CLAIMS

1. A cleanroom partition wall panel system (200, 300, 400) comprising:
   a top track (202) affixed to a bottom of a ceiling;
   a plurality of wall panels (204a, 204b, 204c, 204d) spaced apart juxtaposed at opposite side to each other, each wall panel having a coplanar surface;
   a bottom track (206) affixed to a flooring layer as an end post for positioning the wall panels of the cleanroom partition wall system;
   at least one vertical post (506) affixed to the top and bottom tracks to engage with the plurality of wall panels (204a, 204b, 204c, 204d);
   at least one horizontal mullion (212, 800, 404) being affixed to the at least one vertical post (506) as horizontal support and as a divider to the partition wall panel;
   self-locking capping means provides capping to the at least one vertical post (506) for holding at least two of the plurality of wall panels in between; spacing means (210, 406) affixed at both ends of the at least one horizontal mullion for fixing and supporting a position of the horizontal mullion;
   a plurality of brackets (208, 502) affixed to the vertical post (506); and
   a plurality of corner posts (1300) with suspension grid openings for holding and supporting cleanroom partition wall panel at corners of the cleanroom partition;
   characterized in that
   the at least one vertical post (506) affixed to the top and bottom tracks to engage with the plurality of wall panels further comprises (600):
      snap-fit locking means (602a, 602b, 602c, 602d) at each side of a top portion and a bottom portion of the vertical post (506) for interconnecting with the self-locking capping means (700);
      a receiving recess (604) at each side of an inner portion of the vertical post (506); and
      corrugated threaded slots (606a, 606b) recessed into a side surface of the inner portion of the vertical post (506); the corrugated threaded slots having continuous grooves for fastening means to be threaded between the corrugated threaded slots enabling fastening of the vertical post (506) with the top and bottom tracks by using the brackets (208).

2. The cleanroom partition wall panel system (200) according to Claim 1, wherein the self-locking capping means (300, 700) further comprises vertical capping (402, 504)

with extending flanges (702) having at least a pair of inwardly protruding ribs with snap-fit locking means of positive panel lock-in type (704a, 704b) for locking of the at least one vertical post (506) for holding the plurality of wall panels (204a, 204b, 204c, 204d).

3. The cleanroom partition wall panel system (200) according to Claim 1, wherein the top track (1100) affixed to the bottom of the ceiling further comprises:

    a corrugated slot for affixing fastening means enabling the top track to be affixed to the bottom of the ceiling; and

    a plurality of ears for holding the at least one vertical post (506).

4. The cleanroom partition wall panel system (200) according to Claim 1, wherein the bottom track (1200) affixed to the flooring layer as the end post for positioning mounting frames of the cleanroom partition wall panel further comprises a corrugated slot for affixing fastening means enabling the bottom track to be affixed to the flooring layer.

5. The cleanroom partition wall panel system (200) according to Claim 1, wherein the at least one horizontal mullion (800) being affixed to the at least one vertical post (506) as horizontal support and as a divider to the partition wall panel further having suspension grid openings (802) for supporting and holding the wall panels in position.

6. The cleanroom partition wall panel system (200) according to Claim 1, wherein spacing means (210, 406) affixed at both ends of the at least one horizontal mullion for fixing and supporting a position of the horizontal mullion is a L-shaped spacer (900); the L-shaped spacer is affixed to each end sides of the horizontal mullion.

7. The cleanroom partition wall panel system (200) according to Claim 1, wherein the plurality of brackets affixed to the self-locking capping means further comprises panel type brackets (1000); the panel type brackets are affixed to the vertical capping for holding the wall panels in position.

8. The cleanroom partition wall panel system (200) according to Claim 7, wherein each of the panel brackets (1000) is affixed to wall panels thickness of less than 45mm.