

Supplementary information for EU Devices in the LoRaWAN® Showcase catalogue. Version 1.0

Version of Questionnaire form from the Customer/ Device Manufacturer

Version	Date	Author	Update
1.0			Initial release from manufacture

Supplementary Information on certified device

1	Supplementary information	
1.1	Manufacturer or Brand name	SOCOMECSAS
1.2	Website	http://www.socomec.com
1.3	Sales / Marketing contact person, email:	Thomas Leonard: thomas.leonard@socomec.com
1.4	Technical contact person, email:	Charles Fumaneri: charles.fumaneri@socomec.com
1.5	Commercial Product name	DIRIS B-10 L
1.6	Product code used when ordering / article number	48290900
1.7	Product Version : Hardware version: Firmware version:	48290900 B 88A078 (v1.0) 880440 (v1.0)
1.8	In what countries is the product available	European Union
1.9	What date was / is the market introduction for this device / product?	31/03/2021
1.10	Is the device already working on a public LoRaWAN network. If yes specify at which public operator, country and number of deployed devices on that network:	<input type="checkbox"/> Yes: <input checked="" type="checkbox"/> No
1.11	What functionality does the device provide and which sensor(s) does it contain?	Use case: Power metering and monitoring devices (PMD) Short behavior description: The DIRIS B is a compact PMD* with a modular format. It is designed for measuring, monitoring and reporting electrical energy. The DIRIS B offers a range of functions for measuring voltage, current, power, energy and quality. It can be used to jointly analyse the single-phase and three-phase loads. Add optional modules to manage multifluid energy sources (water, gas, etc.) and additional inputs/outputs.
1.12	Accuracy & resolution for every sensor or measurement made by the device	
	Name:	Active Power
	sensor accuracy (incl. unit): +/-	± 0.5%

resolution (incl. unit): measurement parameter: measurement range	1 W According IEC 61557-12 2% to 120% In
Name: sensor accuracy (incl. unit): +/- resolution (incl. unit): measurement parameter: measurement range	Reactive Power ± 1% 1 var According IEC 61557-12 5% to 120% In
Name: sensor accuracy (incl. unit): +/- resolution (incl. unit): measurement parameter: measurement range	Apparent Power ± 0.5% 1 VA According IEC 61557-12 10% In to 120% In
Name: sensor accuracy (incl. unit): +/- resolution (incl. unit): measurement parameter: measurement range	Current ± 0.5% 1 mA According IEC 61557-12 10% to 120% In
Name: sensor accuracy (incl. unit): +/- resolution (incl. unit): measurement parameter: measurement range	Voltage ± 0.2% 0.01 V According IEC 61557-12 50 V to 300 V
1.13 Uplinks are: Periodic: Period: Explanation: Keep alive message period: Event triggered how:	<input checked="" type="checkbox"/> [5; 6; 10; 12; 15; 20; 30; 60] min (default 10 min) Upload time based on electrical network aggregations computations By alarms occurrences
1.14 Parameter configuration of device (e.g. transmission or measurement interval, threshold levels, etc.)	<input type="checkbox"/> Remotely: <input type="checkbox"/> Over-the-air with LoRaWAN data downlinks <input type="checkbox"/> Specify if other: <input checked="" type="checkbox"/> Locally: <input type="checkbox"/> Via CLI: specify type of connector: <input type="checkbox"/> Via NFC: <input checked="" type="checkbox"/> Specify if other: Via USB with Easy Config System
1.15 Does the application server send downlinks to the devices?	<input checked="" type="checkbox"/> Yes: (why/how often/typical size) Selection of 7 Predefined Profiles for Data / 10 min / 23 words Date/time setup <input type="checkbox"/> No
1.16 Operating temperature of device - x °C to + x °C	Minimum -10°C Maximum +70°C
1.17 Is the payload structure available for decoding?	<input checked="" type="checkbox"/> Yes: <input type="checkbox"/> No See below
There are 7 pre-defined LoRa profiles The default profile is "Mono charge Energies".	

The default integration period of average values is 10 minutes.

1) Provide mono-load energy profile :

