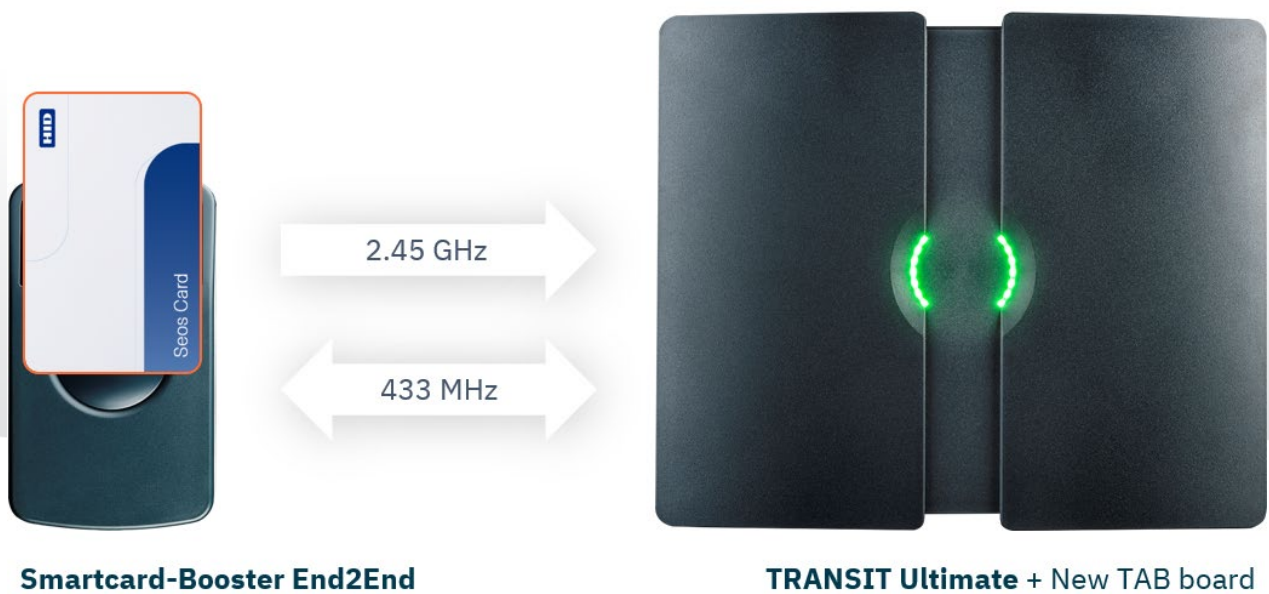


Application note

Smartcard-Booster End2End

Introduction

The Smartcard-Booster End2End supports reading HID SEOS/iCLASS cards.



The Smartcard-Booster End2End uses the 433 MHz bi-directional wireless communication with the TAB board on the TRANSIT Ultimate reader. The HID OMNIKEY secure element on the TAB board enables reading securely the id-number from HID SEOS/iCLASS cards. This means that the Booster must be in range of the TRANSIT Ultimate reader to read the inserted card.

Supported card types

HID iCLASS SEOS (14443A)

HID iCLASS SE (15693)

HID MIFARE Classic SE (14443A)

HID MIFARE Desfire SE (14443A)

Future TAB board firmware updates may enable the support for more card types.

Configuration

Requirements

9988483 - Smartcard-Booster End2End

9215689 - TRANSIT Ultimate

↳ 7819102 - RS232 / HID interface board (default)

↳ 7841329 - TAB board hardware revision C *

* The TAB board (part. no. 7841329) is part of the TRANSIT Ultimate and does not need to be ordered separately. However it is important that the TAB board hardware revision must be at least C. Older readers may be featured with an older TAB board which does not support reading the HID SEOS/iCLASS cards. In such case the TAB board needs to be replaced. See further below for more detailed information about how to install.



✓ TAB board hardware revision C



✗ Older TAB

TRANSIT Ultimate configuration

Enable ULTIMATE-mode by setting dip-switch SW2-2 ON.

Smartcard-Booster End2End configuration

No configuration needed.

Booster usage

Insert card into booster.

Push button (while in range of TRANSIT Ultimate).

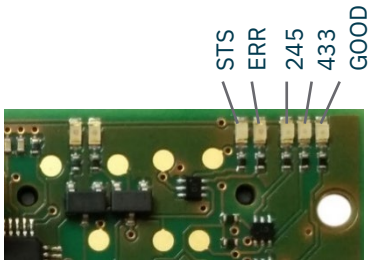
Booster requests help from TRANSIT Ultimate.

In case card read successful, the booster beeps happy tone. If card read failed then the booster beeps low tone.

Booster buzzer indications

Description	Buzzer
Card read successful	Happy tone 🎵
Card read failed (timeout 1 s)	1 low tone beep
Power on	3 beeps increasing frequency 🎵
Power-on + button	Tune Mission Impossible → Smartcard-Booster End2End
Battery-low	Morse SOS (. . . - - - . . .)

TAB board LED indications



LED	Description
● STS	Status LED Fast blinking: Starting up. Regular blinking: Status OK, HID + SAM ready (0.5s on / 0.5s off) Double blink: Status OK, HID ready (no SAM)
● ERR	Error LED Should be normally off.
● 245	2.45GHz microwave tag data received. This LED should blink when Tag or Booster in range. Does not indicate when TAB bypassed. Ensure dip-switch SW2-2 is ON.
● 433	433MHz tag data received. Only indicated when using Smartcard-Booster End2End or Ultimate tags
● GOOD	Yes! Smartcard-Booster End2End card read successful. Smartcard-Booster Ultimate authenticated successful.

TAB board installation

When the TAB board must be replaced follow the procedure below.

Caution: Ensure to follow general safety and ESD (electrostatic discharge) precautions!

1. Disconnect 433 MHz antenna cable.
2. Remove original TAB board from TRANSIT Ultimate main board.
3. If present, remove security key pack (SAM) from original TAB and insert into new TAB C.
4. Place new TAB C board onto TRANSIT Ultimate main board.
5. Connect 433 MHz antenna cable.

After power-on check status and error LED indications.