



SCANRAY®

Portable wireless digital radiography system



SCANRAY

Benefits of using digital radiography

Cost-effectiveness and quick payback

Removing the need to use consumables and the X-ray film processor significantly reduces the cost of radiographic non-destructive testing. A single-time investment will allow great savings in the long run.

A flat-panel detector is by far more sensitive to X-ray radiation compared to films, which saves the life of the X-ray generator by reducing the required exposure time.

The high speed of obtaining results relative to other methods of radiographic testing allows a 2-10 times increase in labor productivity.

SCANRAY® series has a short payback period even with the small amounts of NDT.

High level of information protection

Processing, storage and archiving of the received images is carried out in a secure digital DICOM format. The ability to quickly transfer images over the Internet allows immediate analysis by specialists located in a remote office.

The exact date, time and GPS coordinates can be defined automatically and stored as a part of the data file to prevent confusion or fraud.

Taking care of the personnel

Reducing the X-ray or Gamma source exposure time minimizes the radiation dose absorbed by the staff.

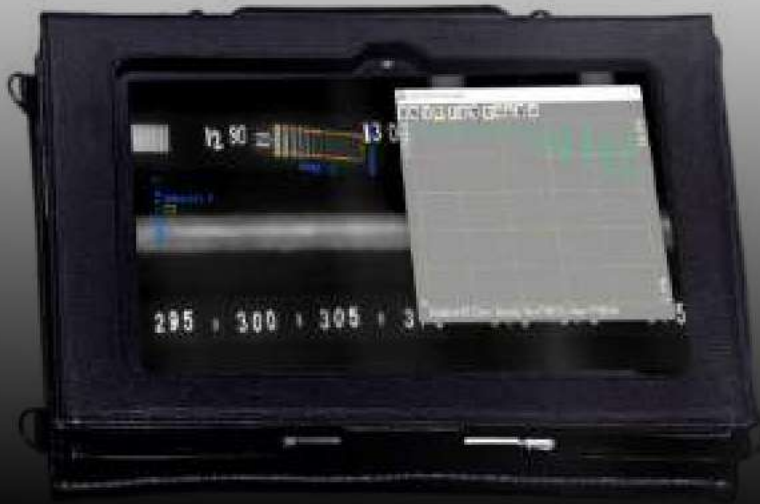


Advantages of using SCANRAY® series

- A range of detectors with different sizes of the active area and pixel pitch created on the basis of a variety of matrix and scintillator technologies allows solving a wide spectrum of tasks in the field of industrial non-destructive testing;
- The high sensitivity of the detector and the wide dynamic range allow NDT even if the control object is in operation (product presence inside the pipelines, installed outer insulation layer, etc.);
- The detector can be powered by both AC and replaceable batteries;
- The included extra set of batteries allows performing NDT without stops for recharging;
- The system fully meets ISO/ASTM/ASME standards requirements and provides images of the highest quality;



- System components are protected from the influence of external factors such as direct ingress of moisture and dust, and have high mechanical strength during installation and transportation;
- A special protective cover dampens possible impacts when placing the detecting unit on the NDT object;
- Built-in X-ray sensor allows taking pictures automatically after the start of the exposure;
- Internal memory saves images when the connection to the operator's station (PC, tablet) is broken;
- The flat-panel detector can work with constant-potential and pulsed X-ray generators, as well as Gamma sources;
- Additional accessories can be used for quick and convenient positioning of the detector on the object.



