

# Communication Hardware

## A-910-2.4ZB

### A-910 (900 MHz and 2.4 GHz)

### R-358 Computer Interface

*Computer interface and new wireless receiver technology*

#### A-910-2.4ZB Wireless Computer Interface

The A-910-2.4ZB computer interface is a small, compact USB dongle wireless receiver that communicates with up to 99 2.4GHz ZigBee® targets with a wireless range of up to 200 ft. (60 m). Power is supplied by the laptop computer's USB port and the system IDs can be changed in the software, unlike those of the A-910-900/2.4, which are changed via switch settings.



A-910-2.4ZB

#### A-910 Radio Transceiver/Hub (900 MHz and 2.4 GHz)

Hamar Laser's A-1519/1520 Type II Universal Wireless Targets incorporate a built-in radio transceiver, available in 900 MHz or 2.4 GHz ISM band. Operating through the A-910 Radio Transceiver/Hub, up to 99 Type II Targets may be connected as a Target System Group, and up to ten Target System Groups consisting of 99 targets per group may be used at one time. Power is supplied by a 3.5 volt lithium ion, rechargeable battery or by the computer's USB port. When connected to the USB port, the battery charges automatically.



A-910 Transceiver/Hub (900 MHz/2.4 GHz)

The 900 MHz model has an indoor range of 300 ft. (91m) and the 2.4 GHz model has an indoor range of 600 ft. (183 m). Data transmission is 4 mW and 50 mW respectively.

#### R-358 Computer Interface

The R-358 computer interface provides exceptionally high resolution (.00001 in. or 0.25 microns) for downloading target data to Hamar Laser's alignment software. The interface attaches to the computer with an RS-232 cable, and it is powered by a lithium ion battery for long life and usage. An AC adapter/charger is provided, and the unit features LED charging and power indicators. Also available is a standard-resolution version (.0001 in. or 2.5 microns). The R-358 interface can support two single-axis or dual-axis targets, (a 10 ft. splitter cable is available as an accessory for operating dual-axis targets) or one 4-axis target.



R-358 Computer Interface

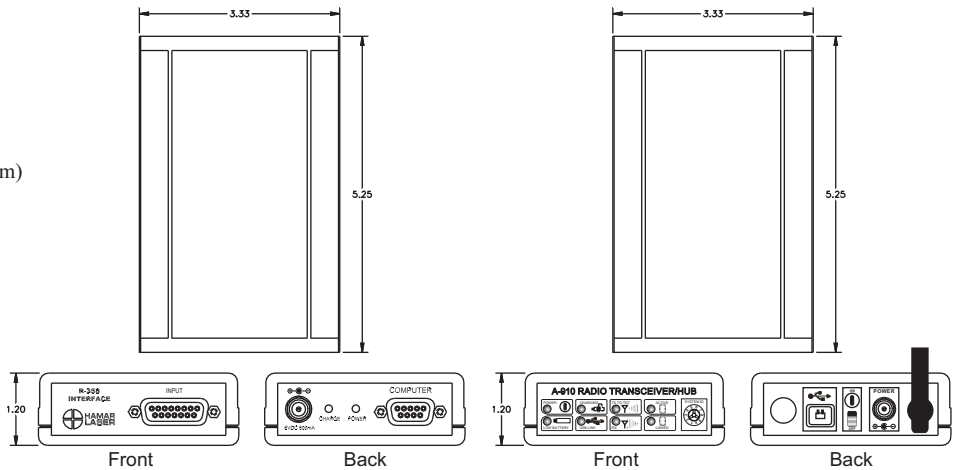


# Specifications

## A-910-2.4ZB Computer Interface A-910 Transceiver/Hub R-358 Computer Interface

### A-910-2.4ZB

**RF Data Rate:** 250 kbps  
**Wireless Range:** Up to 200 ft. (60 m) outdoors.  
 Indoor range may be less depending on obstructions and interference.  
**Transmit Power:** 1.25 mW (+1 dBm)/2 mW (+3 dBm) boost mode  
**Serial Interface:** 3.3V CMOS UART  
**Frequency Band:** 2.4 MHz  
**Certification:** FCC (US): OUR-XBEE  
 IC (Canada) 4214A-XBEE  
 ETSI (Europe)  
 C-Tick (Australia)  
 Telec (Japan)  
**Weight:** 3 oz. (85 grams)  
**Dimensions:** 1.75 x 1.25 in. (44 x 32 mm)



