

Starter Kit

Seamlessly Connected Ready2Go Smart Setup



Quick Start Guide



Abstract

The Starter Kit contains the smart components periNODE, a periSTART, and a sensor or an actuator. With the point-to-point solution, the user can access the values read from the sensor or send commands to the actuator in a web browser or via MQTT protocol. This Quick Start Guide describes everything you need to know to start.

Document Information

| | |
|------------------------|---|
| Title | Starter Kit |
| Subtitle | Seamlessly Connected Ready2Go Smart Setup |
| Type | Quick Start Guide |
| Status | Release |
| Version | 1 |
| Date | 2022-08-24 |
| Disclosure Restriction | |

Intellectual property rights in the products, names, logos and designs included in this document may be held by *Perinet* or third parties. Copying, reproduction, modification or disclosure to third parties of this document or any part thereof is only permitted with the express written permission of *Perinet*.

The information contained herein is provided “as is” and *Perinet* assumes no liability for its use. No warranty, either express or implied, is given, including but not limited to, with respect to the accuracy, correctness, reliability and fitness for a particular purpose of the information. This document may be revised by *Perinet* at any time without notice. For the most recent documents, visit <https://perinet.io>.

Copyright © Perinet GmbH.

Contents

| | | |
|----------|-----------------------------------|-----------|
| 1 | Package Content | 4 |
| 1.1 | Common Itens List | 4 |
| 1.2 | Starter Kit Distance | 5 |
| 1.3 | Starter Kit Temperature | 5 |
| 1.4 | Starter Kit GPIO | 6 |
| 2 | Assembling | 7 |
| 2.1 | Starter Kit Distance | 7 |
| 2.2 | Starter Kit Temperature | 7 |
| 2.3 | Starter Kit GPIO | 8 |
| 3 | Access the periNODE WebUI | 10 |
| 4 | Troubleshooting | 12 |
| 5 | Further Documentation | 13 |
| 5.1 | Starter Kits | 13 |
| 5.2 | periMICA | 13 |
| 5.3 | Smart Components | 14 |
| 5.4 | periCORE | 14 |
| 6 | Contact & Support | 15 |
| A | List of Figures | 16 |
| B | List of Tables | 17 |
| C | Glossary | 18 |
| D | References | 19 |
| E | Revision History | 21 |

1 Package Content

1.1 Common Items List





| Item | Description | Product |
|------|---|--|
| 1 | 1 pc. periSTART media converter Article No. PRN.000.003 |  |
| 2 | 1 pc. periLINE hybrid SPE cable Article No. PRN.000.017 |  |
| 3 | 1 pc. periSTART power supply 24VDC Article No. PRN.000.035 |  |
| 4 | 1 pc. M8 A-coded Fast Ethernet cable Article No. PRN.100.362 |  |

Table 1: Starter Kit List Common Components for all kits

1.2 Starter Kit Distance

| Item | Description | Product |
|------|---|--|
| 1 | 1 pc. periNODE smart adapter 0-10V Article No. PRN.000.002 |  |
| 2 | 1 pc. Distance sensor Article No. PRN.100.001 |  |

Table 2: Itens included just in Starter Kit Distance

1.3 Starter Kit Temperature



| Item | Description | Product |
|------|---|---|
| 1 | 1 pc. periNODE smart adapter Pt100 Article No. PRN.000.006 |  |
| 2 | 1 pc. Temperature sensor Article No. PRN.100.139 |  |

Table 3: Itens included just in Starter Kit Distance

1.4 Starter Kit GPIO



| Item | Description | Product |
|------|--|---|
| 1 | 1 pc. periNODE smart adapter GPIO Article No. PRN.000.010 |  |
| 2 | 1 pc. Contactor Article No. PRN.100.543 |  |

Table 4: Itens included just in Starter Kit GPIO

2 Assembling

Prerequisites

- PC / Laptop
- Network port (e.g. ethernet switch)
- Power socket

Warning: Please connect all devices before connecting/enabling the power supply (100V...240V).

Assembly your kit accordingly to the variant you have. For this refer to the following sections.

2.1 Starter Kit Distance

Connect the components as shown in Figure 1 below. Make sure the ethernet switch is connected to the local network.



Figure 1: Starter Kit Distance setup

2.2 Starter Kit Temperature

Connect the components as shown in Figure 2 below. Make sure the ethernet switch is connected to the local network.



Figure 2: Starter Kit Temperature setup

2.3 Starter Kit GPIO

Please connect the GPIO to the contactor as shown in Figure 3.

