

Janus Remote Communications

CellBridge™ Global Cellular Modems

Helping customers
connect their products
to the world!



Who We Are

Janus Remote Communications provides state-of-the-art wireless products and services, including Custom Design Solutions to the global IoT marketplace

- 20 Years in Business
- Connor-Winfield – Parent Company
Connor-Winfield Corporation is a privately held, US based electronic product manufacturer incorporated in 1963

What We Do

Our Products are most often used in Remote Monitoring and Control Applications

- Industrial
- Public Infrastructure
- TeleHealth
- Energy / Utilities
- Transportation
- Building / Construction
- Retail / Consumer



The CellBridge™ Family

The Janus CellBridge™ family of Global Cellular Modems provide our customers with powerful hardware, software and connectivity tools. Quickly and easily integrate “End Device” certified Cellular Modems, Terminals and Gateways into end applications.



Global Embedded Cellular Modems

4G LTE CAT-M1/NB2



LTE310SMT v1.00

- Janus SMT Platform (89-Pin LGA)
- 1.02" x 1.38"
- Input Voltage Range 2.5 to 5.25Vdc



LTE910CF v20.00

- Common Footprint (49-Pin DIP)
- 2.5" x 1.4" x 0.325"
- Input Voltage Range 4.75 to 5.25Vdc



LTE910XF v20.00

- X Footprint (20-Pin DIP)
- 1.14" x 1.3" x 0.256"
- Input Voltage Range 3.5 to 5.5 Vdc

Available Now! PTCRB, AT&T, ISED, FCC and Red Certified

End Device Certified, Low Power, Telit OneEdge Tools, Based on Telit ME910G1-WW

LTE Bands: B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B71 and B85

Global CAT1 Embedded Cellular Modems



LTE910CFX v1.00

- Common Footprint (49-Pin DIP)
- 2.5" x 1.4" x 0.325"
- Input Voltage Range 4.75 to 5.25Vdc



LTE910XFX v1.00

- X Footprint (20-Pin DIP)
- 1.14" x 1.3" x 0.256"
- Input Voltage Range 3.5 to 5.5 Vdc

Available Now! PTCRB, AT&T, ISED, FCC and Red Certified

End Device Certified, Low Power, Telit OneEdge Tools, Based on Telit LE910C1-WWxD

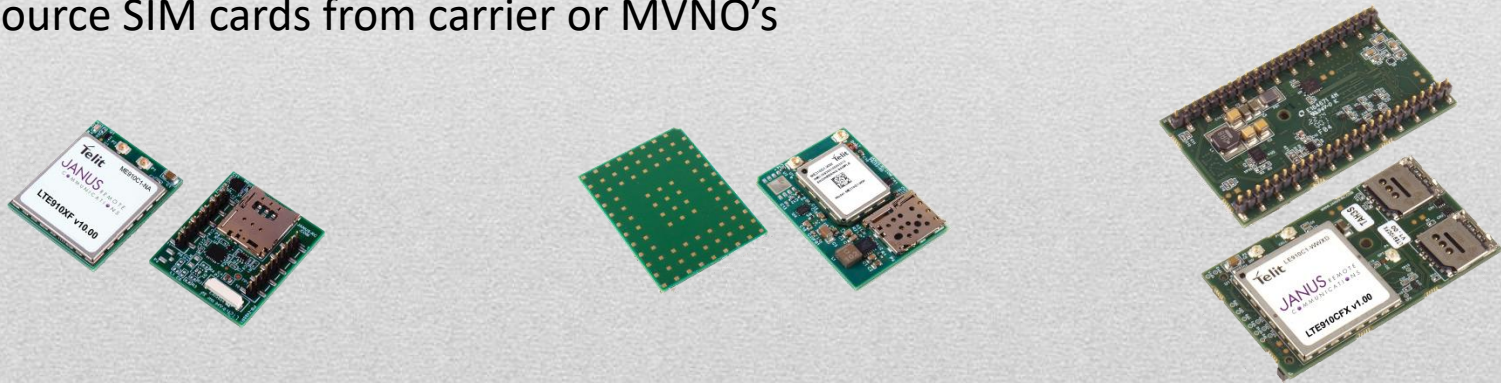
LTE Bands: B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B71 and B85

What's the Difference Between a Cellular Module and a Modem?

A **Cellular Module** is an RF component built using a cellular chipset with minimum required circuitry for regulatory and carrier certification as a radio component. Cellular modules must be integrated into another device with antenna connectors, a stable power supply, a SIM Holder or SIMIc, and standard connectivity to be considered a modem.