Data	Nb bytes	Unit	Comment
Type	1	-	Always 2 for this profile
Profile number	0.5	-	Always 1 for this profile
Profile version	0.5	-	Always 1 for this profile
Date and time DIRIS B-10	4	s	Number of seconds elapsed since 01/01/2000 00h00. Keep at 0 as long as the time cannot start via LoRa network (downlink) or by Modbus (ECS) → the value 0 will be replace by the applicative plateforme with the timestamp of server as long as the product won't have been set on time.
Ea+	8	10 ⁻¹ Wh	
Ea-	8	10 ⁻¹ Wh	
Er+	8	10 ⁻¹ Varh	
Er-	8	10 ⁻¹ Varh	
MFF 1	8	NA	native input 1 DIRIS B-10
Input state AND voltage presence	2	-	Bits filed. <ul style="list-style-type: none"> • Bit 0 : Input 1 (native input DIRIS B-10) • Bit 1 : Input 2 (native input DIRIS B-10) • Bit 2 : Input 3 (only with option module) • Bit 3 : Input 4 (only with option module) • Bit 4 : Input 5 (only with option module) • Bit 5 : Input 6 (only with option module) • Bit 6 : Input 7 (only with option module) • Bit 7 : Input 8 (only with option module) • Bit 8 : Input 9 (only with option module) • Bit 9 : Input 10 (only with option module) • Bit 10 : voltage presence CT1 • Bit 11 : voltage presence CT2 • Bit 12 : voltage presence CT3 • Bit 13 : voltage presence CT4
Input state change counters	2	-	Half bytes field : <ul style="list-style-type: none"> • 4 bits : Input state change counters 1 (native input DIRIS B-10) • 4 bits : Input state change counters 2 (native input DIRIS B-10) • 4 bits : Input state change counters 3 (only with option module) • 4 bits : Input state change counters 4 (only with option module)
TOTAL	50 bytes		

- Payload size : 48 octets
- By default the sending frequency is 10 minutes.

The change counters go from 0 to 15 then restart at 0. No saving in context or reset on change of config.

2) Data profile "Multi Charges Energy Consumption"

Data	Nb bytes	Unit	Commentaire
Type	1	-	Always at 2 for this profile
Profile number	0.5	-	Always at 2 for this profile
Profile version	0.5	-	Always at 1 for this version
Date and time of DIRIS B-10	4	s	Number of seconds elapsed since 01/01/2000 00h00. Keep at 0 as long as the time cannot start via LoRa network (downlink) or by Modbus (ECS) → the value 0 will be replace by the applicative plateforme with the timestamp of server as long as the product won't have been set on time.
Ea+ load 1	4	kWh	
Er+ load 1	4	kVarh	
Ea+ load 2	4	kWh	
Er+ load 2	4	kVarh	
Ea+ load 3	4	kWh	
Er+ load 3	4	kVarh	
Ea+ load 4	4	kWh	
Er+ load 4	4	kVarh	
MFF 1	8	NA	Native input 1 DIRIS B-10
Input state AND voltage presence	2	-	Bits field. <ul style="list-style-type: none"> • Bit 0 : input 1 (native input DIRIS B-10) • Bit 1 : input 2 (native input DIRIS B-10) • Bit 2 : input 3 (only with option module) • Bit 3 : input 4 (only with option module) • Bit 4 : input 5 (only with option module) • Bit 5 : input 6 (only with option module) • Bit 6 : input 7 (only with option module) • Bit 7 : input 8 (only with option module) • Bit 8 : input 9 (only with option module) • Bit 9 : input 10 (only with option module) • Bit 10 : voltage presence CT1 • Bit 11 : voltage presence CT2 • Bit 12 : voltage presence CT3 • Bit 13 : voltage presence CT4

Input state change counters	2	-	Half bytes field : <ul style="list-style-type: none"> • 4 bits : Input state change counters 1 (native input DIRIS B-10) • 4 bits : Input state change counters 2 (native input DIRIS B-10) • 4 bits : Input state change counters 3 (only with option module) • 4 bits : Input state change counters 4 (only with option module)
TOTAL	50 bytes		

- Payload size : 48 octets
- By default the sending frequency is 10 minutes.

The change counters go from 0 to 15 then restart at 0. No saving in context or reset on change of config.

3) Data profile "Multi Energy Loads"

Data	Nb bytes	Unit	Commentaire
Type	1	-	Always at 2 for this profile
Profile number	0.5	-	Always at 3 for this profile
Profile version	0.5	-	Always at 1 for this version
Date et heure du DIRIS B-10	4	s	Number of seconds elapsed since 01/01/2000 00h00. Keep at 0 as long as the time cannot start via LoRa network (downlink) or by Modbus (ECS) → the value 0 will be replace by the applicative plateform with the timestamp of server as long as the product won't have been set on time.
Ea+ charge 1	4	kWh	
Ea- charge 1	4	kWh	
Ea+ charge 2	4	kWh	
Ea- charge 2	4	kWh	
Ea+ charge 3	4	kWh	
Ea- charge 3	4	kWh	
Ea+ charge 4	4	kWh	
Ea- charge 4	4	kWh	
MFF 1	8	NA	entrée native 1 DIRIS B-10
Input state AND voltage presence	2	-	Bits field. <ul style="list-style-type: none"> • Bit 0 : input 1 (native input DIRIS B-10) • Bit 1 : input 2 (native input DIRIS B-10) • Bit 2 : input 3 (avec module option uniquement) • Bit 3 : input 4 (avec module option uniquement) • Bit 4 : input 5 (only with option module) • Bit 5 : input 6 (only with option module) • Bit 6 : input 7 (only with option module) • Bit 7 : input 8 (only with option module)

			<ul style="list-style-type: none"> • Bit 8 : input 9 (only with option module) • Bit 9 : input 10 (only with option module) • Bit 10 : voltage presence CT1 • Bit 11 : voltage presence CT2 • Bit 12 : voltage presence CT3 • Bit 13 : voltage presence CT4
Input state change counters	2	-	Half bytes field : <ul style="list-style-type: none"> • 4 bits : Input state change counters 1 (native input DIRIS B-10) • 4 bits : Input state change counters 2 (native input DIRIS B-10) • 4 bits : Input state change counters 3 (only with option module) • 4 bits : Input state change counters 4 (only with option module)
TOTAL	50 bytes		

- Payload size : 48 octets
- By default the sending frequency is 10 minutes.

