

# Q-NET™ Navigator

## Network Control Application

### One System, Boundless Connectivity

#### OVERVIEW

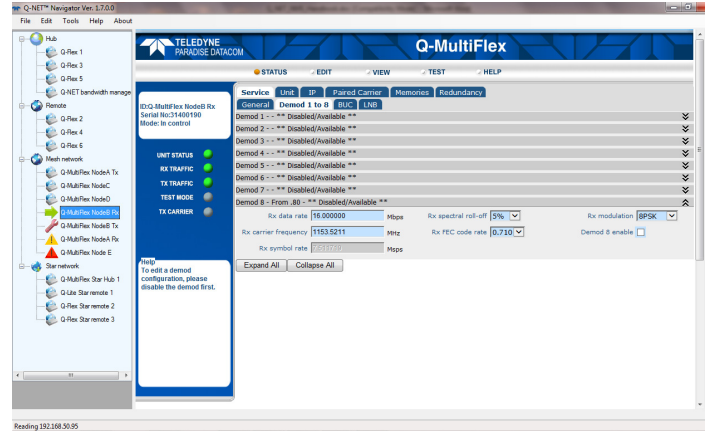
Q-NET™ is our scalable satellite communications system for point-to-point and point-to-multipoint networks.

Q-NET™ Navigator is a powerful application for controlling all devices in the network that support a web user interface (such as Ethernet switches, routers, RF equipment and modems). It's easy-to-navigate site map provides access to any network device with a single mouse click.

Being completely HTTP based, third-party network devices are supported 'out-of-the-box' and do not require device-specific software drivers to be installed.

Multiple networks, operators and operator roles/access levels are all supported. Virtual Network Operator (VNO) support allows visibility and access to the underlying network to be virtualized as required, enabling the network owner to lease network services to third parties without compromising network security.

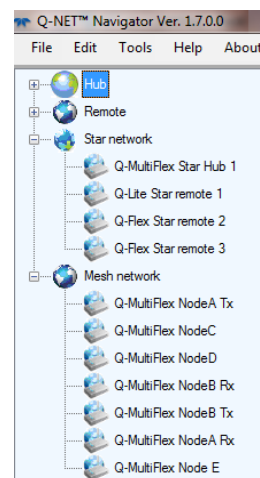
Automatic status polling is supported for all devices, giving instant visibility of all system alarms. In addition, alarms can optionally be masked by device and alarm category. Meeting and proving conformance with Service Level Agreements (SLAs) is facilitated by the extensive support for network metrics and satellite link diagnostic tools.



Q-NET™ Navigator's web-based user interface.

#### NETWORK VIEW

Q-NET™ Navigator allows the user to enter details of all network devices and arrange these into an easy-to-use navigation tree. Clicking on a network device brings up a control interface for that device, which can be used to control every aspect of device operation.



Navigator's intuitive user interface allows access to any network device in one mouse click.

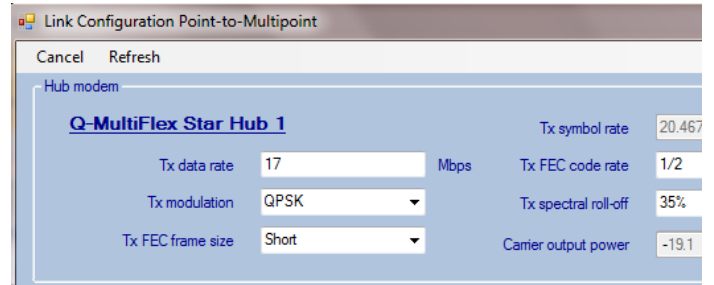
### LINK CONFIGURATION

In point-to-multipoint networks, it is essential to ensure that network reconfiguration, which may impact large numbers of services, is carried out efficiently with minimal interruption to services.

**Q-NET™ Navigator's SYNC LINK** feature ensures that all carrier changes are automatically propagated and synchronised throughout the network. This avoids the operator having to log in to each modem and manually apply the changes. It makes use of a feature called **Reversionary Control** that ensures that the system reverts to the last known good configuration should any modem fail to reconfigure correctly. **SYNC LINK** supports both point-to-point and point-to-multipoint links and inbound carriers as well as outbound carriers.

