

NanoNID™

At a time when global network operators are demanding performance assurance across their entire network, they face many restrictions; such as physical limitations with their small cells deployments or with legacy equipment which does not provide the same service assurance functionality as newer equipment - thereby limiting the network operators visibility into their network performance. By offering OAM functionality, NanoNID avoids the installation of additional networks devices and preserves an established footprint.



Feature Highlights

Service Assurance Functionality

- **Intelligent Loopbacks (LBM/LBR)**

In-service loopbacks per-flow, defined by NanoNID MAC address, enabling connectivity verification between two service end points.

Automatically reacts to loopback requests sent from popular 3rd party Ethernet test-sets, as well as IEEE 802.3ah and ITU-T Y.1731 OAM loopback commands.

NanoNID can operate in out-of-line mode (no traffic dependency) or in in-line mode (wirespeed pass-through, no added latency)

Intelligent NID on a SFP

The Accedian NanoNID provides NID service performance management capabilities such as Remote Troubleshooting, Performance Measuring and Capacity Planning. With its small footprint, the NanoNID is ideal for locations that are limited in rack-space and/or power capacity. Furthermore, the Accedian NanoNID empowers network operators to easily perform in-line and off-line service performance assurance through Y.1731 with LBM and LBR capabilities, all from a single device. More specifically, in an off-line configuration, the NanoNID allows service providers to upgrade legacy networks by seamlessly adding performance assurance capabilities in an in-service fashion.

NanoNID can be rapidly installed, making it easy to use and maintain (OPEX) for a low-cost solution (CAPEX). The NanoNID has Plug & GO™ instant provisioning functionality; this automated zero-touch discovery, auto-configuration and inventory tracking capabilities makes integration into a network element simple.

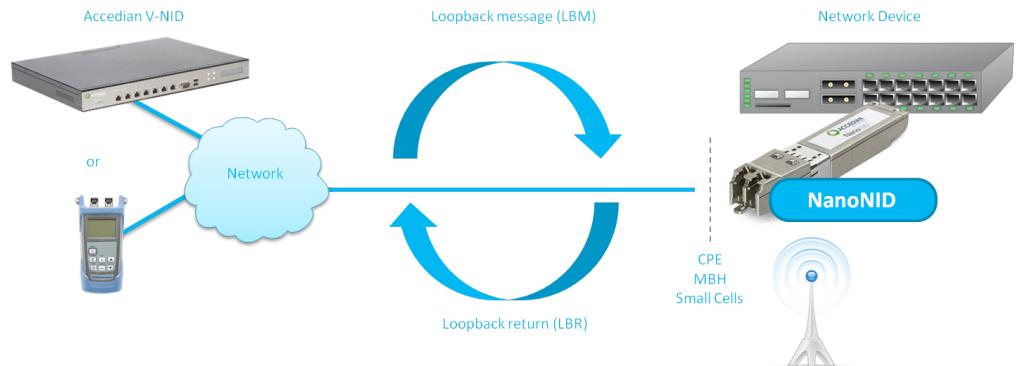
The NanoNID can be deployed in:

- Mobile Backhaul (MBH)
- Small Cells
- Business Services (CPE)

The Accedian Networks NanoNID provides an innovative way to offer NID key features such as Performance Monitoring (PM) and Connectivity Fault management (CFM) into deployed Network Elements. The NanoNID is a virtual test set, which can provide NID service management capabilities. It is an alternative and efficient service turn-up tool set. The NanoNID can enhance existing legacy network elements instead of replacing them, thereby saving truckrolls and costs to the network operator.

The rich feature set of the NanoNID include:

- **Future Proof Field Programmability:** New functionality can easily be downloaded remotely to the NanoNID, without the need for a truck roll
- **Remote management:** With its unique design, the NanoNID can be managed remotely without the need for an embedded software agent
- **Allows for the seamless integration with existing Accedian Networks suite of V-NID™ Actuators**
- **Layer 3 performance management and troubleshooting with a TWAMP-Lite option**
- **Integrated FPGA offers modular, as-needed functionality that is highly configurable**
- **Allows for RFC-2544 and ITU-T Y.1564 automated Service Activation Testing capabilities**



LBM/LBR functionality

Loopback message (LBM) is sent from source node (NID, Test Set, etc.) to NanoNID, which responds with loopback reply (LBR)

NanoNID Characteristics

Interface Type: Ethernet 1Gb
IEEE 802.3 1000 Base-LX, 1310nm,
single mode, FP Laser

Connector Type: LC

Sensitivity: -19dBm

Typical Range: 10km

Rx input power: -40 to +8.2 dBm

Tx-output power: -40 to +8.2 dBm

Timing

Clock Rate: 400kHz

Time to initialize: 300ms

Power & Connectivity

Supply Voltage +3.3V

Input Voltage

Power Supply Current 455mA

Power Consumption <1.5W (1.35W)

Physical Specifications

- **Dimensions:** 2.8"L x 0.8"W x 0.55"H

Regulatory and Certification

- CFR Title 21, Parts 1040.10 and 1040.11 Compliant
- FCC Part 15 Class B Compliant
- INF-8074i Rev 1.0 Compliant
- SFF-8472 Rev. 11.0
- IEC-60950-1 2nd Edition Compliant
- IEC 60825-1 2nd Edition Laser Class 1 Compliant

Environmental

- **Standard operating temperature:** 0 to +70°C
- **Storage temperature:** -40 to +85°C
- **Operating/storage humidity:** 5-85% RH non-condensing

Accedian Networks Inc.

2351 Alfred-Nobel, Suite N-410
St-Laurent, Quebec, Canada H4S 2A9
Toll free: 1-866-685-8181

© 2012 Accedian Networks Inc. All rights reserved. Accedian Networks, the Accedian Networks logo, High Performance Service Assurance, Performance Assurance Agent, MetroNID, EtherNID, MetroNODE 10GE, Fast-PAAAs, PAA, SLA-Meter, Plug & Go, Multi-SLA, Traffic-Meter, Vision EMS, VisionMETRIX, V-NID are trademarks or registered trademarks of Accedian Networks Inc. All other company and product names may be trademarks of the respective companies. Accedian Networks may, from time to time, make changes to the products or specifications contained herein without notice. Some certifications may be pending final approval, please contact Accedian Networks for current certifications.