The change counters go from 0 to 15 then restart at 0. No saving in context or reset on change of config.

4) Data profile "Mono Monitoring load"

Data	Nb bytes	Unit	Commentaire
Type	1	-	Always at 2 for this profile
Profile number	0.5	-	Always at 4 for this profile
Profile version	0.5	-	Always at 1 for this version
Date and time of last AVG	4	s	Number of seconds elapsed since 01/01/2000 00h00. Keep at 0 as long as the time cannot start via LoRa network (downlink) or by Modbus (ECS) → the value 0 will be replace by the applicative plateforme with the timestamp of server as long as the product won't have been set on time.
Average total active power	4	W	Signed
Average total reactive power	4	Var	Signed
Average total apparent power	4	VA	No signed
Average total power factor	2	-	Signed
Average total power factor type	2	-	Type of power factor : 0 : non défini 1 : capacitif 2 : inductif
Single phase current 1 average	4	mA	No signed

Single phase 2 average current	4	mA	No signed
Single phase 3 average current	4	mA	No signed
Average frequency	4	mHz	No signed
Input state AND voltage presence	2	-	Bits field. <ul style="list-style-type: none"> • Bit 0 : input 1 (native input DIRIS B-10) • Bit 1 : input 2 (native input DIRIS B-10) • Bit 2 : input 3 (only with option module) • Bit 3 : input 4 (only with option module) • Bit 4 : input 5 (only with option module) • Bit 5 : input 6 (only with option module) • Bit 6 : input 7 (only with option module) • Bit 7 : input 8 (only with option module) • Bit 8 : input 9 (only with option module) • Bit 9 : input 10 (only with option module) • Bit 10 : voltage presence CT1 • Bit 11 : voltage presence CT2 • Bit 12 : voltage presence CT3 • Bit 13 : voltage presence CT4
Temperature 1 (option module 1)	2	0.01°C	Signed
Temperature 2 (option module 1)	2	0.01°C	Signed
Temperature 3 (option module 1)	2	0.01°C	Signed
Inputs state change and voltage presence counters	4	-	Half bytes fields : <ul style="list-style-type: none"> • 4 bits : Inputs state change 1 (native input DIRIS B-10) • 4 bits : Inputs state change 2 (native input DIRIS B-10) • 4 bits : Inputs state change 3 (only with option module) • 4 bits : Inputs state change 4 (only with option module) • 4 bits : Inputs state change and voltage presence counters CT1 • 4 bits : Inputs state change and voltage presence counters CT2 • 4 bits : Inputs state change and voltage presence counters CT3 • 4 bits : Inputs state change and voltage presence counters CT4
TOTAL	50 bytes		

- Payload size : 48 octets
- By default the sending frequency is 10 minutes.

The change counters go from 0 to 15 then restart at 0. No saving in context or reset on change of config.

5) Data profile "Multi Monitoring load"

Data	Nb bytes	Unit	Commentaire
Type	1	-	Always at 2 for this profile
Profile number	0.5	-	Always at 5 for this profile
Profile version	0.5	-	Always at 1 for this version
Date and time of last AVG	4	s	Number of seconds elapsed since 01/01/2000 00h00. Remains at 0 as long as the time has not been written via the Lora network (downlink) or by Modbus (ECS) → the value 0 will be replaced by the application platform with the server timestamp until the product has registered an AVG.
Total active power average load 1	4	W	Signed
Total reactive power average load 1	4	Var	Signed
Total active power average load 2	4	W	Signed
Total reactive power average load 2	4	Var	Signed
Total active power average load 3	4	W	Signed
Total reactive power average load 3	4	Var	Signed
Total active power average load 4	4	W	Signed
Total reactive power average load 4	4	Var	Signé

Input state AND voltage presence	2	-	Bits field. <ul style="list-style-type: none"> • Bit 0 : Input 1 (native Input DIRIS B-10) • Bit 1 : Input 2 (native Input DIRIS B-10) • Bit 2 : Input 3 (only with option module) • Bit 3 : Input 4 (only with option module) • Bit 4 : Input 5 (only with option module) • Bit 5 : Input 6 (only with option module) • Bit 6 : Input 7 (only with option module) • Bit 7 : Input 8 (only with option module) • Bit 8 : Input 9 (only with option module) • Bit 9 : Input 10 (only with option module) • Bit 10 : voltage presence CT1 • Bit 11 : voltage presence CT2 • Bit 12 : voltage presence CT3 • Bit 13 : voltage presence CT4
Inputs state change and voltage presence counters	4	-	Half bytes fields : <ul style="list-style-type: none"> • 4 bits : Inputs state change counter 1 (native input DIRIS B-10) • 4 bits : Inputs state change counter 2 (native input DIRIS B-10) • 4 bits : Inputs state change counter 3 (only with option module) • 4 bits : Inputs state change counter 4 (only with option module) • 4 bits : Inputs state change and voltage presence counters CT1 • 4 bits : Inputs state change and voltage presence counters CT2 • 4 bits : Inputs state change and voltage presence counters CT3 • 4 bits : Inputs state change and voltage presence counters CT4
TOTAL	44 bytes		

- Payload size : 42 octets
- By default the sending frequency is 10 min.

