set of application interfaces. The clever LegioBox NanoGate product architecture allows almost any configuration of interfaces to compose the functionality for your IoT solution. Internally, the LegioBox NanoGate offers a number of integrated sensors to even further enhance your application.

For local and remote communication, the LegioBox NanoGate provides a number of wired and wireless data communication interfaces. Thus, the LegioBox NanoGate can serve as a wireless hub for sensors, or as a gateway for a wireless sensor network. The versatility of the LegioBox NanoGate makes it a perfect fit for almost any IoT project.

The LegioBox NanoGate is designed to withstand even the harshest conditions, protected by its ruggedized enclosure, and high-quality weatherproof connectors. Mounting accesories are available to ensure that the LegioBox NanoGate is always securely installed during operation. Its power management architecture selectively activates the functionality only when it's needed, minimizing energy consumption and conserving battery life.

PRODUCT FEATURES

- Cat-M1/NB-IoT cellular interface with 2G-fallback
- Ethernet and wireless LAN interface
- WISE wireless networking
- Internal antennas
- SD card storage memory
- Ruggedized IP-67 enclosure
- Sensor supply voltage generation
- High-precision 24-bit analog-to-digital conversion
- UPS power supply backup (mains versions)
- M12-style sensor connectors

SENSORS AND INTERFACES

- Pt-1000 temperature sensor interface
- 4-20mA sensor intrerfaces
- 0-10VDC sensor interface
- Digital inputs
- RS-232 data communication port
- RS-485 data communication port
- Internal barometer and thermometer
- Internal elative humidity sensor
- Internal accelerometer
- GNSS geo-localization

ELECTRICAL DATA

Power supply	Battery-powered or mains-powered, with back-up batteries (UPS)
Supply voltage	24-32 VDC input voltage
Sensor supply voltage	14 VDC, max. 40mA (output)
Primary battery types	4 AA-size cells, Alkaline or Lithium chemistries
Rechargeable battery types	4 AA-size cells, Li-Ion chemistry (AVIC-approved types only)
Current consumption	7 µA | 0.12 mA | 0.6A (stand-by | average | peak)

MECHANICAL DATA

Dimension (l x w x h)	114 x 129 x 48 mm
Weight	375 g
Enclosure material	ASA, UV-ressistant

ENVIRONMENTAL DATA

Operating temperature	-30°C/+80°
Storage temperature	-45°C/+85°
Ingress protection class	IP-67
Mechanical impact class	IK-08

WIRELESS COMMUNICATION PERFORMANCE

Receive sensitivity	-110dBm (BER10^{-3})
Transmit power	25mW/14dBm
Frequency / bitrate	868 MHz / 5 kpbs
Communication range	600 meter

REGULATORY COMPLIANCE

Electromagnetic comp.	EN 61000-3-2, 61000-2-2, 61000-6-3, 61000-6-1
Safety	EN 62368-1
Radio communication	EN 300-220, 301-489