### VIRTUAL NETWORK OPERATOR SUPPORT

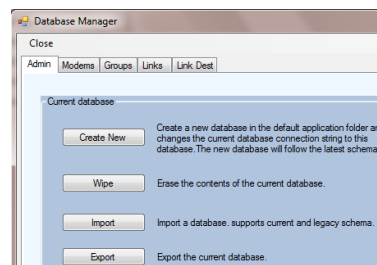
**Q-NET™ Navigator** has full support for Virtual Network Operators (VNO). In situations where network services are sold through resellers who do not own any of the network infrastructure, this feature allows visibility and access to the underlying network to be virtualised on an operator-by-operator basis. It enables the network owner to lease low-cost services to third parties that want to enter the satellite market but who do not want the expense of owning and maintaining their own infrastructure.



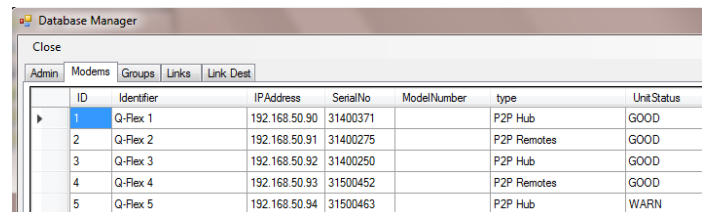
**Q-NET™ Navigator's SYNC LINK** feature provides inbound and outbound carrier management, ensuring the network automatically syncs to all changes with minimal service interruption and automatic recovery from configuration failures.

### REAL-TIME DATABASE

A real-time transactional database is used to store all of the network details (for example, the location and configuration of each piece of equipment). This can be shared between all operators, if desired, ensuring that changes to the network topology and other configuration changes are propagated to all operators in real time.

