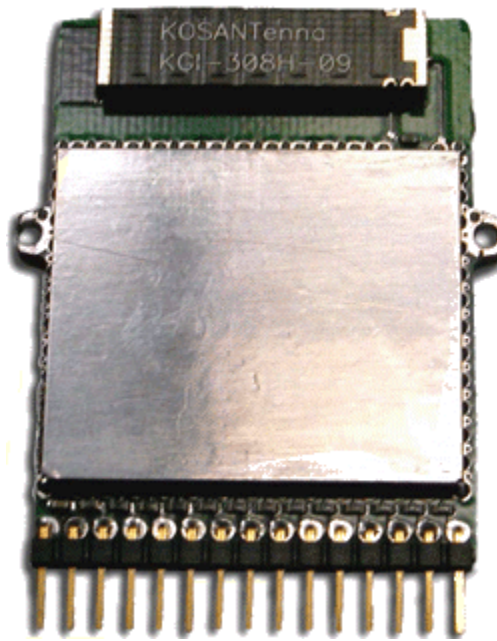


Needham's Electronics - (916) 924-8037
- SALES - SERVICE - SUPPORT - 6AM to 5PM Pacific Sta

- Home
- RF Transceiver
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RF Transceiver *SureLink 9*

Quantit
Call Needham's Staff at (916)

Using the
SureLink

RF 101

The SureLink 915A-FM

The Needham's Electronics RF transceiver, the SureLink 915A-FM, gives yo solution with the ability to transmit information point to point or point to mul of sight. Most other wireless solution require you develop a working solution is need with our RF transceivers is a module to send, a module to receive, pov that needs to be sent. Used in conjunction with the [QuickLink 232A](#) and you PC, a version of the software will be available to download soon.

The SureLink 915A-FM has the capability to transmit data at 76.8K BPS up t BPS up to 1000 FT distance in a urban setting. This low power module is gre in acquiring information from a remote location, home automation, instrumer monitoring, remotely controlling circuits or in anything you can dream of.

For customers looking to integrate the SureLink into their existing or new prc

Electronics RF design services are available. Depending on the amount of work the cost will vary. The SureLink 915A-FM utilizes both a Xemics 1202 and an antenna.

As with the entire line of products that Needham's Electronics has designed this RF Transceiver Module is built using quality product and care. All manufacturing is done in house to insure that the quality that Needham's Electronics is known for will always be there.

Any questions or comments please feel free to call our support staff at (916) 942-1111.

Header Connections							
Pin ¹	1	2	3	4	5	6	7
Description	IO1	IO2	IO3	IO4	IO5/AD1	IO6/AD2	IO7/AD3
Pin ¹	9	10	11	12	13	14	15
Description	IO9/SI	IO10/SO	Reset	IO11/FO/AD5	$\overline{\text{VEnable}}$	IO12/AD4	IO13/AD6

Mode Settings

Demo Mode: Use this mode to ensure a connection can be established and test a given distance and Data Rate. By depressing the momentary switch on the front of the unit or TX LED on the other QuickLink will light. A connection to a PC is not needed in Demo Mode.

Cable Link Mode: As a RS-232 cable replacement the SureLink transmits at 115200 baud data point to point. If using the QuickLink 232A the DB9 Serial and DB9 Flo can be swapped with a couple of flips of a jumper. If the SureLink is directly connected to a PC no swapping of these lines is needed.

Command Mode: This allows the SureLink to connect and read or write the Flash memory; UART, and configure or read the I/O and A/D pins of itself or other peripheral SureLinks. The command unit can give the requested data from other satellite units using the command set to the user serial device. This mode can be used point to point or point to multipoint.

AT Command Mode: Using the basic AT modem commands to dial a specific number the user can transmit and receive RS-232 data point to point or point to multipoint these satellite SureLinks. The internal registers, Flash memory, UART, I/O are disabled in the mode; it is only for serial data.

Peripheral Mode: The setting for both AT and Command modes. Multiple units can be used with both modes. To set the unit address a QuickLink needs to be used to address the unit.

RC Mode: Gives the user the ability to remotely control any of the 10 I/O pins of the SureLink point to point. Although there is a master and slave set the communication is bidirectional, any of the 10 I/O pins can be set as either input or output as long as the master SureLink is configured to the opposite. An example would be if the master unit is configured as an input the corresponding pin on the slave unit must be set as an output.

want to have pin 3 on the slave unit to have the ability to toggled high and low master unit will be set as an input and pin 3 on the slave unit will need to be raised high. When pin 3 is raised high on the master transceiver the corresponding pin 3 on the slave unit will need to be raised high to match.

Control Connections							
Pin ¹	1	2	3	4	5	6	
Control Signals	Mode	Speed	Baud Rate		Channel		M
Command	Demo Mode	4.8K BPS	Demo Mode		Channel0		
Pin Settings	Gnd	High	High	High	Gnd	Gnd	
Command	Cable Link	19.2K BPS	300 BPS		Channel1		
Pin Settings	Gnd	Float	Gnd	High	Gnd	Float	
Command	Command Mode	76.8K BPS	1200 BPS		Channel2		
Pin Settings	High	Gnd	Float	Float	Float	Gnd	
Command	Peripheral Mode		2400 BPS		Channel3		
Pin Settings	Float		High	Gnd	Float	Float	
Command	R/C Mode		4800 BPS		Channel4		
Pin Settings	Float		Float	High	Low	High	
Command			9600 BPS		Channel5		
Pin Settings			Float	Gnd	Float	High	
Command			19.2K BPS		Channel6		
Pin Settings			High	Float	High	Gnd	
Command			38.4K BPS		Channel7		
Pin Settings			Gnd	Float	High	Float	
Command			57.6K BPS		Channel15		
Pin Settings			Gnd	Gnd	High	High	

¹ Pins are numbered left to right viewed from solder side

Features

- Calibrated OnBoard Temperature Sensor
- Small Size W/ OnBoard Antenna
- RS232 Data Full Duplex
- Auto Error Detection and Retransmission
- 11 User I/O ports are available
 - 5 Ports of 10 Bit A/D are available

- RS232 with flowcontrol is available using 4 pins
- All ports are 0 - 3.3 Volts
- Modes
 - Point to Point
 - Point to MultiPoint (Up to 65000 Units)
- Up to 16 Channels (4 User Configurable)
- Auto Compensation for Crystal Drift due to Temperature
- Onboard Regulator w/ Shutdown
- 5.0 Volt Tolerant I/O

WIRELESS SOLUTIONS	
	SureLink 915A-FM
RF Data Rate	4.8K, 19.2K, 38.4K, 76.8K bps
Serial Baud Rate	300 to 57.6K
Spread Spectrum	No
In-City Range (high data rate to low data rate)	300-1000 FT
Line of Sight Range	Over 1000 FT
Transmit Power	-3 DBM
Receiver Sensitivity	TBD
TDMA current consumption	TBD
Rx current consumption	TBD
Transmit Frequency	902-928 MHz
Security	128 bit encryption
Checksum	32 bit CRC
Connection	15 pin .1 spacing header
Operating Voltage	3.5-12 Vdc
VEnable Voltage	0-5 Vdc
Fcc Approved	pending
Size	44mm X 60mm X 4.85mm
Cost (quantity price available)	\$59.95