

PLS-DC

Power Line Network Gateway



Key Features

- Used to connect and control all neighborhood NC1/NC2/NM7 nodes distributed on any of the three phases of the local power grid
- **Open source API** – allowing end users to write their own front-end SCADA or to modify the standard SCADA provided at no cost
- **Internet independent** – allowing users to connect directly to a terminal using local Ethernet and control all the network nodes, independent of the internet
- Flexible communication channels: Ethernet, WIFI, and Cellular
- A highly secure, transparent, patent-pending, multi-protocol communications pipeline to remote devices using existing power lines
- Secure industry leading communications on all channels of communications

Applications—DC

Bi-directional data transmission to edge nodes over power lines

Network	<ul style="list-style-type: none"> • G3-PLC (ITU-T G.9903) standards based and certified. • OFDM based IPV6 Auto Connect / Auto Healing Mesh network • 98.4 - 121.9KHz CENELEC Band • 40Kbps minimum data rate • Up to 3-mile range between nodes • 255 nodes per sub-net with one DC
Security	<ul style="list-style-type: none"> • 256-bit Elliptic Curve Cryptographic security between nodes and data concentrator • Secure TLS/SSL based connection between data concentrator and operator terminal (SCADA) • Biometric and two factor authentications at the operator terminal
Cellular	<ul style="list-style-type: none"> • LTE/4G – QPSK, 16QAM with Verizon carrier certification for use in the USA • Global 3G HSPA/GSM quad band with 2G fall back and multiple carrier certifications for international use • 24dBm class 3 transmit power with two internal antennae • 44FF (nano sized) SIM card slot
WiFi	<ul style="list-style-type: none"> • 802.11 b/g/n support • WPA-PSK, WPA2-PSK, and WEP security • Built-in internal antenna with up to 16dBm transmit power
Ethernet	<ul style="list-style-type: none"> • IP68 panel mount connector • 10/100LAN with built-in surge suppression
Software	<ul style="list-style-type: none"> • Open API for building front-end SCADA. • Standard SCADA is provided at no cost and is under GPL license—allowing modification as needed • Windows based admin software for commissioning and control of nodes with biometric authentication • Automatic logging of network and node statistics • Automatic powerline network intrusion detection using a patented cipher stream encryption technique
Power	<ul style="list-style-type: none"> • 80 – 305VAC, 50-60Hz, Single phase via screw terminal block • ANSI C136.37 surge requirements compliant • Fully protected against transients and brownouts with EN55022 Class B isolation • Quick connect field installable wiring for 3 phase + neutral power connection
Mechanical	<ul style="list-style-type: none"> • 6.65 x 4.68 x 2.4 in [169 x 119 x 61 mm] • IP66 protection level • -40°C to 65°C operating temperature