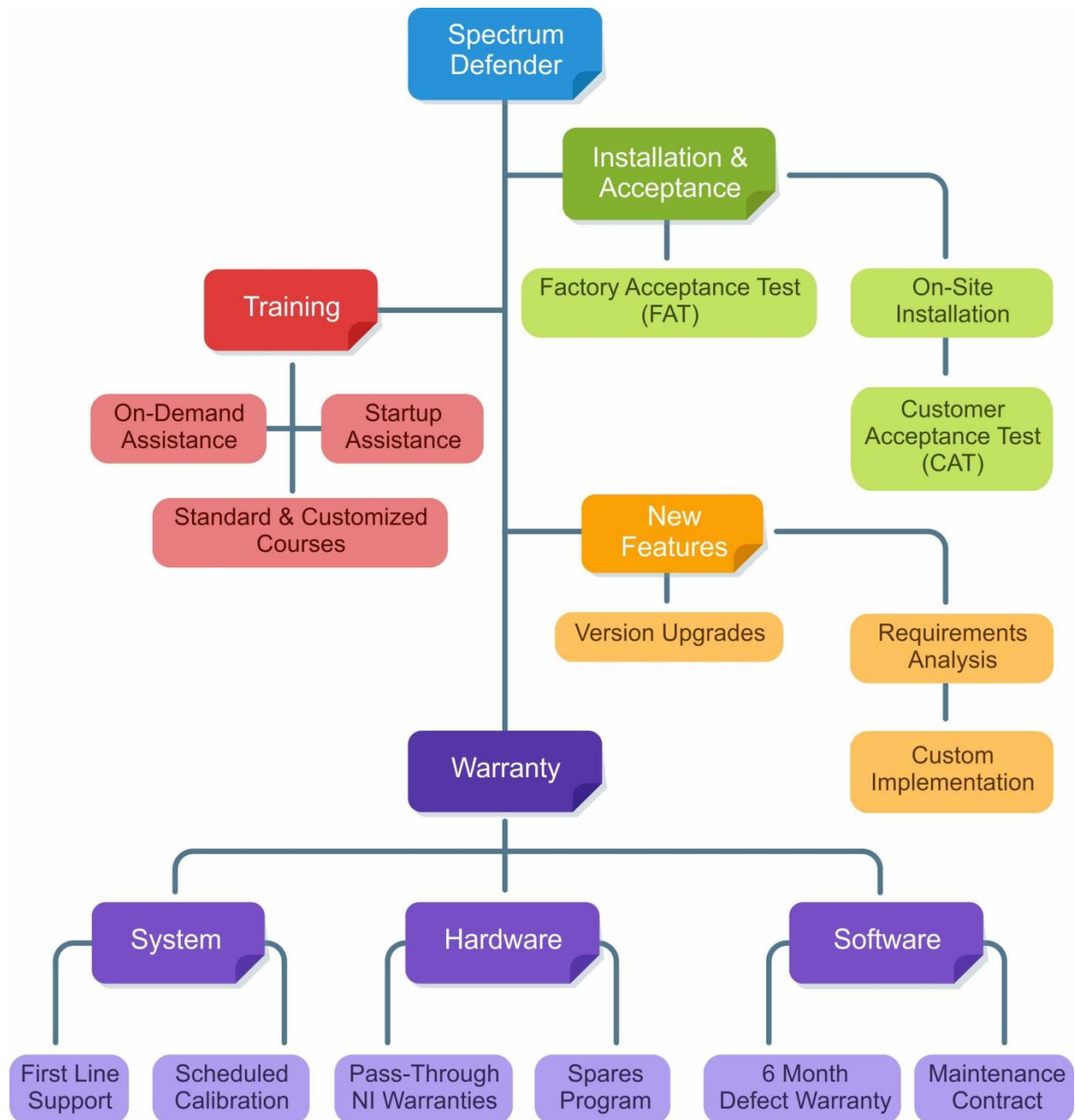


Spectrum Defender delivers a comprehensive menu of support services to ensure your success. From on-site installation to training & scheduled calibration, your long-term investment in Spectrum Defender is secured by a full lifecycle of support.

The illustration below provides an overview of all available support services. Please review your individualized proposal to see which services are included with your system purchase.



