

# DATA SHEET MURATA LBAD0ZZ1RX WIRELESS MODULE

## KEY BENEFITS

Compact-sized NB-IoT module
Supports 3GPP Rel. 13/14 NB-IoT air interfaces and protocols
Ultra-low power consumption
Up to +20 dB extended coverage compared to GPRS (164 dB MCL)
Operating Temp Range of -30 °C to 85 °C
CoAP over UDP/IP, IPv4/6
TS.34 communication efficiency feature Radio Policy Manager

## NETWORK

<b>3GPP Protocol Stack Compliancy</b>	Release 13 / 14
<b>Support for TS.34 IoT Communication Efficiency</b>	Radio Policy Manager
<b>Wireless Protocol Support</b>	
2G/GPRS	None
3G/UMTS	None
4G/LTE	None
LTE-M	None
NB-IoT	Supported
<b>Frequency Band Support</b>	
2G Bands (MHz)	None
3G Bands (MHz)	None
4G Bands (MHz)	None
LTE-M Bands (MHz)	None
NB-IoT Bands (MHz)	B1/B3/B8/B5/B20
<b>3GPP Classes / Categories</b>	
CSD	None
GPRS Multislot Class (DL/UL)	None
EDGE Class (DL/UL)	None
HSDPA Category (DL)	None
HSUPA Category (UL)	None
LTE Category	None
NB-IoT Category	NB1
<b>Short Message Service (SMS)</b>	Text, PDU mode
<b>Speech Codecs</b>	None
<b>Protocol Support</b>	CoAP, UDP, IPv4/6

<b>Firmware Updates</b>	UART
<b>Integrated Positioning Technology</b>	
GPS	None
GLONASS	None
Control Plane A-GPS Support	None
SUPL A-GPS Support	None
<b>Regulatory</b>	
eCall	None
Standalone / Assisted GNSS	None
TTY	None

## HARDWARE

Dimensions (L x W x H, mm)	15.6mm × 14mm × 2.2mm
Weight (g)	ca. 1 g
On-board Memory	256KB Flash / 64KB SRAM
Operating Temperature – Extended Operation (°C)	-30 °C to +85 °C
Supply Voltage Range (V)	3.0 V - 4.2 V
<b>Interfaces</b>	
USB 2.0 (480 Mbps)	None
ASC0 HS Serial Modem	None
GPIO Lines	Supported
UICC and U/SIM (1.8 V/3 V)	3 V
Module ON/Reset	Supported
ADC and I2C	Supported
4-Wire HS Serial Interfaces SCA1	None
Analog Audio	None
Digital Audio	None



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## CERTIFICATION DETAILS

GMA Certification	None
Deutsche Telekom Certification Date (Initial Firmware)	20.07.2018 (1RX-STD-V020A)
Certified Deutsche Telekom Affiliates	AT, CZ, DE, NL, PL, SK
Certifying Entity	IDU-TIV (Miguel Rodriguez)
DT Certification Type (Conditions)	<b>Limited</b> (GCF certification outstanding)
<b>Deutsche Telekom Affiliate Country Codes</b>	
AL	Telekom Albania
AT	T-Mobile Austria GmbH
CZ	T-Mobile Czech Republic a.s.
DE	Telekom Deutschland GmbH
GR	COSMOTE Mobile Telecommunications S.A.
HR	Hrvatski Telekom d.d.
HU	Magyar Telekom Telecommunications plc
ME	Comorgski Telekom a.d. Podgorica
MK	Makedonski Telekom AD - Skopje
NL	T-Mobile Netherlands B.B.
PL	T-Mobile Polska S.A.
RO	Telekom Romania Mobile Communications S.A.
SK	Slovak Telekom, a.s.



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