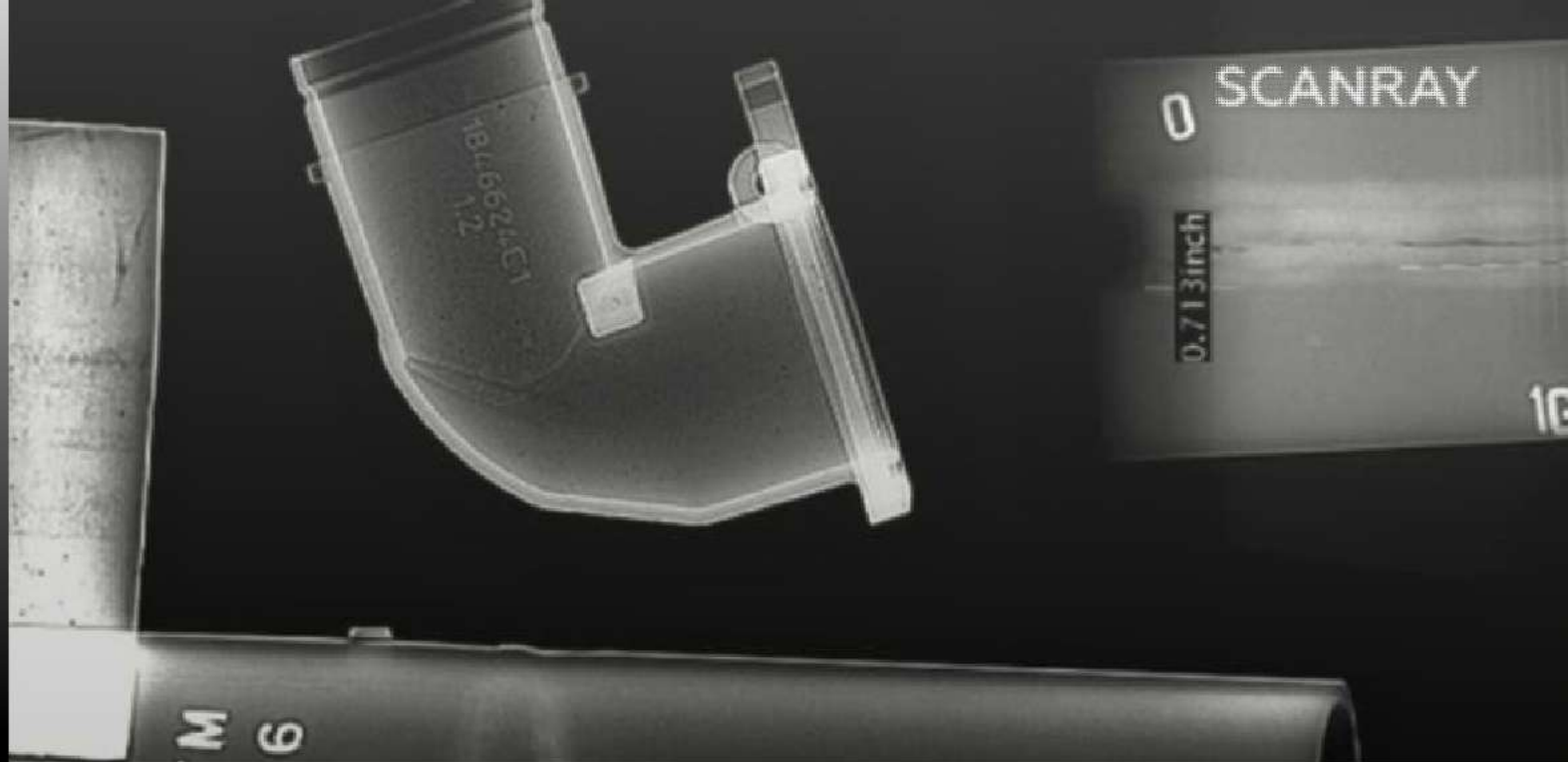
Digital radiography software DR-SOFT®

- SNR/SNR_n automatic evaluation, SR_b determination by duplex IQI according to ISO 17636-2;
- Measuring metal thickness at any point of the object (after calibration);
- Measuring the linear dimensions and area of defects, the distance between any points on the image;
- Combining the frames accumulated during the exposure to form a better-quality image;
- A built-in algorithm for stitching several images into one for convenience of viewing;
- Edit-protected DCM format allows storing up to 100 images in one file with 16-bit data representation (65536 grayscale);
- Module for digital marking of images;
- Image processing to improve the convenience of interpretation: changing brightness, contrast, gamma correlation either manually or using a set of readymade filters;
- Markers drawing (signs, text, arrows, etc.) and geometric image transformation (scaling, rotation, mirroring, fragment cutting, etc.);
- Archive data storing in a secured DICOM format with the possibility to export images to other formats (BMP, JPEG, TIFF);
- An intuitive interface will not cause difficulties in decoding and processing images, even for non-experienced specialists;
- Automatic tool for the remaining wall thickness measurement (including pipes with insulation and product).