The change counters go from 0 to 15 then restart at 0. No saving in context or reset on change of config.

6) Data Profil "Mono Charge Load curves"

Data	Nb bytes	Unit	Commentaire
Type	1	-	Always at 2 for this profile
Profile number	0.5	-	Always at 1 for this profile
Profile version	0.5	-	Always at 1 for this version
Date and time of the last point	4	s	Number of seconds elapsed since 01/01/2000 00h00. Keep at 0 as long as the time cannot start via LoRa network (downlink) or by Modbus (ECS) → the value 0 will be replace by the applicative plateforme with the timestamp of server as long as the product won't have been set on time.
Total positive active power - last point	4	W	No signed
Total negative active power - last point	4	W	No signed
Total positive reactive power - last point	4	Var	No signed
Total negative reactive power - last point	4	Var	No signed
Last point Flag	2	-	0 : complete period and date configured 1 : complete period and date configured 2 : complete period and date configured 3 : complete period and date configured
Date and time of the penultimate item	4	s	Number of seconds elapsed since 01/01/2000 00h00. Keep at 0 as long as the time cannot start via LoRa network (downlink) or by Modbus (ECS) → the value 0 will be replaced by the application plateforme with the server timestamp as long as the product has not been set to time.
Total positive active power - penultimate item	4	W	No signed
Total negative active power - penultimate item	4	W	No signed
Total positive reactive power - penultimate item	4	Var	No signed
Total negative reactive power - penultimate item	4	Var	No signed
Penultimate item Flag	2	-	0 : complete period and date configured 1 : incomplete period and date set 2: complete period and date not configured 3: incomplete period and configured date

Input state AND voltage presence	2	-	<p>Bits fields.</p> <ul style="list-style-type: none"> • Bit 0 : Input 1 (native Input DIRIS B-10) • Bit 1 : Input 2 (native Input DIRIS B-10) • Bit 2 : Input 3 (only with option module) • Bit 3 : Input 4 (only with option module) • Bit 4 : Input 5 (only with option module) • Bit 5 : Input 6 (only with option module) • Bit 6 : Input 7 (only with option module) • Bit 7 : Input 8 (only with option module) • Bit 8 : Input 9 (only with option module) • Bit 9 : Input 10 (only with option module) • Bit 10 : voltage presence CT1 • Bit 11 : voltage presence CT2 • Bit 12 : voltage presence CT3 • Bit 13 : voltage presence CT4
Change of state counters	2	-	<p>Half bytes fields :</p> <ul style="list-style-type: none"> • 4 bits : Inputs state change counter 1 (native input DIRIS B-10) • 4 bits : Inputs state change counter 2 (native input DIRIS B-10) • 4 bits : Inputs state change counter 3 (only with option module) • 4 bits : Inputs state change counter 4 (only with option module)
TOTAL	50 bytes		

- Payload size : 48 octets
- By default the sending frequency is 10 min.

The change counters go from 0 to 15 then restart at 0. No saving in context or reset on change of config.

The integration period of load curves must be based on upload time LoRa (settings to delete in ECS).

7) Data Profil "Multi Charge Load curves"

Data	Nb bytes	Unit	Commentaire
Type	1	-	Always at 2 for this profil
Profile number	0.5	-	Always at 7 for this profil
Profile version	0.5	-	Always 1 for this version
Date and time of the last point	4	s	Number of seconds elapsed since 01/01/2000 00h00. Keep at 0 as long as the time cannot start via LoRa network (downlink) or by Modbus (ECS) → the value 0 will be replaced by the application platform with the server timestamp as long as the product has not recorded a point.
Total positive active power - Load 1 – last point	4	W	No signed
Total positive active power - Load 2 – last point	4	W	No signed
Total positive active power - Load 3 – last point	4	W	No signed
Total positive active power - Load 4 – last point	4	W	No signed
Last point Flag	2	-	0: complete period and date configured 1: incomplete period and date configured 2: complete period and date not configured 3: incomplete period and date configured
Date and time of penultimate item	4	s	Number of seconds elapsed since 01/01/2000 00h00. Keep at 0 as long as the time cannot start via LoRa network (downlink) or by Modbus (ECS) → the value 0 will be replaced by the application platform with the server timestamp as long as the product has not been set on time.
Total positive active power - Load 1 - penultimate item	4	W	No signed
Total positive active power - Load 2 - penultimate item	4	W	No signed
Total positive active power -	4	W	No signed