A **Socket Modem** or **Embedded Modem** includes a cellular module and all circuitry and connectors required for operation. These units can be fully certified for use on cellular networks by carriers and regulatory bodies. Customers can source SIM cards from carrier or MVNO's



CellBridge™ Global LTE Modems



LTE910T2 v20.00

- Cortex M4
- USB/Serial Connectivity
- Ryton Enclosure
- Input Voltage 7-28Vdc
- 2.6 " x 3.75 " x 1.2"



LTE910T3 v20.00

- USB/ Serial Connectivity
- Aluminum Enclosure
- Input Voltage 5Vdc
- 5.2 " x 2.35 " x 1.8"



LTE400AP v20.00

- Arm9 Linux
- Ethernet Serial / USB Connectivity
- Aluminum Enclosure
- Input Voltage 7-26Vdc
- 3.15 " x 4.27 " x 1.18"

Available Now! PTCRB, AT&T, Verizon, ISED, FCC and Red Certified

CellBridge™ LTE Modems Common Features

Available as CAT-M1/NB2 or CAT1, End Device Certified, Low Power, Telit OneEdge Tools

Benefits of CellBridge™ Technology

Benefits of adding CellBridge™ Cellular Technology to your products include:

- Global Cellular Coverage
- Janus device certifications decrease “time-to-market “
- New Revenue Streams/Increased Revenue (via data service solutions)
- Product Health and Location Information
- Modem Reliability (rigorous design, certification and processing criteria)
- Wireless Product Security (via Telit OneEdge Platform)
- Update End Products and Cellular Devices Remotely
- Inclusive Janus service & support packages make deployment hassle free

End Device and RED Certifications

What is North American End Device Certification of a Modem?

End device certification simply means that a customer can source carrier SIM cards with a product model number and begin using their end product immediately. There are (generally) no other regulatory or carrier certification requirements as long as customers follow the published guidelines for modem integration.

What is RED Certification?

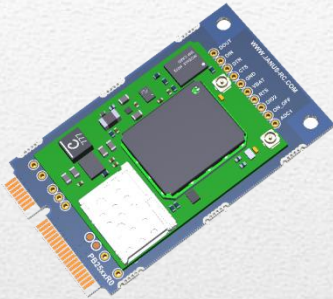
The radio equipment directive 2014/53/EU (RED) establishes a regulatory framework for placing radio equipment on the market. It ensures a single market for radio equipment by setting essential requirements for safety and health, electromagnetic compatibility, and the efficient use of the radio spectrum.

Janus CellBridge™ modems are based on the Telit ME310G1-WW, ME910G1-WW and LE910C1-WWxD modules with Telit's OneEdge® tools. The CellBridge™ products give customers unmatched connectivity and operational features and functions at an affordable price.

- Telit IoT AppZone
- Lightwave M2M
- Telit simWISE™
- Telit's Connection Manager
- Location services

LTE Global Connect Modems

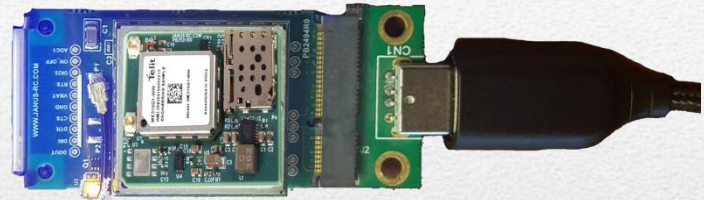
Coming Soon!



LTE310mPCIe v1.00

mPCIe Device

Currently in Development



LTE310USB v1.00

USB Device

Currently in Development

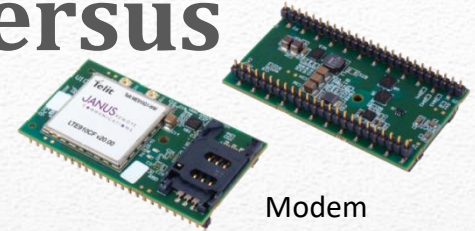
CellBridge™ LTE310SMT Modems Common Features

LTE CAT M1/NB2, End Device Certified, Low Power, Telit OneEdge Tools

Buying a Cellular Module versus a Cellular Modem



Module



Modem

As a general rule, customers that deploy between 1 to 50k units within 24 months should choose **pre-certified cellular modems**.

Several factors advocate that modems are more appropriate for most customers:

- **Time to market:** Modems will get customers to market 60% to 80% more quickly. The average length of a cellular module integration project is 24 months. Average for a pre-certified modem is 6-12 months.
- **Engineering time:** Cellular integration requires a great deal of time and resources.
- **Carrier and regulatory certification** is complex and time-consuming. Simple certifications cost between \$20k to \$50k. Module manufacturers, on average, update firmware two to five times per year and all updates must be certified.
- **Modem experience and expertise:** Customers can leverage the specialty circuit design, software design, and certification knowledge base of their modem developer. Module suppliers do not have the integration experience as a modem developer/manufacturer.

Why Should Customers Buy Janus End Device Certified Modem Products?

