

# The A-1519 and A-1520 Series Type II Universal Wireless Targets

*The most accurate, versatile, easy-to-use targets available now operate in both single and dual-axis modes!*

## Target features

- Hamar Laser's new A-1519 and A-1520 Type II Universal Wireless targets operate in both single and dual axis modes (depending on the readout used) and are available in frequencies of 900 MHz or 2.4 GHz.
- In single axis scanning mode, the targets can be used with Hamar Laser's continuously sweeping lasers (L-730/L-740 series) for measuring the flatness, straightness, squareness and parallelism of both machine tools and rolls. Either the R-1310-900 PDA Readout (displaying simultaneous readings from up to four targets) or the new R-1307 Readout (displaying readings from up to two targets) may be used in single-axis mode.
- When the targets operate in dual axis mode with the L-705 Bore Laser, the new R-1307 Universal Readout must be used.
- The targets provide wireless radio communication with up to a 1-inch (25 mm) measuring range, an electronic "zero" function and an operating range of 100 feet (30.5 mm) from laser to target. The A-1519 has a resolution of .00002" (0.5 microns). For applications where greater accuracy is needed, such as surface plates, the A-1520 has a resolution of .00001" (0.25 microns).
- The targets feature fully linearized, position-sensitive detectors with automatic background-light correction for extremely accurate readings.
- Both the A-1519 and A-1520 can easily be converted to a height gage, as the center of the target has been set to a tightly-controlled dimension. Attach the 2.565" spacer to the base of the target and the *exact dimension* from laser plane to the measured surface can be obtained. Optional precision spacers are available in 1", 2" 3" and 6" sizes, all of which are accurate to .0003" (0.0075 mm).
- The A-1519 and A-1520 packages include the target, a magnetic base, a 2.565" precision spacer with spherical tip and three insert posts (6.25", 4", and 2" or 158.8 mm, 101.6 mm and 50.8 mm) for coarse height adjustment.
- The targets require the R-1310 PDA Receiver or the A-910 Computer Radio Base Station (900 MHz or 2.4 GHz) to display target data in single-axis mode. Both radio transceivers have frequency hopping to minimize interference from other devices using the same or similar frequencies. Targets can change channels within their frequency range so two or more independent systems can be used in the same working area without interfering with each other.
- Completely automatic on/off operation with no switches, wires or connections. The target activates when the laser beam sweeps across the target cell and flashing target indicators provide immediate "off target" status.
- Powered by two internal lithium ion batteries for long life and usage. Comes with AC adapter/charger, low battery and charging indicators. Targets can also be charged with the optional A-1519CS-4 Charging Station that charges up to 4 targets simultaneously.
- Communication working distance (PDA/PC Base Station to target) is 300 feet (91 M) maximum.



## A Wireless Alignment System

*With the PDA, up to 4 targets (99 with the A-910) can function simultaneously with any of Hamar Laser's continuously sweeping lasers in single-axis mode. The wireless targets operate with a robust, frequency-modulated, radio transceiver that captures target data for use with Hamar Laser's alignment programs. The software features include single or multi-plane capabilities, multiple surface configurations, squareness and parallelism analysis and other powerful capabilities.*



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# Specifications

## The A-1519 and A-1520 Wireless Targets

### General:

<b>Size:</b>	2.00" W x 4.11" H x 1.75" D (50.8 mm x 104.4 mm x 44.5 mm)
<b>Weight:</b>	13.5 oz. (383 grams)
<b>Target Angle Acceptance Range:</b>	± 10°
<b>Power Supply:</b>	7.5-12vDC, 500mA
<b>Battery Life:</b>	11.5 hours continuous duty (900 MHz) 7.5 hours continuous duty (2.4 GHz)
<b>Operating Temperature:</b>	5° F to 140° F (-15° C to 60° C)
<b>Detector Size/Type:</b>	2-Axis PSD 1.3" x 0.51" (33 mm x 13 mm)
<b>Operating Range:</b>	100' from laser to target
<b>Spherical Tip Size:</b>	.620" diameter x 2.565" long (15.75 mm x 65.15 mm)
<b>Spherical Tip Weight:</b>	3.2 oz. (90.7 grams)
<b>Magnetic Base Size:</b>	2.00" W x 3.09" H x 4.14" D (50.8 mm x 78.5 mm x 105.2 mm)
<b>Magnetic Base Weight:</b>	2.78 lb. (1.26 Kg)

### Accuracy:

Model Number	Sensor Resolution	Linearized Accuracy	Measuring Range
A-1519	0.00002" 0.0005 mm	0.00015" 0.0035 mm	1.0" 24 mm
A-1520	0.00001" 0.00025 mm	0.00006" 0.0015 mm	0.2" 5 mm

Measuring range may be limited by obstructions, antenna type and orientation.  
Outdoors line-of-sight range, with dipole antenna, may be greater.

Radio Specifications	900 MHz Models A-1519-900 A-1520-900	2.4 GHz Models A-1519-2.4 A-1520-2.4
<b>Indoor Range</b>	Up to 300' (91 M)	Up to 600' (183 M)
<b>Transmit Power</b>	4 mW	50 mW
<b>Radio Frequency</b>	902-928MHz, Frequency Hopping	2.4000-2.4835 GHz, Frequency Hopping
<b>Certification (see certification details)</b>	FCC (US): OUR-9XCITE IC (CANADA): 4214A-9XCITE CE: Not approved	FCC (US): OUR-24XSTREAM IC (CANADA): 4214A 12008 CE: ETSI

#### 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 centimeters or more for antennas with gains < 6 dBi or (ii) 2 meters 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-24XSTREAM

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 meters 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.

#### 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 ([www.maxstream.net](http://www.maxstream.net)).

