

Raychem SmartTrace FAQ's

Raychem SmartTrace Frequently Asked Questions

SmartTrace is purpose-built heat trace monitoring and management software designed to improve system visibility, alarm management, maintenance efficiency, and reliability.

Below are answers to common questions about SmartTrace software, controller compatibility, communications, deployment, integration, security, implementation, and support.

About SmartTrace

What is SmartTrace?

SmartTrace is a flexible heat trace monitoring and management software platform for industrial facilities. It brings controller data, alarms, trends, documentation, programming information, reporting, and maintenance workflows into one system, giving operations, maintenance, reliability, engineering, and management teams a common view of heat trace performance.

SmartTrace can be deployed in the cloud, on-premise, or through a hybrid architecture.

What is the difference between heat trace monitoring and management?

- Monitoring shows your team what is happening within the heat trace system.
- Management helps your team understand what matters, determine what action is required, and coordinate the response.

SmartTrace combines real-time monitoring with:

- Alarm validation and prioritization
- Historical trends and analytics
- Programming visibility
- Documentation and asset records
- Reporting and audit trails
- Maintenance workflow support
- Heat-trace-specific management tools

This helps facilities move beyond simply seeing heat trace alarms toward actively managing system performance and reliability.

Is SmartTrace software or a service?

SmartTrace is a software platform.

Customers can also add SmartTrace Enterprise services for ongoing support from heat trace specialists. SmartTrace Enterprise can assist with alarm review, troubleshooting, reporting, maintenance prioritization, system-health reviews, and ongoing performance improvement.

What is the difference between SmartTrace and SmartTrace Enterprise?

SmartTrace provides the software tools needed to monitor and manage heat trace systems.

SmartTrace Enterprise extends the facility's team with access to dedicated heat trace specialists who can help:

- Review and validate alarms
- Identify maintenance priorities
- Support troubleshooting
- Coordinate with site maintenance and scheduling teams
- Improve system reporting
- Identify recurring issues
- Support proactive heat trace management

The level of Enterprise support can be configured around the facility's requirements. Expanded or 24/7 coverage can also be provided where specifically requested and agreed.

Controllers, Communications and Integration

Can SmartTrace work with our existing heat trace controllers?

Yes, in most cases.

SmartTrace supports a broad range of third-party heat trace controllers, PLC-based systems, and mixed-controller environments.

Compatibility depends on:

- Controller manufacturer and model
- Installed firmware
- Available communication capabilities
- Communication protocol
- Existing network architecture

Chemelex will review the installed equipment and confirm the appropriate integration approach during project planning.

What types of heat trace systems can SmartTrace monitor and manage?

SmartTrace can support a wide range of industrial heat trace systems, including systems using:

- Chemelex and Raychem controllers
- Other third-party heat trace controllers
- PLC-based heat trace control systems
- Mixed controller fleets
- Remote panels and distributed facilities

The controllers generally require a suitable communication interface. Where native communication is not available, Chemelex can evaluate upgrade, replacement, or alternative monitoring options.

What if our heat trace controllers are not currently networked?

A lack of existing communications does not prevent a SmartTrace implementation.

Chemelex can assess the facility and recommend a suitable communication architecture. Depending on the application, this may include:

- Ethernet-to-serial converters
- Industrial radios
- Cellular communications
- Network switches
- New communication cabling

- Controller communication upgrades
- A combination of wired and wireless technologies

The objective is to reuse suitable existing infrastructure where practical and add only what is required.

Does SmartTrace require proprietary communication hardware?

No.

SmartTrace does not require proprietary communication hardware.

It is designed to communicate through standard industrial protocols and commonly available networking equipment.

Where additional infrastructure is required, SmartTrace can use commercially available components such as:

- Ethernet-to-serial converters
- Industrial radios
- Cellular devices
- Network switches
- Serial communication equipment
- Standard industrial power supplies and networking accessories

The specific design depends on the installed controllers, communication requirements, network architecture, and classified-area requirements.

This allows customers to reuse existing infrastructure where practical, select suitable industrial hardware, and avoid being locked into a proprietary SmartTrace communication ecosystem.

Does SmartTrace replace our DCS, SCADA, or DCD system?

No.

SmartTrace is not intended to replace a facility's DCS or SCADA system. These systems remain responsible for broader process control and facility operations.

SmartTrace complements them by providing heat-trace-specific capabilities that a DCS or SCADA system typically does not provide—or that would require significant engineering, programming, and ongoing maintenance to recreate.

These capabilities include:

- Heat trace alarm management and prioritization
- Controller programming visibility
- Circuit-level trending and analytics
- Integrated heat trace documentation
- Asset history and audit trails
- Maintenance workflow support
- Multi-site heat trace reporting
- Heat-trace-specific rules and management tools
- Digital field inspection and reporting tools
- System-health and reliability reporting

In many cases, the decision is essentially **build versus buy**.