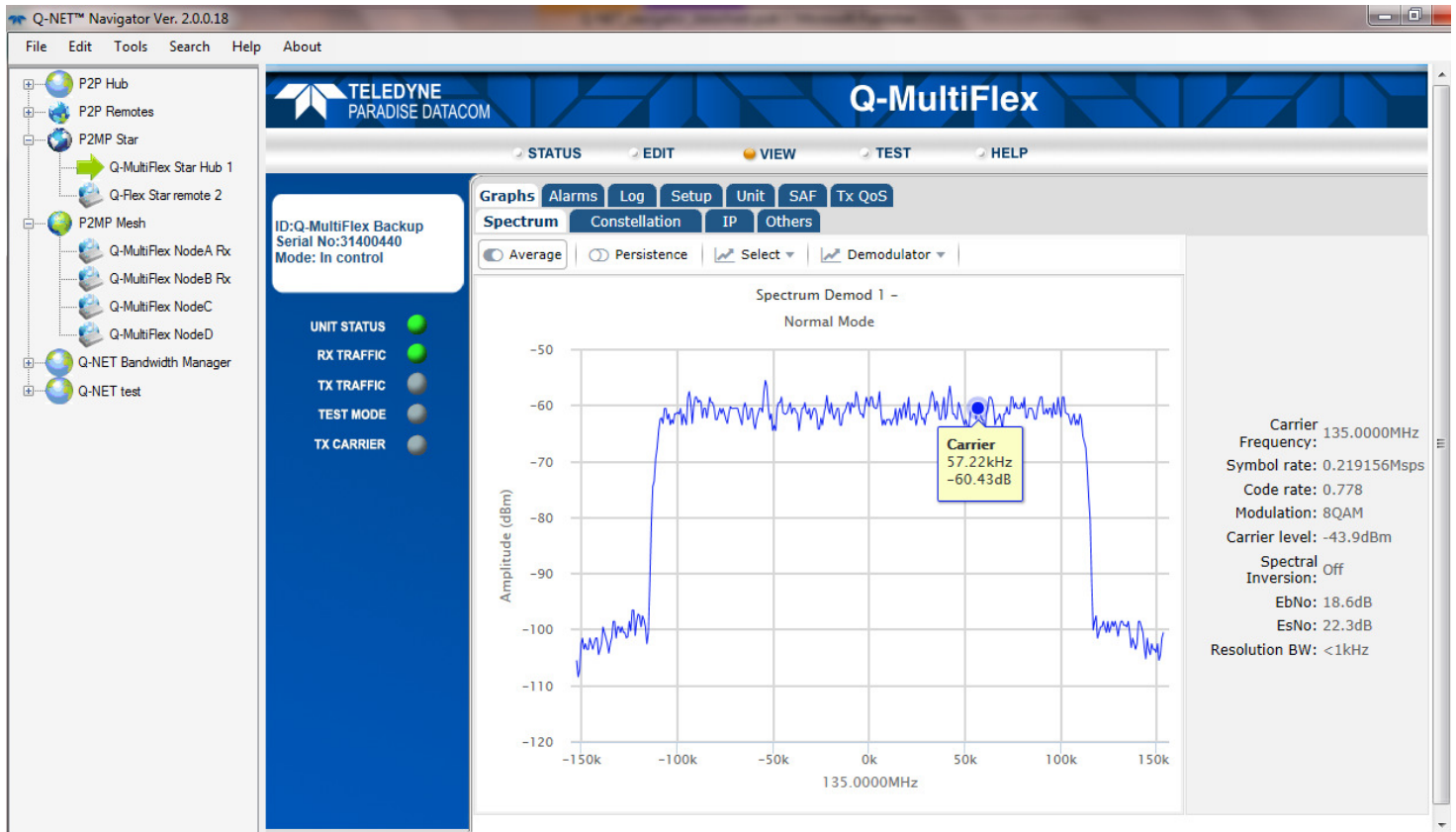


*A real-time database stores all of the network management configuration details and can be accessed by all operators via a shared server.*



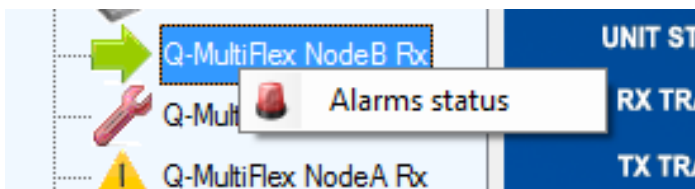
ID	Identifier	IP Address	Serial No	Model Number	type	Unit Status
1	Q-Flex 1	192.168.50.90	31400371		P2P Hub	GOOD
2	Q-Flex 2	192.168.50.91	31400275		P2P Remotes	GOOD
3	Q-Flex 3	192.168.50.92	31400250		P2P Hub	GOOD
4	Q-Flex 4	192.168.50.93	31500452		P2P Remotes	GOOD
5	Q-Flex 5	192.168.50.94	31500463		P2P Hub	WARN





## STATUS MONITORING

All devices are polled continuously for their status, which is reflected in the icons used in the navigation tree, giving the operator an instantaneous visible indication of any alarms in the system. The operator can drill down to find the specific details of alarms, acknowledge alarms, etc.



Alarm Name	Status	Level
Rx fault: Demodulators unlocked	Off	Fault
Rx fault: FEC Decoder synchronisation lost	Off	Fault
Wanted Rx input power out of range	Off	Warning
Composite to wanted power level ratio	Off	Warning

Navigator supports system-wide status monitoring and easy access to multiple levels of detailed alarm reports for individual network devices.

Navigator is a fully integrated 'all-in-one' network control application that supports all management and maintenance activities from carrier management, system monitoring and QoS reporting, to routine remote device software upgrades.

## FEATURE HIGHLIGHTS

- ▶ Full control of all network devices from a single multi-operator application, using an intuitive network navigation tree
- ▶ Continuous status polling and alarm reporting for all network devices
- ▶ Secure login and secure network M&C communications
- ▶ Network access can be tailored to reflect different operator roles
- ▶ Support for third-party network devices
- ▶ Supports all Paradise modems (point-to-point and point-to-multipoint)
- ▶ No fee, no annual maintenance charge!

Teledyne Paradise Datacom reserves the right to change specifications of products described in this document at any time without notice and without obligation to notify any person of such changes. Refer to the website or contact Sales or Customer Support for the latest product information. The information contained herein is classified EAR99 under the U.S. Export Administration Regulations. Modem equipment is classified ECCN 5A991.b.4 and is subject to U.S. Department of Commerce export control. Export re-export or diversion contrary to U.S. law is prohibited.