



D600 USERGUIDE

DURASCAN™

Bluetooth[®] wireless technology
Contactless Reader/Writer
Model D600

TABLE OF CONTENTS

Table of Contents	2
Package Contents	3
Product Information	4
Charge the Battery	6
Optional Charging Accessories	7
Powering on/off	8
Reading Tags	9
Bluetooth Connection Modes	10-11
Bluetooth Unpairing	12
Factory Reset	13
Auto Mode Charging Stand	14
Bluetooth ReConnection	15
Status Indicators	21-24
Product Specifications	25-26
Helpful Resources	27
Safety and Handling Information	28
Bluetooth Device United States	29-30
Bluetooth Device Canada	31
Bluetooth Device Europe	32
Bluetooth Device Japan	33
Battery Warning Statements	34-35
Regulatory Compliance	36
Limited Warranty	37
Configuration Cards	38

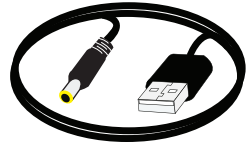
PACKAGE CONTENTS



DuraScan
D600



Lanyard

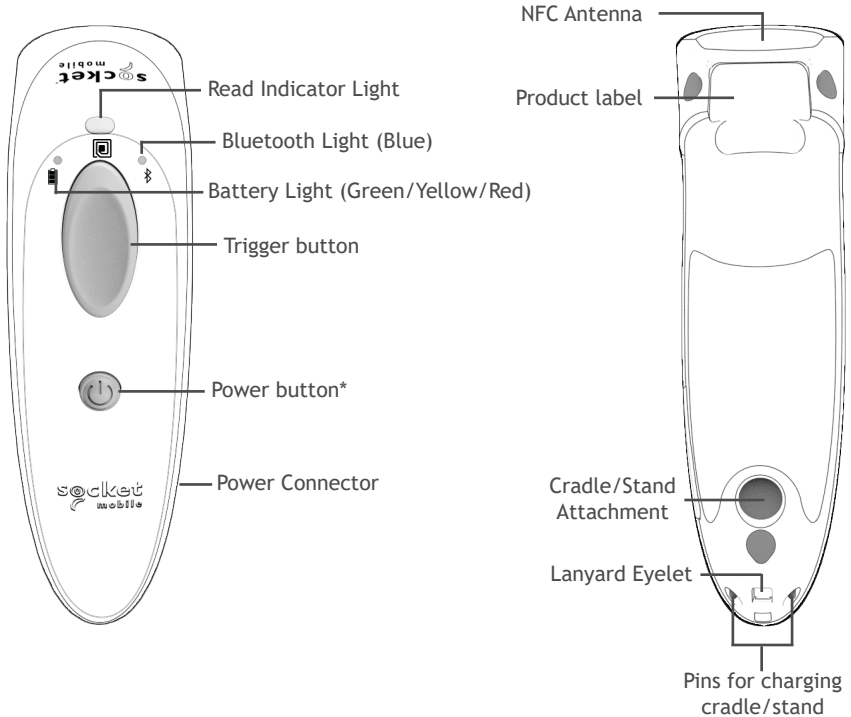


USB to DC Plug
Charging Cable

Thank you for choosing Socket Mobile!
Let's get started!

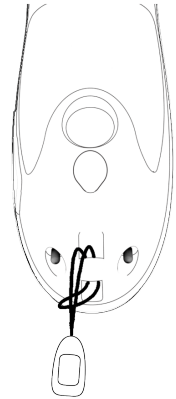
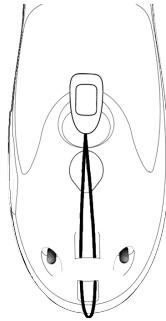
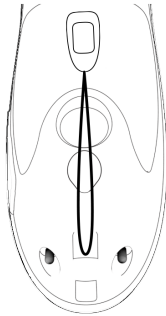
©2017 Socket Mobile, Inc. All rights reserved. Socket, the Socket logo, and SocketScan are registered trademarks or trademarks of Socket Mobile, Inc. The Bluetooth word mark and logo are registered trademarks of the Bluetooth SIG, Inc. USA, and any use by Socket Mobile, Inc. is under license. All other trademarks and trade names contained herein may be those of their respective owners.

