

Wireless Spread Spectrum Modem

Synxcom's SkyLink series wireless modem features robust, high-speed, low latency, secure communication for utility and industrial applications.

Designed for rugged environment and reliable communications, the Skylink modems use license-free, frequency-hopping spectrum technology (FHSS) at 900 MHz and 2.4 GHz. Equipped with build-in diagnostic and set up capabilities, the SkyLink modems are easy to configure as a master, remote unit (slave), or repeaters in any point-to-point, point-to-multipoint, or multipoint-to-multipoint network topology.

Designed with advanced FHSS technology, Synxcom's wireless modems are capable of operating at distance of up to 60 miles line of sight, speeds from 1200 to 115,200 bps at full duplex operation. The transmitter output power is programmable from 100 mw to 1.0 watt for optimum system operation.

Each Skylink modem provides a serial RS-232 and RS-485 port compatible with standard DTE/RTU interface equipment. A terminal controlled power down feature can, when selected, places the modem in an sleep mode to conserve power in any low power or battery operation environment.

The Skylink modem is powered by a 9 to 36 volts DC source. A 115/230 AC to DC power converter is available when required. A SMA antenna port is provided at the rear panel for supporting a portable antenna or external high-gain antennas.



KEY FEATURES

License Free Frequency Hopping Spread Spectrum Technology: 900 MHz or 2.4 GHz

Robust Performance receivers at -108 dBm @10⁻⁶ BER

Build-in Error Detection: 32-bit CRC, ARQ

Output Power: Programmable from 100 mw to 1 watt

Selectable data rates support for DTE from 1200 to 115,200 bps

Operating Range: Up to 60 miles (line of sight)

Selectable EIA RS-232/V.24 (DB-9F) and RS-485 (RJ-11C) DTE serial port interface

*Operation Modes:
Point-to-Point
Point-to-Multipoint
Store & Forward repeater
Peer-to-Peer*

Powered by wide range of AC & DC power supply options:

9 to 36 volts DC, 100 – 264 volts AC, 50/60Hz, 100-400 VDC

Wide range of operating temperatures: -40 to +85°C

General Specifications

Modem Specification

Frequency:

902 – 928 MHz
2.4000 – 2.4835 GHz

Spreading Method:

Frequency Hopping / DTS

Forward Error Detection:

Hamming BCH Golay Reed-Solomon

Error Detection:

32 bits of CRC, ARQ

Data Encryption:

128-bit or 256-bit AES Encryption
(US and Canada only)

Output Power:

100 mW to 1W (20-30 dBm)

Range:

60+ miles (900 MHz)
30+ miles (2.4 GHz)

Receiver Sensitivity:

-108 dBm @ 10^{-6} BER

DTE Interface:

Asynchronous, 7 or 8 data bits format
RS-232: with DB-9F Connector
Signals Supported:
RTS, CTS, TD, DCD, DTR, DSR, RD
RS-485: with RJ-11C Connector

Data Rate:

1200 bps to 115.2 Kbps

Link Rate:

19.2 Kbps to 1.3824 Mbps

Operating Modes:

Point-to-Point, Point-to-Multipoint, Store &
Forward Repeater, Peer-to-Peer

Antenna Connector:

SMA-F , Panel mount

Remote Diagnostics:

VSWR, Temperature, RSSI, Packet Statistics

Power Supply Requirement*

Input Voltage: 9 to 36V DC
Power Consumption (@12V Input):
RX: 145mA
TX: 350-500mA
Idle: 35mA
Sleep: < 1mA

Environment:

Operating: -40 to +85° C
Humidity 5 to 95%, non-condensing

Mechanical Dimensions:

Aluminum Enclosure:
3.25”(W) x 5.25”(L) x 1.25”(H)
Weight: 8.8 oz

Approval:

FCC Part 15.247
IC RSS210

ORDERING INFORMATION

SM3090: FHSS Stand-alone Modem, 900 MHz
9 to 36 VDC

SM3024: FHSS Stand-alone Modem, 2.4 GHz
9 to 36 VDC

PSM-15W: 115/230 VAC power supply Module

EN4-KIT-DIN: DIN-Mount Kit