Load 3 - penultimate item			
Total positive active power - Load 4 - penultimate item	4	W	No signed
penultimate item Flag	2	-	0: complete period and date configured 1: incomplete period and date configured 2: complete period and date not configured 3: incomplete period and date configured
Input state AND voltage presence	2	-	Bits fields. <ul style="list-style-type: none"> • Bit 0 : Input 1 (native Input DIRIS B-10) • Bit 1 : Input 2 (native Input DIRIS B-10) • Bit 2 : Input 3 (only with option module) • Bit 3 : Input 4 (only with option module) • Bit 4 : Input 5 (only with option module) • Bit 5 : Input 6 (only with option module) • Bit 6 : Input 7 (only with option module) • Bit 7 : Input 8 (only with option module) • Bit 8 : Input 9 (only with option module) • Bit 9 : Input 10 (only with option module) • Bit 10 : voltage presence CT1 • Bit 11 : voltage presence CT2 • Bit 12 : voltage presence CT3 • Bit 13 : voltage presence CT4
Inputs state change counter	2	-	Half bytes fields : <ul style="list-style-type: none"> • 4 bits : Inputs state change counter 1 (native input DIRIS B-10) • 4 bits : Inputs state change counter 2 (native input DIRIS B-10) • 4 bits : Inputs state change counter 3 (only with option module) • 4 bits : Inputs state change counter 4 (only with option module)
TOTAL	50 bytes		

- Payload size : 48 octets
- By default the sending frequency is 10 min.

The change counters go from 0 to 15 then restart at 0. No saving in context or reset on change of config.

1.18 Is there a decode-API available	<input checked="" type="checkbox"/> Yes: <input type="checkbox"/> No See table – last pages
1.19 Is the firmware upgradeable and how?	<input checked="" type="checkbox"/> Yes: (how), via USB with Product Upgrade Tool

1.20 How can the device be reset to factory default settings?	Via USB with Easy Config System
1.21 How can the device be forced to re-initiate the join procedure?	With a product hard reboot
1.22 Product certifications (IP rating, ATEX, ...)	1. IP rating: IP40 2. ATEX compliance: No Other:
1.23 Which regulatory certifications are available (RED, CE, EMC)?	<input checked="" type="checkbox"/> RED <input checked="" type="checkbox"/> CE <input checked="" type="checkbox"/> EMC
1.24 Power Supply	<input checked="" type="checkbox"/> External power supply: connection: Power Supply Connector voltage: 110-230 VAC ±15 % amperage: 10 mA <input type="checkbox"/> Internal battery: battery type: chemical composition: Battery self-discharge (%/year): Battery shelf life: capacity: weight: rechargeable: <input type="checkbox"/> Yes: <input type="checkbox"/> No
1.25 Powering device on and off How is the device turned ON ? How is the device turned OFF ?	Powered by 230 V Unpowered at 230V
1.26 Dimensions of device (Length x width x height)	65 x 54 x 100 cm
1.27 Weight of full device	175 g
1.28 Mounting of device 1. How to mount? 2. How to mount for best antenna propagation	DIN Rail, Plate Modular for DIN rail mounting with the antenna at the outside of cabinet

2 LoRaWAN Device Information

2.1 DevEUI Range (IEEE Compliance)	From :00 17 4A CA 00 01 00 01 To : 00 17 4A CA 00 01 FF FF
2.2 LoRaWAN Class	<input checked="" type="checkbox"/> Class A <input type="checkbox"/> Class B <input checked="" type="checkbox"/> Class C
2.3 For Class C Device: Device Under Test restores previous RF settings at boot?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2.4 In what LoRaWAN region/frequency ranges is the product available	<input checked="" type="checkbox"/> EU863-870 <input type="checkbox"/> US902-928 <input type="checkbox"/> AS923 <input type="checkbox"/> IN865-867 <input type="checkbox"/> KR920-923 <input type="checkbox"/> Other
2.5 Is the LoRaWAN test mode supported?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, why not
2.6 Tested and certified against which LoRaWAN Specification(s)	<input type="checkbox"/> V1.0 <input type="checkbox"/> V1.0.1 <input checked="" type="checkbox"/> V1.0.2 revB <input type="checkbox"/> V1.0.3 <input type="checkbox"/> V1.1.x <input type="checkbox"/> Other :
2.7 Link to document on the LoRa Alliance website	Link:
2.8 Which TX power is used in production devices by default? - if LW 1.0.2 rev A or older is used: - if LW 1.0.2 rev B or newer is used	<input type="checkbox"/> TXPower 0 (20dBm) <input type="checkbox"/> TXPower 1 (14dBm) <input type="checkbox"/> TXPower 2 (11dBm) <input type="checkbox"/> TXPower 3 (8dBm) <input type="checkbox"/> TXPower 4 (5dBm) <input type="checkbox"/> TXPower 5 (2dBm) <input type="checkbox"/> other TXPower (dBm) <input checked="" type="checkbox"/> TXPower 0 (MaxEIRP) <input type="checkbox"/> TXPower 1 (MaxEIRP-2dB) <input type="checkbox"/> TXPower 2 (MaxEIRP-4dB) <input type="checkbox"/> TXPower 3 (MaxEIRP-6dB) <input type="checkbox"/> TXPower 4 (MaxEIRP-8dB) <input type="checkbox"/> TXPower 5 (MaxEIRP-10dB) <input type="checkbox"/> TXPower 6 (MaxEIRP-12dB) <input type="checkbox"/> TXPower 7 (MaxEIRP-14dB) <input type="checkbox"/> other TXPower (Max EIRP : dB)

