

Sonardyne Maritime Security Sentinel Server

Device Driver Specification. DYNAMICALLY GENERATED; DO NOT MODIFY.

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1 Document Versions

Version	Date	Name	Change
1.0	2019-10-31	BH	Document Created.

2 Referenced Documents

Document	Version	Description
Driver Project Requirements (DDK-PR)	1.0	The Sonardyne Maritime Security Sentinel Server driver must conform to all the requirements detailed in this document.
Driver Connection and Online States Requirements (DDK-DC)	1.0	The Sonardyne Maritime Security Sentinel Server driver must conform to all requirements in this document detailed in the section: Device Connection and Online States

3 Manufacturer

Name Sonardyne Maritime
Security



Website <http://sonardyne-ms.net/>

Description Sonardyne - Subsea technology for energy, science and security

4 IPSecurityCenter Versions

The driver must be compatible with the following IPSecurityCenter versions:

IPSecurityCenter Version	Supported
5.2	<input checked="" type="checkbox"/>

5 Operating Systems

5.1 Client Side Functionality

Operating Systems	Supported
Windows 7 64 bit	<input checked="" type="checkbox"/>

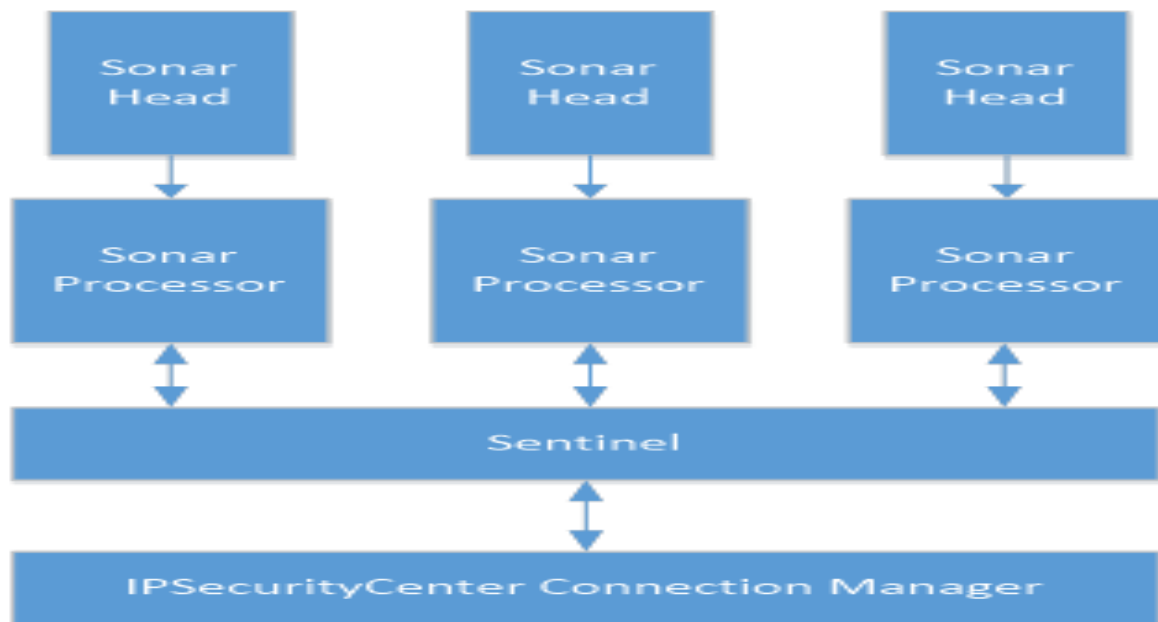
5.2 Server Side Functionality

Operating Systems	Supported
Windows Server 2008 R2	<input checked="" type="checkbox"/>
Windows Server 2012	<input checked="" type="checkbox"/>

6 Models / Firmware Versions

Model	Versions	SDK
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7 Hardware Configurations



8 Driver Package

The driver package is named: `cnl_ipsc_sonardynemaritimesecurity_sentinelserver_[BUILD-VERSION].ipsc`

9 Driver Features

9.1 Sentinel Server

9.1.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
DC1.0 Device Online Status	Sdk/Query Device
DC2.0 Authentication	None

9.1.2 Video

This device does not support video.

9.1.3 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

Name	Type	Description	Default Value & Ranges
Event Filter	AlertState	The filtering level for Event	Default: Min: Max:
Invert Longitude	bool	When true, Longitude values will be inverted so that South is positive, and North is negative.	Default: false Min: Max:
Invert Latitude	bool	When true, Latitude values will be inverted so that West is positive, and East is negative	Default: false Min: Max:

9.1.4 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

9.1.5 Events

General requirements for events can be found in [Driver Project Requirements](#).

