What is claimed is:

1. A linear scanning CT imaging system, comprising:

a conveying device configured to move a scanned object in a predetermined conveying direction in a scanning channel, wherein the conveying device comprises a conveying surface for placing the scanned object;

m ray sources configured to alternately emit ray beams to form a scanning region, wherein the m ray sources are located on a side of the scanning channel, and m is a positive integer greater than or equal to 2; and

n detectors configured to detect projection data formed by the ray beams transmitted through the scanned object during a process of the scanned object passing through the scanning region, wherein the n detectors are located on the other side of the scanning channel and are sequentially arranged at intervals in the conveying direction, and n is a positive integer greater than or equal to 3,

wherein the n detectors comprise n1 first detectors and n2 second detectors, n1 is a positive integer greater than or equal to 2, and n2 is a positive integer greater than or equal to 1; the n1 first detectors are configured to detect first projection data formed by the ray beams transmitted through the scanned object during the process of the scanned object passing through the scanning region; the n2 second detectors are configured to detect second projection data formed by the ray beams transmitted through the scanned object during the process of the scanned object passing through the scanning region; and

wherein the system further comprises an imaging device configured to: generate a digital radiographic image of the scanned object according to the second projection data; and generate a computed tomography image of the scanned object according to the first projection data and the second projection data.

2. The system according to claim 1, wherein at least one of the second detectors is different from each of the first detectors.

3. The system according to claim 2, wherein at least one of the second detectors has a higher resolution than each of the first detectors.

4. The system according to claim 3, wherein at least one of the second detectors has a greater number of pixels than each of the first detectors; and/or

at least one of the second detectors has a smaller pixel size than each of the first detectors.

5. The system according to any one of claims 2 to 4, wherein at least one of the second detectors is made of a different crystal material from each of the first detectors; and/or

at least one of the second detectors has a different thickness in a ray incident direction from each of the first detectors.

6. The system according to claim 5, wherein at least one of the second detectors exhibits less crystal afterglow than each of the first detectors; and/or

wherein at least one of the second detectors has a higher detection efficiency than each of the first detectors.

7. The system according to any one of claims 2 to 6, wherein the first detector comprises a plurality of first detector modules, the second detector comprises a plurality of second detector modules, and an arrangement of the plurality of first detector modules is different from an arrangement of the plurality of second detector modules.

8. The system according to any one of claims 1 to 7,

wherein each of the n1 first detector is a linear detector array; and/or

wherein each of the n2 second detector is a linear detector array; and/or

wherein each of the n1 first detectors is a linear detector array; and/or wherein at least one of the second detectors comprises a vertical-arm detector arranged in a first direction and a horizontal-arm detector arranged in a second direction, and the second direction intersects both the conveying direction and the first direction.

9. The system according to any one of claims 1 to 7, wherein each of the n1 first detectors is a linear detector array; and/or

wherein at least one of the second detectors comprises a vertical-arm

detector arranged in a first direction, a first horizontal-arm detector arranged in a second direction and a second horizontal-arm detector arranged in the second direction, the first horizontal-arm detector and the second horizontal-arm detector are respectively located on an upper side and a lower side of the vertical-arm detector in the first direction, and the second direction intersects both the conveying direction and the first direction.

10. The system according to any one of claims 1 to 9, wherein the m ray sources are sequentially arranged at intervals in a first straight line, and the first straight line is an imaginary straight line extending along a first direction perpendicular to the conveying surface.

11. The system according to any one of claims 1 to 10, wherein the n detectors include a single second detector, and at least one first detector is disposed on each side of the single second detector along the conveying direction.

12. The system according to claim 11, wherein a plane defined by the single second detector and the first straight line is perpendicular to the conveying direction.

13. The system according to any one of claims 1 to 10, wherein at least one of the second detectors comprises k sub-detectors sequentially arranged at intervals in the conveying direction, and k is a positive integer greater than or equal to 2; and

wherein an arrangement interval in the conveying direction between any two adjacent sub-detectors among the k sub-detectors is smaller than an arrangement interval in the conveying direction between any two adjacent first detectors among the n1 first detectors.