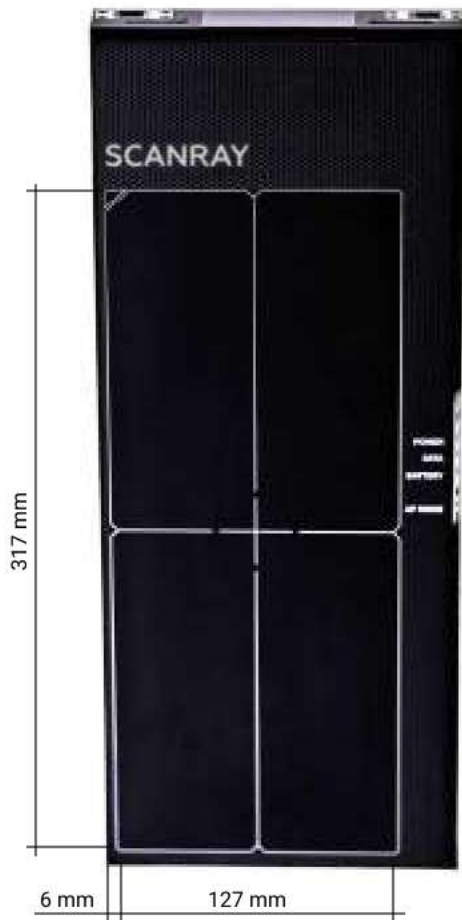
Technical specifications

SCANRAY® FLAT-PANEL DETECTOR SYSTEMS	REGULAR			PRO		ULTRA	
	1230	2532	3643	2530 PRO	3643 PRO	1723	2329
Technology	a-Si TFT	a-Si TFT	a-Si TFT	a-Si flexible TFT	a-Si flexible TFT	IGZO TFT	IGZO TFT
Scintillator	Gadox / Csl	Gadox / Csl	Gadox / Csl	Gadox	Gadox	Gadox / Csl	Gadox / Csl
Pixel pitch, µm	124	124	140	99	99	75	75
Pixel matrix, pixels	1024 × 2560	2048 × 2560	2560 × 3072	2524 × 3036	3548 × 4316	2304 × 3072	3072 × 3840
Image size, mm (inches)	127 × 317 (5.0 × 12.5)	254 × 317 (10.0 × 12.5)	358 × 430 (14.1 × 16.9)	250 × 301 (9.8 × 11.8)	351 × 427 (13.8 × 16.8)	173 × 230 (6.8 × 9.1)	230 × 288 (9.1 × 11.3)
Weight, kg	3.2	3.4	5.4	2.5	4.2	2.4	3.4
Dimensions, mm	160 × 400 × 25	322 × 355 × 17	400 × 470 × 17	283 × 333 × 15	384 × 460 × 15	208 × 257 × 28	322 × 355 × 17
Grayscale, bits	16						
Operating environment, °C	-20 to +50						
Max battery life, h	7						
Dust and water resistance	IP67						





SCANRAY® 1230



A unique combination of technical parameters and capabilities of the system

The optimal size of the active area: 127 × 317 mm with a minimum distance from the edge of the detector housing along the long side of 6 mm.

Can work with X-ray generators of constant potential of up to 450 kV and with all models of pulsed X-ray generators as well as Se-75 and Ir-192.

The pixel size of 124 μm , the grayscale of 16 bits and the minimal noise level of the detector make it possible to obtain a digital radiographic image of the highest quality.

The detector's low weight of 3.2 kg and the use of wireless Wi-Fi communication technologies provide an unsurpassed level of mobility and convenience in real working conditions.

Contents of delivery of SCANRAY® series



Portable flat-panel detector

The detector's design allows it to be used in the harshest conditions without a cable connection, 2 pairs of replaceable batteries provide at least 8 hours of continuous operation.



Industrial tablet with pre-installed software DR-SOFT®

An industrial tablet supplements the complete portability of the system for the site operation.



Industrial laptop with pre-installed software DR-SOFT®

An industrial laptop for convenient viewing and analyzing the images in stationary conditions.



Additional Wi-Fi module

Serves as an intermediate link between the operator's station and the detector when direct wireless communication is hindered.



Universal protective cover

Dampens possible mechanical impacts when placing the detecting unit on the control object. The cover has a built-in mounting system for additional equipment, i.e., magnetic holders or lashing straps included in the standard package of delivery.