PRODUCT SELECTION GUIDE

PRODUCT VERSION		COMMUNICATION							POWER		SENSORS AND INTERFACES								
Application areas	Ordering code	Cat.M1/NB-IoT/2G	GPRS/2G	Ethernet	Wireless LAN	RS232	RS485	WISE RF	24DVC/UPS	Battery-powered	0-10VDC	Pt-1000	4-20mA	Digtal-input	Rel. humidity	Barometer/temp.	GNSS receiver	Accelerometer
Outdoor RF hub	NG00130	-	●	-	-	-	-	●	●	-	-	-	-	-	-	●	●	-
Indoor RF hub	NG00131	-	●	-	-	-	-	●	●	-	-	-	-	-	●	●	-	-
Telemetry outdoor	NG00132	-	●	-	-	-	●	●	●	-	2	2	2	2	-	●	●	-
Telemetry indoor	NG00133	-	●	-	-	-	●	-	●	-	2	2	2	2	●	●	-	-
Telemetry autonomous	NG00134	-	●	-	-	●	-	-	-	●	2	2	2	2	-	●	●	-
Outdoor RF hub	NG00135	●	-	-	-	-	-	●	●	-	-	-	-	-	-	●	●	-
Indoor RF hub	NG00136	●	-	-	-	-	-	●	●	-	-	-	-	-	●	●	-	-
Telemetry outdoor	NG00137	●	-	-	-	-	●	●	●	-	2	2	2	2	-	●	●	-
Telemetry indoor	NG00138	●	-	-	-	-	●	-	●	-	2	2	2	2	●	●	-	-
Telemetry autonomous	NG00139	●	-	-	-	●	-	-	-	●	2	2	2	2	-	●	●	-
Indoor RF hub Ethernet	NG00326	-	-	●	-	-	●	●	●	-	-	-	-	-	-	-	-	-
Indoor RF hub WLAN	NG00328	-	-	-	●	-	-	●	●	-	-	-	-	-	-	-	-	-

Avic LegioBox **MiniGate**

The LegioBox MiniGate is Avic's most compact IoT device, designed for space-constrained applications that require only a few sensor values. Equipped with either a GRPS or NB-IoT cellular modem, the MiniGate performs its measurements indepedently of local communication infrastructure. For local interfacing to peripheral devices through serial links, the MiniGate features a RS-232, RS-485, or SDI-12 data communication port.

Various analog and digital sensors can be connected to the LegioBox MiniGate, that - thanks to the integrated sensor supply voltage generation - do not require additional power sources for performing measurements. The LegioBox MiniGate also provides digital inputs, a relay output and integrated environmental sensors.

The LegioBox MiniGate is designed to work in any-weather outdoor applications. The operation of the LegioBox MiniGate analog and digital interfaces can easily be tailored to the application with jumper settings. Mounting accesories are available to ensure that the LegioBox MiniGate is securely installed during operation.

PRODUCT FEATURES

- Cat-M1/NB-IoT cellular interface with 2G-fallback
- GNSS geo-localization
- Internal antennas
- Battery-powered
- SD card storage memory
- Ruggedized IP-67 enclosure
- Sensor supply voltage generation
- High-precision 24-bit analog-to-digital conversion
- Push-in terminal connectors
- Cable gland entry

SENSORS AND INTERFACES

- Pt-1000 temperature sensor interface
- 4-20mA sensor intrerfaces
- 0-10VDC sensor interface
- Digital inputs (2) and relay output
- RS-232 data communication port
- RS-485 data communication port
- SDI-12 conmmunication port
- Internal barometer and thermometer
- Internal relative humidity sensor
- Internal accelerometer

ELECTRICAL DATA

Power supply	Battery-powered (primary batteries only)
Sensor supply voltage	14 VDC or 5 VDC, max. 40mA (output)
Primary battery type	D-size cells, Lithium chemistries (AVIC-approved types only)
Current consumption	13 µA | 0.25 mA | 1.2A (stand-by | average | peak)

MECHANICAL DATA

Dimension (l x w x h)	63 x 97 x 34 mm
Weight	140 g
Enclosure material	ASA, UV-ressistant

ENVIRONMENTAL DATA

Operating temperature	-30°C/+80°
Storage temperature	-45°C/+85°
Ingress protection class	IP-67
Mechanical impact class	IK-08

REGULATORY COMPLIANCE

Electromagnetic comp.	EN 61000-3-2, 61000-2-2, 61000-6-3, 61000-6-1
Safety	EN 62368-1
Radio communication	EN 300-220, 301-489

