SCAN TRONIC
COMBUSTION OPTIMIZING

OSCAN Controller App

v2.0.0



Technical Information and User Guide

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1.0 General information

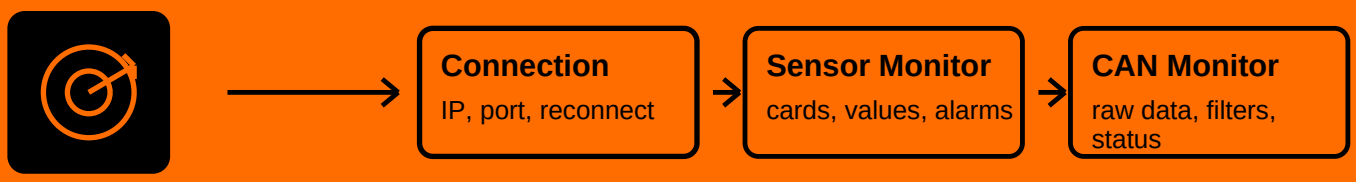
1.1 Introduction

OSCAN Controller App is an Android service and diagnostic application for connecting to an OSCAN gateway, displaying live sensor values and monitoring raw CAN telegrams. The application is intended for commissioning, service checks and operational verification of oxygen and NOx related sensor systems.

1.2 Main functions

- Connect to the OSCAN gateway by AP address, detected system IP or local fallback hostname.
- Display live sensor cards with O2 values, NOx support, operating status and warning indication.
- Pair two sensors as MASTER and CHECKER and compare their O2 difference against a tolerance limit.
- Set O2 limits, optional NOx limits and difference tolerance for each sensor card.
- Open CAN Monitor to view raw CAN ID, DLC, data bytes, timestamp, filters and device status.

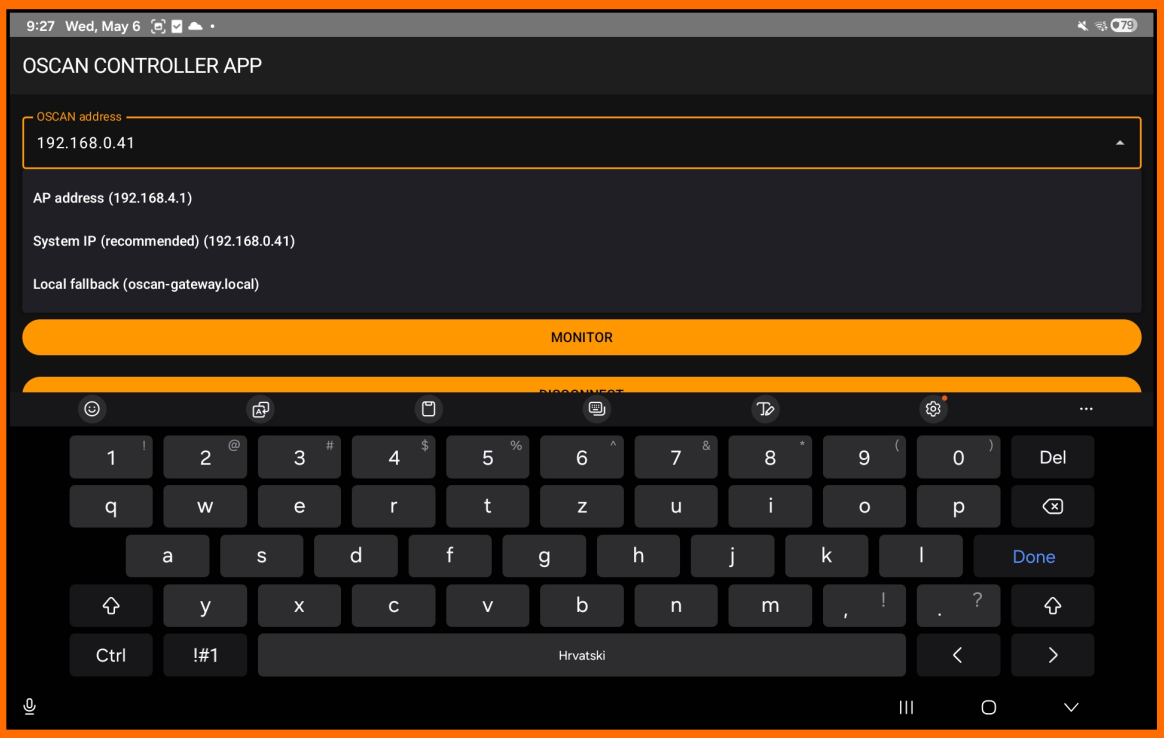
1.3 Quick screen map



1.4 Recommended use

- First connect and verify the status message is Online.
- Use Sensor Monitor for normal overview and Sensor Settings for limits and pairing.
- Use CAN Monitor for service work, troubleshooting and raw telegram verification.