Transportation case

A shockproof case for transporting the entire system.

Additional accessories for SCANRAY® series

C-ARM

Allow for easy alignment of the flat-panel detector and Gamma collimator or lightweight X-ray generator on pipes with diameters of 1-4" / 32-114 mm (DWDI, ellipse) or 4-10" / 108-273 mm (DWSI).

A convenient clamping mechanism provides fast and reliable positioning and movement of the setup along the weld with the same pre-selected optimal exposition angle and distance.



ADJUSTABLE MAGNETIC HOLDER

Applicable for magnetic structures, it will help to securely place the flat-panel detector in a single move, cutting the preparation time to the minimum possible. Can be used for pipes of 2" / 57 mm and up to the flat surface. The construction is designed with the ability to place magnets on both sides of the detector or on one side to inspect objects of various shapes and sizes.

TRIPOD

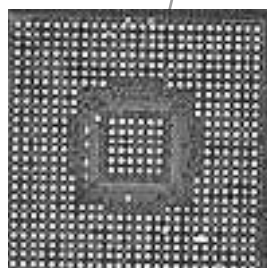
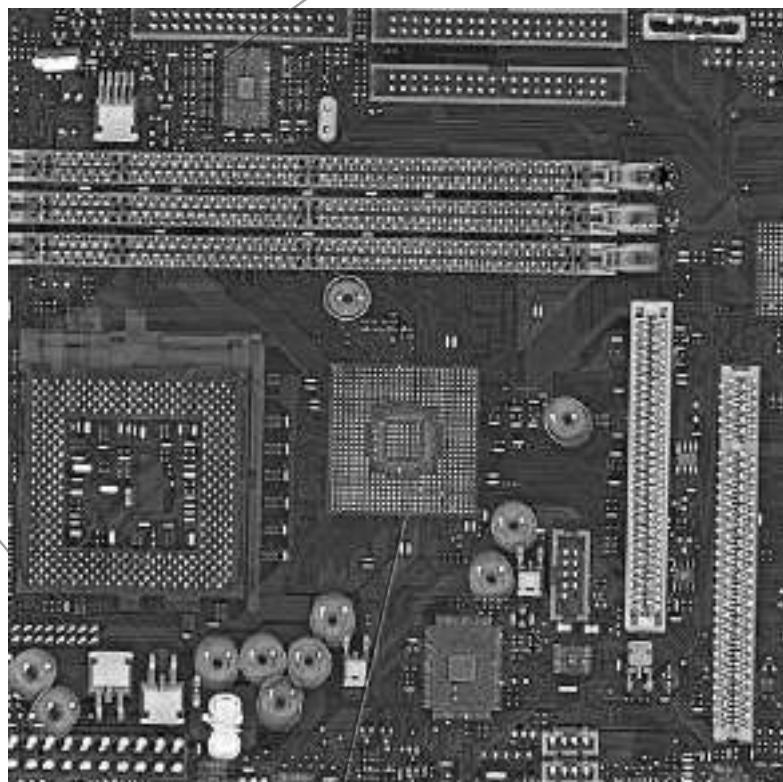
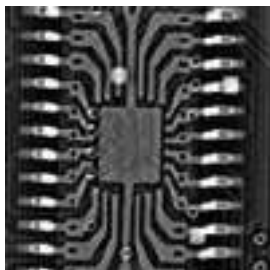
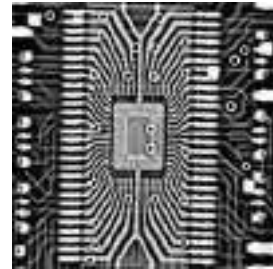
Used to firmly place the flat-panel detector on the floor or ground. Comes with telescopic legs of adjustable length to control the height of the detector's positioning and a rotating fixator to change its' angle.



