DATA-LINC GROUP

FastLinc™ 820G

802.11G/B INDUSTRIAL WIRELESS ETHERNET FOR 2.4 GHZ BAND

The *FastLinc*™ Family of IEEE 802.11 Industrial Ethernet wireless modems offers three distinct models— the stand-alone Ethernet FLC810E+ and FLC820G* and the PCMCIA card FLC800C+ for single device or multiple device capabilities. *FastLinc* FLC modems provide high-speed, secure wireless communicatons using 2.4 GHz direct sequence technology. With an output power much higher than commercial 802.11b/g products and rugged design, the *FastLinc* Family is ideal for industrial SCADA and factory automation systems.

The *FastLinc* FLC820G offers high speed communications (up to 54 Mbps**) and flexible networking architectures using the IEEE 802.11b/g wireless standards. With its high speed capability and industrial grade design, the FLC820G is ideal for demanding applications such as wireless Ethernet I/O, PLC communications, remote video and HMI/OPC server applications.

The FLC820G includes Station Adapter, Access Point, and Access Point with Repeater modes. Access Point with Repeater mode eliminates the need to install Ethernet cable to each access point and extends range by creating a wireless mesh network. Rated at a range up to 10 miles (17 km) with unobstructed line-of-sight (farther using additional FLC820Gs in AP with Repeating mode), the FLC820G is ideal for wireless Ethernet communications in challenging industrial environments. When extended lengths of coaxial cable are required, communication can still meet ranges up to 10 miles by using an amplifier at the Master location that boosts RF power to 1 Watt.

The FLC820G, that has the ability to connect multiple Ethernet devices in Station Adaptor mode and utilizes WPA-PSK encryption and authentication for security, is housed in a sturdy, compact steel enclosure with an optional DIN rail clip for mounting. Designed for harsh environments, the FLC820G has an extended operating temperature of -40 to +70°C and may be powered from 10 to 30 VDC power source (115 VAC power supply included) or may be powered over the Ethernet cable using an optional injector.

FLC820G FEATURES

- Wirelessly connects Ethernet devices at high speeds

- Communicates up to 10 miles (17 km) with unobstructed line-of-sight

- Optional RF amplifier enables long runs of antenna coax cable to aid line-of-sight antenna installation

- Complies with IEEE 802.11g and IEEE 802.11b standards for Wi-Fi compatibility

- Supports Access Point, Access Point with Repeater, and Station Adapter modes for flexible network design

- Access Point with Repeater mode eliminates AP cable installation and extends range with mesh networking

- Ensures high level of security using WPA-PSK data encryption and authentication

- Rugged compact steel enclosure and extended operating temperature ensures reliable operation in harsh environments

- Supports 10 to 30 VDC power and power over Ethernet using an optional power injector

The FLC820G is easy to configure and trouble shoot using a web browser to access an internal web server or the software configuration utility that is included. Like all *Data-Linc* products, the *FastLinc* 820G provides field proven performance and comes with industrial grade support that includes pre-sale project consultation, post-sale tech assistance with PLC expertise and site survey planning as part of the *Data-Linc Group* commitment.

* for installations outside of North America
** over-the-air RF speeds

FLC820G SPECIFICATIONS

Operating Frequency
License-free, 2.412-2.462 GHz

Included.
CD. Configuration software, User Manual I
Antenna. Test antenna
Power. Wall mount 115 VAC to 12 VDC

Transmitter
Transmitter type: 802.11 b/g
Output power.
    802.11b. 100mW w/o amplifier, 1 Watt w/amplifier
    802.11g. 50mW w/o amplifier (will not operate at g-speeds while using an amplifier)
Range: 10 miles (16 Km)*

Receiver Sensitivity.
    802.11b mode. 11 Mbps –89 dBm; 5.5 Mbps –91 dBm; 2 Mbps –93 dBm; 1 Mbps –94 dBm
    802.11g mode. 54 Mbps –68 dBm; 48 Mbps –70 dBm; 36 Mbps – 75 dBm; 24 Mbps –80 dBm; 18 Mbps –84 dBm; 9 Mbps –88 dBm; 6 Mbps –89 dBm

RF Data Transmission
Data Encryption. WEP (64 or 128 bit); WPA-PSK
RF Data rate.
    802.11b mode. 11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps
    802.11g mode. 54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 9 Mbps, 6 Mbps

Operating modes.
Access Point, Access Point With Repeating, Station Adaptor Infrastructure, Station Adaptor Ad-Hoc

Data Interface
Interface. 10/100BaseT (auto select)
Auto MDIX function
Data Throughput. 800 Kbps to 20 Mbps (depends on link quality)

Diagnostics.
Web (html) RF Statistics; 7 LED indicators (Power, RF link, LAN connection / activity, DC Input Monitor (DCIM) Low, 10+ OK, 22+ OK, High)

Antenna
Types. Omni-directional and directional
Connection. Reverse Polarity SMA

Power.
10 to 26 VDC (115 VAC to 12 VDC wall mounted transformer provided)
Power over Ethernet cable using optional power injector
Note: Not 802.3af PoE compliant

Operating Environment
Temperature. -40 to +158°F (-40 to +70°C)
Humidity. 0 to 95% non-condensing

Enclosure
Standard. 18-gauge steel; 3.7 x 1.8 inch x 5.8. in. (9.4 x 4.6 x 14.7 cm)– including mounting feet
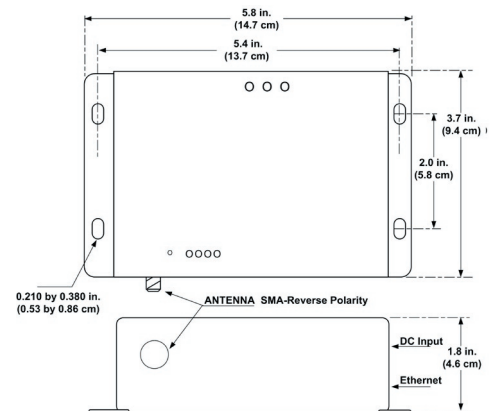**Mounting**. Panel or DIN rail mounting

Weight.
2.0 lb (.91 kg)

* Range is dependant upon RF link quality and environmental conditions

FLC820G DIMENSIONS

ABOUT DATA-LINC GROUP

Since 1988, Data-Linc Group has provided reliable communication solutions for industrial automation systems. Data-Linc Group, an alliance partner with most major PLC manufacturers including Rockwell Automation, Siemens, Schneider Electric, GE Fanuc, and Omron, as well as others, provides expert technical support and communications consultation. Data-Linc's industry proven RF technology has been successfully implemented in all major industries including automotive plants, consumer goods manufacturing/packaging, steel mills, mines, oil/gas refineries, paper mills, utilities and transportation systems as well as the instrumentation industry. With its line of wireless modems for the European Union, Data-Linc's products and support are available worldwide. All Data-Linc products provide field proven performance and come with industrial grade support. For more information, please contact us.

ALLIANCE PARTNERS

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