9.2 Sonar Head

9.2.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
DC1.0 Device Online Status	Sdk/Query Device
DC2.0 Authentication	None

9.2.2 Video

This device does not support video.

9.2.3 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

Name	Type	Description	Default Value & Ranges
Heading	double	The heading of the sonar head	Default: Min: Max:
Pitch	double	The pitch of the sonar head	Default: Min: Max:
Roll	double	The roll of the sonar head	Default: Min: Max:
Pitch Inverted	bool	True if the pitch is inverted	Default: Min: Max:
Roll Inverted	bool	True if the roll is inverted	Default: Min: Max:

9.2.4 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

9.2.5 Events

General requirements for events can be found in [Driver Project Requirements](#).

9.2.5.1 Track Event

Raised whenever a track update is received from a sonar head

Performance

The driver must be able to handle 4000 events per hour.

Event Properties

Name	Type	Description
ID	string	ID of the track
Name	string	Name of the track
Is Fusion Master	bool	True or False
Master Track ID	string	ID of master track if fused
First Detection Time	DateTime	Date and time of initial detection
State	string	Dead/Born/Active/Predicting/Abandoned/Lagged
Alert State	string	Moderate/Substantial/Severe/Critical
Classification	string	None/Scuba/Machine/Closed circuit
DateTime	DateTime	The current track date and local time
Unfiltered	int	0 - Filtered, 1- Unfiltered
Predicting Time	float	If predicting, the time in seconds the track has been in that state
Trail Length	float	The total length in metres, of the tracks trail
Bearing	double	Bearing in degrees from the sonar head
SNR	double	Signal to Noise Ratio (dB)
Age	float	Time in seconds from oldest ping to current
Pings	long	The integer number of pings over which the track has endured
Hits	long	The integer number of pings where the track has been detected
Track Length	float	The distance in metres, between the point of initiation and the current track position

Track Trail Ratio	float	The ratio of track length to trail length. This becomes a measure of aggression
Track Uncertainty Range	float	Range uncertainty from error
Track Quality	float	Quality measure (%)
Track Uncertainty Bearing	float	Bearing uncertainty from error
Rate of turn	double	Variation of heading of target in degrees per second. Positive clockwise from above
Variation of speed	double	m/s ² . Positive if speed increasing, negative if speed decreasing
Latitude	double	Latitude of the track
Longitude	double	Longitude of the track
Heading	double	Track heading
Speed	double	Track Speed
Display Label	string	Formatted track Information - TrackID, Age,Range,Speed,Class and State

9.2.5.2 *Event Interfaces*

This section provides details of built-in interfaces that are implemented on this event. Full details of these interfaces can be found in the DDK documentation.

Interface	Description
ITrackableGeoSpatialAwareEvent	Identifies an event as Trackable Geo-Spatial Aware
IRelativeGeoSpatialAwareEvent	Defines a extension to a position update event where the position is available as a relative position from the reporting source. The relative position is reported as an absolute azimuth position of the object relative to the position of the reporting source.

9.2.6 Built-In Interfaces

This section provides details of built-in interfaces that are implemented on this device. Full details of these interfaces can be found in the DDK documentation.

Interface	Description
IGeoSpatialAware	Defines a locatable object

10 Installation

10.1 Prerequisites

Install the SDK on all machines running the following services / software:

- Client
- Connection Manager

10.2 Driver Installation

- Start the IPSecurityCenter™ client and any supporting services
- Open the Device Driver Manager from the System Configuration
- Click the ***Install*** button
- Select the Sonardyne Maritime Security Sentinel Server Driver Package in the Open file dialog
- Wait for the driver to be uploaded

The driver packages should be listed in the Device Driver Manager.

Additional Installation Details

10.2.1 Device Configuration

- Right click in a folder (e.g. Devices) in the System Configuration: **New** → **Device On** → **Server**
- Click **Next** on the introduction
- Select **Sonardyne Maritime Security** in the **Device Manufacturer** list
- Select **Sentinel Server** in the Available Devices list
- Click **Next** to enter the device details: Enter the Sonardyne Maritime Security Sentinel Server hostname or IP address, the port (use 0 to use the default port), and user name and password if integrated security is not being used.
- Click **Next** and **Finish** to add the device.
- Enable the device to bring it online.

Additional Configuration Details

10.2.2 Driver Compatibility

The following devices are known to be incompatible with the Sonardyne Maritime Security Sentinel Server.

Model
