

# neoVI ION

## Vehicle Network Interface and Remote Data Logging System

The neoVI ION marries the best of vehicle network tools with the Android embedded operating system. The result is a solution unparalleled in capability.

### Applications

- Standalone data logger
- Remote data logger with auto-download via Wi-Fi, 4G or Ethernet
- Standalone ECU or vehicle simulator
- In-vehicle data acquisition system
- Captive test fleet data collection
- Fleet management
- Vehicle interface with J2534 and RP1210 support over USB 2.0 (GM DPS, Ford DET, DiagRA, Chrysler CDA)

### Networks

- 6-12 Dual Wire CAN
- 1-2 Single Wire CAN
- 1-2 LSFT CAN
- 5-10 LIN
- 5-10 ISO9141/KWP, K-LINE
- FlexRay

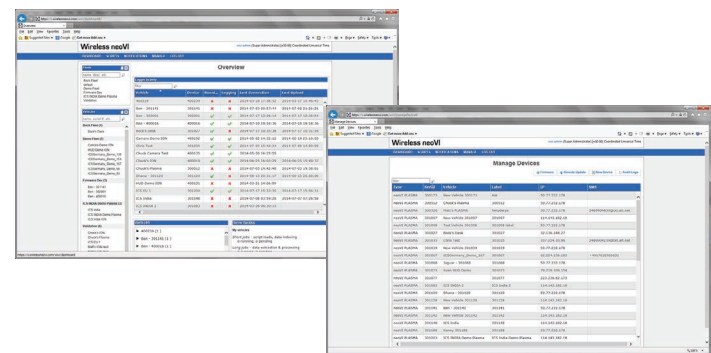
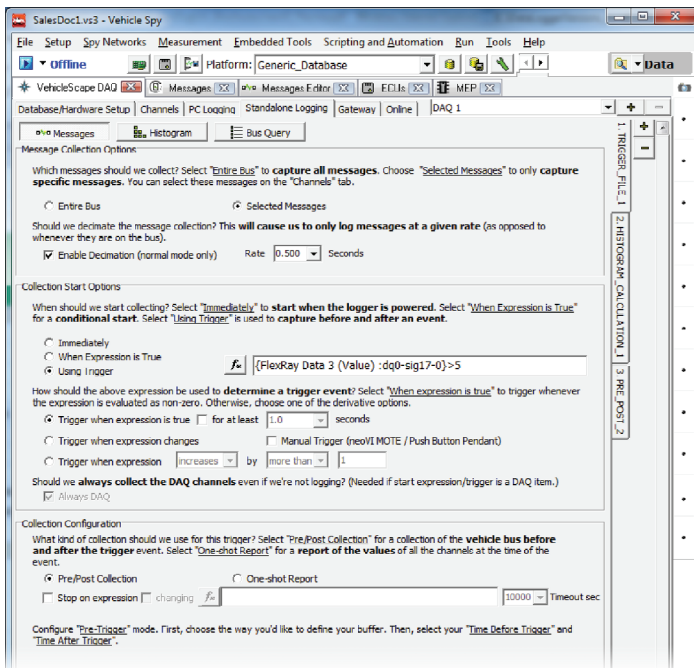
### Protocols

- ISO14229 (UDS)
- GMLAN
- CCP/XCP
- J1939
- OBD



### VehicleScope DAQ

Using VehicleScope DAQ inside Vehicle Spy software provides a single GUI for loading vehicle databases such as A2L, ODX, MDX, GDX, DBC, and others. Once the vehicle databases are loaded, simply search using signal names, PIDs/DIDs/LIDs, measurements, and parameters, and select those you wish to acquire. Click on the Standalone Logging tab to configure pre-/post-trigger events, sleep modes, names for your data files, remote upload options, and much more.



### Send Configurations or Scripts and Manage Data Remotely via Wireless neoVI

You can remotely send a data logger configuration or script from Vehicle Spy to your neoVI ION through Wireless neoVI, a website that provides fleet and data management to a fleet of vehicles. You can get the latest GPS locations, automatic data downloads, and automatic export of data in the format you require.



