.

TELETASK
trendsetter in home automation

DoIP
Domotics over IP

TDS15132 OpenDoIP API

Version September 1, 2026

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2 Introduction

2.1 LICENCE AGREEMENT.

This document describes the OpenDoIP protocol used to communicate with a TELETASK central unit configured with PROSOFT 5.

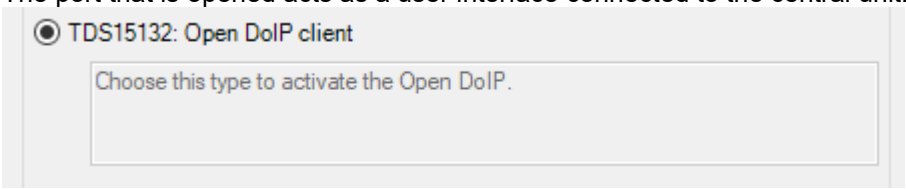
To use the protocol a TELETASK DoIP Open Protocol license (TDS15132) is needed.

TELETASK has the right to make any changes to this library at any point without any prior notice.

Because the protocol can be used in many different ways by third-party developers, TELETASK cannot provide free development support or accept responsibility for the implementation, use, or results of external applications based on this protocol.
By using these libraries, the developer and the user agree with this statement.

2.2 Configuration in PROSOFT

In PROSOFT you have to add the TDS15132 as a 'GUI' in GUISOFT.
The port that is opened acts as a user interface connected to the central unit.



No further configuration is required. This will open TCP port 55957 for communication.
If there is no license available, the port will be open for 3 days after download.

To work without interruption, you need to import the activation file from a TDS15132 license in PROSOFT!

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3 Communication Protocol - Frames

The TDS central unit can be controlled by an external third-party application that opens a TCP socket connection to the TDS central unit. The communication between the third-party application and the TDS central unit is a TCP connection on **port 55957**.

All commands and messages in both directions will use the same frame format:

STX (0x02)	Length	Command or Report	Parameter 1	…	Parameter n	Checksum (obsolete)

- STX: 0x02 this byte indicates the start of a command (Required)
- Length: the length of the message measured in bytes. the length includes the STX and Length bytes without the Checksum byte (Required)
- Command or Report: The type of command or report (Required)
- Parameter 1-n: The data bytes for the given command number (Required except for keep alive)
- Checksum (Not required anymore)

When the central unit receives a message, it will send a single acknowledge byte (0x0A). If the acknowledge byte is not received, there is no guarantee that the command is handled.

Under normal operation, communication in both directions uses hexadecimal (binary) messages. All commands, responses, and status reports are exchanged as hex-encoded packet structures. However, communication from the external third-party application can also be performed using ASCII commands, as described in the next subchapter.

3.1 Communication using ASCII

In some cases, it is impossible to send binary data to the central unit e.g. when trying to control the TELETASK system from a third-party device that does not support binary communication.

In this case you can also use ASCII (text), to send commands **TO** the central unit. All commands can be sent using ASCII but *replies from the central unit will always be binary.*

To send a command to the central unit in ASCII, first determine what the command would be in binary.
E.g. To switch on relay five the bytes to send to the central unit are:
2 (STX),
8 (length),
7 (Device set),
1 (central unit nr)
1 (function type, relay),
0 and 5 (function number int two bytes)
255 (= ON, use 0 for OFF and 103 for 'Toggle')

The ASCII string that needs to be sent to the central unit for the same command is:
s,8,7,1,1,0,5,255;

Note that:
- The 'STX' has been replaced with an 's' character
- Each byte is represented by one or more ASCII digits.
- The bytes are separated by ',' characters
- **There must be a semicolon ';' at the end**

Example keep alive: `s,11;`
Example set dimmer 1 of central unit 1 to 100% `s,7,7,1,2,0,1,100;`
Example toggle dimmer 9 of central unit 2 `s,7,7,2,2,0,9,103;`
Example set relay 1 of central unit 2 on `s,7,7,2,1,0,1,255;`

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4 Available Commands & Reports

4.1 Keep Alive Command

To keep the socket connection open, the client should send this command to the TDS once every minute.

