

CrossTalk DataSheet 3.4

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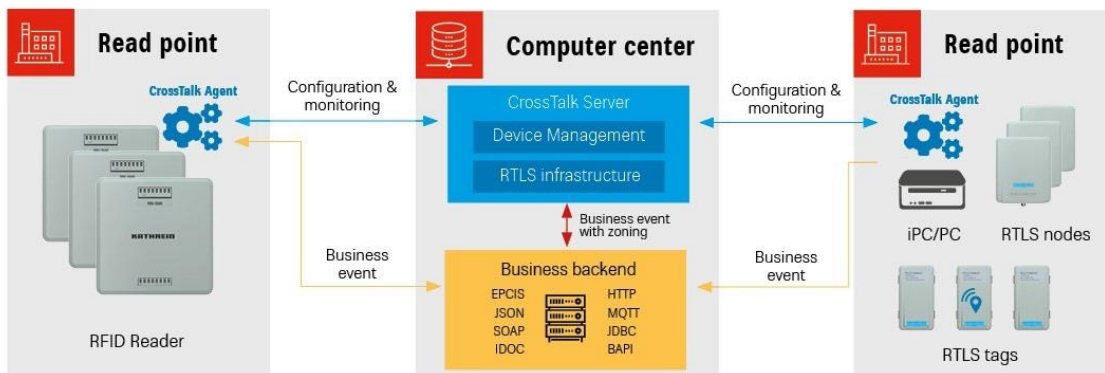
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1 Architecture Overview

1.1 Base architecture

CrossTalk is a pure Java implementation. It is designed to run on any platform with Java VM support.

1.2 CrossTalk components



1.2.1 CrossTalk Agent (Edgeware)

To support remote installed stationary devices like RFID portal gates or RTLS systems, a CrossTalk Agent can be deployed directly in the same LAN environment or on the device itself. This allows real time device control, data capturing and filtering.

1.2.2 CrossTalk Performance

Since CrossTalk is based on a distributed architecture, performance can be well balanced using one CrossTalk Agent per data capturing device or managing multiple devices on an Agent. Multiple instances of an Agent can be deployed on a computing resource as well, to achieve a fault tolerant configuration.

1.2.3 **CrossTalk Server**

The central configuration and monitoring component of CrossTalk is the Java server application „CrossTalk AppCenter“, which needs to be deployed on a Java application server.

The CrossTalk AppCenter is a framework for running multiple applications. The main applications are the “CrossTalk Device Management” and “CrossTalk RTLS Infrastructure” App.

There are two different types of licensing models for CrossTalk AppCenter available.

The **CrossTalk RFID license** package includes all features for:

- AutoID and IoT device integration and management
- AutoID Process Toolkit
- Business backend integration

In this scenario, all business events are typically forwarded directly from a CrossTalk Agent to an existing backend application, where the events will be processed. All the end user function and user interfaces are delivered by the backend as well.

The **CrossTalk RTLS license** package includes the building blocks required for RTLS systems:

CrossTalk Agent

- Localization on a local IPC or PC
- Configuration of node and tag
- Calculation of the tag position by means of the measurement data from the nodes
- Filtering and buffering of the tag position data

CrossTalk Server

- Visual zone editor
- Geo-localization and geo-fencing
- Repository for the RTLS device configuration
- Monitoring of the devices and functional modules
- Zone allocation events are sent directly to the business backend
- Many interface adapters ready for immediate use

2 Requirements

2.1 Introduction

CrossTalk AppCenter is designed to run on many combinations of Operating Systems (*MS Windows, Linux*) and *Java* Application Servers (*Tomcat, JBoss, WebSphere*).

The repository for *CrossTalk AppCenter* could be any Relational SQL Database Schema (*PostgreSQL, MS SQL Server, Oracle, MySQL, DB2*).

2.2 System requirements CrossTalk Server

2.2.1 Hardware

The following hardware resources are required to run *CrossTalk Server* as a standalone application:

Component	Minimum	Recommended
CPU	2 x 2 GHz	2 x Quad core
Memory	4 GB	8 GB
Disc space	10 GB	100 GB
Network	10 Mbit	100 Mbit
TCP connection	A direct TCP connection with fixed IP address is necessary to connect devices (RFID readers, K-RTLS Nodes, etc.). The assigning of ports depends on the devices and is indicated in the device manufacturer's documentation or description.	

2.2.2 Software

To install *CrossTalk Server* the following software components are required:

Component	Product version	Recommended (Open Source)
<i>Java</i> VM	Operating system independent <i>Java</i> runtime environment: 6 to 11	OpenJDK: Adoptium Eclipse Temurin JRE 11.x (LTS)
<i>Java</i> Application Server	- <i>Apache Tomcat</i> : 7 to 9 - <i>Red Hat JBoss</i> : 6 or higher - <i>IBM WebSphere</i> : 6 or higher - <i>SAP NetWeaver</i> : 7.3 or higher	<i>Apache Tomcat</i> 9.x
Relational SQL database connected by JDBC driver	- <i>Oracle</i> : 9 or higher - <i>Microsoft SQL Server</i> : 2008 or higher - <i>PostgreSQL</i> : 10 or higher - <i>MySQL</i> : 5.5 or higher - <i>IBM DB2</i> : 9.7 or higher	<i>PostgreSQL</i> 14.x

2.3 System requirements CrossTalk Agent (Edgware)

2.3.1 Hardware

The following hardware resources are required to run CrossTalk Agent:

Component	Minimum	Recommended
CPU	ARM / x86 / x64 based processor 600 MHz	ARM / x86 / x64 based processor Dual core 800 MHz
Memory	256 MB	512 MB
Disk	256 MB	1 GB
Network	10 Mbit	100 Mbit

Important: The Java VM must support the used processor type!

2.3.2 Software

To install CrossTalk Agent the following software components are required:

Component	Product version	Recommended (Open Source)
Java VM	Operating system independent Java runtime environment: Version 6 or higher	OpenJDK: Adoptium Eclipse Temurin JRE 11.x (LTS)