

OFFICE OF THE SUPPLY CHAIN MANAGEMENT

1.1 DESCRIPTION OF SERVICE: SUPPLY OF A LANTRONIX M114F002S LTE 4G MODEM OR A SIMILAR PRODUCT

BACKGROUND:

The 4G modems are needed for logger communication for an existing network of eight dataloggers that are collecting data (sap flow, soil water content, soil matric potential, flow meters) on a continuous basis for water use research at remote sites. Modems that are within the budget limit are considered.

PURPOSE

To procure eight 4G modems that are compatible to an existing network of dataloggers to enable communication and downloading of research data from remote research sites.

SPECIFICATIONS OF A LANTRONIX M114F002S LTE 4G modem OR SIMILAR PRODUCT:


SPECIFICATION	Comply with specification. Please indicate (Yes or No)		
	Yes	No	If no, indicate deviation
Characteristics and performance should be similar to or better than the specs below:			
HARDWARE			
Cellular via two SubMiniature version A antenna connectors (main and diversity)			
Operating system software (I/Os)			
Two 2-way versatile I/Os, i.e. user-configurable, each one independently from the other, as either (i) analogue input or (ii) digital output; via the lower row of the same header			
<ul style="list-style-type: none"> ANALOGUE INPUT: 0 V dc ~ ± 48 V dc range; ± 12-bit resolution 			
<ul style="list-style-type: none"> DIGITAL OUTPUT: open collector; ± 200 mA max.; ± 50 V dc max. 			
<ul style="list-style-type: none"> Third possible configuration as analogue input suited to current loop sensors (aka ± 4 mA ~ ± 20 mA sensors) 			
Serial Communication			
RS232 Full implementation; via a 9-pin sub-D header			
USB 2.0 via a Type-C header			
SIM: Single SIM			

Physical description			
Compact design: Dimensions $\pm 6 \times \pm 6 \times \pm 2$ cm			
Brushed aluminum alloy housing			
Operating status LEDS for power and cellular signal, respectively			
Reset button with options to Reset or Reset to factory settings			
Operating temperatures: $\pm -30\text{ }^{\circ}\text{C} \sim \pm +70\text{ }^{\circ}\text{C}$			
Power Consumption low for Remote Internet of Things (IoT) Application (during worst case scenario i.e. high temperatures, all subsystems fired on, etc.)			
Idle: $\pm 1.10\text{ W}$			
Standby: $\pm 2.63\text{ W}$			
Communication (Tx max.): $\pm 6.18\text{ W}$			
Power: $\pm 8\text{ V dc} - \pm 32\text{ V dc}$			
SOFTWARE			
Multiple Cellular Network Support in 4G LTE-M1 and Cat 1: available on LTE standards such as LTE Cat 1 and M1 for IoT applications			
Auto TCP dial-up function allows initiating any communication of a serial device with or without dial-up capability.			
Device options available.			
<ul style="list-style-type: none"> Dial-up 			
<ul style="list-style-type: none"> TCP/UDP permanent client/server 			
<ul style="list-style-type: none"> On-demand client with two TCP / UDP sockets for failover 			
<ul style="list-style-type: none"> Network connectivity watchdog 			
GENERAL CONDITIONS FOR THE PURCHASE ORDER AGREEMENT			
The LANTRONIX M114F002S LTE 4G MODEM or similar product and accessories shall be delivered to the Irrigation Division, Soil and Water Science Programme, Nietvoorbij Campus, ARC Infruitec-Nietvoorbij, Stellenbosch			

The specification was prepared by: Senior Researcher

Name: Dr Theresa Volschenk

Date: 7 August 2023

Signature..... 

1.2 PRICING SCHEDULE

Item description	QTY	Unit price	Total Price
1. LANTRONIX M114F002S LTE 4G MODEM or similar product	8		
2. Power cord (the latter with two stripped wires for I/Os)	8		
3. USB cord: ± 0.8 meter-long, Type-C to Type-A plug	8		
4. Remote, Adhesive, Antennas	8		
5. Din Rail Clip for modem	8		
Other: Delivery	1		
SUBTOTAL			
VAT			
GRANDTOTAL			

Delivery Address: ARC Infruitec Nietvoorbij, Helshoogte Road, Stellenbosch

Supplier's Details:

Company Name:

Contact person:

Contact number:

Date & Signature:

Contact: *Dr Theresa Volschenk, Irrigation division, Soil and Water Science*
volschenkt@arc.agric.za, 021-8093345

Quotes must be sent via email only - MatayiZ@arc.agric.za

Closing Date 22/08/2023 at 11:00 am

NB: Bidders must complete the TABLE below as per the commitment of the RFQ.

AGREE WITH THE ABOVE SPECIFICATION: We the undersigned submit this RFQ in accordance with the conditions contained in the referenced above RFQ document and attach the documents required:
Bidders representative:
Capacity:
Date and Signature:

DISAGREE WITH THE ABOVE SPECIFICATION:		
PAGE NUMBER	CLAUSE NUMBER	DEVIATION
Bidders representative and Capacity		
Date and signature		

**5.3 EVALUATION PROCESS & CRITERIA STAGE ONE FOR SUPPLY OF A LANTRONIX M114F002S
LTE 4G MODEM OR A SIMILAR PRODUCT**

ADMINISTRATIVE COMPLIANCE EVALUATION OF ALL PROPOSALS

	Comply with specification. Please indicate (Yes or No)		
	Yes	No	If no, indicate deviation
EVALUATION PROCESS: NB: It must be noted that ARC reserve the rights to request for clarification if all the below questions are not answered properly.			
<u>STAGE ONE: ADMINISTRATION COMPLIANCE</u>			
<p>All suppliers are duly lodged will be examined to determine compliance with quoting requirements and conditions. Quotes with obvious deviations from the requirements/conditions, will be eliminated or disqualified from further adjudication.</p> <p>(a) Mandatory</p> <p>Quotes will only be compliant if supplier has submitted the following documents:</p>			
<p><i>Administrative documents</i></p> <p>1. According to National Treasury SCM Instruction number 4 of 2016/2017, only suppliers who are registered on Central Supplier Database (CSD) may be appointed. Suppliers is therefore encourage to register their entities on CSD, www.csd.gov.za and such information will be verified through Central Supply Database (CSD);</p>			
2. All SBD documents must be submitted and completed;			
<p>(b) Non-Mandatory</p> <ul style="list-style-type: none"> Valid B-BBEE certificate or sworn affidavit certify by commissioner of oaths. 			