PRODUCT INFORMATION



The D600 has a protection rating of IP54 for dust and water protection. It is also made with antimicrobial material to help provide protection against bacteria.

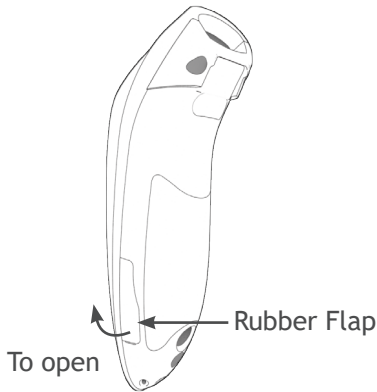
*Also used to display the on-screen keyboard in Basic Mode (iOS only).



Attach the Lanyard (optional)

1. Detach the string loop of the tether from the lanyard.
2. Feed the string loop through the eyelet.
3. Pull the gimbal through the string loop.
4. Pull tight so the string loop is secure.
5. Reattach the string loop's tether to the lanyard.


CHARGE THE BATTERY



The reader must be fully charged before first use. Please allow 6 hours of uninterrupted charging for the *initial* battery charge.

Lift the rubber flap to access the power connector.

- Yellow Light = Charging
- Green Light = Fully charged

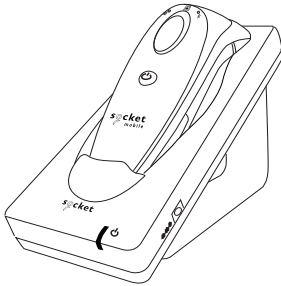
 **Important:** Charging from a computer USB port is not reliable and not recommended.

 The reader beeps twice (high-high tone) to indicate a valid power supply is detected and the reader has started charging.

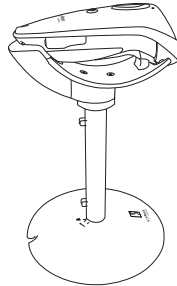
 Only use a USB to DC plug charging cable (with the yellow plastic tip, provided by Socket Mobile)

OPTIONAL CHARGING ACCESSORIES

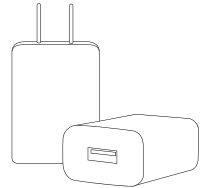
Available separately



Charging Cradle



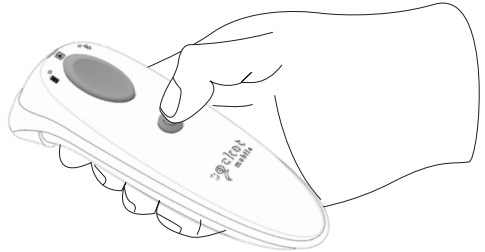
Charging Stand*



AC Power Supply
International Adapters
available

*Supports continuous read modes.

For all optional accessories visit our [Socket Store](#).



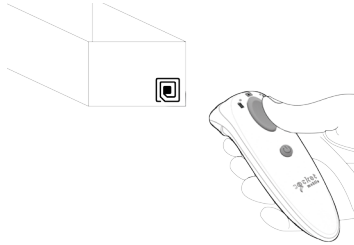
Powering On:

Press and hold down the small power button until the Battery light turns on and the reader beeps twice (low-high).

Powering Off/ Disconnecting:

Press and hold down the small power button until the reader beeps twice (high-low) and all lights turn off.

The reader will power off automatically if device is not connected within 5 minutes. Reader connected to a device will power off within 2 hours if idle/inactive.



Reading Tags

1. Hold the reader within two inches of the card, tag or smart device
2. The card, tag, or smart device should be parallel to the D600 antenna
3. Press the trigger button momentarily; the read indicator light turns orange while reading/pulling a tag.
4. Hold the reader steady until the read operation is complete (orange LED turns to green).

By default, the reader will beep, vibrate, and the read indicator will flash green to confirm a successful read.

BLUETOOTH CONNECTION MODES

Connect your reader using one of the following Bluetooth connection modes:



Bluetooth Connection Profiles

Bluetooth Mode	Description
Basic Mode (HID) (Default)* Human Interface Device Profile	<ul style="list-style-type: none">• NO software installation required• Connects to most devices• Good for RFID tags containing small amounts of data• Reader interacts with host device like a keyboard
Application Mode (RDR) Reader Only	<ul style="list-style-type: none">• Software installation is required• More efficient and reliable data communications for RFID tags containing lots of data• If you have an application that supports the Socket Mobile reader, this is the mode recommended
Application Mode (PC/SC) Personal Computer / Smart Card	<ul style="list-style-type: none">• SDK-enabled functions to support Read & Write capabilities

*By default, the reader is set to Basic Mode (HID).

