

1 Node Descriptor 19 – Vibration Counter

1.1 Device Description

The Wireless Activity Counter accumulates vibration activity, giving the user an idea of how much activity has occurred. Instead of just indicating that vibration is present, it quantifies the vibration by counting the number of vibrations detected in a user specified time period.

1.2 Hardware Details

1.2.1 Vibration sensor

Possible hardware combinations include:

- Platform RFSC Rev A, Version x: Supported.
- Platform RFSC Rev B, Version x: Supported.
- Platform RFSC Rev C, Version x: Supported.

Raw Sensitivity	0.05g – 0.10g
RoHS	Compliant

For a less sensitive sensor, parts from the same manufacturer could be implemented with the same form factor and foot print.

1.3 Enclosure Details

This product is available in WIT, WIT2, and Industrial.

1.4 MNP Message Details

1.4.1 STATE (SOM, SDM)

Both the Spurious Orphan Message (SOM) and the Spurious Data Message (SDM) contain the STATE field. STATE is defined here.

Field	Length	Description
Test Active	1 bit LSB	Test state is active (1) or inactive (0)
Aware State	1 bit	Aware state is active (1) or inactive (0)
Sensor Disable	1 bit	Sensor is disable (communication still happens)
RSVD	1 bit	Currently not used
Not used	1 bit	
Not used	1 bit	
Not used	1 bit	
Not used	1 bit MSB	

This application specifies no additional action control types.

1.4.2 SDATA (SDM)

The Spurious Data Message contains the SDATA field, which is defined here. The SDATA field is defaulted to 3 bytes for this application.

SDATA[0]: STATE

SDATA[1-2]: Number of vibrations

Field	Length	Value	Format
SDATA[0]	1 byte	Int8	STATE
SDATA[1]	2 bytes	Int16	Number of vibrations

1.5 General Configuration Defaults

The Configuration Defaults below are native to the Vibration Counter sensor only.

Field	Default	Min	Max	Comments
NODEDESC	19	N/A	N/A	Fixed.

1.6 Profile Defaults

The Vibration Counter sensor operates using the Interval device profile.

Field	Default	Min	Max	Comments
PROFILE	1	N/A	N/A	1=Interval profile.
MRES	1	1	250	Measurements per heartbeat
SYNCMASK	0	0	0x00FF	Synchronization or offset of heartbeats.
HYST	4294967295	0	4294967295	Unused
THRSHMIN	4294967295	0	4294967295	Unused
THRSHMAX	4294967295	0	4294967295	Unused
CALVAL_1	4294967295	0	4294967295	Unused
CALVAL_2	4294967295	0	4294967295	Unused
CALVAL_3	4294967295	0	4294967295	Unused
CALVAL_4	4294967295	0	4294967295	Unused