

Contention Protocol Declaration

CPE8000-PRO-1D-3.X Customer Premises Unit (CPE) is functioning as a slave-client, linked with BreezeCOMPACT base station which is functioning as a master.

Only the Base Station performs channel collision sensing mechanism. Base Station performs a "listen before transmit" function at system startup (channel availability check) and monitoring the channel during its regular listening periods. Base Station will detect (both at startup and on normal operation) if another system, using any technology , is transmitting on the same frequency bandwidth, regardless of the type of transmitting protocol, raising a proper alarm and **evacuate the channel** as long as the channel is occupied, restarting the "listen before talk" mechanism. Upon alarm, the operator may manually set the base station to a new non-busy channel, always restarting the "listen before talk" mechanism.

As the product implements a scheduled protocol (BS is a master and CPEs are slaves), when the base station stops transmitting, the client will not receive the necessary control information and will also stop transmitting.

Once the spectrum usage is clear to be used, the base station will resume transmission and only then CPEs will re-connect to the base station and will receive UL grants.

The overall interference of the CPEs on a foreign systems is avoided due to the following reasons:

- 1. As the used protocol is a scheduled TDD, the CPEs are being scheduled with UL grant only during the UL-sub frame duration.
- 2. The UL grants are shared between all the active clients, therefore the base station schedules only a fraction of the UL frequency/time resources per client.
- 3. The base station UL power control mechanism is targeting the clients to transmit with the minimal power to achieve stable link.
- 4. Clients uses directional antennas which lowers the probability for a collision event.

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