

*Highly accurate, wireless,  
versatile, easy-to-use scan targets  
for many different applications*

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

### Target features:

- ✦ Hamar Laser's A-1519-2.4XBE and A-1520-2.4XBE Type II Universal Wireless targets are high-resolution and high-accuracy wireless target for use with most of Hamar's straight-beam and scanning lasers. Both targets operate in either single or dual-axis modes.
- ✦ In single-axis scanning mode, the targets are used with Hamar Laser's continuously sweeping lasers (L-730/L-740 series) for measuring the flatness, straightness, squareness and parallelism of both machine tool linear and rotary axes, platens and rolls. Several options are available to display the target data: the R-1357-2.4XBE Rugged PDA display, the R-1307-2.4XBE Readout, the R-1307W-2.4XBE Readout or the R-1308 Readout.
- ✦ In dual-axis mode, the targets are used with our straight-beam lasers, such as the L-702SP/L-703S/L-705/706/708 for gas steam turbine applications. The 1307W-2.4XBE or R-1307-2.4XBE are used to display the data.
- ✦ The targets provide a measuring range of  $\pm .55$  in. ( $\pm 14$  mm) 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), and the A-1520 has a resolution of .00001 in. (0.25 microns).
- ✦ The targets feature super-linear, fully linearized, position-sensitive detectors (PSDs) with automatic background-light correction for extremely accurate readings. The A-1519 has an accuracy of  $\pm .00015$  in. ( $\pm 0.0038$  mm) and the A-1520 has an accuracy of  $\pm .00006$  in. ( $\pm 0.0015$  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 precision 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.
- ✦ 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 XBee® 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-910-2.4XBE) can function simultaneously with any of Hamar Laser's continuously sweeping lasers in single-axis mode.*



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# Specifications

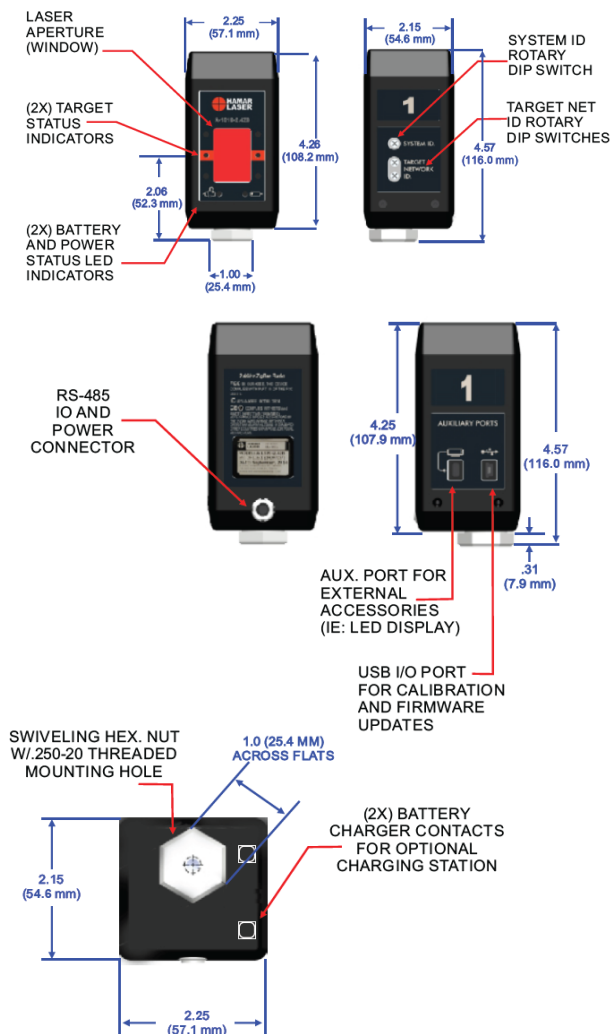
## The A-1519-2.4XBE and A-1520-2.4XBE Wireless Targets

### 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:	35° F to 140° F (2° 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	.00002 in. (0.0005 mm)	±.00015 in. (±0.0038 mm)	± .55 in. (± 14 mm)
A-1520	.00001 in. (0.00025 mm)	±.00006 in. (±0.0015 mm)	± .1 in. (±2.5 mm)



Radio Specifications	A-1519-2.4XBE A-1520-2.4XBE
Indoor Range	133 ft. (40 m)
Transmit Power	+8dBm (6.3mW)
Radio Frequency	2.4 GHz, DSSS (Direct Sequence Spread Spectrum)
Certification	FCC ID: MCQ-XBEE3. Complies with FCC rules, Part 15 CE: Complies with ETSI (Europe) IC ID: 1846A-XBEE3 (Canada) RCM/R-NZ (Australia/New Zealand) ANATEL 06329-18-01209 (Brazil) TELEC [R] 210-119309 (Japan)



*The R-1308 Auxiliary Readout attaches to the target's magnetic base post and connects directly to the target.*