### A-910 Transceiver/Hub (900 MHz/2.4 GHz)

**Size:** 3.33 in. W x 1.20 in. H x 5.25 in. D (84.6 mm x 304.5 mm x 133.4 mm)  
**Weight:** 8.8 oz. ( 249.5 grams)  
**Power:** 3.5 V, lithium ion rechargeable battery or computer's USB port  
**Battery life:** 8 hours continuous operation  
**Radio Specifications:**  
 Indoor Range **900 MHz model:** Up to 300 ft. (91 m) **2.4 GHz model:** Up to 600 ft. (183 m)  
 Transmit Power **900 MHz model:** 4 mW **2.4 GHz model:** 50 mW  
 Radio Frequency **900 MHz model:** 902-928 MHz, Frequency Hopping **2.4 GHz model:** 2.4000-2.4835 GHz, Frequency Hopping  
 Certification **900 MHz model:** FCC (US): OUR-9XCITE; IC (CANADA): 4214A-9XCITE; CE: Not approved  
**2.4GHz model:** FCC (US): OUR-24XTREAM; IC (CANADA): 4214A 12008; CE: ETSI

### R-358

**Size:** 3.33 in. W x 1.20 in. H x 5.25 in. D (84.6 mm x 304.5 mm x 133.4 mm)  
**Weight:** 8.8 oz. ( 249.5 grams)  
**Power:** 3.5V, 1350 mAh lithium ion rechargeable battery  
**Battery life:** 8 hours continuous operation  
**Resolution:** .00001 in. (0.25 microns)

#### Agency Certifications for the 900 MHz Radio Transceiver

FCC (United States of America) Certification

Contains FCC ID: OUR-9XCITE

The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) This device must accept any interference received, including interference that may cause undesired operation.

**▲ RF EXPOSURE WARNING:** This equipment is approved only for mobile and base station transmitting devices, separation distances of (i) 20 centim or more for antennas with gains < 6 dBi or (ii) 2 m or more for antennas with gains ≤6 dBi should be maintained between the antenna of this device and nearby persons during operation. To ensure compliance, operation at distances close than this is not recommended.

IC (Industry Canada) Certification

Contains Model 9XCite Radio (900 MHz), IC: 4214A-9XCITE

#### Agency Certifications for the 2.4 GHz Radio Transceiver

FCC (United States of America) Certification

Contains FCC ID: OUR-24XTREAM

The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) This device must accept any interference received, including interference that may cause undesired operation.

**▲ RF EXPOSURE WARNING:** This equipment is approved only for mobile and base station transmitting devices, separation distances of (i) 20 centimeters or more for antennas with gains < 6 dBi or (ii) 2 m or more for antennas with gains ≤6 dBi should be maintained between the antenna of this device and nearby persons during operation. To ensure compliance, operation at distances close than this is not recommended.

IC (Industry Canada) Certification

Contains Model 24XStream Radio (2.4 GHz), IC: 4214A-12008

Complies with IC ICES-003

CE

Complies with ETSI. France: France imposes restrictions on the 2.4 GHz band. Go to [www.art-telecom.fr](http://www.art-telecom.fr) or contact MaxStream\* for more information. Norway-Norway prohibits operation near Ny-Alesund in Svalbard. More information can be found at the Norway Posts and Telecommunications site ([www.npt.no](http://www.npt.no)).

Since the 2.4 GHz band is not harmonized throughout Europe, other restrictions may apply to your country.

#### Agency Certifications for the XBee® 802.15.4 Series 1

FCC (United States of America) Certification

Contains FCC ID: OUR-XBEE

IC (Industry Canada) Certification

Contains Model XBee 802.14.4 IC:4214A-XBEE

Complies with ETSI (Europe), C-TICK (Australia) and Telec (Japan)

#### Technical Data:

OEM radio transceiver, model number: 24XStream

Frequency band: 2400.0 - 2483.5 Mhz

Modulation: Frequency shift keying

Channel spacing: 400 kHz

ITU classification: 400KF1D

Output power: 100 mW EIRP max.

Notified body number: 0891

\*The radio transceiver contained in the A-1519/20 Unitarget is manufactured by MaxStream\*. For more information pertaining exclusively to the radio transceiver, please contact MaxStream at (800) 765-9885 or visit their website