Improving operational efficiency, traceability, and compliance in high-security environments

APS provided Rapiscan Systems an embedded thermal printer with integrated controller board optimized for seamless integration within their Itemiser system architecture.
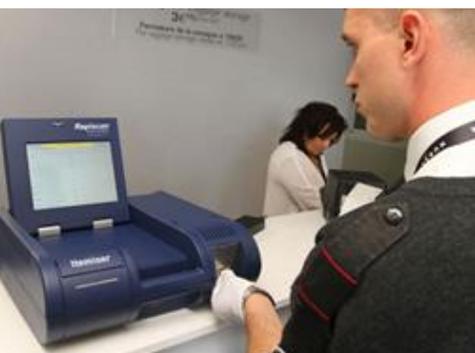
THE CHALLENGE

Rapiscan Systems required a **compact, rugged, and highly reliable** embedded printing solution for its Itemiser® Explosive and Narcotics Trace Detection systems. The printer needed to support fast, accurate printing of test results, including detection status, sample identification, time/date stamps, operator details, and compliance records—directly at the point of inspection.

THE SOLUTION

APS provided the **CP305-M0-FL**, an embedded thermal printer with integrated controller board, optimized for seamless integration. Through close collaboration, both engineering teams ensured mechanical compatibility within the compact Itemiser enclosure, **seamless firmware and software integration**. The APS thermal printer enables on-demand printing of inspection and detection results, eliminating the need for external peripherals.

THE RESULT

The integration of APS thermal printing technology strengthens the Itemiser platform by improving **operational efficiency, traceability, and compliance** in high-security environments. Immediate printing of detection results allows security personnel to **act quickly and decisively** at checkpoints. Printed records provide verifiable documentation for audits, chain-of-custody, and incident reporting. APS printers are engineered to perform consistently **in harsh operational environments** common to security and defense applications. Accurate, time-stamped records support adherence to aviation security, border control, and law enforcement regulations.

"APS delivered exactly what we needed — on time, on spec, and with outstanding support throughout the project."

Todd Watson – Product Manager at Rapiscan Systems

By integrating the CP305-M0-FL, Rapiscan Systems have delivered a solution that enhances speed, reliability, compliance, and operational confidence in security screening environments.

KEY FEATURES OF THE SOLUTION

1. Improved Workflow & Operational Efficiency
By printing results directly from the Itemiser device, operators avoid delays associated with centralized printers or manual logging. This improves throughput at security checkpoints and inspection zones.

2. Reduced Human Error
Automated printing ensures test results are recorded accurately and consistently, minimizing transcription errors and supporting reliable enforcement actions.

3. Durable, High-Quality Print Output
APS thermal printers generate **clear, smudge-free receipts** that remain legible despite frequent handling, transport, or exposure to environmental factors—critical for evidence handling and audits.

4. Secure Data & Record Keeping
Printed reports can include **sample IDs, operator IDs, barcodes, and timestamps**, enabling secure traceability and reinforcing chain-of-custody procedures.

5. Compliance with Security Regulations
Thermal printing supports compliance with aviation security authorities, customs agencies, and law enforcement documentation standards by delivering clear, standardized inspection records.

6. Enhanced Public Safety
Fast, accurate, and verifiable detection reporting strengthens explosive and narcotics interdiction efforts—helping ensure safer airports, borders, and public spaces.

ABOUT RAPISCAN SYSTEMS
Rapiscan Systems is a global leader in security screening technology, best known for its X-ray scanners, metal detectors, and advanced threat-detection systems used in airports, ports, borders, and high-security facilities. The company is part of OSI Systems, a major U.S. technology and electronics group.