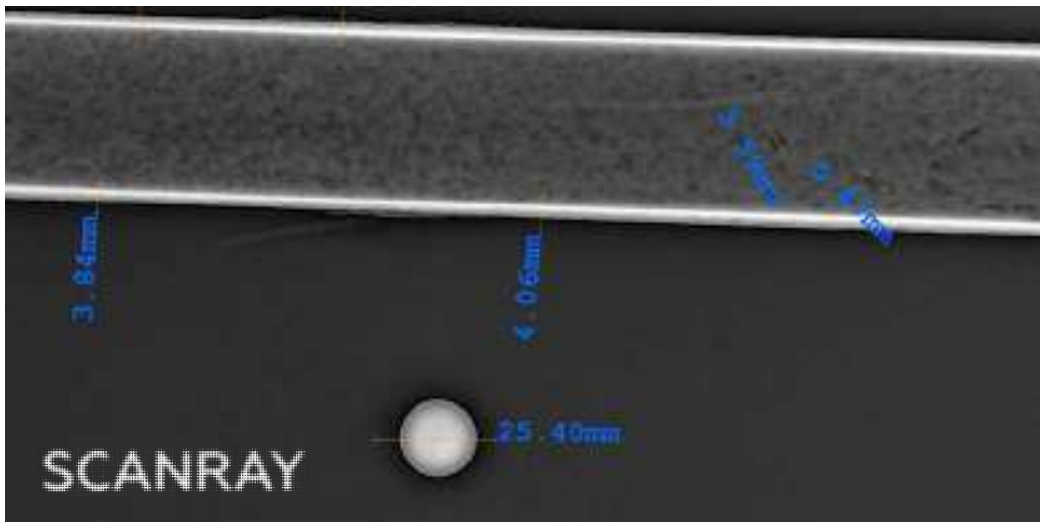
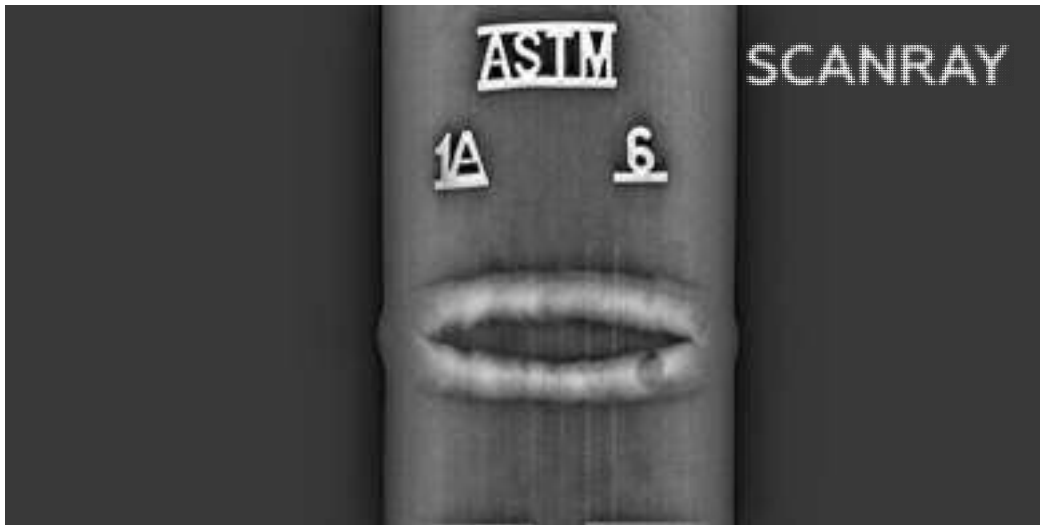
Images taken with SCANRAY® series