## **Installation and Acceptance**

### **Factory Acceptance Test**

Every Spectrum Defender system must pass a rigorous Factory Acceptance Test (FAT) suite prior to customer release and shipment. These tests are designed by the Spectrum Defender engineering team to ensure that the system: (1) Contains the functionality stated on the applicable model number datasheet and (2) Meets stated performance specifications (or complies to any requirements documents that may be included in a custom (CST) procurement).

Factory Acceptance Tests are always included at no additional charge in your individualized quotation.

### **On-Site Installation**

Some Spectrum Defender systems, particularly those that include a 19-inch rack, many synchronous RF channels, or multiple PXI chassis, may require on-site installation with support from factory personnel. These larger systems typically ship in pieces, with final assembly occurring at your site. Certain Factory Acceptance Tests must be repeated during on-site installation to ensure proper operation after shipment and reassembly.

Your individualized quotation will include on-site installation if the complexity or size of your system warrants these services.

### **Customer Acceptance Test**

The Factory Acceptance Tests included with every system purchase are typically sufficient to ensure proper system operation and final customer acceptance. However, some customers may have unique business or technical considerations that require an additional set of final tests. These additional tests are offered as Customer Acceptance Tests (CAT).

Customer Acceptance Tests require close collaboration with you to define the exact test suite, identify third party dependencies, define acceptance criteria, and plan logistics. Customer Acceptance Tests are quoted based on the complexity and third party dependencies of your particular project.

Customers who prefer a balanced choice between the standard FAT and a completely customized CAT may opt to send a representative witness to our factory during the final system FAT.

If your individualized quotation does not include a separate line item for CAT, then customer acceptance of the system will occur upon completion of the FAT and delivery of the FAT test result documentation.

## **Training**

### **Startup Assistance**

Startup Assistance provides informal training to ensure that you can start using your Spectrum Defender system immediately after delivery. A specialist engineer will provide one calendar day of on-site assistance at your facility during normal business hours.

Startup Assistance is driven by your needs and requests. Typical activities include an informal introduction to system functionality, basic system design, theory of operation, and orientation to software user

interface(s) & programming interfaces. Interactive Q&A sessions with an unlimited number of employees or contractors may also be included.

Please refer to your individualized quotation to determine if Startup Assistance is included with your system purchase. We offer Startup Assistance for significantly reduced cost if it is scheduled to coincide with On-Site Installation services.

## **On-Demand Assistance**

On-demand assistance is a flexible form of training, which allows you to request and quickly receive in-person assistance whenever you need it. On-Demand Assistance often includes help with instrument operation, setup, calibration, application advice, or any other type of assistance requested. A specialist engineer will visit your US or Canadian facility to provide in-person assistance based on your specific needs and requests.

On-demand assistance is provided on a "per event" basis. Each event is priced to include flat rate outbound and return travel to your location (as identified on the original price quotation), and up to two days of on-site collaborative assistance. You may initiate an On-Demand Assistance event with a call or e-mail to Spectrum Defender first line support at least five working days in advance of the desired on-site assistance.

On-demand assistance is quoted on a per event basis, with a minimum order of 2 events per year. Unused events expire one calendar year after purchase. Please reference your individualized quotation for a list of On-Demand Assistance events and locations included with your system purchase.

## **Standard & Customized Courses**

Formal training sessions with Power Point slides and written course material are available for customers with large teams of engineers or training needs that are not otherwise met by our Startup Assistance and On-Demand Assistance offerings. These courses are particularly relevant for more complex multi-channel systems with extensive calibration procedures.

Please contact us to receive a quote for a formal training course.

## **New Features**

### **Custom Features & Requirements Analysis**

The National Instruments hardware and Spectrum Defender software platform are purpose-built for extensibility into many additional application areas and use case scenarios. We will define, develop, test, and deliver new features or functionality that extends the capabilities of your current system. New feature development may be quoted as either a pre-paid time & materials "hours bank" or as a fixed price effort to deliver specific, well-scoped features.

Please contact us to receive a scope estimate for new features development.

## **System Warranty**

### **First Line Support**

The Spectrum Defender team is your first line of support whenever you have a question regarding the operation of your system, calibration procedures, or system troubleshooting. We work together with you

to determine if the issue is best resolved via phone support, a training service offering, software warranty service, or hardware warranty service.

