

## FlashLink Wireless 900 MHz Receiver

- Receives signals from up to 100 Sensors
- 900MHz Receiver with RS232 serial output to PC
- Up to 1,300 feet of networking distance between the Receiver and Repeater
- Plug-and-play, setup-free design
- Data is recorded and managed with FlashLink Wireless Manager Software



**Model 20132**

Channel Capacity	Hops through 25 channels. Features 7 different hop sequences and 65,000 network identifiers.
Channel Data Rate	10kb
Data Throughput	19200bps
Enclosure (Casing)	High impact acrylonitrile butadiene styrene (ABS)
Frequency Control	Direct FM
Radio Frequency	900 MHz, unlicensed ISM band
Accessories	6.5 in (165mm) reverse polarity SMI antenna, 9V DC power supply
Interface Rejection	70 dB at pager and cellular phone frequencies
Network Topology	Point-multipoint, point-to-point or multi-drop transparent networking
Output to PC	RS232 (DE9) serial port
Power Supply	6W 9V DC 300mA 120V power supply with (2.5mm x 50mm x 9.5mm) output plug
Range	Indoor: 1300 ft (from repeater) maximum (depending on environment)
Rx (Reception) Sensitivity	-110dBm
Serial Data Interface	19200bps
Size	4.125 in (L) 2.625 in (W) 1.125 in (H) (1-5 x 67 x 29mm)
Transceiver Type	Frequency hopping spread spectrum transceiver
Transport Protocol	Various monitoring and addressing modes

Rev 02/23/2009

## FlashLink<sup>®</sup> Wireless Repeater

- Repeats signals from Sensors and other Repeaters for superior scalability
- Receives readings from all FlashLink Wireless Sensors from up to 600 feet away
- Sends signals either to another Repeater or to a Receiver
- Up to 1,300 feet of networking distance from Repeater-to-Repeater or Repeater-to-Receiver



Channel Capacity	Hops through 25 channels. Features 7 different hop sequences
Enclosure (Casing)	High impact acrylonitrile butadiene styrene (ABS)
Frequency Control	Direct FM
Frequency Range	418 MHz(Rx) and 900MHz(Tx) unlicensed ISM Band
Accessories	6.5in (165mm) reverse polarity SMI antenna 9VDC power supply
Network Topology	Mesh networking
Power Supply	6W 9VDC 300mA 120V power supply with 2.5 mm x 5.0 mm x 9.5 mm output plug
Transmission Range	Indoor: 1300ft. (396 m) (max) (depending on environment)
Receiving Range (from sensor)	Indoor: 600ft. (183 m) (max) (depending on environment)
Size	4.25in (L) 3.25in (W) 1.375in (H) (108 x 83 x 35mm)
Tranceiver Type	Frequency hopping spread spectrum tranceiver

Rev. 08/11/06

## FlashLink® Wireless Ambient Temperature Sensor



**Model 20124**

- Highly reliable temperature measurements and data transmission
- Sends signal up to 600 feet distance to a 418MHz Receiver, or a 900 MHz Repeater with 900 MHz Receiver
- Low power consumption for years of non-stop operation before battery change
- Data is recorded and managed with FlashLink Wireless Manager Software

Temperature Measurement Range	-22°F to 185°F (-30°C to 85°C)
Temperature Accuracy	±0.9°F (±0.5°C) from 32°F to 185°F (0°C to 85°C) ±1.8°F (±1°C) < 32°F (0°C)
Temperature Resolution	0.1°F/°C
Battery Type/Life	CR2032 3-Volt Lithium/ (2 to 3 years in live mode)
Data Throughput	9600 or 19200 bps
Compliance	FCC Part 15
Enclosure (Casing)	High impact acrylonitrile butadiene styrene (ABS)
Frequency Control	Direct FM
Frequency Range	418 MHz, unlicensed ISM Band
Unique Identifier	22-character unique ID
Network Topology	Point-to-point transparent networking
Operating Temperature	-22°F to 185°F (-30°C to 85°C)
Tx (Transmission) Range	600ft (183 m) max.
Size	3.063in (L) 1.938in (W) 0.875in (H) (79 x 50 x 22 mm)
Transmitter Type	Internal loop antenna; 15 milliseconds transmission time at random intervals
Transmission Intervals	10 to 17 seconds random
Transport Protocol	Various monitoring and addressing modes