PRODUCT SELECTION GUIDE

PRODUCT VERSION		COMMUNICATION					POWER		SENSORS AND INTERFACES									
Application areas	Ordering code	Cat.M1/NB-IoT/2G	GPRS/2G	RS232	RS485	SDI-12	Primary battery	Sensor supply (V)	0-5VDC	0-10VDC	Pt-1000	4-20mA	Digtal-input	Relay output	Rel. humidity	Barometer/temp.	GNSS receiver	Accelerometer
Telemetry SDI12	MG00270	●	-	-	-	●	●	14	-	3	3	3	2	1	-	-	-	-
Telemetry	MG00304	●	-	-	-	-	●	14	-	3	3	3	2	1	-	-	-	-
Telemetry 5V sensors	MG00318	●	-	-	-	-	●	14	-	3	3	3	2	1	-	-	-	-
Telemetry GNSS	MG00306	●	-	-	-	-	●	5	3	-	3	3	2	1	-	-	●	-

Avic LegioBox
BasicGate

The LegioBox BasicGate is Avic's all-round IoT device for stand-alone operation in industrial environments. It can be powered either from universal AC mains or 24 VDC, with an internal back-up battery to bridge power outages. The LegioBox BasicGate can connect to cellular networks using its Cat-M1/NB-IoT modem with a fallback to 2G/GPRS. The LegioBox BasiGate supports a multitude of industry-standard process interfaces, as well as data communication ports.

The LegioBox BasicGate allows any of its six analog sensor interfaces to be configured as 4-20mA current, Pt-1000 thermometer, or 0-10VDC voltage sensor. In addition, the LegioBox BasicGate provides four digital inputs, as well as 8 user-definable LED indicators. Sensors and other peripherals can be connected to the LegioBox BasicGate in any arrangement.

Protected by a robust die-cast aluminum enclosure, the LegioBox BasicGate is designed to work in heavy-duty industrial environments. Mounting accesories are available to ensure that the LegioBox BasicGate is securely installed during operation.

PRODUCT FEATURES

- Cat-M1/NB-IoT cellular interface with 2G-fallback
- Universal AC or 24VDC supply voltage
- UPS power supply backup
- SD card storage memory
- Robust, metal IP-67 enclosure
- Sensor supply voltage generation
- High-precision 24-bit analog-to-digital conversion
- Push-in terminal connectors

SENSORS AND INTERFACES

- Pt-1000 temperature sensor interfaces
- 4-20mA sensor intrerfaces
- 0-10VDC sensor interfaces
- Digital inputs
- RS-232 data communication port
- RS-485 data communication port
- TTL-level UART data communication port

ELECTRICAL DATA

Power supply	Mains-powered, with back-up batteries (UPS)
Supply voltage	90-264VAC, 47-440 Hz, or 12-32 VDC input voltage (depending on product version)
Sensor supply voltage	14 VDC, max. 40mA (output)
Rechargeable battery types	PP3-size cell, NiMH chemistry (AVIC-approved types only)
Current consumption (24VDC)	4 µA | 17.64 mA | 0.4A (stand-by | average | peak)
Current consumption (AC)	254 µA | 2.1 mA | 0.1A (stand-by | average | peak)

MECHANICAL DATA

Dimension (l x w x h)	60 x 160 x 85 mm
Weight	850 g
Enclosure material	Aluminum

ENVIRONMENTAL DATA

Operating temperature	-30°C/+80°
Storage temperature	-45°C/+85°
Ingress protection class	IP-67
Mechanical impact class	IK-08

REGULATORY COMPLIANCE

Electromagnetic comp.	EN 61000-3-2, 61000-2-2, 61000-6-3, 61000-6-1
Safety	EN 62368-1

PRODUCT SELECTION GUIDE

PRODUCT VERSION		COMMUNICATION					POWER			SENSORS AND INTERFACES			
Application areas	Ordering code	Cat.M1/NB-IoT/2G	GPRS/2G	RS232	RS485	Serial TTL	Univ. AC mains	24 VDC	UPS	0-10VDC	Pt-1000	4-20mA	Digtal input
Telemetry RS232	BG00143	•	-	•	-	-	•	-	•	2	6	4	4
Telemetry RS485	BG00144	•	-	-	•	-	•	-	•	2	6	4	4
Telemetry RS232	BG00329	•	-	•	-	-	-	•	•	2	6	4	4
Telemetry RS485	BG00330	•	-	-	•	-	-	•	•	2	6	4	4