STX	2 (0x02)
Length	3 (0x03)
Command number	11 (0x0B)

4.2 Device Set Command

This command allows the client to set individual states or values on a device.

STX	2 (0x02)
Length	depends on the number of parameters
Command number	7 (0x07)
Parameter 1	Device central unit number
Parameter 2	Device type
Parameter 3 & 4	Device Number (2 bytes)
Parameter 5	Device Action
Parameter 6 – n	Data (optional)

As on other commands also most of the times a device identification is necessary.
This is done by the 4 bytes following the command byte.

Device central unit number:

For physical devices this is the central unit number starting at 1, so if you want to control a dimmer on central unit “B”, you should use 2.
If you don’t know the central unit id, like for a flag, you must use number 0.

Device type:

This is the type identification for the device, explained later for each kind of device. Example a relay is always 1, a flag is 15.

Device Number (2 bytes)

This is the number of the device in MSB order. Example if it is relay 7 the bytes will be 0 and 7. For dimmer 388 the bytes will be 1 and 132, or in hexadecimal 0x01 and 0x84

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4.3 Device Current State Request Command

When the central unit receives this command, it will reports immediately the state of the specified device or a group of devices from the same type and central unit.

Single device:

STX	2 (0x02)
Length	7 (0x07)
Command number	6 (0x06)
Parameter 1	Device central unit number
Parameter 2	Device type
Parameter 3 & 4	Device Number (2 bytes)

Group of devices:

STX	2 (0x02)
Length	depends on the number of outputs
Command number	9 (0x09)
Parameter 1	Device central unit number
Parameter 2	Device type
Parameter 3 & 4	Device Number 1 (2 bytes)
Parameter 5 & 6, …, n	Device Number 2 (2 bytes), …

Remark: the group is limited because the length of frame is maximum 255 bytes.
Remark: devices in the group are always from the same central unit and of the same type.
Only to be used for one-time requests! For recurring requests, the Device State Subscription Command in the next subchapter should be used.

4.4 Device State Subscription Command

When the central unit receives this command it (de-)activates its channel for reporting on the device. Any change made to the state of the device will result in a Current State Report.

Single device:

STX	2 (0x02)
Length	7 (0x07)
Command number	34 (0x22)
Parameter 1	Device central unit number
Parameter 2	Device type
Parameter 3 & 4	Device Number (2 bytes)
Parameter 5	0: OFF, 255: ON

Group of devices:

STX	2 (0x02)
Length	depends on the number of outputs
Command number	35 (0x23)
Parameter 1	Device central unit number
Parameter 2	Device type
Parameter 3 & 4	Device Number 1 (2 bytes)
Parameter 5 & 6, …, n	Device Number 2 (2 bytes), …
Parameter n+1	0: OFF, 255: ON

The legacy single-device command 0x03 remains supported for backward compatibility but is now deprecated in favor of 0x22 / 0x23 above, which additionally allow subscribing to one specific device instead of all devices of a device type.

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4.5 Device Current State Report

Central unit sends this command if the state of a specified device, it is subscribed to, has changed, or as an answer to a State Request. Each state report follows the structure shown in the table below and can be interpreted using the same field breakdown.

STX	2 (0x02)
Length	depends on the number of parameters
Report number	16 (0x10)
Parameter 1	Device central unit number
Parameter 2	Device type
Parameter 3 & 4	Device Number (2 bytes)
Parameter 5	Error State (Not implemented)
Parameter 6 – n	State(s)

The state byte **parameters** starting from 6 are **explained per device** in the following chapters.

