



The following is a description of Tag Class Definitions as updated by EPCglobal 1-November 2007.

### **Class-1: Identity Tags**

Passive-backscatter Tags with the following minimum features:

- An electronic product code (EPC) identifier,
- A Tag identifier (Tag ID),
- A function that renders a tag permanently non-responsive
- Optional decommissioning or recommissioning of the Tag,
- Optional password-protected access control, and
- Optional user memory.

### **Class-2: Higher-Functionality Tags**

Passive Tags with the following anticipated features above and beyond those of Class-1 Tags:

- An extended Tag ID,
- Extended user memory,
- Authenticated access control, and
- Additional features (TBD) as will be defined in the Class-2 specification.

### **Class-3: Battery-Assisted Passive Tags (called Semi-Passive Tags in UHF Gen2)**

Passive Tags with the following anticipated features above and beyond those of Class-2 Tags:

- A power source that may supply power to the Tag and/or to its sensors, and/or
- Sensors with optional data logging.

Class-3 Tags still communicate passively, meaning that they (i) require an Interrogator to initiate communications, and (ii) send information to an Interrogator using either backscatter or load-modulation techniques.

### **Class-4: Active Tags**

Active Tags with the following anticipated features:

- An electronic product code (EPC) identifier,
- An extended Tag ID,
- Authenticated access control,
- A power source,
- Communications via an autonomous transmitter,
- Optional User memory,
- Optional sensors with or without data logging.

Class-4 Tags have access to a transmitter and can typically initiate communications with an Interrogator or with another Tag. Protocols may limit this ability by requiring an Interrogator to initiate or enable Tag communications. Because active tags have access to a transmitter, of necessity they have access to a power source. Class-4 Tags shall not interfere with the communications protocols used by Class-1/2/3 Tags.