Pixel pitch 75 microns

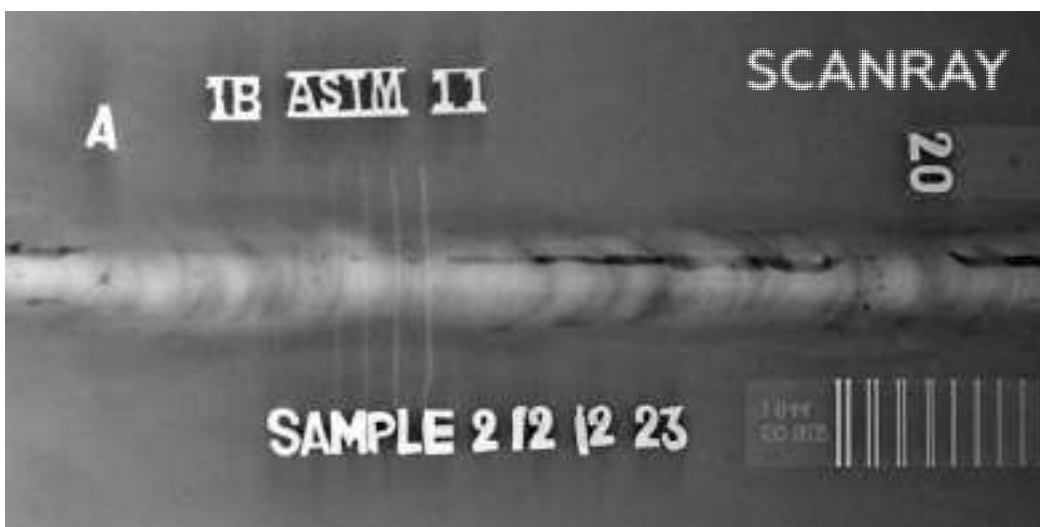
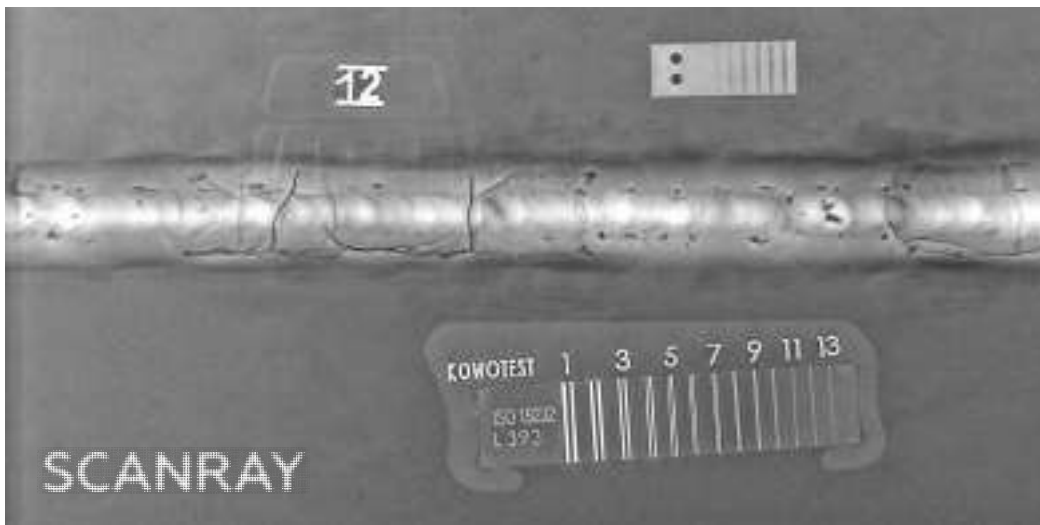
These digital radiography systems are focused on the inspection of circuit boards and electronics as well as critical components, the quality of which is subject to increased requirements, for example, in the aerospace or military industry.

