

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 A-1519-2.4ZB and A-1520-2.4ZB Type II Universal Wireless targets operate in both single and dual axis modes (depending on the readout used) and are now available with ZigBee® radio technology.
- 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. Several options are available to display the target data: the R-1356-2.4ZB Rugged PDA display, the R-1307-2.4ZB Readout, the R-1307W-2.4ZB Readout or the R-1308 Readout.
- The targets can also be used in dual-axis mode with our L-705/706/708 Bore lasers for steam turbine applications. The R-1307W-2.4ZB or R-1307-2.4ZB are used to display the data.
- The targets provide up to a 1-in. (25 mm) measuring range, an electronic "zero" function and an operating range of 100 feet (30.5 m) from laser to target. The A-1519 has a resolution of .00002 in. (0.5 microns). For applications where greater accuracy is needed, such as surface plates, the A-1520 has a resolution of .00001 in. (0.25 microns).
- The targets feature fully linearized, position-sensitive detectors with automatic background-light correction for extremely accurate readings. The A-1519 targets have an accuracy of +/- 0.00015 in. (0.0038 mm) and the A-1520 targets have an accuracy of +/- .00006 in. (0.0015 mm) over the central 80% of the sensor area.
- 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 in. 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 in., 2 in., 3 in. and 6 in. sizes, all of which are accurate to .0003 in. (0.0075 mm).
- The A-1519 and A-1520 packages include the target, a magnetic base, and three insert posts (6.25 in., 4 in., and 2 in. or (58.8 mm, 101.6 mm and 50.8 mm) for coarse height adjustment.
- 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.
- Data from the target is transmitted wirelessly to the PDA or readout using ZigBee radios with a range of up to 133 ft. (40 m) maximum.



A Wireless Alignment System

With the PDA, up to 5 targets (99 with the A-910-2.4ZB) can function simultaneously with any of Hamar Laser's continuously sweeping lasers in single-axis mode. The wireless targets transmit target data for use with Hamar Laser's alignment programs.



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Specifications

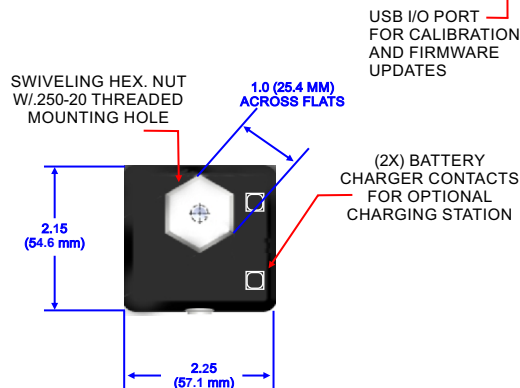
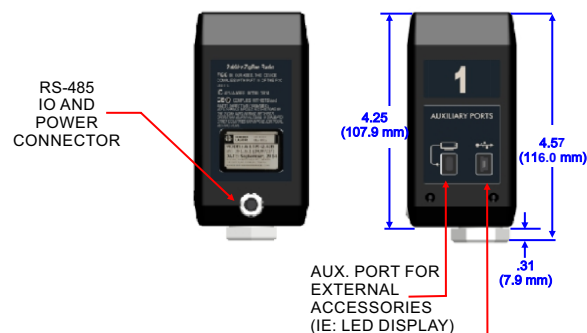
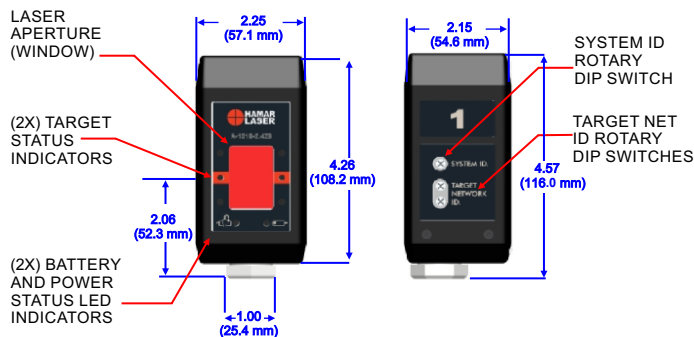
The A-1519-2.4ZB and A-1520-2.4ZB Wireless Targets

| General: | |
|---------------------------------------|--|
| Size: | 2.25 W x 4.26 H x 2.15 D in. (57.2 x 108.2 x 54.6 mm) |
| Weight: | 13.5 oz. (383 grams) |
| Target Angle Acceptance Range: | ± 10° |
| Power Supply: | 7.5-12VDC, 500mA |
| Battery Life: | 11.5 hours continuous duty |
| Operating Temperature: | 5° F to 140° F (-15° C to 60° C) |
| Detector Size/Type: | A-1519: 2-Axis PSD 1.3x0.51 in. (33x13 mm) A-1520: .39x.39 in. (10x10 mm) |
| Operating Range: | 100 in. (30.5 m) from laser to target |
| Auto On/Off Power: | Targets automatically turn on when the laser beam sweeps across the target and turn off when the laser stops sweeping. |
| Magnetic Base Size: | 2.00 W x 2.53 H x 3.55 in. D (w/o T-screw) (50.8 x 64.2 x 105.2 mm (w/o handle) |
| Magnetic Base Weight: | 2.78 lb. (1.26 Kg) |

| Accuracy: | | | |
|--------------|---------------------------|----------------------------|----------------------|
| Model Number | Sensor Resolution | Linearized Accuracy | Measuring Range |
| A-1519 | 0.00002 in. 0.0005 mm | ±0.00015 in. ±0.0038 mm | ± .55 in. ± 14 mm |
| A-1520 | 0.00001 in. 0.00025 mm | ±0.00006 in. ±0.0015 mm | ± .1 in. ±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 | A-1519-2.4ZB A-1520-2.4ZB |
|------------------------|---|
| Indoor Range | 133 ft. (40 m) |
| Transmit Power | 1.25 MW (+1 dBm) / 2 mW (+3 dBm) boost mode |
| Radio Frequency | 2.4 GHz, DSSS (Direct Sequence Spread Spectrum) |
| Certification | 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) |



The R-1308 Auxiliary Readout attaches to the magnetic base post of Hamar Laser's Type II Wireless Unitargets (A-1519-2.4ZB and A-1520-2.4ZB) and operates using a direct connection to the target.