

Designed to preserve privacy

People screening at airports, borders, high-security facilities and in other environments requires a balance between security effectiveness and respect for the privacy of individuals being screened. R&S®QPS quick personnel security scanners deliver high-performance threat and contraband detection designed specifically to protect personal privacy and minimize intrusive secondary screening measures.



Images are never produced during operation of R&S®QPS scanners

Your task

Security operations have shown that there is a need to evolve beyond walk-through metal detectors to screen for a wider variety of threats. Consequently, higher-performance imaging technology has been employed to provide enhanced detection. However, advanced image detection technology has raised concern about protecting the privacy and dignity of individuals throughout the screening process.

Rohde & Schwarz solution

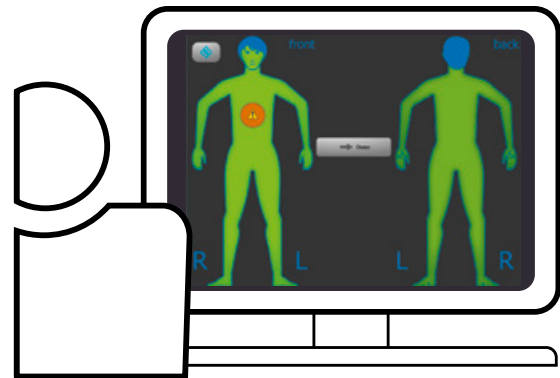
Advanced millimeterwave imaging solution

R&S®QPS high-resolution security scanners and their groundbreaking design make people screening at security checkpoints faster, easier and more effective. Utilizing non-ionizing millimeterwave (mmWave) radio frequency technology, the R&S®QPS automatically identifies a wide range of concealed objects and threats.

Next generation high-resolution performance protects privacy and dignity

High-performance people screening technology with the R&S®QPS addresses concerns among the public and among privacy advocates by eliminating revealing images of scanned individuals. High-resolution mmWave signals are able to detect concealed, small objects of interest by using machine-learning algorithms that mark areas on a generic human avatar to highlight areas where a potential threat item may be concealed.

Generic symbolic body graphic

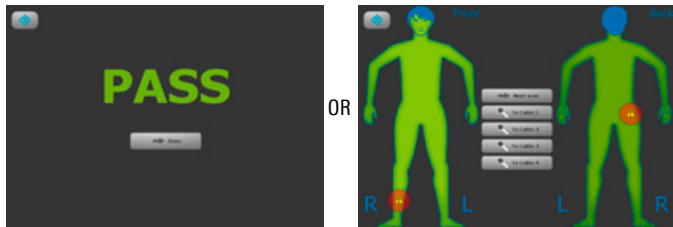


US laws mandate that all results generated by body scanners must be represented as a generic symbolic body graphic to protect privacy.

Automated high-resolution detection – no revealing body images produced

The R&S®QPS scanning system completely automates the detection of concealed threats. No body images are created for detection or review by screeners and no signal return results are stored on the system. Instead, if the system detects any potential threat, it indicates its location on a generic human avatar to help security operators promptly resolve any alarms and maintain passenger throughput. Individuals requiring additional screenings are identified quickly and with confidence.

The R&S®QPS also addresses well-documented performance challenges of existing people screening imaging technology, reducing the need for invasive, full body pat-downs due to false alarms and secondary screening.



If the R&S®QPS reports an alarm, the location of the object is marked on an avatar, a symbolic graphic of the human body

No images produced means no images retained

The R&S®QPS system combines advanced high-speed electronics capable of real-time performance with automatic threat recognition (ATR) software to eliminate any need to store scan data.

The high-speed data processing has a computational capacity as high as 10^6 tera-operations per second. The ATR software reduces the data set in real time to sort through anomalies, so the system has no need for raw image collection, retention or storage.

All raw data from each scan is automatically purged after ATR analysis.

Automatic threat recognition eliminates the need for human analysis

The R&S®QPS scan results are analyzed automatically using highly optimized and dedicated machine-learning algorithms that are tailored for such security-scanning tasks. Each part of the 3D image is analyzed and observed to decide if any location looks anomalous to usual conditions. The algorithms are also trained in a manner that makes them more accurate in finding relevant threats – including, but not limited to, weapons such as explosives, guns or knives.

High-resolution imaging, leveraged by real-time intelligent image processing, delivers extremely high-performance, high-efficiency screening. The R&S®QPS technology eliminates the need for security staff to view captured images, which enables faster security checks, reduces the number of errors and increases the ability to detect genuine threats.

Visit the R&S®QPS Learning Center at www.rohde-schwarz.com/QPS

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