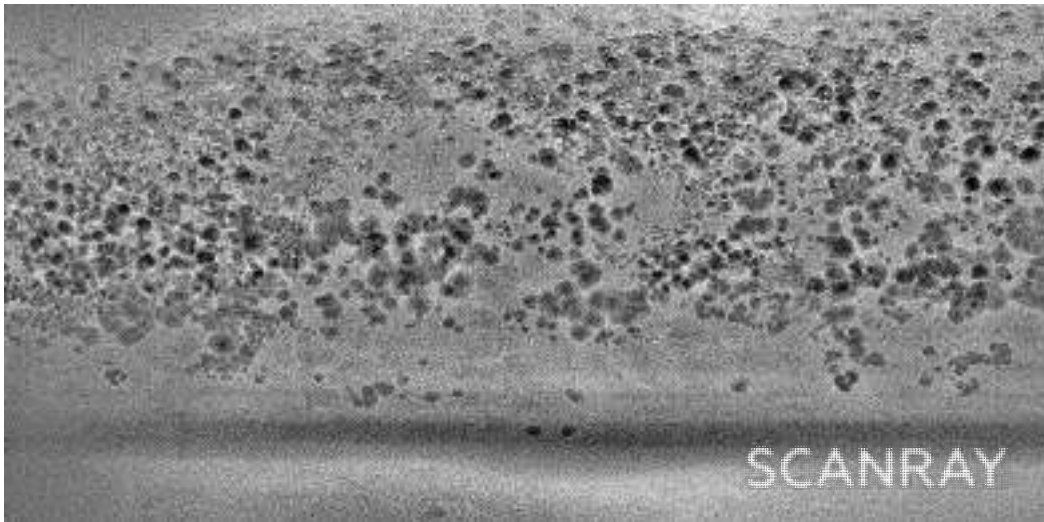
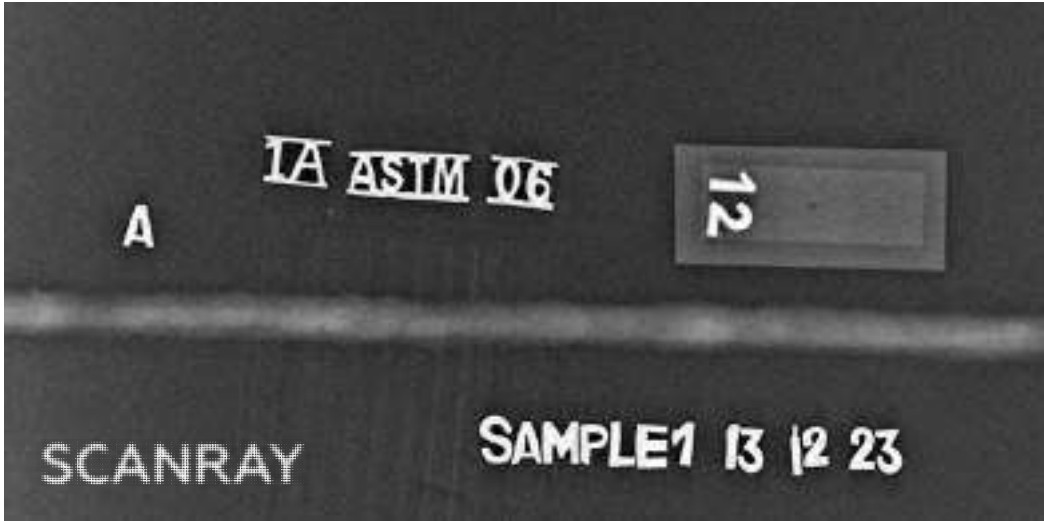
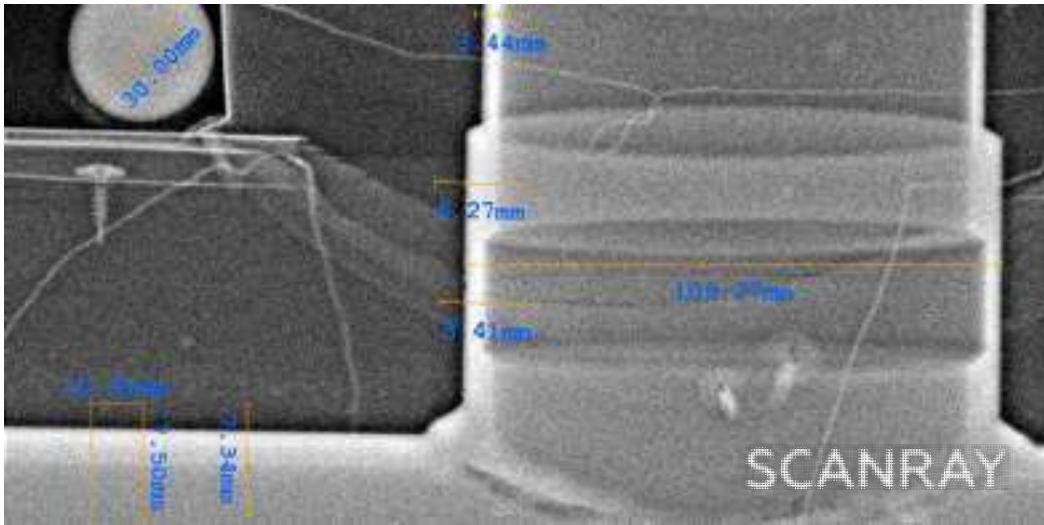


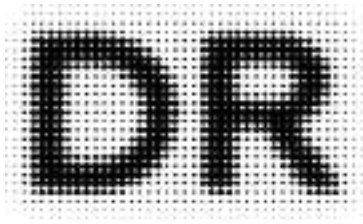
Pixel pitch 99 microns



Pixel pitch 124 microns







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