AVEM IntelliCore

INTELLIGENT THERMAL VIDEO MANAGEMENT PLATFORM

AVEM IntelliCore is an advanced, intelligent, and user-friendly thermal video management software designed for modern security and monitoring environments. It integrates thermal imaging, AI analytics, and centralized system management into a single powerful platform, with a 64-bit, scalable architecture for enterprise-level deployments.



2,000	200	600+ Mbps	200	2FA
CCTV CAMERAS	THERMAL CAMERAS	VIDEO I/O BANDWIDTH	MAX USERS	LOGIN SECURITY

USER FEATURE & SECURITY

System Management Service is the core component of AVEM IntelliCore, providing authentication, permission granting, and management services. It authenticates Control Client access, manages users, roles and permissions, monitors devices, and provides the interface for third-party system integration. It includes the following services:

- Supports maximum 200 users
- Setting permissions for roles, including resource access permissions, resource permissions, configuration and operation permissions, user status (inactivate or activate), and role effective period.
- Saving the permission of a role as a template which can be applied to other roles.
- Advanced Security Features:
  - Integration with Active Directory (AD)
  - Import users from Security Groups
  - Automatic synchronization with AD
- Forgot Password functionality:
  - Self-service reset via registered email
  - Admin-assisted password reset
- Anti-Brute Force protection during password recovery via security questions
- Two-Factor Authentication (2FA):
  - Login with password + verification code via email
  - Per-user configuration for enabling/disabling Email Verification
  - Login activity monitoring and auditing

DEVICE & SYSTEM FEATURE

- Automatic IP Camera discovery on network
- Auto-add detected cameras into the system
- Real-time system alerts for device issues:
  - Camera disconnection
  - Recording failure
  - External storage

EVENT & INTEGRATION

- Advanced Event Management System
- Integration with:
  - Access Control Systems
  - Video Intercom Systems
  - IP Speaker

  Alarm system integration support

VIDEO FEATURE

- The platform shall support discovering online devices in the same network as the client, so that devices can be added in LAN/WAN.
- The platform shall support adding encoding devices by IP address or domain name, so that devices can be added in LAN/WAN.
- The platform shall support adding devices from a different network segment which can be accessed by the server.
- The platform shall support adding encoding devices by IPv4/IPv6.
- Full control of CCTV systems including:
  - Live view monitoring
  - Playback of recorded video
  - Add, delete,search camera
- Playback with flexible time selection:
  - Search by date, month, year, and time
  - Supports forward and reverse playback
- Supports Video Wall control and management
- Supports up to 2,000 CCTV cameras or up to 200 thermal cameras.

PERFORMANCE

- Supports video input bandwidth of ≥ 600 Mbps
- Supports video output bandwidth of ≥ 600 Mbps
- Supports Streaming Server / Transmission Server
- Can operate as:
  - Recording Server
  - Storage Server
- Supports storage on:
  - Internal storage

SYSTEM STATUS MONITORING AND SECURITY

The platform consists of the server, client, service component, and platform SDK. Interaction between server and client, server and service component, and server and platform SDK supports HTTP and HTTPS. To ensure data storage security, all sensitive data stored on the server is encrypted — irreversible encryption for information that never needs to be decrypted, and reversible encryption for information that does. The platform adopts RSA, AES, SHA, and MD5 encryption algorithms, sourced from the standard open-source library OpenSSL-1.0.2k.

- Displays device status (normal and exception) and server/resource status (normal, exception, and warning). Camera status details include: camera offline, video loss, communication exception, recording exception, no recording schedule configured, and arming exception.
- Manual and scheduled refresh of device, resource, and server status.
- Configurable refresh interval on the Mobile Client (Web Client refreshes every 3 minutes by default).
- Support multi access by Mobile/Web/Control Client.
- Export of all device and resource status data as Excel or CSV.
- Export of selected data (all or exception only).
- For functions not supported by the device, the status is displayed as “not supported” instead of “abnormal.”

MAP & VISUALIZATION

- Supports multiple map types:
  - Google Online Map
  - Google Offline Map
- E-Map functionality:
  - Visual display of camera locations
  - Custom icons representing device status and function

AI & INTELLIGENT ANALYTICS

- Supports AI-powered features:
  - Face Comparision
  - Automatic Number Plate Recognition (ANPR)
  - People Counting
  - Intelligent Search (Keyword-based)
  - Object Detection

VIDEO EXPORT

- Supports video export formats: AVI, DAV, MP4

REPORTING & THERMAL ANALYTICS

- Supports reports:
  - Daily, Weekly, Monthly, Annual
  - Custom time intervals

ADVANCED THERMAL REPORTING

- Daily reports with hourly breakdown
- Displays max/min temperature within 1-minute intervals
- Displays number of temperature exception events
- Comparison of highest and lowest temperatures across points
- Supports report export
- Advanced Temperature Analysis Reports with filtering