14. The system according to claim 13, wherein the imaging device is further configured to: combine the second projection data from the k sub-detectors to generate the digital radiographic image of the scanned object.

15. The system according to claim 8 or 9,

wherein the horizontal-arm detector comprises a plurality of detector

modules connected end to end in sequence, wherein a light receiving surface of each detector module is perpendicular to a second straight line, the second straight line is a straight line connecting an i^{th} ray source and a predetermined point on the light receiving surface, the predetermined point is located on a boundary of or within the light receiving surface, and i is a positive integer greater than or equal to 1 and less than or equal to m, or

wherein the horizontal-arm detector comprises a plurality of detector modules arranged at intervals in the second direction.

16. The system according to any one of claims 1 to 9 and 13, wherein the number n2 of second detectors is greater than or equal to 2, and the n2 second detectors and the n1 first detectors are alternately arranged in the conveying direction,

wherein among the n2 second detectors, a plane defined by one second detector and the first straight line is perpendicular to the conveying direction, and a plane defined by any other second detector and the first straight line form an angle greater than 90° or less than 90° with the conveying direction.

17. The system according to claim 16, wherein each of the n2 second detectors comprises a vertical-arm detector arranged in a first direction and a horizontal-arm detector arranged in a second direction, and the second direction intersects both the conveying direction and the first direction,

wherein for each of the second detectors, a plane formed by an intersection of the vertical-arm detector and the horizontal-arm detector of the second detector extends through the first straight line.

18. A linear scanning CT imaging method, comprising:

moving a scanned object in a predetermined conveying direction in a scanning channel by means of a conveying device, wherein the conveying device comprises a conveying surface for placing the scanned object;

alternately emitting ray beams from m ray sources to form a scanning region, wherein the m ray sources are located on a side of the scanning channel, and m is a positive integer greater than or equal to 2;

moving the scanned object to pass through the scanning region;

detecting projection data formed by the ray beams transmitted through the scanned object by means of n detectors during a process of the scanned object passing through the scanning region, wherein the n detectors are located on the other side of the scanning channel and are sequentially arranged at intervals in the conveying direction, and n is a positive integer greater than or equal to 3,

wherein the n detectors comprise n1 first detectors and n2 second detectors, n1 is a positive integer greater than or equal to 2, and n2 is a positive integer greater than or equal to 1;

wherein the detecting projection data formed by the ray beams transmitted through the scanned object by means of n detectors comprises: detecting first projection data formed by the ray beams transmitted through the scanned object by means of the n1 first detectors; and detecting second projection data formed by the ray beams transmitted through the scanned object by means of the n2 second detectors; and

wherein the method further comprises: generating a digital radiographic image of the scanned object according to the second projection data; and generating a computed tomography image of the scanned object according to the first projection data and the second projection data.

19. The method according to claim 18, wherein at least one of the second detectors comprises a vertical-arm detector arranged in a first direction and a horizontal-arm detector arranged in a second direction, and the second direction intersects both the conveying direction and the first direction; and

wherein the generating a digital radiographic image of the scanned object according to the second projection data comprises: proportionally adjusting the second projection data detected by the vertical-arm detector and the second projection data detected by the horizontal-arm detector, and then combining adjusted data to generate the digital radiographic image of the scanned object,

wherein at least one of the second detectors comprises k sub-detectors sequentially arranged at intervals in the conveying direction, k is a positive integer greater than or equal to 2; an arrangement interval in the conveying direction between any two adjacent sub-detectors among the k sub-detectors is smaller than an arrangement interval in the conveying direction between any two adjacent first detectors among the n1 first detectors; and wherein the generating a digital radiographic

image of the scanned object according to the second projection data comprises: combining the second projection data from the k sub-detectors to generate the digital radiographic image of the scanned object.