4.6 Proximity Access Report

The central unit sends this command when there has been an 'access attempt' with a badge.
Reporting will only happen if there is a ***subscription on device with id 202, and number 1***

STX	2 (0x02)
Length	depends on the length of the names
Report number	20 (0x14)
Parameter 1	RESULT: 0x00=DENIED, 0xFF=ALLOWED
Parameter 2 – 5	CARDID: 4 bytes = uint32
Parameter 6 – 11	UNIX TIMESTAMP: 6 bytes = uint48
Parameter 12	length username (u)
Parameter 13 – 13+u	UTF-8 string username
Parameter 14+u	lenght readername (r)
Parameter 15+u – 15+u+r	UTF-8 string readername

Remark: 'PORTA' should be selected for that user!

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5 Devices explained

5.1 Relay / Process function / Timed function / Flag / Mood

Device type

Device	Type
RELAY	1 (0x01)
PROCES	3 (0x03)
TIMEDFUNCTION	5 (0x05)
LOCALMOOD	8 (0x08)
TIMEDMOOD	9 (0x09)
GENERALMOOD	10 (0x0A)
FLAGS	15 (0x0F)

Device Action

Following actions are possible:

Action	Value	Description
ON	255	Will switch ON the device or function
TOGGLE	103	Will toggle the device between ON and OFF (not for GeneralMood)
OFF	0	Will switch OFF the device or function (not for GeneralMood)

Example command frame to switch relay 1 ON at central unit 1:
`[0x02,0x08,0x07,0x01,0x01,0x00,0x01,0xFF]`

Report State Parameters

For these device there is only one byte:

State	ON: 255, OFF: 0

Example report for Relay 1 at central unit 1 turned ON:
`[0x02,0x09,0x10,0x01,0x01,0x00,0x01,0x00,0xFF,0x1D]`

Example report for Flag 1 at central unit 1 turned OFF:
`[0x02,0x09,0x10,0x01,0x0F,0x00,0x01,0x00,0x00,0x26]`

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5.2 Dimmer or Dimmer group

Device identifier

Device	Type
DIMMER	2 (0x02)
DIMMERGRP	13 (0x0D)

Device Action

Following actions are possible:

Action	Value	Description
DIM	0 - 100	Will set the DIMMER to the provided percentage
TOGGLE	103	Will toggle the device between ON and OFF

Example command frame to set dimmer 8 to 75% at central unit 1:
`[0x02,0x08,0x07,0x01,0x02,0x00,0x08,0x4B]`

Report State Parameters

For dimmer the state the report can be one or three bytes depending if it's currently dimming or not.

If it is not dimming

Target brightness	0 - 100	The current brightness level in percentage

If it is dimming

Target brightness	0 - 100	The target brightness level in percentage
Initial brightness	0 - 100	The current brightness when report is send
Time Required	2 bytes	The time required to change the brightness to reach the Target in milliseconds

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5.3 Motor or Motor group

Device identifiers

Device	Type
MOTOR	6 (0x06)
MOTORGRP	40 (0x28)

Device Action

Following actions are possible:

Motor Action without parameters		
Action	**Value**	**Description**
UP	1	To start a motor in the UP direction
DOWN	2	To start a motor in the DOWN direction
STOP	3	To stop a motor
STARTSTOP	6	Toggle Start/Stop
UPSTOP	7	Toggle Up/Stop
DOWNSTOP	8	Toggle Down/Stop
UPDOWN	55	Toggle Up->Stop->Down-Stop->Up->…

Motor Control with parameters			
Action	**Value**	**Extra byte**	**Description**
GO_TO_POSITION	11	0 - 100	Sets the target position of the motor as a percentage of its full travel range
SET_SLAT_POSITION	12	0 - 100	Sets the target angle/position of the slats as a percentage of their adjustable range
SET_SUN_PROTECTION	15	0x00 = OFF 0xFF = ON	To (de)activate the sun protection

Example command frame for motor 4 to go UP on central unit 1:
`[0x02,0x08,0x07,0x01,0x06,0x00,0x04,0x01]`

Report State Parameters

For a motor the state bytes consist of:

Direction	0x01: up 0x02: down	The current (or last) run direction of the motor
Power	0x00: stopped 0xFF: running	The on state of the motor
AUTO & WIND state	0x0-4 0-4	High nibble => AUTO, Low nibble => WIND. 0: not defined 1: ON, and the motor is currently controlled by the AUTO/WIND 2: ON, but the motor is not controlled by the AUTO/WIND 3: ON, but overruled by user (not for WIND) 4: switched OFF
Position	0 - 100	Target position of the motor or position the motor is running to. This byte is only available if position indication is enabled.
5 extra bytes		Can be ignored.