2.0 Connection and startup



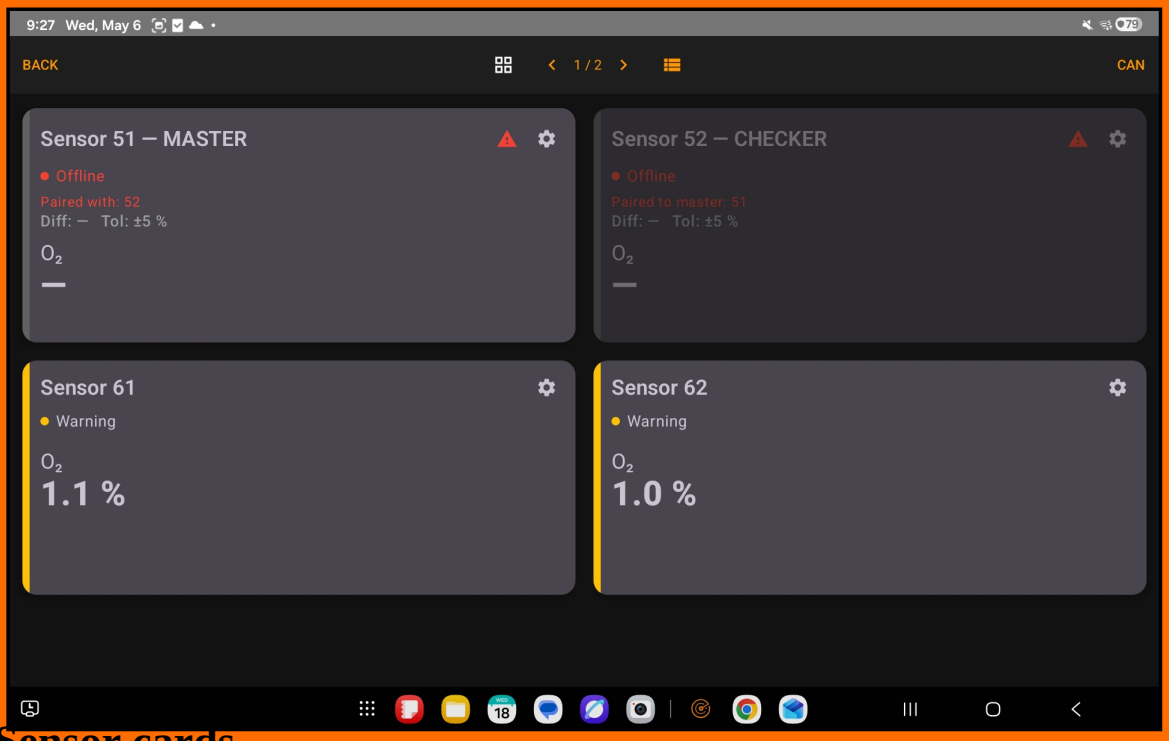
2.1 OSCAN address

- AP address: use 192.168.4.1 when connected directly to the OSCAN access point.
- System IP: recommended when the gateway reports its IP address on the local network.
- Local fallback: use oscan-gateway.local if name resolution is available on the network.

2.2 Port and reconnect

- Default service port shown in the app is 8881.
- Enable Auto reconnect for normal field use, especially after temporary WiFi interruptions.
- Press MONITOR when the app is already online. Press DISCONNECT before changing network setup or servicing the gateway.