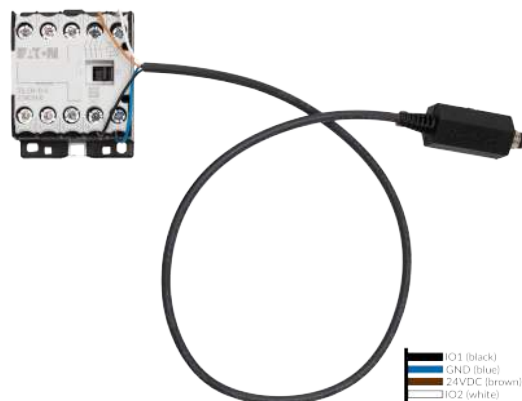


Figure 3: periNODE GPIO connected with the contactor

Now connect the components as shown in Figure 4 below. Make sure the ethernet switch is connected to the local network.

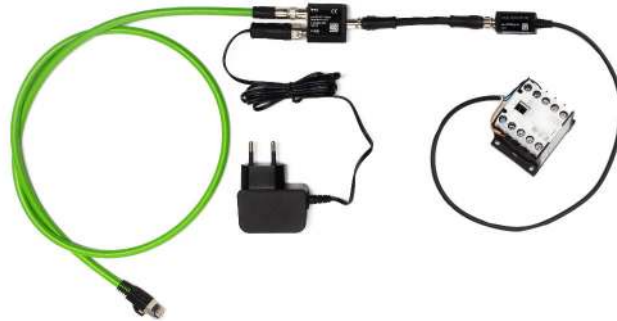


Figure 4: Starter Kit GPIO setup

Note: After connecting the periSTART to your local network the Starter Kit is ready for use.

3 Access the periNODE WebUI

The periNODE smart adapters have a friendly Web User Interface (UI) for device management and configuration.

To access the Web UI, open your browser and enter the URL of the node in its address bar. The URL is determined by the node name, written on the device, as follows: `https://<nodename>.local`.

Figure 5 shows a periNODE smart adapter for 0-10V signal type. In this case the node's name is `perinode-aab8k`, thus the URL for this periNODE is: `https://perinode-aab8k.local`.



Figure 5: Label of a periNODE 0-10V

Based on the above, use the node name corresponding to the device in your kit.

If you didn't install the *Perinet ECC Root CA* certificate, at the first access of a *periNODE* the browser will pop-up a warning about the connection that is not private. You can trust on the certificate and proceed or refer to the Troubleshooting Section 4 for further information.

The figures below shows the homepage of the *periNODE* that displays the live sensor values and the *periNODE GPIO* that shows the status of the input port read and also is possible to switch the output port contactor from there.