Example report from motor 1 on central unit 1 currently running DOWN, without any protection defined and currently at 99% closed position:
`[0x02 0x0F 0x10 0x01 0x06 0x00 0x01 0x00 0x02 0xFF 0x00 0x63 0x00 0x07 0xCD 0x62]`

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5.4 Climate Control zone

Device identifier

Device	Type
Climate Control	17 (0x11)

Device Action

Following actions are possible:

Climate Control action without parameters		
Action	**Value**	**Description**
TEMPUP	21	Increase the Temperature target with 0.5°C
TEMPDOWN	22	Decrease the Temperature target with 0.5°C
TEMPNIGHT	25	Set the preset to NIGHT
TEMPDAY	26	Set the preset to DAY
TEMPSTANDBY	93	Set the preset to STANDBY
TEMPSPEED	31	To scroll through the different speeds
TEMPSPLOW	97	Set speed to Low
TEMPSPMED	98	Set speed to Medium
TEMPSPHIGH	99	Set speed to High
TEMPSPAUTO	89	Set speed to Auto
TEMPMODE	30	To scroll through the different modes
TEMPAUTO	94	Set mode to Auto
TEMPHEAT	95	Set mode to Heat
TEMPCOOL	96	Set mode to Cool
TEMPVENT	105	Set mode to Vent
TEMPONOFF	104	To toggle between ON and OFF

Climate Control action with parameters			
Action	**Value**	parameters	description
TEMPMANUAL_TARGET	87	4-byte float	Set a manual setpoint

Report State Parameters

For a Climate Control Zone the state bytes consist of:

Value	4-byte float	The current value measured in °C by the zone
Target	4-byte float	The current target in °C for the zone
Day	4-byte float	The value in °C of the Day preset for heating
Night	4-byte float	The value in °C of the Night preset for heating
Standby	1-byte	The standby value (in 0,1 degrees as offset on the Day preset)
Active Preset	byte	TEMPDAY=26 (0x1A), TEMPNIGHT=25 (0x19), TEMPSTANDBY=93 (0x5D) or 0 (0x00) (if there is no active preset)
Mode	byte	The mode for the zone (94 Auto, 95 Heat, 96 Cool, 105 Vent)
SpeedMode	byte	The speed mode for the zone (97 Low, 98 Medium, 99 High, 89 Auto)
Power	byte	0 = OFF, 255 = ON
WindowState	byte	255 if the window is open, 0 if closed
isCooling	byte	128 if cooling, 8 if heating
Zero byte	byte	can be ignored
Night	4-byte float	The value in °C of the Night cooling preset

Explanation of the 4-byte float: look at the sensor readings

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5.5 Audio zone

Device identifier

Device	Type
AUDIO	31 (0x1F)

Device Action

Following actions are possible:

Audio action without parameters		
Action	**Value**	**Description**
VolumeStepUp	32	Increase the volume by one step
VolumeStepDown	33	Decrease the volume by one step
SetPowerOn	36	Turn the device ON
SetPowerOff	37	Turn the device OFF
SetAudioSource1	38	Sets audio source 1
SetAudioSource2	39	Sets audio source 2
SetAudioSource3	40	Sets audio source 3
SetAudioSource4	41	Sets audio source 4
SetAudioSource5	42	Sets audio source 5
SetAudioSource6	71	Sets audio source 6
SetAudioSource7	72	Sets audio source 7
SetAudioSource8	73	Sets audio source 8
ToggleMute	77	Toggles the audio mute state
ActivatePreset10	78	Activates preset 10
ActivatePreset1	79	Activates preset 1
ActivatePreset2	80	Activates preset 2
ActivatePreset3	81	Activates preset 3
ActivatePreset4	82	Activates preset 4
ActivatePreset5	83	Activates preset 5
ActivatePreset6	84	Activates preset 6
ActivatePreset7	85	Activates preset 7
ActivatePreset8	86	Activates preset 8
ActivatePreset9	87	Activates preset 9
CycleAudioPresetNext	88	Activates the next preset in the cycle
CycleAudioPresetPrev	89	Activates the previous preset in the cycle