First line telephone and e-mail support is provided during standard business hours (Eastern US time zone), with a 24-hour response time to the initial inquiry. Remote assistance via screen sharing software is also available when technically feasible.

Every Spectrum Defender system includes first line support for the life of the system. Please note that final resolution of some technical issues may require in-warranty hardware or an active Maintenance Contract.

## **Scheduled Calibration**

Most Spectrum Defender systems include National Instruments (NI) hardware that you may wish to calibrate on an annual basis either for optimal performance or to maintain compliance with your organization's policy regarding traceable instrument calibration. Calibration services for individual NI modules within your Spectrum Defender system may be obtained directly from NI. Please contact your local NI field sales representative for these services.

Some customers with more complex multi-channel systems may also wish to calibrate at the *system level*. System level calibration ensures that the overall system is calibrated to account for path losses external to the individual NI modules. System level calibration of multi-channel systems also includes compensation for inter-channel amplitude and phase offsets.

Our Scheduled Calibration service calibrates your system at *both* the individual NI module level *and* at the overall system level. A Spectrum Defender factory representative will:

1. Visit your facility to disassemble the system
2. Pack and return particular hardware modules to NI for device level calibration
3. Return to your facility after hardware modules are returned from NI
4. Reassemble your system
5. Re-calibrate at the system level and repeat a FAT subset

Scheduled Calibration occurs at intervals you specify. The quoted cost includes: travel, technician labor, pack & crate services, shipping, and NI calibration fees.

Scheduled Calibration is offered as a separate line item on your individualized price quotation. The price will vary significantly depending on your Spectrum Defender model number. You may also request a quotation for this service any time after your initial system purchase.

## **Hardware Warranty**

### **Pass-Through National Instruments Warranties**

The hardware in your system is protected against failure via the National Instruments hardware warranty program (reference <http://www.ni.com/services/repair> for terms and conditions).

In the event of a suspected hardware failure, we recommend contacting Spectrum Defender first line support for assistance in locating the issue and preparing a specific hardware module for return to the NI factory. We will assist you in obtaining an RMA from NI and provide any additional technical information that may be necessary to resolve the failure.

All Spectrum Defender systems include the NI standard one-year hardware warranty.

This warranty period may be extended to 3 or 5 years for an additional cost. Please refer to your individualized price quotation for the warranty period included with your system purchase.

## **Spares Program (Downtime Protection)**

For customers with very high uptime requirements, we are introducing a Downtime Protection program that will stock hardware spares for immediate shipment to you in the event of a hardware failure that impacts your production tests. Please contact us for more information.

## **Software Warranty**

### **Six-Month Software Defect Warranty**

We are pleased to offer our customers an industry leading software defect warranty standard with every Spectrum Defender system. If you identify any software defects during the first six months of ownership of a Spectrum Defender system, and those defects result in a substantial variation from stated system performance, we guarantee resolution of those software-related issues.

For systems with a model number that contains the characters "BTO" or "CST", you may be required to return the system to the factory in order to resolve identified defects (unless you have separately purchased a maintenance contract agreement with on-site services).

Please refer to the Spectrum Defender End User License Agreement (EULA) for complete terms and conditions.

### **Maintenance Contract**

Maintenance contracts extend the software defect warranty to a period beyond the standard six-month warranty. Maintenance contract customers receive proactive and reactive resolution of software defects identified by either you or the Spectrum Defender engineering team. Maintenance Contract customers receive service package updates at least once per contract year. Service package updates may also be provided quarterly if issues you identify warrant an accelerated service package release schedule.

The primary objective of service package updates is resolution of software defects and any other issues related to deviation from stated system performance. New features delivered with a service package are coincidental to this primary maintenance contract objective.

Periodic service package updates include:

1. Inbound and outbound travel to customer site (location as identified on original price quotation)
2. User & Programmer manual documentation updates (as applicable)
3. Design documentation updates (as applicable)
4. Hardware & software release package updates (with associated configuration management activities)
5. On-Site installation and execution of Factory Acceptance Test (FAT) subset.

Please note that we may require access to your system hardware, either in-person or via screen sharing software, to periodically validate service package updates on your exact system configuration. As part of a maintenance contract agreement, we agree to travel to your location to perform these activities as required to support annual or quarterly updates. You agree to grant us reasonable access to the hardware on a non-interference basis during normal working hours as required.