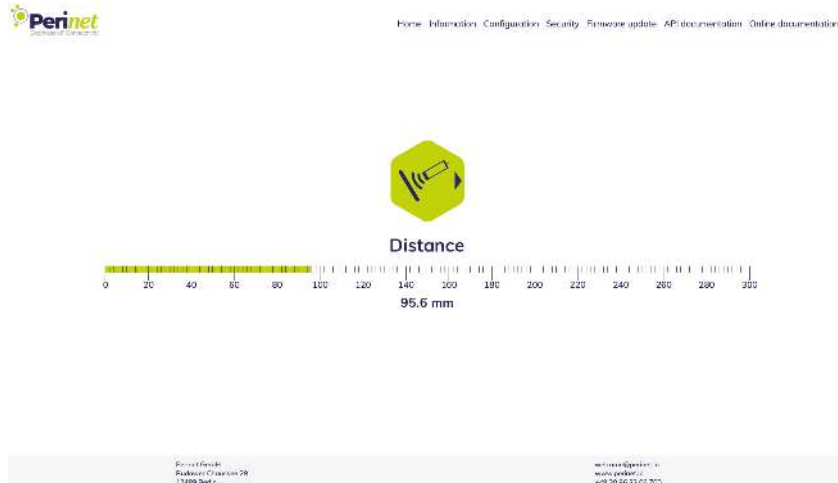


Figure 6: periNODE distance sensor homepage

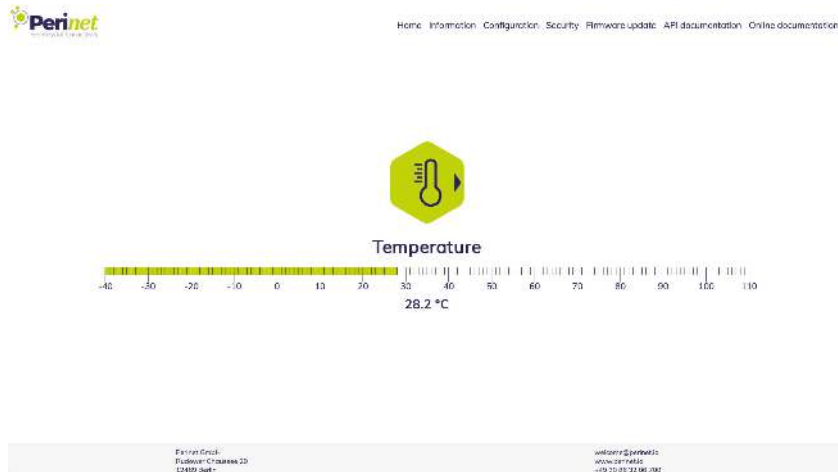


Figure 7: periNODE temperature sensor homepage



Figure 8: periNODE GPIO homepage

4 Troubleshooting

| Problem | Solution |
|---|---|
| "Your connection is not private" warning in browser | You can easily ignore this warning, and continue by choosing "advanced" and "Proceed to domain". If you prefer, you can install the <i>Perinet ECC root CA</i> certificate in your system and avoid these warnings. Please, access https://perinet.io/documentation where you can find the certificate and the guide on to install it. |

Table 5: Troubleshooting

5 Further Documentation

5.1 Starter Kits

| Document Name | Description |
|--|---|
| Starter Kit Plus Product Summary [19] | A product features summary documentation for the <i>Starter Kit Plus</i> . |
| Starter Kit Plus Quick Start Guide [20] | A setup guide for the <i>Starter Kit Plus</i> product. |
| Starter Kit Plus User Guide [22] | A detailed description of the setup <i>Starter Kit Plus</i> . |
| Starter Kit Plus Security Certificates Installation Guide [21] | A small guide on how to install security prerequisites for accessing the various entities of the <i>Starter Kit Plus</i> setup. |
| Starter Kit Product Summary [23] | A product features summary documentation for the available <i>Starter Kits</i> . |
| Starter Kit Quick Start Guide [24] | A setup guide for the <i>Starter Kit</i> products. |

5.2 periMICA

| Document Name | Description |
|---|---|
| periMICA Product Summary [8] | A product features summary documentation for the <i>periMICA</i> . |
| periMICA Quick Start Guide [9] | A setup guide for the product <i>periMICA</i> . The starting point when you are new to the product. |
| periMICA User Guide [10] | A detailed description and reference documentation of the product <i>periMICA</i> . |
| PKI2go Container User Guide [16] | A detailed description of the public key infrastructure (PKI) <i>periMICA</i> container 'PKI2GO'. |
| Security Certificates Installation Guide [17] | A guide on how to install prerequisites certificates on various platforms (MAC, Windows and linux). |
| periMICA Debian Container User Guide [7] | A detailed description of the base container of a <i>periMICA</i> lxc-based container. It's the starting point for container development. |

5.3 Smart Components

| Document Name | Description |
|---|--|
| PeriLINE Product Summary [6] | A product features summary documentation for the product <i>periLINE</i> . |
| periNODE 0-10V Product Summary [11] | A product features summary documentation for the product <i>periNODE 0-10V</i> . |
| periNODE Pt100 Product Summary [13] | A product features summary documentation for the product <i>periNODE Pt100</i> . |
| periNODE GPIO Product Summary [12] | A product features summary documentation for the product <i>periNODE GPIO</i> . |
| periSWITCH 3-port Product Summary [15] | A product features summary documentation for the product <i>periSWITCH 3-port</i> . |
| periSTART Standard Product Summary [14] | A product features summary documentation for the product <i>periSTART standard</i> . |
| Smart Components Datasheet [18] | A detailed reference documentation of the Smart Components products (<i>periLINE</i> , <i>periNODE 0-10V</i> , <i>periNODE Pt100</i> , <i>periNODE GPIO</i> , <i>periSWITCH 3-port</i> , <i>periSTART standard</i>). |

5.4 periCORE

| Document Name | Description |
|---|--|
| periCORE Product Summary [5] | A product features summary documentation for the product <i>periCORE</i> . |
| periCORE Datasheet [1] | A detailed reference documentation of the product <i>periCORE</i> . |
| periCORE Development Kit Product Summary [2] | A product features summary documentation for the product <i>periCORE Development Kit</i> . |
| periCORE Development Kit Setup Application Note [3] | A setup guide for the product <i>periCORE Development Kit</i> . The starting point when you are new to the product which describes how to quickly set up a development environment for firmware development for a <i>periCORE</i> based product. |
| periCORE Development Kit User Guide [4] | A guide and reference documentation for the product <i>periCORE Development Kit</i> . |

6 Contact & Support

For customer support, please call us at **+49 30 863 206 701** or send an e-mail to support@perinet.io.