BLUETOOTH CONNECTION MODES

Bluetooth Connection Mode button sequence will toggle the D600 between Mode B and Mode A.

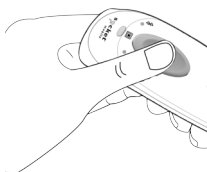


Follow the Bluetooth Connection Mode (button) sequence:

1. Power OFF the D600.



2. Press and hold the trigger button.



3. Press and hold the power button while continuing to press the trigger button. Hold both buttons for 10 seconds.

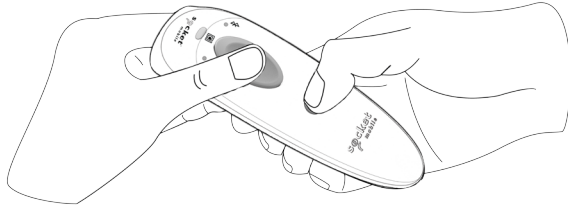


4. After 10 seconds, release both buttons. The D600 will play the Success Melody and it will be powered on and ready to pair in the new mode.

Note: If either button is released before 10 seconds, the D600 just performs a normal Power on.

Mode Indications:

- a. Mode B - two tones synchronized with two short vibrations and two green RFID LED flashes
- b. Mode A - three tones synchronized with three short vibrations and three green RFID LED flashes



Note: This procedure will put the reader in discoverable mode.

Step 1: Unpairing the reader: Delete the Bluetooth Pairing



If the reader is paired with a device, unpair it before trying to connect to a different device.

- a. Power on the reader.
- b. Press the trigger button then power button and hold both until you hear 3 beeps.

The reader will unpair and automatically power off. The next time you power on the reader, it will be discoverable.

Step 2: Remove or forget the reader from the Bluetooth list on the host device



Important: Both steps above must be done to complete the unpairing.

Factory Reset will restore the D600 to Factory Default settings (configured as shipped).

Follow the Factory Reset (button) sequence:

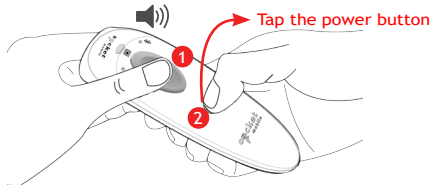
1. Power ON the reader.



2. Press and hold the trigger button.



3. Tap the power button once while continuing to press the trigger.



4. Keep holding the trigger button until you hear a beep (about 15 seconds).

When you release the trigger button you will hear 5 confirmation beeps.

The next time you power on the D600, it will take longer to start up. After it finishes powering on, it will have factory default settings (HID mode).

Note: If you follow this sequence but release the trigger button too early (before 15 seconds and the beep) the Factory Reset will fail.

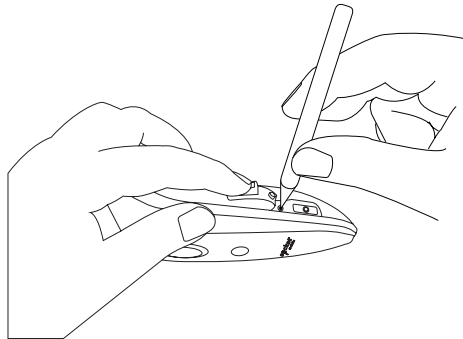
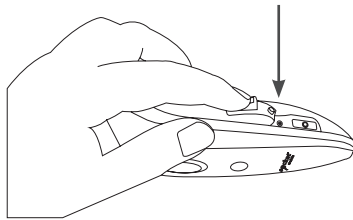
To cancel a firmware update and restore your previous state, follow the Rescue Mode (button) sequence:

1. Power Off the D600 and disconnect from external power (DC-in Jack, Charging Stand, Charging Cradle)

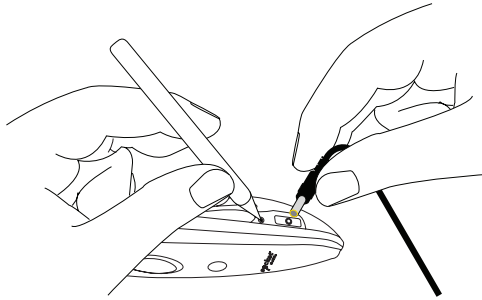


2. With the end of a pen, press and hold the Restore Button (located next to the power jack).

Restore Button



3. Connect the D600 to external power while holding the Reset Button for about one second.



4. When the D600 starts in Recover mode, the Power and RFID LEDs become solid red.

Note: It is possible to cancel the Recover (so the firmware update remains) by pressing the Power Button (instead of the Trigger Button) in Step 4. Then the D600 will perform a normal power on.