Avic LegioBox
PicoWise

The LegioBox PicoWise is a small but powerful IoT device that is designed to operate as a node in wireless sensor network. The LegioBox PicoWise excels in applications that require high-resolution sensor measurements from many isolated locations, e.g. in food-chain temperature monitoring, or in greenhouse climate control. Different versions of the PicoWise can be combined to serve the specific needs of the IoT solution. Please contact Avic for more information on the benefits and features of the PicoWise wireless networking technology.

Various analog and digital sensors can be connected to the LegioBox PicoWise, that - thanks to the integrated sensor supply voltage generation - do not require additional power sources for performing measurements. The LegioBox PicoWise also provides digital inputs and integrated environmental sensors. For local user alerting, the PicoWise has a buzzer that creates an audible signal.

The LegioBox PicoWise is designed to work in any-weather outdoor applications, as well as indoor in situations where compliance with hygene standards must be guaranteed. Mounting accesories are available to ensure that the LegioBox PicoWise is securely installed during operation.

PRODUCT FEATURES

- WISE RF comnunication
- Internal antenna
- High-precision thermometer
- Ruggedized IP-67 enclosure
- Sensor supply voltage generation
- M8-style sensor connectors

SENSORS AND INTERFACES

- Pt-1000 temperature sensor interfaces
- 4-20mA sensor intrerfaces
- 0-5VDC/0-10VDC sensor interfaces
- Digital inputs
- RS-232 data communication port
- RS-485 data communication port
- SDI-12 serial sensor interface
- Relative humidity sensor (internal)
- Barometer (internal)
- Accelerometer (internal)

ELECTRICAL DATA

Power supply	Battery-powered
Sensor supply voltage	14 VDC or 5 VDC, max. 40mA (output)
Primary battery types	2AA-size cells, Alkaline or Lithium chemistries
Current consumption	2 µA | 0.05 mA | 0.1 A (stand-by | average | peak)

WIRELESS COMMUNICATION PERFORMANCE

Receive sensitivity	-110dBm (BER10^{-3})
Transmit power	25mW/14dBm
Frequency / bitrate	868 MHz / 5 kpbs
Communication range	600 meter

MECHANICAL DATA

Dimension (l x w x h)	63 x 97 x 34 mm
Weight	140 g
Enclosure material	ASA, UV-ressistant

ENVIRONMENTAL DATA

Operating temperature	-30°C/+80°
Storage temperature	-45°C/+85°
Ingress protection class	IP-67
Mechanical impact class	IK-08

REGULATORY COMPLIANCE

Electromagnetic comp.	EN 61000-3-2, 61000-2-2, 61000-6-3, 61000-6-1
Safety	EN 62368-1
Radio communication	EN 300-220, 301-489

PRODUCT SELECTION GUIDE

PRODUCT VERSION		COMMUNICATION				POWER	SENSORS AND INTERFACES									
Application areas	Ordering code	WiSE RF	RS232	RS485	SDI-12	Battery-powered	0-5VDC	0-10VDC	Pt-1000	4-20mA	Digtal-input	Rel. humidity	Barometer	Temperature	Buzzer	Accelerometer
Current (0-25mA)	PW00183	●	-	-	-	●	-	-	-	2	2	-	-	●	-	-
Voltage (0-10Volt)	PW00184	●	-	-	-	●	-	2	-	-	2	-	-	●	-	-
Temperature External	PW00185	●	-	-	-	●	-	-	2	-	2	-	-	●	-	-
Humidity autonomous	PW00186	●	-	-	-	●	-	-	-	-	-	●	●	●	-	-
Temperature Internal	PW00187	●	-	-	-	●	-	-	-	-	-	-	-	●	-	-

Avic LegioBox **LightGate**

The LegioBox LightGate IoT device is unique in its kind: shaped as signal lamp, it conceals a rich set of features. Operating from 24VDC or 24VAC supply voltages, with a back-up battery to cope with power outages, it connects analog sensors, digital inputs, and serial interfaces. And of course, it also illuminates LEDs at varying patterns to signal the detection of user-definable conditions.