**INTREPID**  
CONTROL SYSTEMS  
www.intrepidcs.com

1850 Research Drive  
Troy, MI 48083 USA  
Phone: +1 (586) 731-7950  
Fax: +1 (586) 731-2274



www.aeta-rice.com

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## Remote Connectivity and GPS Location

The neoVI ION provides several ways of connecting remotely: internal 4G data modem, Wi-Fi, or Ethernet (for connection to external 4G modem or wired network). All of these allow for data download and remote fleet management. In addition, the neoVI ION has a 5 Hz GPS accurate to within 3 meters. GPS is provided both as a fleet management tool and within the data logging session for correlating location to your test data.

## The Power of Scripting – CoreMini

If you need to support a proprietary protocol, set up a simulation to run in parallel with the data logger, or any other custom action, the system offers a scripting environment for you to expand the base functionality to fit your unique needs. This makes the entire system very flexible and adaptable.

## VNET Modules – Multiple Adapters in One neoVI ION

The neoVI ION comes standard with one neoVI FIRE 2 VNET Module – a miniaturized version of our neoVI FIRE 2 network adapter. You can have up to two VNET modules, supporting large numbers of CAN channels, FlexRay, analog and digital I/O, HD video, and more.

Example configurations:

- 16x Dual Wire CAN
- CAN + Analog I/O
- CAN + FlexRay

VNET modules also allow for future expansion and reconfiguration as your needs change.

## Log While Downloading from Massive On-Board Memory

With the aid of a proprietary Android application, data is uploaded without interrupting or slowing down your data acquisition. The neoVI ION has an SD card slot and allows for a high-speed SD card of up to 128 GB. This enables you to capture on the order of hundreds of billions of messages! If you are automatically uploading data, this may not seem important. However, if you are in an area with no coverage, or you have a network outage, you won't have to worry about losing data.

## Sleep Mode Options

The proprietary Android application also provides sleep management, which works with the neoVI ION to sleep when needed, upload data before sleep, and wake whenever network traffic begins. Many options are available:

- Upload all data since last power-on before sleep
- Upload all pending data before sleep
- Upload pending data when network signal returns
- Instant wake-up – capture even the very first message on Dual Wire CAN networks
- Several sleep modes with current draw < 1 mA

## Ordering Information

Part Number	Description
NEOVI-ION	neoVI ION Device

Specifications subject to change; please contact Intrepid for the latest information. All trademarks are the property of their respective owners.

## Networks / Inputs

- 6-12<sup>a</sup> Dual Wire CAN (all baud rates supported)
- 1-2<sup>a</sup> Single Wire CAN (also referred to as GMLAN)
- 1-2<sup>a</sup> Low Speed Fault Tolerant (LSFT) CAN
- 5-10<sup>a,b</sup> LIN / K Line / KW2K / ISO 9141
- 3-6<sup>a,c</sup> Low range analog inputs (FIRE VNET):
  - 0-3.3V range
  - 12 bit single ended analog inputs with +/-5% error
  - 1K Samples per second
- 2-4<sup>a,c</sup> Low range digital inputs/outputs (FIRE VNET):
  - 0-3.3V range
  - Digital I/O (5V tolerant)

*a - One VNET included; up to 2 supported for 2x network interfaces*

*b - Uses K-Line transceiver (simultaneous K-Line and LIN for one network not supported)*

*c - Analog input pins are shared with 4 digital input pins*

## Device Specifications

- Voltage input: 4.5-40V
- Temperature range: -40°C to +85°C
- Dimensions: 1.52" x 4.38" x 7.30" (3.88 x 11.12 x 18.67 cm)
- Number of expansion slots: 1
- LEDs (user programmable): 8 red
- Android user microSD card
- SD card: 1
- High-speed USB 2.0
- DAQ Ethernet
- 4G modem
- GPS support: 5 Hz

## Protocol Support:

- OBD
- J1939: Includes J1939 DBC, BAM, RTS/CTS
- GMLAN:
  - Services include \$22, \$23, \$AA, \$A9, \$2C
  - DBC, A2L (ASAP2 File) and ODX, and PID file support
- UDS (ISO14229):
  - Services include \$19, \$22, \$23, \$2A, \$2C
  - DBC, A2L (ASAP2 File), GDY, MDX, ODX support
- CCP: Includes A2L (ASAP2 file) and ROB support
- XCP: Includes A2L (ASAP2 file) and ROB support

Rev. 20200616



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www.intrepidcs.com

1850 Research Drive  
Troy, MI 48083 USA  
Phone: +1 (586) 731-7950  
Fax: +1 (586) 731-2274



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