TRIDIUM

SEDONA JENNIC OPTION CARD

Sedona Jennic Option Card

Overview

The Sedona Jennic Option Card (NPB-SED-001) enables integrators to implement embedded Jennic based wireless systems using the Sedona Framework with 6LoWPAN addressing, JenNet networking stack and IEEE 802.15.4 radio with minimum time to market. This card uses the Sedona Framework™ enabled wireless module sold by Jennic for developers and integrators to provide comprehensive device integration into a JACE®-2, JACE-6 or JACE-7 as well as the JACE-2/6-XPR series via the standard option card slot. It is configured as a Network coordinator node to enable supervision and integration of Sedona Framework enabled Jennic 802.15.4 devices into a Niagara^AX JACE.

The option card is a wireless product that enables the integration of Sedona Framework enabled Jennic 802.15.4 devices into a Niagara^AX JACE version 3.4 or later. This RF option card has a maximum distance capability of up to 4 km (line of sight, your mileage may vary depending on the building layout and RF interference).

Features

The NPB-SED-001 is a plug-in option card designed for installation into the option card socket of a JACE-2, JACE-6, JACE-7, or JACE-2/6-XPR series controller. This card uses a Sedona Framework-enabled Jennic wireless microcontroller, like the one used on the Sedona Development Board. However, instead of running a Sedona Framework app, the option card enables the JACE to act as a wireless network coordinator and 6LoWPAN 802.15.4 RF network bridge. Wireless bridging to Sedona Framework enabled devices is done via mapping to IPv4 addresses, where they can be opened in Niagara^AX Workbench using the Sedona Framework SOX protocol, and configured using Sedona Framework-based views, components, and tools.

In addition, the option card enables the JACE to integrate the remote wireless Sedona Framework enabled devices into its Niagara^AX station, using the Sedona Framework Jen6lp Network. This provides the standard device/proxy point architecture that enables common data modeling across all device types and networks. The option card includes a small antenna which can be extended as necessary using the optionally available antenna extension cable to get the RF signal outside a metal enclosure in which the JACE is likely to be mounted. Also included is a RS-485 port for future development. With the appropriate version of Niagara^AX Framework and Sedona Framework software, wireless Sedona Framework enabled devices can be supported by the JACE using this card.

- Compatible with Jennic JN5139 and JN5148 chipsets
- 2.4GHz IEEE802.15.4 compliant with 6LoWPAN and JenNet network
- Plugs into standard JACE-2, JACE-6, JACE-7, or JACE2/6-XPR series option card socket
- All necessary power is supplied by the JACE
- 16 MHz, 32 bit RISC processor with 96 Kb RAM, 192 Kb ROM
- Device integration follows the standard Niagara Driver Framework for easy integration into a JACE database
- One RS-485 MSTP port for connection to wire network connected Sedona devices (non-operational, for future use)

POWERED BY SEDONA FRAMEWORK™

- Diagnostic indicator LEDs provided for visual indication of operation
- Antenna included
- Enables updating of Sedona Framework devices over the wireless network
- Remote Sedona Framework devices can be managed and changed by adding, removing, or modifying Sedona Framework components via the connection from the JACE using the standard Niagara Workbench at release 3.4.52 or above
- Lead-free and RoHS compliant
- Optional antenna extension cable available for relocating antenna outside JACE enclosure

Ordering Information

Model Number	Description
NPB-SED-001	Sedona Jennic Option Card for JACE-2, JACE-6, JACE-7, or JACE-XPR with antenna-wireless and RS-485 port
CBL-SED-EXT	Extension cable for antenna connector – 2 M long with mtg. bracket
11277	Replacement adjustable-angle 2.4GHz RF-SMA coax-mounted antenna
10027	Replacement 3-terminal wiring plug for RS-485

Specifications

Transceiver

- 2.4GHz IEEE802.15.4 compliant
- Receiver sensitivity -100dBm
- Transmit power +19dBm
- Up to 4 km range
- One RP-SMA style connector for antenna or coax cable connection
- Optional extender cable for Antenna to allow antenna mounting outside JACE enclosure – 2 Meters long with antenna connectors attached – CBL-SED-EXT

Processor

- 32-bit RISC processor sustains 16MIPs with low power

Environmental Specifications, packaging

- Temperature range (0°C to +50°C)
- Lead-free and RoHS compliant
- Compliant with FCC part 15 rules, ETSI ETS 300-328 and Japan ARIB STD-T66
- FCC compliance in a JACE is part 15 Class A

Operating System

- Sedona Virtual Machine included with 6LoWPAN support built in and configured as a PAN coordinator node for use with a JACE

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