A facility could attempt to build some of these capabilities within its DCS or SCADA environment. However, doing so would require considerable engineering effort, custom programming, ongoing support, and continued development. It would still not provide the complete purpose-built SmartTrace platform. SmartTrace can also push selected heat trace information back to a DCS or SCADA system through an OPC UA or Modbus connection. This allows operations to retain important heat trace data within the existing control environment while SmartTrace performs the detailed monitoring, analysis, documentation, and management functions.

For facilities using legacy DCD systems, SmartTrace can work with the existing architecture where technically practical or support a planned migration away from the DCD platform. The correct approach is determined by reviewing the installed controllers, communication loops, network infrastructure, and operational requirements.

Can SmartTrace integrate with SAP, Maximo, or another CMMS?

Yes.

SmartTrace can support integration with SAP, Maximo, and other computerized maintenance management systems.

Depending on the project requirements, integration may include:

- Sharing heat trace asset information
- Supporting work-order creation
- Exchanging work-order status
- Supporting maintenance prioritization
- Linking SmartTrace alarms and asset records to maintenance activities
- Improving reporting and work coordination

The specific integration method and level of automation are defined as part of the project scope.

Can SmartTrace integrate with our existing facility infrastructure?

Yes.

SmartTrace is designed to work with existing heat trace controllers, communication networks, operational systems, and maintenance processes wherever practical.

Chemelex reviews the existing environment to determine:

- What infrastructure can be reused
- What communication upgrades may be required
- How SmartTrace should connect to the heat trace controllers
- Whether the deployment should be cloud, on-premise, or hybrid
- How SmartTrace should exchange information with DCS, SCADA, OPC UA, Modbus, SAP, Maximo, or CMMS systems

The goal is to integrate SmartTrace into the facility without unnecessarily replacing suitable existing equipment.

Deployment, Licensing, Data and Security

Is SmartTrace only available in the cloud?

No.

SmartTrace can be deployed using:

- Cloud infrastructure

- An on-premise server
- A hybrid architecture

The deployment model is selected based on:

- Facility infrastructure
- User-access requirements
- IT and OT standards
- Cybersecurity policies
- Data-storage requirements
- Remote-support requirements
- Integration architecture

Is SmartTrace a subscription service?

Yes. SmartTrace is provided through an annual recurring software license.

SmartTrace is not a static, one-time software purchase. It is an actively developed and supported software platform that is continuously updated to reflect changing customer requirements, controller technologies, operating environments, and cybersecurity expectations.

The annual software license supports:

- Continued access to the SmartTrace platform
- Ongoing software updates
- New features and capability enhancements
- Software maintenance and fixes
- Performance and usability improvements
- Continued development of controller compatibility
- Continued development of system integrations
- Standard software support from the SmartTrace team
- Assistance with platform questions and software-related issues
- Continued investment in the security and reliability of the platform

This recurring model ensures customers receive an evolving and actively supported platform rather than purchasing a fixed software version that may become outdated over time.

The commercial structure may vary based on:

- Deployment model
- Number of connected circuits
- Selected software capabilities
- Number of facilities
- Required integrations
- Additional SmartTrace Enterprise services

SmartTrace Enterprise is available separately for customers who want proactive alarm review, troubleshooting support, reporting, maintenance prioritization, and ongoing heat trace management assistance from dedicated specialists.

Who owns the data in SmartTrace?

The customer retains ownership of its facility and heat trace data.

Customer data remains the customer's data.

Data access, storage, retention, backups, administrative control, and system responsibilities are defined according to the selected deployment architecture and the applicable customer agreement.

How is SmartTrace secured?

SmartTrace is designed for industrial environments and can be configured to align with facility IT and OT requirements.

Depending on the deployment model, security measures may include:

- Encrypted communications
- Controlled user access
- Role-based permissions
- Audit trails and change history
- Segmented network architecture
- Outbound-only communications where applicable
- No open inbound ports where applicable
- On-premise hosting where required
- Controlled remote-access processes
- Customer-defined access and authentication requirements

Chemelex works with the customer's IT and OT teams to review the proposed architecture and address site-specific security requirements.

What infrastructure is required?

Requirements vary by facility.

A SmartTrace implementation may require:

- Heat trace controllers with communication capability
- A suitable serial, Ethernet, wireless, or cellular network
- Communication gateways or converters
- Industrial network equipment
- A cloud connection, on-premise server, or hybrid environment
- Coordination with facility IT and OT teams
- Access to controller programming and heat trace asset information

Chemelex reviews the existing system and identifies what can be reused before recommending additional infrastructure.

Implementation and Configuration

How is SmartTrace implemented?