5. Remove the pen from the Restore Button.
6. Tap the Trigger Button to confirm the firmware recovers the previous Good Release state.



The D600 will rewrite its firmware. Power and RFID LEDs blink red for 16 seconds during the process, then the reader will restart.

AUTO MODE (CHARGING STAND)

If you have purchased the Socket Mobile Charging Stand, the D600 can both charge and read stationary in Auto Mode.

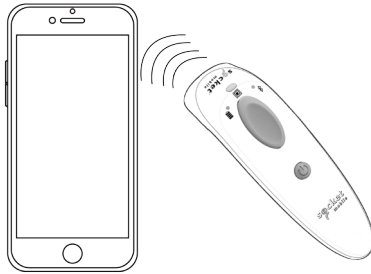
1. Pair and connect the D600 to your device prior to placing the reader in Auto Mode. The reader is not discoverable when in Auto Mode and in the Stand. This facilitates a fast connection to the current connected device when powered on (for example the start of the new business day).
2. The Trigger button must be pressed to disable Presentation Mode (and enable Mobile Mode) after the reader is removed from the Stand.
3. The reader will not turn off when its in Presentation Mode and in the Stand under AC Power.
4. To avoid excessive power drain, the reader should not be left out of the Stand in Auto Mode. Either press the Trigger button or Power off the reader.

Auto Mode (In the Stand)

Action	Behavior	Notification		
		Beep Pattern	Light Activity	Vibrate
Place Reader in the Stand	Reader switches to Presentation Mode	High-high tone confirms proper seating*	Battery Status Light is Disabled	None
Place an RFID tag in the Reader's Field of View	Initiate Read operation	1 Beep when Data successfully reads	Green Light blinks (while reading)	None

Mobile Mode (Not in the Stand)

Action	Behavior	Notification		
		Beep Pattern	Light Activity	Vibrate
Remove the Reader from the Stand and press the Trigger button	Reader switches to Mobile Mode	None	Battery Status Light is Enabled	Enabled
Press the Trigger button	Initiate Read operation	1 Beep when Data successfully read	Green Light blinks (while reading)	Vibrate when Data successfully read



Automatic Reconnections

Each time you power on the reader, it will automatically try to connect to the last device it was connected to.

- Make sure the device is in range with Bluetooth turned on.
- Pressing the trigger button will initiate the attempts to connect.
- If using Application Mode, make sure the Reader-enabled Application is launched or running.
- If a connection is made, the blue light will stop blinking and turn solid.
- If a connection is not made after several attempts, the reader will emit a long beep (and the blue light will turn off).

BLUETOOTH CONNECTION MODES

Operating System Connection Options

Operating Systems (OS)	Devices	Bluetooth HID Support	Bluetooth APP Support
Android	Android 4.4 & later	Yes	Yes
Apple iOS	iPod, iPhone, & iPad	Yes	Yes
Windows PC	Windows 7, 8, 10	Yes	No
Mac OS	Mac OS X 10.4 to 10.X Mac Books, Mac Mini, & iMac	Yes	No

Note: To switch from one mode to the other you must remove the pairing information from both devices - host computer and the reader. (see Bluetooth Unpairing procedure on page 12)



Android: Connect Android Device in Basic Mode

In this mode the reader functions and communicates similar to a keyboard. Therefore, the reader will work with Notes, and any other application that support an active cursor.

1. Power on the reader. Make sure the reader is discoverable (unpaired) The Blue light blinks fast.
2. Settings | Bluetooth.
3. Make sure the device has Bluetooth “On” and read for devices.
4. In the list of found devices, select D600 [xxxxxx]. Tap Pair.
5. The reader will connect to the Android device.
6. The reader will beep once after it has connected.