3.0 Sensor Monitor



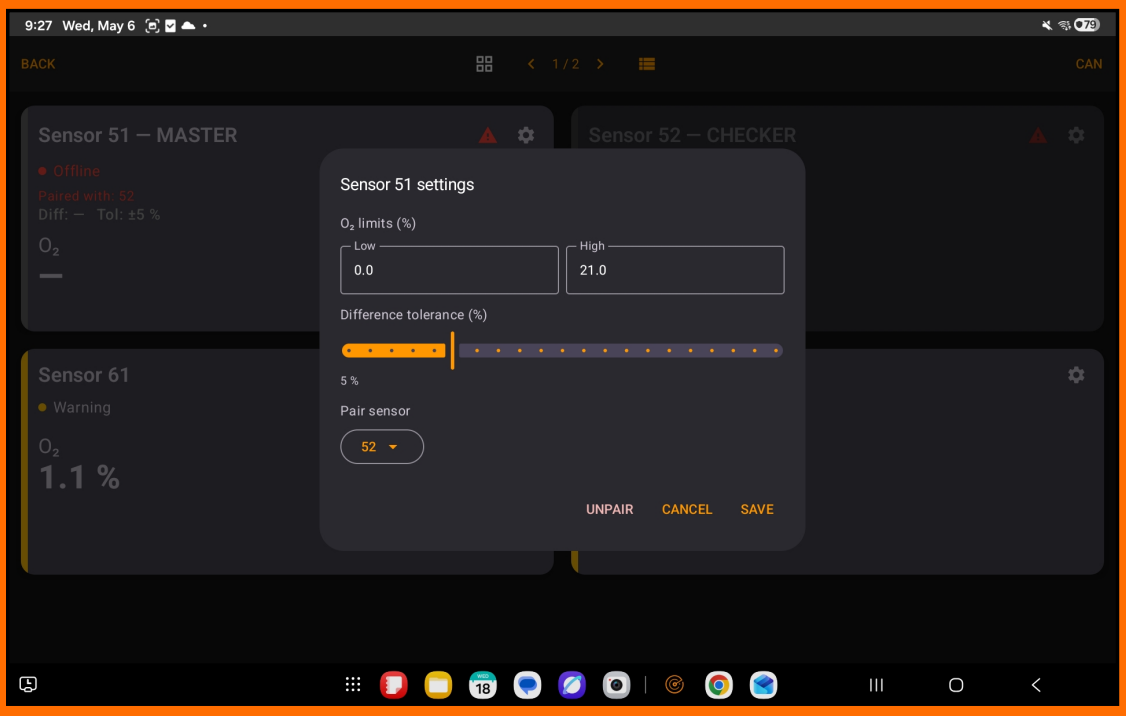
3.1 Sensor cards

- Each card represents one detected sensor or logical sensor channel from the OSCAN CAN data.
- The card shows sensor number, role, O2 value, status text and warning or alarm symbols.
- Use the grid/list icons to switch between compact grid view and full-width service list view.
- The CAN button opens CAN Monitor for detailed raw telegram inspection.

3.2 Status colors

- Green/optimal: sensor value and communication are inside the expected operating range.
- Yellow/warning: value is valid, but outside the preferred tolerance or warning range.
- Red/alarm/offline: sensor data is missing, offline, invalid or outside the alarm limits.

4.0 Sensor settings and pairing



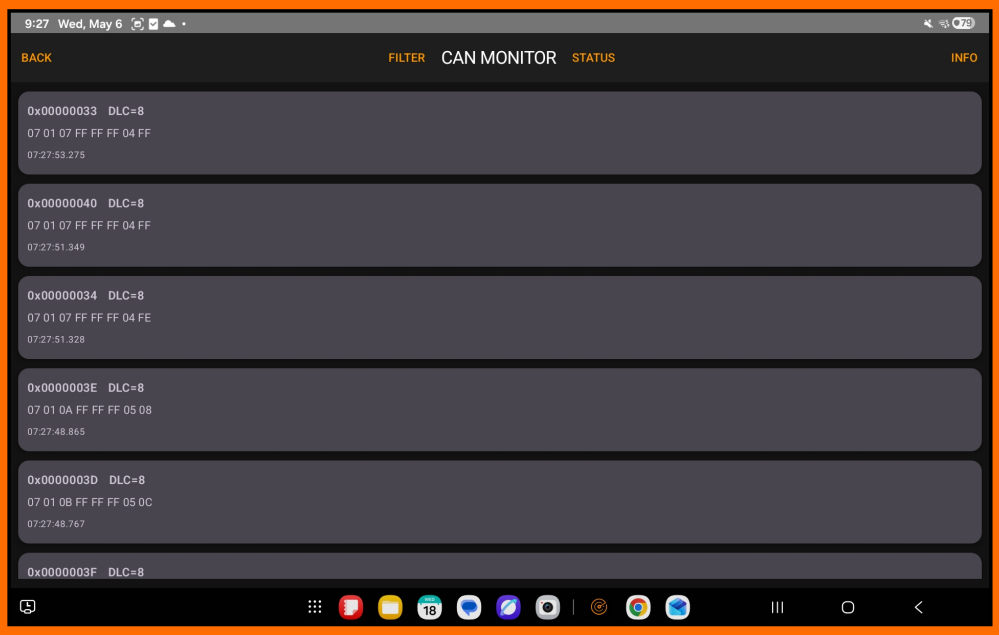
4.1 Limits

- O2 Low and High define the valid oxygen measurement range for the selected sensor.
- For NOx sensors, the settings dialog can also show NOx Low and NOx High limits in ppm.
- The difference tolerance slider is adjustable from 0 % to 20 %. The normal default value is 5 %.

