WHAT IS CLAIMED IS:

1. A ray scanning apparatus for a luggage conveying system, comprising:

a conveying device for conveying an object under inspection to pass through a scanning area of the ray scanning apparatus; and

a plurality of scanning beam planes, respectively disposed on a plurality of scanning planes arranging in a conveying direction of the object under inspection, each scanning beam plane comprising a ray source module and a detector assembly which are arranged opposite each other,

wherein the ray source modules of the plurality of scanning beam planes are arranged on a lower side, a left side, and a right side of the scanning area respectively,

characterized in that, the ray source module of each scanning beam plane is a distributed ray source comprising a plurality of ray source points for emitting ray beams, and the ray source modules of the plurality of scanning beam planes are mountable and detachable independently from each other.

2. The ray scanning apparatus according to claim 1, wherein when observed in the conveying direction of the object under inspection, the ray source modules of the plurality of scanning beam planes are arranged as a semi-enclosed structure surrounding the scanning area and opening on an upper side.

3. The ray scanning apparatus according to claim 2, wherein the ray source modules are formed in a straight line, broken line, or arc shape.

4. The ray scanning apparatus according to any of claims 1-3, wherein in each scanning beam plane, the detector assembly is arranged to surround the scanning area in at least two sides.

5. The ray scanning apparatus according to claim 4, wherein in the scanning beam plane where the ray source module is arranged on the lower side of the scanning area, the detector assembly is formed in a U-shaped structure surrounding the scanning area and opening on a lower side.

6. The ray scanning apparatus according to claim 4, wherein in the scanning beam plane where the ray source module is arranged on the left or right side of the scanning area, the detector assembly is formed in an L-shaped or U-shaped structure surrounding the scanning area.

7. The ray scanning apparatus according to any of claims 1-3, further comprising a control device, wherein the control device is configured to control a beam emitting sequence of the ray source modules in respective scanning beam planes, so that the ray source modules in the respective scanning beam planes simultaneously emit ray beams from one ray source point.

8. The ray scanning apparatus according to claim 7, wherein the ray beams of the ray source modules of the respective scanning beam planes have the same energy.

9. The ray scanning apparatus according to claim 7, wherein the ray beams of the ray source module arranged on the left or right side of the scanning area have energy higher than that of the ray beams of the ray source module arranged on the lower side of the scanning area.

10. A ray scanning system for luggage inspection, comprising the ray scanning apparatus according to any of claims 1-9 and a luggage conveying system, the luggage conveying system comprises a conveying belt for conveying luggage, wherein the conveying device of the ray scanning apparatus matches the conveying belt in height and speed.

11. The ray scanning system according to claim 10, wherein the conveying device of the ray scanning apparatus has the same height and speed as the conveying belt of the luggage conveying system.