- Wide selection of form factors and specifications for ease of integration into any application
- Low cost – consider all components and integration costs along with variety of modem options
- End Device Certifications for North America – No conformance worries
- Radio Equipment Directive (RED) certification for Europe and beyond
- All our products are designed and manufactured in our facilities in Chicago, Illinois.
- All our products are open platform (no mediating software) for maximum engineering flexibility
- Janus has exceptional technical and customer support. Just ask any of our current customers!



Who Uses Janus Products and Services

- Companies with little or no wireless experience – whose products or services would benefit from global wireless connectivity
- Companies that need a quick and easy wireless implementation
- Companies with products that currently incorporate a wireless solution going into product redesign
- Companies with low volume demand that might not be able to achieve PTCRB, carrier, FCC, CE, or other certifications due to great expense
- Companies that might require engineering assistance



Customer Application Examples

Application	Janus Product	Solution
Parking Kiosks	CF Embedded Cellular Modems	End device certified Modem mounted on customers PCB to control Credit card Transactions. Can choose CF modem for Category (high bandwidth/low bandwidth) and Carrier (AT&T, Rogers, Verizon, etc.)
Oilfield Gateway	CF Embedded Cellular Modem	End device certified Modem mounted on customers Gateway PCB to monitor and control oilfield equipment. Can choose CF modem for category (high bandwidth/low bandwidth) and Carrier (AT&T, Rogers, Verizon, etc.)
Agricultural Application Monitoring	T3 Cellular Terminal	Certified terminal used for sensor monitoring/data telemetry in outbuildings (barns, coops, etc.)
Water Monitoring	T2 Cellular Gateway	Certified Gateway w/Cortex M4 Processor used to monitor water flow in conjunction with water meter
Satellite Gateway	XF Embedded Cellular Modems	End device certified modems used in satellite based gateways for fortune 500 companies. Cellular channel used for redundant data transport.

Janus Website

- General Navigation
- Product Pages
 - Documentation
 - Downloads
 - App Notes, Technical Papers, etc.
- Media
- Support
- Contact Us
- Partners
- Janus Store

www.janus-rc.com

The screenshot shows the Janus Remote Communications website. At the top, the logo 'JANUS REMOTE COMMUNICATIONS' is displayed on the left, and 'Email Us | Shop Now!' with the phone number '630-499-2121' is on the right. A navigation bar contains links for 'About Us', 'Products', 'LTE POTSwap', 'Support', 'Store', 'Contact Us', and 'GPS Solutions'. The main content area features a 'CellBridge™ Global Surface Mount (LGA) Socket Modem' section with a list of features: Carrier and Regulatory Certifications, 89 LGA Pads, 26mm x 35mm, Global CAT-M1/NB-IoT with 2G fallback, Available in GNSS or Non-GNSS Versions, Telit OneEdge® Tools, and Samples Available. An image of the LTE310SMT modem is shown. To the right, there are social media icons for LinkedIn, Twitter, YouTube, and Facebook, and a 'STAY CONNECTED' section. Below that is a 'Quick Links' section with links to presentations, product roadmaps, and comparisons. A 'BROWSE STORE' button is at the bottom right. A 'SPECIAL OFFER - POTSwap LTE Kits & AT&T Voice Service GNSS RTK Solutions' is highlighted, along with a note about Verizon FOTA requirements and 'End Device Certified IoT Hardware Solutions'. A small graphic states 'ALL Janus products are manufactured in the USA!'.

This block displays four product category cards:

- LTE 4G POTSwap POTS Replacement**: Features a cellular replacement for copper phone landlines, aluminum enclosure, size 6.5" x 5.2" x 1.2", temp range -40°C to 60°C, input voltage 7 to 15 Vdc, 4G with 3G fallback, and voice over cellular. Includes 'LTE 4G Info' and 'Carrier Release Dates' links.
- Embedded Cellular CF Plug-In Series**: Features common footprint (CF) design, PCB mount, size 2.5" x 1.4" x 0.325", temp range -40°C to 85°C, input voltage 3.0 to 5.25Vdc, and support for LTE, HSPA+, EVDO, and CDMA. Includes a 'Read More' link and 'Buy at Digi-Key LTE910CF Modems' link.
- Embedded Cellular XF Plug-In Series**: Features industry standard 20-pin connector footprint design, PCB mount, size 1.14" x 1.3" x 0.255", temp range -40°C to 85°C, input voltage 3.5 to 5.5 Vdc, and support for LTE and HSPA+. Includes a 'Read More' link and 'Buy at Digi-Key LTE910XF Modems' link.
- CellBridge LTE310SMT v1.00 SMT Modem**: Features 89 pad LGA package, 26mm x 35mm size, lowest modem total cost of ownership (TCO), ships in carrier tape/reeel, low power design, and is Telit OneEdge ready. Includes a 'Read More' link.

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