



EP5000Z air quality probe ZigBee clusters

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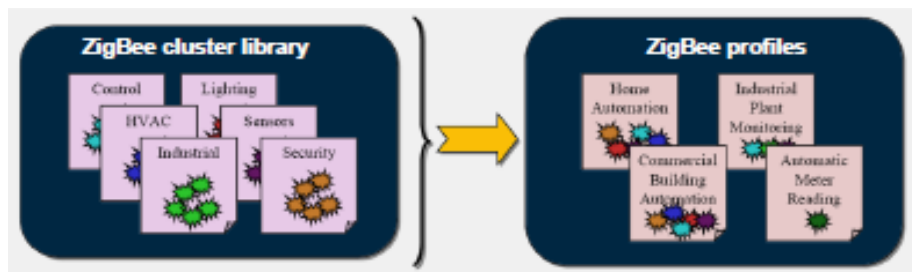
1. ZCL and ZigBee profiles organization

The ZigBee Cluster Library defines

- functional domains
- cluster sets for that functional domain
- mandatory and optional clusters, attributes, commands and functional descriptions
- cluster identifiers
- explicit device descriptions are not defined

Application Profiles defines

- application domains
- related elements from the cluster library collected into application domains
- device descriptions for each required device
- any specialized or deviated use of ZCL cluster



The ZigBee Cluster Library (ZCL) forms a generic basis for the ZigBee common application layer.

Two types of application profiles are administered by the Alliance:

- Public Application Profiles, developed by members of the ZigBee Alliance so that devices from different manufacturers can interoperate.
- Manufacturer-Specific Application Profiles, developed by product developers creating private networks for their own applications where interoperability is not required.

2. Functional Domains

Clusters are grouped by functional domains as follow:

Functional Domain	Cluster ID Range	Used
General	0x0000 – 0x00ff	✓
Closures	0x0100 – 0x01ff	
HVAC	0x0200 – 0x02ff	✓
Lighting	0x0300 – 0x03ff	✓
Measurement and sensing	0x0400 – 0x04ff	✓
Security and safety	0x0500 – 0x05ff	
Protocol interfaces	0x0600 – 0x06ff	

Manufacturer Specific application profile.	0xc000 – 0xffff	
Reserved.	0x8000 – 0xbfff	

3. ZigBee Clusters used by the probe

3.1. General

Cluster ID	Cluster Name	Description
0x0006	On Off	Turn a device on or off : For heating, cooling and ventilation
0x0008	Level Control	Control a device with a range, rather than simple on/off. Applies to dimmable air flow water flow or lights

3.2. HVAC

Cluster ID	Cluster Name	Description
0x0201	Thermostat	An interface for configuring and controlling the functionality of a thermostat.
0x0202	FanControl	Controls speed of a fan part of an HVAC system

3.3. Lighting

Cluster ID	Cluster Name	Description
0x0300	Color control	Attributes and commands for controlling the color properties of a color-capable light

3.4. Measurement and Sensing

Cluster ID	Cluster Name	Description
0x0400	Illuminance measurement	Attributes and commands for configuring the measurement of illuminance, and reporting illuminance measurements.
0x0402	Temperature measurement	Attributes and commands for configuring the measurement of temperature, and reporting temperature measurements.
0x0403	Pressure measurement	Attributes and commands for configuring the measurement of pressure, and reporting pressure measurements.
0x0405	Relative humidity measurement	Attributes and commands for configuring the measurement of relative humidity, and reporting relative humidity measurements.
0x0406	Occupancy sensing	Attributes and commands for configuring occupancy sensing, and reporting occupancy status.
0x040D	Carbon dioxide	Carbon dioxide concentration measurement
0x042A	PM2.5	PM2.5 concentration measurement
0x042C	PM1	PM1 concentration measurement
0x042D	PM10	PM10 concentration measurement
0x042E	VOC	Volatile Organic Compounds concentration measurement typical range example: 0 to 10 PPM typical value example: 1.11 PPM

* In case of occupancy confirmation by CO2

4. Manufacturer Specific Profiles (or MSPs)

The ZigBee Alliance requires manufacturers to make use of a unique private profile identifier to ensure the product can successfully co-exist with other products. The ZigBee Alliance issues these unique private profile IDs to member companies upon request. Private profiles are officially called Manufacturer Specific Profiles (or MSPs). Private profiles are used for those applications that do not need to interact with other vendors' products.

4.1. General

Cluster ID	Cluster Name	Description
0x00XX	BITE status	Built In Test Equipment status
0x00XX	Life Span	Remaining Life span of sensors for predictive maintenance (CO ₂ , PM and VOCT FRUs shall be changed every 10 or 15 years)

4.2. Measurement and Sensing

Cluster ID	Cluster Name	Description
0x04XX	TVOC concentration measurement	Expressed in µg/m ³
0x04XX	Average Noise level measurement	Attributes and commands for configuring the measurement of average Noise, and reporting total average Noise measurements
0x04XX	Pic Noise level measurement	Attributes and commands for configuring the measurement of Pic Noise, and reporting total Pic Noise measurements

4.3. Lighting

Cluster ID	Cluster Name	Description
0x03XX	Light Flickering	Attributes to report the flickering properties of light