<p>2.9 Which TX powers are supported by the device in production</p> <p>- if LW 1.0.2 rev A or older is used:</p> <p>- if LW 1.0.2 rev B or newer is used</p>	<p><input type="checkbox"/> TXPower 0 (20dBm)</p> <p><input type="checkbox"/> TXPower 1 (14dBm)</p> <p><input type="checkbox"/> TXPower 2 (11dBm)</p> <p><input type="checkbox"/> TXPower 3 (8dBm)</p> <p><input type="checkbox"/> TXPower 4 (5dBm)</p> <p><input type="checkbox"/> TXPower 5 (2dBm)</p> <p><input type="checkbox"/> other TXPower (dBm)</p> <p><input checked="" type="checkbox"/> TXPower 0 (MaxEIRP)</p> <p><input type="checkbox"/> TXPower 1 (MaxEIRP-2dB)</p> <p><input type="checkbox"/> TXPower 2 (MaxEIRP-4dB)</p> <p><input type="checkbox"/> TXPower 3 (MaxEIRP-6dB)</p> <p><input type="checkbox"/> TXPower 4 (MaxEIRP-8dB)</p> <p><input type="checkbox"/> TXPower 5 (MaxEIRP-10dB)</p> <p><input type="checkbox"/> TXPower 6 (MaxEIRP-12dB)</p> <p><input type="checkbox"/> TXPower 7 (MaxEIRP-14dB)</p> <p>(Max EIRP : dB)</p>
<p>2.9 Which LoRaWAN Specification is currently supported on the production devices?</p>	<p><input type="checkbox"/> V1.0</p> <p><input type="checkbox"/> V1.0.1</p> <p><input type="checkbox"/> V1.0.2 revA</p> <p><input checked="" type="checkbox"/> V1.0.2 revB</p> <p><input type="checkbox"/> V1.0.4</p> <p><input type="checkbox"/> V1.1.x</p> <p><input checked="" type="checkbox"/> Other: 1.0.3 revA</p>
<p>2.10 Will you re-certify your device when a new major LoRaWAN specification version is released</p>	<p><input checked="" type="checkbox"/> Yes.</p> <p><input type="checkbox"/> No, why :</p>
<p>2.11 Has Interoperability prequalification testing been done?</p>	<p><input checked="" type="checkbox"/> Yes.</p> <p><input type="checkbox"/> No, why :</p> <p>Which Network Servers</p> <p><input type="checkbox"/> Actility</p> <p><input type="checkbox"/> Loriot</p> <p><input type="checkbox"/> TTI</p> <p><input checked="" type="checkbox"/> Other: Specify: Wi6Labs network server</p> <p>Please attach all the test reports.</p>
<p>2.12 Is Activation Type OTAA the default</p>	<p><input checked="" type="checkbox"/> Yes.</p> <p><input type="checkbox"/> No, why :</p>
<p>2.13 For OTAA, is AppKey unique for each device?</p>	<p><input checked="" type="checkbox"/> Yes.</p> <p><input type="checkbox"/> No.</p>