Note: The characters in bracket are the last 6 characters of the Bluetooth address.

**If you have trouble connecting or pairing with host device, turn host device’s Bluetooth off/on, and/or perform Factory Reset to the reader (see page 13).*

Now you are ready to read RFID tags!



Apple: Connect to Apple iOS Device or Mac OS Device Basic Mode

In this mode the reader functions and communicates similar to a keyboard. Therefore, the reader will work with Safari, Notes, and any other application that supports an active cursor.

1. Power on the reader. Make sure the reader is discoverable (unpaired). The Blue light blinks fast.
2. Start a Bluetooth device search.
 - Settings | Bluetooth: Turn on Bluetooth and search for device.
 - Mac OS: Click System Preferences | Bluetooth. A Bluetooth device search will begin.
3. In the device list, tap on D600 [xxxxxx]. Tap Pair.
4. The reader will connect to the Apple device.
5. The reader will beep once after it has connected.

Note: The characters in bracket are the last 6 characters of the Bluetooth address.

Now you are ready to read RFID tags!

To use the virtual keyboard while the reader is connected, double tap on the power button. See [YouTube video](#) for demonstration.



Windows: Connect Windows Device in Basic Mode

In this mode the reader functions and communicates similar to a keyboard. Therefore, the reader will work with Notes, and any other application that supports an active cursor.

1. Turn Bluetooth on for your device. Go to Settings > Bluetooth. A Bluetooth Devices search will begin.
2. Tap Socket D600[xxxxxx] in the list of Devices found. After a few seconds the “Not Paired” status will change to “Connected” or “Paired” and the reader blue light will stop blinking and turn solid blue.

Note: The characters in bracket are the last 6 characters of the Bluetooth address.

Now you are ready to read RFID tags!



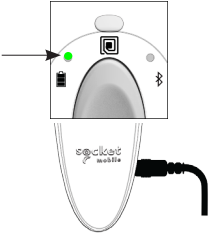
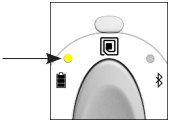
Connect Apple iOS device in Application Mode

Please check with your reader application vendor or visit www.socketmobile.com/appstore to confirm your reader-enabled application supports the reader.

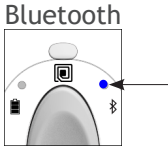
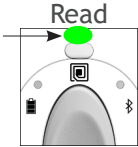
If you are using the reader with an Apple iOS device and a reader-enabled Application that does not provide instructions how to connect your reader, please use the following steps.

1. Power on the reader. Make sure the reader is discoverable (unpaired). The Blue light should be blinking fast.
2. Turn on Bluetooth on the Apple device. Go to Settings > Bluetooth. A Bluetooth Devices search will begin
3. Launch your reader-enabled Application. The reader will beep once indicating that it is connected to the appropriate application.

Now you are ready to read RFID tags!

Battery Charging when plugged into Power Supply	LED Activity	Meaning
	Blinking Yellow	Charging the battery
	Solid Green	Battery is 100% full
Battery Status When not connected to power supply	LED Activity	Meaning
	Solid Green	Battery capacity from 100% to 25%
	Solid Yellow	Battery capacity from 25% to 10%
	Solid Red	Warning - Battery capacity below 10%
	Blinking Red	Charge immediately! The battery level is critically low. Alternatively, if battery capacity is unknown battery status will blink red until the power is applied & reader is fully charged.

STATUS INDICATORS (CONTINUED)

Bluetooth	LED Activity	Meaning
 <p>Bluetooth</p>	Quick Blinking Blue (2 blinks every second)	Discoverable - waiting for a host Bluetooth connection.
	Slow Blinking Blue (1 blink every second)	Attempting to connect to a paired device. Searching the last known Host. Note: Will STOP attempting after approx. 1 minute.
	No Light - No Activity	Reader has attempted to connect and failed. Press trigger button to try again.
	Solid Blue	Reader is connected
Read	LED Activity	Meaning
 <p>Read</p>	Solid Orange	Reader is polling for an RFID
	Blink Green Once	Good Read
	Blink Red Once	Bad Read
	Solid Red - for as long as power button is pressed	Power Button Pressed
Quick Blinking Green (2 blinks every second)	Reader is in bootloader mode during firmware upgrade.	