The LegioBox LightGate provides interfaces for 4-20mA current, Pt-1000 thermometer, or 0-10VDC voltage analog sensors. The sensor supply voltages are generated by the LegioBox LightGate, making external powering of sensors unnecessary. In addition, the LegioBox LightGate provides three digital inputs, as well as a relay for control purposes. Furthermore, the LegioBox LightGate offers a number of integrated environmental sensors.

The LegioBox LightGate is well suited to work in any-weather outdoor applications. Its clever housing design makes installation, e.g. onto cabinet enclosures, by simply tightening a single mounting screw, very straightforward.

PRODUCT FEATURES

- Cat-M1/NB-IoT cellular interface with 2G-fallback
- Internal antenna
- UPS power supply backup
- Sensor supply voltage generation
- LED signal function
- GNSS geo-localization
- Ruggedized IP-67 enclosure
- Digital inputs
- Control relay

SENSORS AND INTERFACE

- Pt-1000 temperature sensor interfaces
- 4-20mA sensor intrerfaces
- 0-10VDC sensor interfaces
- RS-232 data communication port
- RS-485 data communication port
- Temperature sensor (internal)
- Relative humidity sensor (internal)
- Barometer (internal)
- Accelerometer (internal)

ELECTRICAL DATA

Power supply	Mains-powered, with backup batteries (UPS), or primary batteries
Supply voltage	24 VDC or 24 VAC
Sensor supply voltage	14 VDC, max. 40mA (output)
Primary battery types	2 AA-size cells, Lithium chemistry (AVIC-approved types only)
Rechargeable battery types	2 AA-size cells, Li-Ion chemistry (AVIC-approved types only)
Current consumption (24VDC)	4 µA | 17.7 mA | 0.4A (stand-by | average | peak)

MECHANICAL DATA

Dimension (ø x h)	121 x 38 mm
Weight	200 g
Enclosure material	ASA, UV-resistant

ENVIRONMENTAL DATA

Operating temperature	-30°C/+80°
Storage temperature	-45°C/+85°
Ingress protection class	IP-67
Mechanical impact class	IK-08

REGULATORY COMPLIANCE

Electromagnetic comp.	EN 61000-3-2, 61000-2-2, 61000-6-3, 61000-6-1
Safety	EN 62368-1

PRODUCT SELECTION GUIDE

PRODUCT VERSION		COMMUNICATION				POWER			SENSORS AND INTERFACES									
Application areas	Ordering code	Cat M1/NB-IoT/2G	GPRS/2G	RS232	RS485	24VAC/24VDC	Primary battery	UPS	0-10VDC	Pt-1000	4-20mA	Digtal-input	Relay	Rel. humidity	Barometer	Temperature	Accelerometer	GNSS
Telemetry RS485	LG00333	●	-	-	●	●	-	●	1	-	1	3	-	●	●	●	●	-
Telemetry RS232	LG00334	●	-	●	-	●	-	●	1	-	1	3	-	●	●	●	●	-
Tel. RS485/GNSS	LG00331	●	-	-	●	●	-	●	1	-	1	3	-	●	●	●	●	●
Tel. RS232/GNSS	LG00332	●	-	●	-	●	-	●	1	-	1	3	-	●	●	●	●	●
Telemetry	LG00335	●	-	-	-	●	-	●	1	-	1	3	●	●	●	●	●	-
Analog-battery	LG00336	●	-	-	-	-	●	-	1	1	1	-	-	-	-	-	-	-

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