<p>2.14 Is ADR implemented? Recommendation: ADR should always be activated. Exceptions can be made for moving devices but will need to be explained.</p>	<p><input checked="" type="checkbox"/> Activated <input type="checkbox"/> Deactivated, why : <input type="checkbox"/> Configurable by user (recommendation: Activated by default) <input type="checkbox"/> Mixed, explain:</p>
<p>2.15 What values did you implement for: - ADR_ACK_LIMIT: - ADR_ACK_DELAY:</p>	<p>64 recommended value: 64 recommended value: 32</p>
<p>2.16 Do you use unconfirmed and/or confirmed uplinks and what is the data rate, timing and power back off algorithm? Upon reception of a confirmed downlink message, is the next uplink sent immediately after the downlink ?Answers (radio buttons)</p>	<p><input checked="" type="checkbox"/> unconfirmed <input type="checkbox"/> confirmed, when and why: <input type="checkbox"/> Both, which is used when and why: Data rate, timing and power back-off algorithm (only if you use confirmed uplinks): <input checked="" type="checkbox"/> Yes. <input type="checkbox"/> No, why :</p>
<p>2.17 Is the device doing a periodical rejoin? (only for OTAA)</p>	<p><input type="checkbox"/> Yes (frequency): <input checked="" type="checkbox"/> No. Why? How to trigger a rejoin?</p>
<p>2.18 Is the first join request sent on SF12?</p>	<p><input checked="" type="checkbox"/> Yes. <input type="checkbox"/> No, why: Explain the JoinRequest sequence if no JoinAccept is received - data rate, timing and power back-off algorithm.</p>
<p>2.19 On what SF and power setting is the first uplink (after join procedure) done?</p>	<p>SF: SF 12 TXPower: DR_0</p>
<p>2.20 Are you doing periodically reset of Uplink frame counter?</p>	<p><input type="checkbox"/> Yes (frequency/why): <input checked="" type="checkbox"/> No.</p>
<p>2.21 If LoRaWAN 1.0.x, DevNonce behaviour :</p>	<p><input checked="" type="checkbox"/> Based on a random value <input type="checkbox"/> Monotonically increasing never-wrapping counter</p>
<p>2.22 Uplink DataRate (0-7 supported)</p>	<p>Min: 0 Max: 6</p>
<p>2.23 RX1 Data Rate Offset</p>	<p><input checked="" type="checkbox"/> Default LoRaWAN in regards of ISM band <input type="checkbox"/> Other:</p>
<p>2.24 RX1 Delay</p>	<p><input checked="" type="checkbox"/> Default LoRaWAN in regards of ISM band <input type="checkbox"/> Other:</p>
<p>2.25 RX2 Data Rate</p>	<p><input checked="" type="checkbox"/> Default LoRaWAN in regards of ISM band <input type="checkbox"/> Other:</p>

2.26 RX2 Frequency	<input checked="" type="checkbox"/> Default LoRaWAN in regards of ISM band <input type="checkbox"/> Other:
2.27 RX1 Delay on JoinRequest (OTAA devices only)	<input checked="" type="checkbox"/> Default LoRaWAN in regards of ISM band <input type="checkbox"/> Other:
2.28 Mobility Profile (how your device moves)	<input checked="" type="checkbox"/> Near static <input type="checkbox"/> Walking speed <input type="checkbox"/> Vehicle speed <input type="checkbox"/> Random
2.29 Frame Counters Up To 32-bits	<input checked="" type="checkbox"/> Frame counter-up <input checked="" type="checkbox"/> Frame counter-down
2.30 Which MAC commands does the device support	<input type="checkbox"/> LinkCheckReq / LinkCheckAns <input type="checkbox"/> TXParamSetupReq / TXParamSetupAns <input type="checkbox"/> LinkADRRReq / LinkADRAns <input checked="" type="checkbox"/> DutyCycleReq / DutyCycleAns <input type="checkbox"/> RXParamSetupReq /RXParamSetupAns <input type="checkbox"/> DevStatusReq / DevStatusAns <input type="checkbox"/> NewChannelReq / NewChannelAns <input type="checkbox"/> TXTimingSetupReq / TXTimingSetupAns
2.31 LoRaWAN Stack Type (optional)	<input type="checkbox"/> Semtech/Stackforce <input checked="" type="checkbox"/> Semtech/Stackforce with modifications <input type="checkbox"/> IBM <input type="checkbox"/> IBM with modifications <input type="checkbox"/> Proprietary- Other, name it:
2.32 LoRaWAN Stack Version (optional)	4.4.6
2.33 LoRa Radio Hardware (optional)	<input type="checkbox"/> Proprietary: SX chip used: <input checked="" type="checkbox"/> LoRaWAN Modem/Module: Manufacturer: Murata Part Number: CMWX1ZZ ABZ Firmware revision:
2.34 Multicast support (optional)	<input type="checkbox"/> Yes: Multicast DevAddr: Multicast AppSKey: Multicast NwkSKey: Payload: Port: <input checked="" type="checkbox"/> No.

3 Radio Frequency Information

<p>3.1 Type of Antenna</p>	<p><input type="checkbox"/> Wire <input type="checkbox"/> PCB <input checked="" type="checkbox"/> External <input type="checkbox"/> Other: (which type)</p>
<p>3.2 Antenna gain [dBi or dBd] Linx</p>	<p>-2.3dBi or</p>
<p>3.2 Antenna gain [dBi or dBd] Gigaconcept GC-2115K868</p>	<p>+ 2.2dBi or</p>
<p>3.3 Did you measure and take into account the loss between the modem and the antenna?</p>	<p><input type="checkbox"/> Yes, dB loss <input checked="" type="checkbox"/> No, why: cf lab RED certification report</p>
<p>3.4 For LW 1.0.2 rev A or older devices: which TXPower setting should be used on the network for your device*: N/A</p>	<p><input type="checkbox"/> TXPower 0 (20dBm) <input type="checkbox"/> TXPower 1 (14dBm) <input type="checkbox"/> TXPower 2 (11dBm) <input type="checkbox"/> TXPower 3 (8dBm) <input type="checkbox"/> TXPower 4 (5dBm) <input type="checkbox"/> TXPower 5 (2dBm) <input type="checkbox"/> other txpower (dBm)</p>
<p>3.5 Did you calibrate your device with the antenna gain and measured loss in between the chipset and antenna? This so that your device emits with maximal power when using TXPower 1 for LW 1.0.2 rev A or older devices (= 14dBm) and TXPower 0 for LW 1.0.2 rev B or newer devices (= MaxEIRP or 16.15dBm EIRP)*.</p>	<p><input type="checkbox"/> Yes, dB loss <input checked="" type="checkbox"/> No, why: cf lab RED certification report</p>

