

NPB-GPRS Modem Option

Overview

The NPM-GPRS modem option is part of the Tridium portfolio of hardware, software and tools designed for remote monitoring and control applications that enables end-to-end automation and device-to-enterprise integration.

The NPB-GPRS modem option card allows a JACE® controller to communicate via cellular communications where connectivity to a LAN, WAN, or VPN is either unavailable or not desired. The connection is established via standard GPRS cellular modem using a local cellular service provider. Delivered with a small dual-band

antenna, The NPB-GPR option card may be installed in any JACE®-2 or JACE®-6 platform running Niagara^{AX} 3.4 or higher. A service contract with an approved Cellular Service Provider is required and is must be purchased separately; refer to Ordering Information below.



Applications

The NPB-GPRS is intended for applications where a connection to the customer's WAN/LAN/VPN is not available. Utilizing cellular technology, the Niagara enabled JACE can be connected to the end-user's network with one of two (2) Virtual Private Network (VPN) techniques. See the "Connectivity Options" below for details. This connection method provides the option to offer connectivity to customers who in the past, have not had a method for a single stand-alone JACE to communicate with the Internet or a customer's in-house WAN/LAN/VPN.

Features

- Provides remote access to JACE where ISP connectivity is not otherwise available.
- Provides GPRS cellular network communication connectivity.
- Fits into either expansion slot of a standard JACE-2 or JACE-6.
- Includes an antenna mounted directly to the option card, or an optional 2 meter (6 foot) extension cable to re-locate the antenna away from the JACE.
- Standard plug-in Subscriber Identity Module (SIM) slot for cellular service provider specific connection information.

Connectivity Options

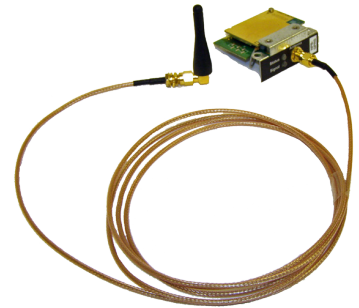
There are two (2) methods of connecting to the remote JACE using the GPRS cellular option. The Point-to-Point Tunneling Protocol (PPTP) over the Internet is best suited for a one-to-one connection between the JACE and a single user. This method is utilized for temporary access to the cellular device for either connection to use the tools, or to utilize a Browser to monitor the JACE. The most robust form of connectivity utilizes IP Security Protocol (IPSec). IPSec connects two firewalls or routers via a secure tunnel and is more reliable than a PPTP connection. This method has much higher bandwidth and will recover quickly from communication breaks in the connection. In addition, IPSec can be utilized to connect an entire user's LAN to the Wireless Network where the cellular GPRS connected devices exist.

Ordering Information

Part Number	Description
NPB-GPRS-W	Modem option card including the standard antenna which mounts directly to the side of the option card and a SIM for use with Wyleless cellular as the service provider. Wyleless is the only Tridium approved service provider for the continental US.
GPRS-CBL-EXT	Optional two (2) meter extension cable with mounting bracket to extend the antenna connection to a more remote location. Typically utilized to re-locate the antenna outside of a metal enclosure.
GPRS-SIM-W	Replacement SIM for using the modem with Wyleless as the service provider.
NPB-GPRS	Modem option card including the standard antenna which mounts directly to the side of the option card. No SIM provided with this option. For use when service provider other than Wyleless is required. Cellular service provider must be negotiated by the installer.
US Cellular Service Provider	Wyleless Group (www.wyleless.com). Order cellular service on-line separately.

Specifications

- Quad-Band GSM (850/900/1800/1900 MHz)
- Utilizes an industry standard Siemens TC63 cellular communications module.
- Typical Connection Speeds
 - Download Speed: 30-60K Bps
 - Upload Speed: 10-15K Bps
- GPRS Multi-Slot Class 12
- GSM Release 99
- Output Power
 - Class 4 (2W) for EGSM850
 - Class 4 (2W) for EGSM900
 - Class 1 (1W) for GSM1800
 - Class 1 (1W) for GSM1900
- Internet Services: TCP, UDP, HTTP, FTP, SMTP, and POP3
- Specifications for GPRS data Transmission:
 - GPRS class 12: max. 86K Bps (DL & UL)
 - Mobile station class B
 - PBCCH support
 - Coding schemes CS 1-4
- Approvals: R&TTE, FCC, UL, IC,GCF, PTCRB, CE,
- Cellular Service Provider: Wyleless Group (www.wyleless.com)



Architecture

