

## CREDENTIALS FOR UHF READERS LR-2000 & UA-612

### VEHICLE MOUNT OPTIONS



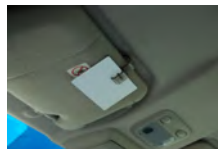
#### WS-UHF-0-0 Windshield Tag

- Self-adhesive tag applied inside windshield
- Hands-free vehicle identification
- Secure tag permanently attached directly on glass
- Out of driver's vision – smaller than a business card



#### RV-UHF-0-0 Rearview Mirror Tag

- Self-adhesive tag applied to rearview mirror frame
- Hands-free vehicle identification
- Secure tag permanently attached on inside mirror
- Almost invisible – tag's black side faces windshield



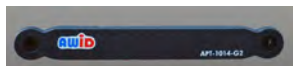
#### VT-UHF-0-0 Sunvisor Tag

- Clip-on tag for sunvisor – reads through windshield
- Quick access – driver lowers sunvisor to read tag
- Hangs from plastic clip – out of sight between reads
- Easily moved from one vehicle to another by user



#### HT-UHF-0-0 Hangtag

- Hook-on tag – hangs on post of inside mirror
- Hands-free vehicle identification
- Visible through windshield for printed identification
- Can be moved to other vehicles or hidden from view



#### MT-UHF-0-0 "Metal-Mount" Tag

- Variety of uses – inside or outside, fixed or movable
- Attached by self-adhesive, or fasteners, or Velcro
- Best tag for trucks & buses – tag facing side of lane
- Suitable for requirements of diverse applications

### HANDHELD OPTIONS



#### CS-UHF-0-0 Clamshell-Type Card

- Rugged hand-held card for LR-2000 & UA-612 readers
- Squeeze between thumb & finger – aim outside window
- For vehicle gate access and/or personal door access
- Multi-purpose – vehicle ID, door access, company logo



#### GR-UHF-0-0 Graphics-Quality Card

- Printable hand-held card for LR-2000 & UA-612 readers
- Squeeze between thumb & finger – aim outside window
- For vehicle gate access and/or personal door access
- Multi-purpose – vehicle ID, door access, photo ID badge



The RFID with Best ROI™

**Slots and Holes**

- Vehicle-mounted tags – up to 15 feet (4.6 m).
- Hand-held cards – up to 15 feet (4.6 m).

**Reader Selection**

- Vehicle-mounted tags – use with LR-2000 reader only.
- Hand-held cards – use with both LR-2000 and UA-612 readers.

**Technology in Tags and Cards**

UHF communications between LR-2000 (or UA-612) reader and credentials.

- Excitation frequency: - 902 MHz to 928 MHz, frequency-hopping in 50 channels with pseudo-random pattern; 500 kHz channel spacing.
- Read repetition rate: - About 3 reads per second (factory default; field-programmable to slower repeat rates).

**Encoding for Tags and Cards**

- Code format types: - Wiegand-type for general use; other types for proprietary formats.
- Code format options: - Number of bits – between 26 and 50 bits total. Open code formats with 26 bits and 37 bits. Reserved facility codes in special 34-bit format.

**Information Required in Purchase Order**

- Product part number and quantity.
- Code format name (*nn-bit-fff*, where *nn* = total number of bits, and *fff* = 3 letters that designate AWID’s format assignment).
- Facility code (also called site code and company code).
- Starting and ending numbers for sequential individual identification numbers for the credentials.

**Environmental Conditions**

- Operating temperature: -31 F to +150 F (-35 C to +65 C).
- Operating humidity: 0% to 95% non-condensing.
- Exposure to sunlight: If possible, remove tags and cards from direct sunlight inside closed vehicles in hot environment.

	Width	Height	Thickness	Notes	Material
<b>WS-UHF-0-0</b>	4" inch	1-1/16 inch	1/32 inch	Peel off label	Polyester
<b>RV-UHF-0-0</b>	4-1/2 inch	1-1/2 inch	1/32 inch	Peel off label	Polyester
<b>VT-UHF-0-0</b>	4-1/2 inch	2-3/8 inch	1/16 inch	Plus clip	Polyester
<b>HT-UHF-0-0</b>	2-1/6 inch	6-11/16 inch	1/16 inch	Includes hook	Polyester
<b>MT-UHF-0-0</b>	8 inch	15/16 inch	¼ inch	Peel off label	ABS
<b>CS-UHF-0-0</b>	3-3/8 inch	2-1/8 inch	0.075 inch	1 side beveled	PVC & ABS
<b>GR-UHF-0-0</b>	3-3/8 inch	2-1/8 inch	0.030 inch	ISO specs	PVC

**Slots and Holes**

- WS-UHF, RV-UHF, HT-UHF: Must have no slots or holes, punched or drilled.
- VT-UHF: Contains a slot for the supplied sunvisor clip.
- MT-UHF: Contains holes at the ends for screws, rivets, wire ties. Must not be punched or drilled.
- CS-UHF: Contains a molded slot for strap-clip or ball-chain.
- GR-UHF: May be punched or drilled *only* at the precise locations shown on the instructions that are included in the shipment.

**Applications**

- Credentials may be used on cars, trucks and buses of all sizes, and on special vehicles (fire trucks, forklifts, etc.).
- If the vehicles are a mix of different vehicle sizes, such as passenger cars and semi-trailer trucks), use the LR-2000HiLoMA reader set. Select the tags and cards that are appropriate for the application.
- CS-UHF and GR-UHF cards may be hand-held and aimed through the driver’s side window. The same cards may also be hand-held for access to doors in a building using the UA-612 switchplate-type reader.

**Installation Guidelines for Credentials with LR-2000 Reader**

- When planning the installation, the important relationships between the readers and credentials are their locations, distances and aiming.
- Test the planned location of a reader using the LR-2000KIT to observe reads by the credentials.
- Locate the “sweet spot” for the tags, where most tags will read. This is typically at 10 feet to 15 feet, measured directly between the reader’s face and the tag.
- At the sweet spot, the tag must face the reader, and be about parallel to it, with clear line of sight from the tag to the reader.
- Tag may be “portrait” or “landscape” or diagonal. Reading is best when the tag’s long end is nearest the reader as the vehicle approaches.
- When hand-holding a tag or card, keep your hand and body as far as possible from the tag, to the side of the tag, outside of the reader’s effective RF field.
- Before attaching the WS-UHF tag inside the windshield, clean the windshield inside and outside.
- For WS-UHF tags on side windows, place tags where the window does not retract into the door. Have the tag at the same height as the reader at the side of the lane.
- Test for metal foil or embedded wire in windshields. If necessary, use other tags or cards instead of WS-UHF windshield tags.
- Use windshield wipers to clear water or snow from the glass that is between the tag and the reader at the “sweet spot” distance.
- Prepare instructions for the users’ representative who will oversee tag attachment.

**Options and Accessories**

- **LR-2000KIT Installation Kit:** *Required* – a one-time purchase for the installer.
- **Custom graphics:** Available on all credentials except MT tags.
- For printing of custom artwork, please contact your AWID Representative.