4.2 Pair sensor

- Use Pair sensor to compare two sensors. The selected sensor becomes linked to the second sensor.
- Typical use is MASTER and CHECKER operation, where the O2 difference is shown on the card.
- SAVE stores the current settings. CANCEL closes without saving. UNPAIR removes the selected pairing.

5.0 CAN Monitor

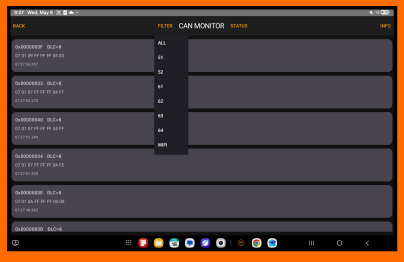


5.1 Raw telegram view

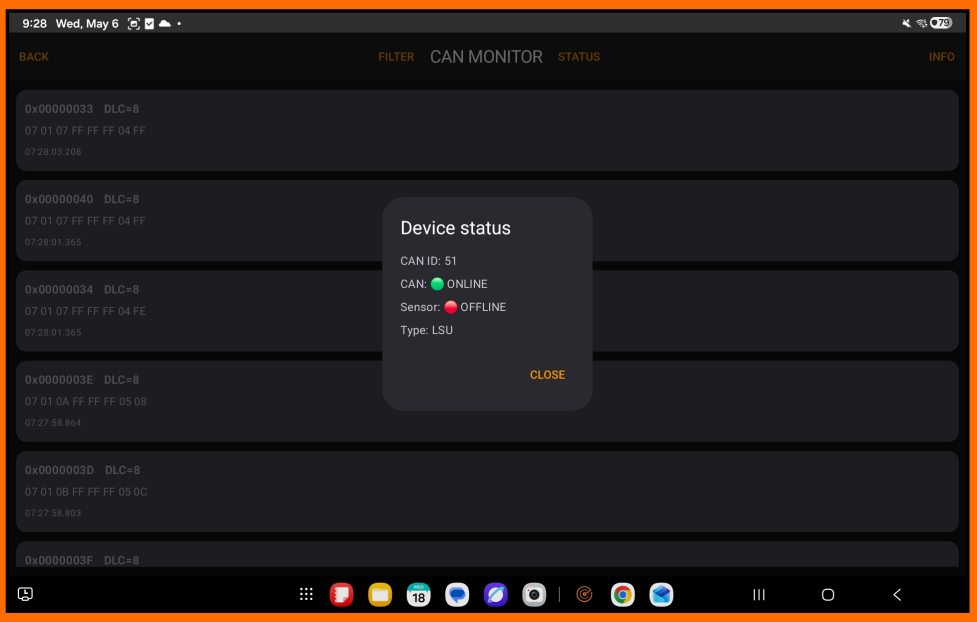
- Each line shows CAN ID, DLC, raw data bytes and timestamp.
- ID is displayed in hexadecimal format for direct comparison with service documentation.
- DLC shows the number of data bytes received in the CAN frame.
- Data bytes are shown as HEX values exactly as received from the gateway.

5.2 Filters

- FILTER = ALL shows all received telegrams.
- Select a CAN ID to show only frames from that device.
- WIFI corresponds to the gateway WiFi information frame and can show the reported IP address.



6.0 Device status and troubleshooting



6.1 Device status

- Open STATUS in CAN Monitor and select the device ID to inspect communication state.
- CAN ONLINE means telegrams from the selected ID are currently present.
- Sensor OFFLINE means the gateway is seen, but the sensor state is invalid or missing.
- Type indicates LSU or NOx according to the received telegram content.

6.2 Service checks

- Check that the tablet is connected to the correct WiFi network or OSCAN access point.
- Verify OSCAN address and port before reconnecting.
- Use CAN Monitor to confirm that raw frames are received.
- If CAN is online but Sensor is offline, inspect sensor wiring, power, heater state and CAN telegram content.

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