Rev 11/18/04

## FlashLink® Wireless Temperature & Humidity Sensor



Model 20126

- Highly reliable measurements and data transmission
- Sends signal up to 600 feet distance to a 418MHz Receiver, or a 900 MHz Repeater with 900 MHz Receiver
- Low power consumption for years of non-stop operation before battery change
- Data is recorded and managed with FlashLink Wireless Manager Software

Temperature Measurement Range	-40°F to 158°F (-40°C to 70°C)
Temperature Accuracy	±0.9°F (±0.5°C) from 32°F to 158°F (0°C to 70°C) ±1.8°F (±1°C) < 32°F (0°C)
Temperature Resolution	0.1°F/°C
Humidity Measurement Range	0% to 100% non-condensing
Humidity Measurement Accuracy	±5% from 20% to 80% from 32°F to 158°F (0°C to 70°C)
Battery Type/Life	3.6 volt Lithium/ (2 to 3 years in live mode)
Compliance	FCC part 15
Enclosure (Casing)	High impact acrylonitrile butadiene styrene (ABS)
Frequency Control	Direct FM
Frequency Range	418 MHz, unlicensed ISM Band
Unique Identifier	22-character unique ID
Network Topology	Point-to-point transparent networking
Operating Temperature	-40°F to 158°F (-40°C to 70°C)
Power Supply	Battery powered
Tx (Transmission) Range	600ft (183 m) max.
Size	3.063in (L) 1.938in (W) 0.875in (H) (79 x 50 x 22 mm)
Transmitter Type	Internal loop antenna; 15 milliseconds transmission time at random intervals
Transmission Intervals	10 to 17 seconds random
Transport Protocol	Various monitoring and addressing modes

Rev 11/19/04

## FlashLink® Wireless External Sharp Temperature Probe



Model 20129

- With external stainless steel sharp thermistor probe
- Low power consumption for years of non-stop operation before battery change
- Data is recorded and managed with FlashLink Wireless Manager Software
- Sends signal up to 600 ft. distance to a 418MHz Receiver, or a 900MHz Repeater with 900MHz Receiver

Temperature measurement range	-40°F to 185°F (-40°C to 85°C)
Temperature Accuracy	±0.9°F (±0.5°C)
Temperature Resolution	0.1°F/°C
Battery Type/ Life	3.6 volt ½ AA Lithium (6 to 10 years in live mode)
Compliance	FCC part 15
Enclosure (Casing)	High impact acrylonitrile butadiene styrene (ABS)
Frequency Control	Direct FM
Frequency Range	418 MHz, unlicensed ISM Band
Unique Identifier	22-character unique ID
Network Topology	Point-to-point transparent networking
Operating Temperature	-40°F to 185°F (-40°C to 85°C)
Power Supply	Battery powered
Probe	5.18 in. (132 mm) stainless steel thermistor sharp probe on 5ft. (1.5m) pvc cable
Tx (Transmission) Range	600ft (183 m) max.
Size	3.063in (L) 1.938in (W) 0.875in (H) (79 x 50 x 22 mm)
Transmitter Type	Internal loop antenna; 15 milliseconds transmission time at random intervals
Transmission Intervals	10 to 17 seconds random
Transport Protocol	Various monitoring and addressing modes
Weight	1.5 oz

Rev 11/12/04

## FlashLink® Wireless

### Dry-Ice (-80°C) Sensor with External Thermistor Probe

- Teflon-coated thermistor
- 9ft / 2.75m extension cable for easy probe placement
- Low power consumption for years of non-stop operation before battery change
- Data is recorded and managed with FlashLink Wireless Manager Software
- Communicate with 418MHz-in/900MHz-out repeater or 418MHz receiver from up to 600 feet away (repeater to receiver communication distance is scalable)



