

NED Network Extension Device



Extend the Reach of your Network with High-Performance Onboard Connectivity

Teledyne Controls' Network Extension Device (NED) is a high-performance and compact networking solution that facilitates data transfer between avionics systems and IP-based equipment, providing greater accessibility to a wide range of applications. This high-reliability device, built to OEM standards, combines the multiple functions of an ARINC 429 to Ethernet converter, multicast router, firewall, data loader and communication gateway, in one single and lightweight unit. The NED can support a variety of applications, such as distribution and loading of software parts and Electronic Flight Bag (EFB) operations. In essence, the NED facilitates high-capacity collection and distribution of critical aircraft data for operations, maintenance and flight safety purposes.

Extensive Networking Functions

Designed to support extensive networking infrastructures, the NED interconnects previously isolated onboard systems and sub-networks with various Ethernet wired interfaces, while enforcing network security with its firewall functionality. The NED acquires, processes, stores and distributes data for multiple systems and applications. It can also manage Quality of Service (QoS), allowing operators to prioritize traffic for critical applications.

Flexible Communication Gateway

Off board communication is also available through the NFS. The system can manage and interface with a variety of communication systems and high-speed links to provide connectivity between the airplane and the airline's ground networks. For example, the NFS can connect to ACARS and Swift Broadband SATCOM systems for in-flight communications, and interface with a wireless solution such as Teledyne's Wireless GroundLink® System (WGL) for ground-based connectivity.

ARINC 615-4 Data Loading

The NED integrates a full 615-4 data loader, to streamline operator's data loading processes by eliminating the need to reproduce, distribute and load countless floppy disks every month. When using the NED with Teledyne's WGL system and LoadStar® Server Enterprise (LSE) ground-based software, operators can fully automate the electronic distribution and loading of software parts across their fleet.

OEM Qualified Device

Teledyne's NED is a high-performance networking system designed to stringent Boeing OEM standards. As a result, the NED meets rigorous requirements for functionality, reliability and performance in severe environmental conditions. This high-caliber system is standard on Boeing 747-8 aircraft and delivers the long-term dispatch reliability that operators expect from avionics class equipment.

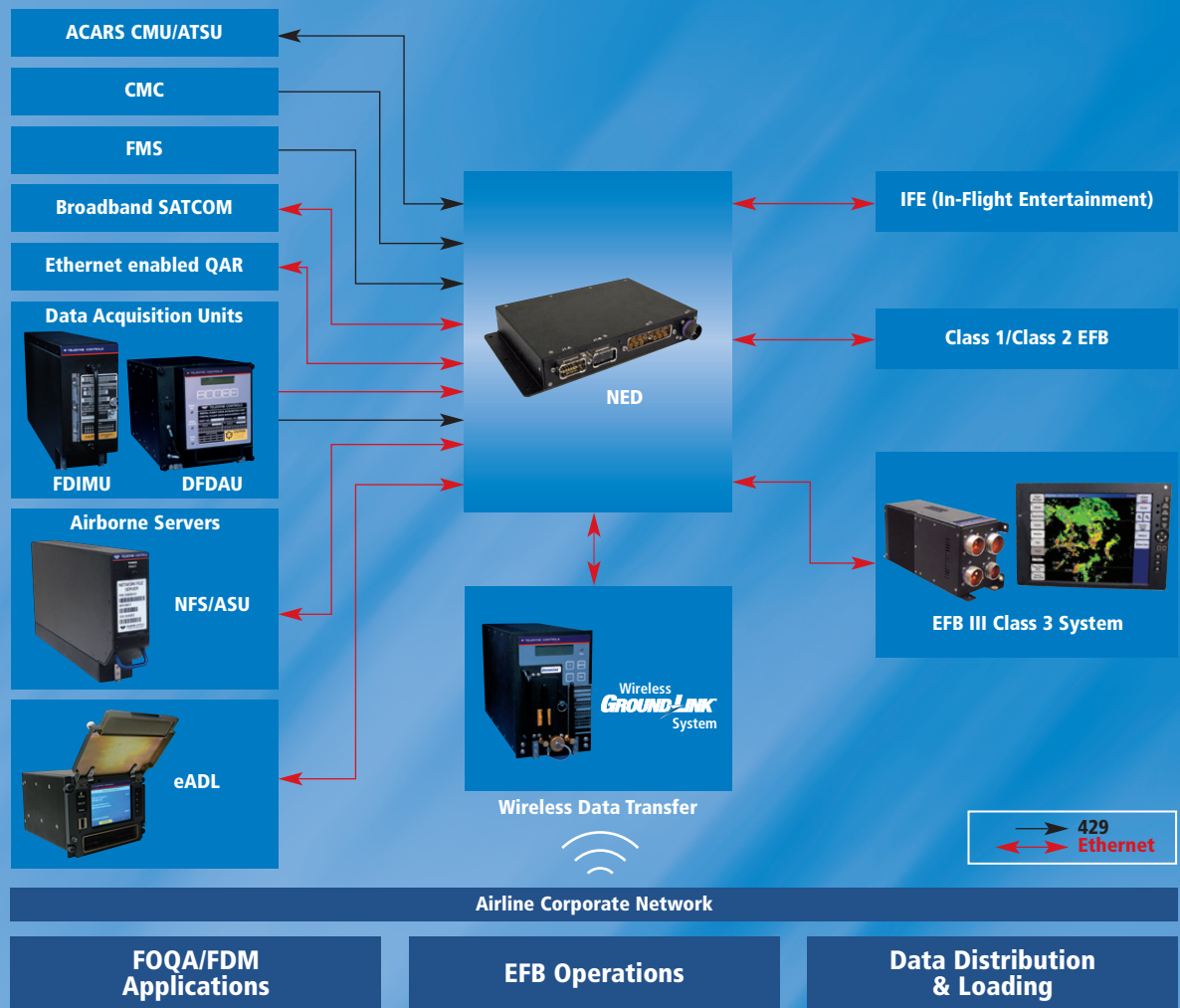
KEY FEATURES

- ARINC 429 to Ethernet converter
- Switch and Router functions in one single unit
- 615-4 data loader
- 615A loadable (over Ethernet)
- ACARS interface
- Standard equipment on B747-8

SPECIFICATIONS

- Avionics interfaces (ARINC 429, 717 and airplane discretes)
- PPPoE network protocol
- Port mirroring
- Networking with multiple NEDs
- 12 Quadrx Ethernet ports
- 2 fiber optic gigabit Ethernet ports
- Size: 11.4 L x 6.5 W x 1.8 H
- Weight: 3.5 lbs
- Power: 20 watts max at 115VAC 400Hz
- Meets DO-160E category A2 environment

NED Interface Block Diagram



SOLUTIONS FOR A "CONNECTED AIRCRAFT"

The NED is a key element in Teledyne Controls' complete "Connected Aircraft" solution, which consists of bridging traditional avionics equipment with new Ethernet-based systems. By integrating a wide range of products that support both traditional ARINC 429 and TCP/IP interfaces, Teledyne's "Connected Aircraft" facilitates connectivity both onboard the aircraft, and between the aircraft and the airline's corporate network.