For complete contact information visit us at www.perinet.io

A List of Figures

| | | |
|---|--|----|
| 1 | Starter Kit Distance setup | 7 |
| 2 | Starter Kit Temperature setup | 8 |
| 3 | periNODE GPIO connected with the contactor | 8 |
| 4 | Starter Kit GPIO setup | 9 |
| 5 | Label of a periNODE 0-10V | 10 |
| 6 | periNODE distance sensor homepage | 11 |
| 7 | periNODE temperature sensor homepage | 11 |
| 8 | periNODE GPIO homepage | 11 |

B List of Tables

| | | |
|---|---|----|
| 1 | Starter Kit List Common Components for all kits | 4 |
| 2 | Items included just in Starter Kit Distance | 5 |
| 3 | Items included just in Starter Kit Distance | 5 |
| 4 | Items included just in Starter Kit GPIO | 6 |
| 5 | Troubleshooting | 12 |

C Glossary

PKI Public Key Infrastructure. 13

D References

- [1] Perinet GmbH. periCORE Datasheet. PRN.100.375. <https://docs.perinet.io/>.
- [2] Perinet GmbH. periCORE Development Kit Product Summary. PRN.100.546. <https://docs.perinet.io/>.
- [3] Perinet GmbH. periCORE Development Kit Setup Application Note. PRN.100.376. <https://docs.perinet.io/>.
- [4] Perinet GmbH. periCORE Development Kit User Guide. PRN.100.378. <https://docs.perinet.io/>.
- [5] Perinet GmbH. periCORE Product Summary. PRN.100.301. <https://docs.perinet.io/>.
- [6] Perinet GmbH. PeriLINE Product Summary. PRN.100.386. <https://docs.perinet.io/>.
- [7] Perinet GmbH. periMICA Debian Container User Guide. PRN.100.462. <https://docs.perinet.io/>.
- [8] Perinet GmbH. periMICA Product Summary. PRN.100.389. <https://docs.perinet.io/>.
- [9] Perinet GmbH. periMICA Quick Start Guide. PRN.100.391. <https://docs.perinet.io/>.
- [10] Perinet GmbH. periMICA User Guide. PRN.100.392. <https://docs.perinet.io/>.
- [11] Perinet GmbH. periNODE 0-10V Product Summary. PRN.100.380. <https://docs.perinet.io/>.
- [12] Perinet GmbH. periNODE GPIO Product Summary. PRN.100.382. <https://docs.perinet.io/>.
- [13] Perinet GmbH. periNODE Pt100 Product Summary. PRN.100.381. <https://docs.perinet.io/>.
- [14] Perinet GmbH. periSTART Standard Product Summary. PRN.100.383. <https://docs.perinet.io/>.
- [15] Perinet GmbH. periSWITCH 3-port Product Summary. PRN.100.385. <https://docs.perinet.io/>.
- [16] Perinet GmbH. PKI2go Container User Guide. PRN.100.465. <https://docs.perinet.io/>.
- [17] Perinet GmbH. Security Certificates Installation Guide. PRN.100.447. <https://docs.perinet.io/>.
- [18] Perinet GmbH. Smart Components Datasheet. PRN.100.387. <https://docs.perinet.io/>.
- [19] Perinet GmbH. Starter Kit Plus Product Summary. PRN.100.568. <https://docs.perinet.io/>.
- [20] Perinet GmbH. Starter Kit Plus Quick Start Guide. PRN.100.394. <https://docs.perinet.io/>.
- [21] Perinet GmbH. Starter Kit Plus Security Certificates Installation Guide. PRN.100.397. <https://docs.perinet.io/>.
- [22] Perinet GmbH. Starter Kit Plus User Guide. PRN.100.548. <https://docs.perinet.io/>.
- [23] Perinet GmbH. Starter Kit Product Summary. PRN.100.567. <https://docs.perinet.io/>.

[24] Perinet GmbH. Starter Kit Quick Start Guide. PRN.100.569. <https://docs.perinet.io/>.

E Revision History

| Revision | Date | Author(s) | Description |
|----------|------------|-------------|-----------------|
| 1 | 2022-08-24 | dher , shoe | Initial Release |