

# DATA SHEET SERCOMM TPB23 WIRELESS MODULE

## KEY BENEFITS

Multiple band support (Band 3/5/8/20)
3GPP Rel.13 NB-IoT air interfaces and protocols compliant
Maximum RF output power of 23 dBm
Typical Sensitivity Level of 129 dBm
eDRX and PSM support. Ultra-low power consumption for longer battery lifetime
Integrated temperature sensor
Max throughput: Uplink 15Kbps, Downlink 21Kbps

## NETWORK

<b>3GPP Protocol Stack Compliancy</b>	Release 13
<b>Support for TS.34 IoT Communication Efficiency</b>	None
<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)	B3, B5, B8, 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
LTE-M Category	None
NB-IoT Category	NB1
<b>Short Message Service (SMS)</b>	Yes (PDU mode)
<b>Speech Codecs</b>	None

<b>Firmware Updates</b>	UART, Onenet *
<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)	19.9 x 23.6 x 2.6
Weight (g)	1.6
On-board Memory	None
Operating Temperature - Extended Operation (°C)	-40 °C to +85 °C
Supply Voltage Range (V)	3.1 - 4.2
<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 (ADC)
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)	17.09.2018 (RD2007B001-CAQK01)
Certified Deutsche Telekom Affiliates	AT, CZ, DE, HR, NL, PL, SK
Certifying Entity	IDU-TIV (Miguel Rodriguez)
DT Certification Type (Conditions)	<b>Limited certification</b> for pilot usage (GCF certification outstanding, technical issues to be addressed)
<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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