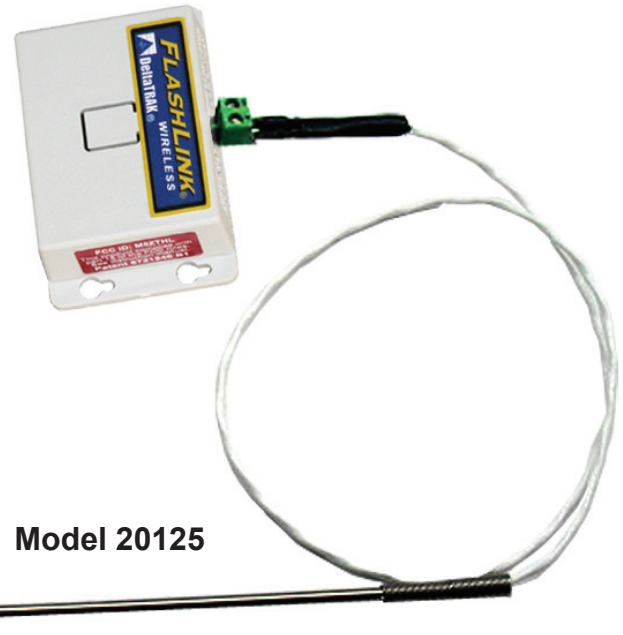
**Model 20151  
(418 MHz)**

Temperature Measurement Range	-112°F to 14°F (-80°C to -10°C)
Temperature Accuracy	±1.0°F (±0.5°C) from -22°F to -112°F or -30°C to -80°C ±2.7°F (±1.5°C) from 14°F to -22°F or -10°C to -30°C
Temperature Resolution	0.1°F/°C
Battery Type / Life	AA (1/2) 3.6Vdc Lithium/6 to 10 years in live mode)
Compliance	CE Mark, N.I.S.T. traceable and FCC part 15
Enclosure (Casing)	High impact Acrylonitrile Butadiene Styrene (ABS) plastic
Frequency Control	FM (Frequency Modulation)
Frequency Range	418 MHz or 902 - 928MHz , unlicensed ISM Band
Unique Identifier	22-character unique ID
Network Topology	Point-to-point transparent networking
Operating Temperature	-40°F to 185°F (-40°C to 85°C)
Probe (Material / Length)	Teflon sleeve covered sensor/4ft or 1.2m
Tx (Transmission) Range	600ft (183m) Line-of-Sight
Size	3.063in (L) 1.938in (W) 0.875in (H) (79 x 50 x 22 mm)
Weight	1.5 oz.
Transmitter Type / Timing	Frequency hopping spread spectrum/15 milliseconds transmission time at random intervals
Transmission / Logging Intervals	10 to 17 seconds random/Transmit reading every 1 min.
Transport Protocol	Various monitoring and addressing modes

09/06 Rev. 1.1

## FlashLink Wireless Ultra-Low Cryogenic Sensor

- Extenal stainless steel thermistor probe with 3" (76.2mm) teflon covered sensor
- Low power consumption for years of non-stop operation before battery change
- Send signal up to 600 feet (183 meters) distance to a 418 MHz receiver
- Data is recorded and managed with FlashLink Wireless Manager Software



Model 20125

Measurement Range	-328°F to -238°F (-200°C to -150°C)
Accuracy	±1.0°F (±0.5°C) from -328°F to -238°F (-200°C to -150°C)
Resolution	0.1° (F or C)
Battery Type/Life	3.6 Volt AA size Lithium battery ( 6 to 10 years in live mode)
Data Throughput	9600 or 19200 bps
Compliance	N.I.S.T. traceable, FCC part 15
Enclosure	ABS plastic
Frequency Control	FM
Frequency Range	418 MHz
Unique Identifier	22-character unique ID
Network Topology	Point to point transparent networking
Operating Range	-40°F to 185°F (-40°C to 85°C)
Transmitting Range	600 feet (183 meters) line of sight depending on environmental conditions
Size	3.063in (L) 1.938in (W) 0.875in (H) (79 x 50 x 22 mm)
Transmitter Type	Frequency hopping spread spectrum transmitter
Transmission Interval	10 to 17 seconds random
Transport Protocol	Various monitoring and addressing modes

Rev 06/26/2009