A typical SmartTrace implementation includes:

1. Reviewing the existing heat trace controllers and communication infrastructure
2. Confirming controller compatibility
3. Defining the deployment and cybersecurity requirements
4. Establishing communication with the controllers
5. Configuring the facility, panels, circuits, alarms, rules, documentation, and user access
6. Uploading available heat trace asset information
7. Validating controller communication and system data
8. Training customer users
9. Supporting commissioning and transition into normal operation

The exact implementation plan depends on the size, complexity, controller types, communication infrastructure, and requirements of the facility.

Can SmartTrace be customized for our facility?

SmartTrace can be configured around the facility's specific requirements.

Configuration may include:

- Heat trace assets and circuit information
- Alarm priorities and criticality
- Operating rules
- User roles and permissions
- Documentation
- Reporting requirements
- Maintenance processes
- Scheduling information
- Programming requirements
- Multi-site reporting structures
- Field inspection and reporting workflows

Some facilities use SmartTrace primarily for monitoring and alarm review. Others use it for detailed heat trace management, programming oversight, documentation, field reporting, work coordination, and multi-site standardization.

SmartTrace is configured around the customer's requirements rather than forcing every facility to follow the same maintenance process.

Can SmartTrace support multiple facilities?

Yes.

SmartTrace can provide centralized visibility and standardized reporting across multiple facilities while still allowing site-specific:

- User access
- Asset configuration
- Alarm priorities
- Criticality rules
- Documentation
- Reports
- Maintenance workflows
- Operating practices

This helps organizations establish common heat trace management practices while preserving the flexibility required by individual sites.

Training and Support

What training and support are included?

Chemelex provides implementation support and user training based on the agreed project scope.

Training can be tailored for:

- Operations personnel
- Maintenance teams
- Reliability teams
- Engineering users
- System administrators
- Management and reporting users

Training may include:

- Navigating SmartTrace
- Reviewing system health

- Managing alarms
- Viewing trends and historical data
- Accessing documentation
- Reviewing controller programming
- Creating reports
- Using field tools
- Managing users and permissions

Ongoing software support is provided according to the applicable software agreement. Optional SmartTrace Enterprise services are also available for customers seeking more proactive heat trace management support.

What support is included with the annual software license?

The annual software licence includes standard support for the SmartTrace software platform.

This may include:

- Assistance with software-related questions
- Support for platform issues
- Software updates and maintenance
- Access to applicable feature improvements
- Support for user-access issues
- Assistance with standard SmartTrace functionality

Detailed alarm review, ongoing system monitoring, proactive troubleshooting, maintenance prioritization, and heat trace management services are provided through SmartTrace Enterprise or another agreed service scope.

Operational and Business Value

How can SmartTrace help reduce maintenance costs?

SmartTrace helps teams identify important issues earlier and provides the context needed to troubleshoot more efficiently.

Potential benefits include:

- Fewer manual controller walkdowns
- Less time spent reviewing nuisance alarms
- Faster access to drawings, settings, trends, and asset history
- Better work prioritization
- Fewer unnecessary field visits
- Reduced reactive troubleshooting
- Reduced dependence on site-specific knowledge
- More effective use of maintenance personnel
- Better utilization of existing controllers and communication infrastructure

Actual savings depend on the facility's current maintenance approach, system condition, and level of SmartTrace adoption.

How can SmartTrace help prevent operational disruptions?

SmartTrace provides continuous visibility into heat trace system health and helps teams prioritize conditions that may create operational risk.

Earlier identification of issues such as:

- Failed circuits

- Communication failures
- Incorrect programming
- Abnormal temperatures
- Excessive ground fault
- Unexpected current conditions
- Controller faults
- Repeated alarm conditions

This gives the facility more time to respond before the issue contributes to a freeze-up, equipment problem, delayed startup, or process interruption.

Can SmartTrace reduce heat trace energy consumption?

SmartTrace can help identify conditions that may contribute to unnecessary energy use, including:

- Circuits left continuously force-on
- Improper control settings
- Incorrect temperature setpoints
- Unnecessary operating modes
- Abnormal circuit behaviour
- Opportunities to improve control strategies

SmartTrace provides the data and visibility required to identify these conditions. Actual energy savings depend on the existing system configuration, operating conditions, and corrective actions taken by the facility.

How does SmartTrace improve heat trace reliability?

SmartTrace brings together the information needed to understand heat trace system health and recurring performance issues.

This includes:

- Real-time controller data
- Alarm history
- Temperature, current, and ground-fault trends
- Programming information
- Asset documentation
- Maintenance records
- Audit trails
- Communication status
- System-health reporting

By improving visibility and helping teams identify recurring conditions, SmartTrace supports more proactive maintenance and continuous improvement of the heat trace system.

Still Have a Question?

Discuss your controllers, communication infrastructure, deployment requirements, or heat trace management objectives with a SmartTrace specialist.

[Contact a SmartTrace Specialist](#)

[Book a SmartTrace Demonstration](#)