Report State Parameters

For an Audio Zone the state bytes consist of:

State	byte	36 = ON (no specific source active), 37 = OFF. If ON and a specific audio source is active: (source position + 38) if the source position is 4 or lower, or (source position + 66) if higher than 4.
Volume	byte 0-100	percentage of volume
Field count	byte	Number of text fields that follow (always 3): preset/source name, track line 1, track line 2.
Preset/Source Name Length	byte n	The length of the active preset/source name
Preset/Source Name	n bytes	The active preset/source name in UTF-8
Track Line 1 Length	byte m	The length of the track line in bytes (m) (byte)
Track Line 1	m bytes	The now playing 1 line in UTF-8
Track Line 2 Length	byte k	The length of the track line in bytes
Track Line 2	k bytes	The now playing 2 line in UTF-8

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The information that track lines can contain are dependent of the source and brand of the controlled device. In most case for an radio station the first line is a banner, the second line is the name of the station. If it is a song that is playing, then it's the 'track' info, with the first line the title, and the second line the artist. If there is no info, then these values have the length 0.

5.6 RGB & RGB group

Device identifier

Device	Type
RGB	217 (0xD9)
RGBGRP	41 (0x29)

Device Action

Following actions are possible:

RGB Action with parameters			
Action	**Value**	**Parameters**	**Description**
RGB_COLOR	231	3 bytes: R, G, B respectively each value: 0-255	To set the color to a RGB value

Example command frame to set RGB function 6 to Red=255 Green=0 Blue=5 on central unit 1:
`[0x02,0x0B,0x07,0x01,0xD9,0x00,0x06,0xE7,0xFF,0x00,0x05]`

Report State Parameters

For RGB, there are '3' state bytes:

byte Red	the Red value from 0-255(byte)
byte Green	the Green value from 0-255 (byte)
byte Blue	the Blue value from 0-255 (byte)

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5.7 Tunable White & Tunable White Group

Device identifier

Device	Type
TW	220 (0xDC)
TWGRP	42 (0x2A)

Device Action

Following actions are possible:

Tunable White Actions			
Action	**Value**	**Parameters**	**Description**
TW_COLOR	230	2 bytes: Short color in Kelvin Byte 3: Brightness (0-100)	To change the color or brightness
TOGGLE	3	/	Will toggle the TW between OFF and ON

Note for TW_COLOR:
If parameter byte 1 & 2 are equal to 0xFEFE, the color will not change.
If parameter byte 3 is equal to 0xFE the brightness will not change.

Example command frame to set Tunable White 7 to brightness 50% without changing the color on central unit 1:

```
[0x02,0x0B,0x07,0x01,0xD9,0x00,0x07,0xE6,0xFE,0xFE,0x32]
```

Report State Parameters

For Tunable White, the state bytes consist of:

2 bytes = Minimum Color Temperature	Minimum color temperature in Kelvin
2 bytes = Maximum Color Temperature	Maximum color temperature in Kelvin
2 bytes = Current Color Temperature	Current color temperature in Kelvin
1 byte = Brightness 0-100	Percentage of brightness

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5.8 Alarm funtion

Device identifier

Device	Type
ALARM	59 (0x3B)

Device Action

Following actions are possible:

Alarm action		
Action	**Value**	**Description**
ON	255	Turn the alarm ON
TOGGLE	103	Will toggle the alarm between ON and OFF
OFF	0	Turn the alarm OFF

