

# FLAWLESS COMMUNICATIONS FOR CAB SIGNALING SYSTEM

Datasheet

# Project objective

Advance the communication technology for a cab signaling system by providing ability of message transmitting over all the units involved via TCP protocol. The upgraded system would ensure full compliance with PTC standards and FRA requirements.

The screenshot displays the 'Device Configuration' window, specifically the 'ACSES Encoder Parameters' section. The interface includes a sidebar with navigation options and a main configuration area with various input fields and dropdown menus.

**Device Configuration**

**Location Properties**

- WMS/SMShell Key
- Network
- SNMP
- NTP
- ITC Time & Locat...
- ACSES Encoder**
- V-ETMS
- ClassC
- ClassD
- Operating Values

**ACSES Encoder Parameters**

Encoder Address: 7.AAA.AA1.AA1.A4.A1

RRR - Railroad: 000 - Initials (Company Name)

LLL - Line: 1

GGG - BCP Address: 1 SS - Encoder: 4 DD: 01

Select protocol (UDP or TCP)

**UDP Parameters**

Multicast Address: 239.255.0.9 Port: 49001

Unicast UDP Port: 49002

**TCP Parameters**

Mode: Bidirectional

TCP Role: Client

Remote Address (AG): 10.255.255.210

Remote Port (AG): 3001

Connection Attempts Timeout: 30

Connection Retry Limit: 30

TCP Connection Max Messages: -1

Import... Export... Device Configuration Status: Saved Cancel Save

# Result

The enhanced messaging service for the cab signaling system provides instant and error-free data transfer using TCP protocol. This allows train crews to be instantly informed on speed restrictions, and for penalty train stop if overspeeding. The upgraded cab signaling system fully meets the definition of a PTC system.

## Scope of work

- ❖ Updating the WIU Application builder, including UI and parameters handling updates
- ❖ Updating the WIU web interface, including web pages, schemas, and parameters handling updates for remote control
- ❖ Changes to messaging attribute and message definition
- ❖ Adjustments CPU firmware, including vital code, as well as event logs

## Activities

- ❖ Requirement clarification
- ❖ Software updates
- ❖ Firmware updates
- ❖ Testing & Bug fixing

# About the project

## Technologies

- ❖ C++
- ❖ Eclipse
- ❖ SVN



## Project size

- ❖ 2 Software Engineers
- ❖ 2 QA Engineers

## Duration



## Platform

- ❖ Linux