4 Battery and TX Power Information

Please indicate if you do not want Section 4 displayed on the LoRa Alliance Website Yes

If yes please supply contact details for the operators to request the information for Section 4 [Thomas Leonard, thomas.leonard@socomec.com](mailto:thomas.leonard@socomec.com)

<p>4.1 Battery consumption of the device (including modem, sensors and all other electronics)</p>	<p>TX current: mA RX current: mA Idle time current: mA</p>																														
<p>4.2 Estimated battery life in years based on the number of transmissions (including sensor readings) at SF7, SF10 & SF12 with your battery self-discharge and aging over time taken into account.</p> <p>Assumptions: - Product shelf life before use: Maximum 1 year. - At an environment temperature of 20°C.</p> <p>- LoRaWAN specification used for battery life calculation:</p> <p>- TX power setting (txpower) used for battery life calculation:</p> <p>- Payload size used for battery life calculation (should be average payload size of production device):</p> <p>- Additional assumptions or comments on battery life (Typical usage</p>	<table border="1"> <thead> <tr> <th colspan="4">Battery life in years</th> </tr> <tr> <th></th> <th>SF7</th> <th>SF10</th> <th>SF12</th> </tr> </thead> <tbody> <tr> <td rowspan="7" style="writing-mode: vertical-rl; transform: rotate(180deg);">Transmission Periodicity (transmissions/day)</td> <td>144</td> <td></td> <td></td> </tr> <tr> <td>96</td> <td></td> <td></td> </tr> <tr> <td>48</td> <td></td> <td></td> </tr> <tr> <td>24</td> <td></td> <td></td> </tr> <tr> <td>12</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> </tr> <tr> <td>1</td> <td></td> <td></td> </tr> </tbody> </table> <p><input type="checkbox"/> LW1.0.1 <input type="checkbox"/> LW1.0.2 revA <input type="checkbox"/> LW1.0.2 revB <input type="checkbox"/> Other :</p> <p><input type="checkbox"/> LW1.0.1 <input type="checkbox"/> LW1.0.2 revA <input type="checkbox"/> LW1.0.2 revB <input type="checkbox"/> Other :</p> <p>bytes</p>	Battery life in years					SF7	SF10	SF12	Transmission Periodicity (transmissions/day)	144			96			48			24			12			4			1		
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	96																														
	48																														
	24																														
	12																														
	4																														
	1																														

<p>4.3 Which TX power setting (TXPower) was used in the RF test?</p> <p>- If LW 1.0.2 rev A or older device:</p> <p>- If LW 1.0.2 rev B or newer device:</p>	<ul style="list-style-type: none"> <input type="checkbox"/> TXPower 0 (20dBm) <input type="checkbox"/> TXPower 1 (14dBm) <input type="checkbox"/> TXPower 2 (11dBm) <input type="checkbox"/> TXPower 3 (8dBm) <input type="checkbox"/> TXPower 4 (5dBm) <input type="checkbox"/> TXPower 5 (2dBm) <input type="checkbox"/> other TXPower (dBm) <input type="checkbox"/> TXPower 0 (MaxEIRP) <input type="checkbox"/> TXPower 1 (MaxEIRP-2dB) <input type="checkbox"/> TXPower 2 (MaxEIRP-4dB) <input type="checkbox"/> TXPower 3 (MaxEIRP-6dB) <input type="checkbox"/> TXPower 4 (MaxEIRP-8dB) <input type="checkbox"/> TXPower 5 (MaxEIRP-10dB) <input type="checkbox"/> TXPower 6 (MaxEIRP-12dB) <input type="checkbox"/> TXPower 7 (MaxEIRP-14dB) <input type="checkbox"/> other TXPower (MaxEIRP- dBdBm)
<p>4.4 Is this the same TX power setting (TXPower) used by default in production devices (before network ADR)?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Yes, <input type="checkbox"/> No, why:
<p>4.5 Maximum ERP measured: (ERP = EIRP - 2.15 dB; LoRaWAN allows 14 dBm ERP)</p>	<p style="text-align: center;">dBm</p>
<p>4.6 TRP measured: (TRP is based on EIRP) This gives an idea about the directivity of the antenna.</p>	<p style="text-align: center;">dBm</p>
<p>3.10 TIS measured on RX1:</p>	<p>For RX1-SF12BW125 on 868.3MHz dBm</p>
<p>3.11 TIS measured on RX2</p>	<p>For RX2-SF12BW125 on 869.525 MHz: dBm</p>