Example command frame to set Alarm 6 ON at central unit 1:
`[0x02,0x08,0x07,0x01,0x3B,0x00,0x06,0xFF]`

Report State Parameters

For Alarms, the state bytes consist of:

State	byte: ON: 255, OFF: 0	Status of the alarm
Type	byte, always 1	can be ignored
Beeps	byte, only send when state is ON	number of beeps for this alarm
number of lines	byte, only send when state is ON	The number of text lines that are following
length of line 1	byte n, only send when state is ON	The length of the first text line
line 1	n bytes, only send when state is ON	the first text line in UTF-8
length of line 2	byte m, only send when state is ON	The length of the second text line
line 2	m bytes, only send when state is ON	the second text line in UTF-8

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5.9 Sensors reading

Device identifier

Device	Type
SENSOR	20 (0x14)

Device Action

Obviously there aren't any actions to take on a sensor device.

Report State Parameters

For sensors, the state is transmitted as an **IEEE 754 32-bit floating-point value (single precision)** encoded in **Big-Endian byte order**. The four state bytes must be interpreted as one floating-point number and **not as a 32-bit integer**.
For most sensor types, the decoded float directly represents the measured value. Temperature sensors use the additional conversion explained below.

Complete example report:
`[0x02,0x24,0x10,0x01,0x14,0x00,0x01,0x00,0x40,0xB6,0x66,0x66,0x00, ... 0x00,0x0E]`
This report contains the four sensor-value bytes `0x40 0xB6 0x66 0x66`. Interpreted together as an IEEE 754 single-precision float in Big-Endian byte order, they equal **5.7**. For a light sensor, this represents **5.7 lux**. The following bytes can be ignored.

Other value examples:
Light sensor: 0x45 0x26 0x40 0x00 = 2660.0 = 2660 lux
Humidity sensor: 0x42 0x54 0x00 0x00 = 53.0 = 53% RH
Real-time power sensor: 0x45 0xA2 0xA0 0x00 = 5204.0 = 5204 W
Total energy sensor: 0x40 0x20 0x00 0x00 = 2.5 = 2.5 kWh
General analog sensor (0-10 V, for example): 0x40 0xB2 0x03 0x21 = approximately 5.56 = 5.56 V

Important: converting the bytes to an unsigned or signed 32-bit integer is incorrect. For example, 0x45 0x26 0x40 0x00 interpreted as an integer is 1160134656, but interpreted as an IEEE 754 float it is 2660.0.

Programming examples

C#:
```
byte[] data = { 0x45, 0x26, 0x40, 0x00 };
if (BitConverter.IsLittleEndian) Array.Reverse(data);
float value = BitConverter.ToSingle(data, 0); // 2660.0
```
Java:
```
float value = ByteBuffer.wrap(new byte[] { 0x45, 0x26, 0x40, 0x00 })
    .order(ByteOrder.BIG_ENDIAN)
    .getFloat(); // 2660.0
```

Temperature value exception

For temperature sensors, first decode the four bytes as the same IEEE 754 Big-Endian float. Then subtract the protocol offset of **273** to obtain the temperature in degrees Celsius.
Example:
Received bytes: `0x43 0x95 0xC0 0x00`. Decoded as an IEEE 754 Big-Endian float, this equals **299.5**.
Temperature: **299.5 - 273 = 26.5°C**.

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5.10 Digital Input reading

Device identifier

Device	Type
DIGITAL INPUT	28 (0x1C)

Device Action

There aren't any actions to take on a Digital Input device.

Report State Parameters

The state consists of 1 state byte, this byte can be 255(0xFF) for HIGH or 0(0x00) for LOW.

Complete example report:
`[0x02,0x09,0x10,0x01,0x1C,0x00,0x01,0x00,0xFF,0x38]`
This report contains 1 state byte: 0xFF=255, so the meaning of this report is: Digital Input 1 on central unit 1 is HIGH.

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