STATUS INDICATORS (CONTINUED)

Beep Pattern	Sound Meaning
Low-High Tone	Power On
High-Low Tone	Power Off
High-High Tone	Power Supply detected and reader started charging
1 Low Beep	Reader has toggled on-screen keyboard or keyboard toggle feature is enabled (iOS devices only)
1 Beep	Reader connected to device and is ready to read tags
1 Beep	Data successfully read
2 Beeps (same tone)	Reader disconnected
1 Long Beep	Reader gave up searching for a host
3 Beeps (escalating tone)	Reader has been reconfigured (the configuration card successfully)
3 Beeps (escalating tone followed by long tone)	The configuration card did NOT work! (Verify if the configuration card used is valid for your reader and try again)

STATUS INDICATORS (CONTINUED)

Vibrate	Meaning
Short Pulse	Data successfully read
Medium Pulse	Power on
Long Pulse	Data unsuccessfully read



If you are using a reader-enabled application, typically the application provides settings for LED, beep, and vibrations.

Configuration Settings

Time after powering on Reader	Bluetooth mode
0-5 minutes	Discoverable and connectable
5 minutes	If connection is not made, reader powers off
2 hours	If your reader is connected but not used it will power off in 2 hours. When trigger button is pressed the timer is reset.

PRODUCT SPECIFICATIONS

Specifications	D600
Dimensions (L x W x H)	5.2" x 1.5" x 1.6" (132.2 x 37.1 x 40.1 mm)
Total Mass	3.8 oz (108 g)
Antimicrobial	Antimicrobial additive in external surfaces
Battery	1400 mAh Lithium - Ion Battery
Charge Time	6 Hours
Battery Life - Per Full Charge	Standby time: over 30 hours Active Read Time: 70,000 reads within 9 hours (based on 2 reads every 1 second) or 14,000 reads within 16 hours (calculation based on 1 read every 4 seconds) <i>Note: Battery life varies depending on operating conditions.</i>
Bluetooth Version	Bluetooth Low Energy v4.2
Bluetooth SIG	Design ID 83178
Wireless Range	330ft (100 m) line of sight
Reader Type	NFC/RFID (13.56 MHz)
HF RFID Tags Supported:	ISO15693: ICode SL2, LRI512, my-d, Tag-It HF-I Proprietary: ICode SL1, PicoTag (no anti-collision), Tag-It HF ISO/IEC 14443 A and B compliant tags with all variants (Mifare, Sony FeliCA) Compliant with EPC GEN 2 HF and ISO 18000-3 mode 3 ThinFilm: NFC Barcodes NFC: NFCIP-1, ISO/IEC 18092) in 2 modes: reader and peer-to-peer, initiator, passive

PRODUCT SPECIFICATIONS

Specifications	D600
Maximum RFID Read Range:	0.4" - 2" (10 - 50 mm)
NFC/RFID front-end:	NXP CLRC663
Carrier frequency:	13.56 MHz (RFID HF, NFC)
Card/tag Read/Write Speed:	264 kbps (ISO 15693), 1064kbps (ISO 14443, 212/424kbps (ISO 18092)
Antenna:	Integrated, 28mm x 14mm, balanced
Systems/Battery Charging Requirement	USB Type 5V 1A
Power Connector	EIAJ - 02 DC-in
Operating Temperature	-4° to 122° F (-20° to 50° C)
Storage Temperature	-40° to 158° F (-40° to 70° C)
Relative Humidity	95% at 140° F (60° C) (non-condensing), 4 days
Sealing	IP54 (Ingress Protection rating for dust and water) EN60529
Drop Specifications	Multiple 5 ft. drops to concrete
Tumble Specification	250 cycles at 1.64 ft. (0.5 m) (500 drops), IEC60062-2-31

Technical Support & Product Registration:

<https://support.socketmobile.com>

Phone: 800-279-1390 +1-510-933-3020 (worldwide)

Warranty Checker:

<https://www.socketmobile.com/support/warranty-checker>

Socket Mobile Developer Program:

Learn more at: <http://www.socketmobile.com/developers>

The User's Guide (full installation and usage instructions) and Command Tags (Advanced Reader Configurations) can be download at:

<https://www.socketmobile.com/support/downloads>



WARNING: Failure to follow these safety instructions could result in fire or other injury or damage to the tag readers or other property.

Carrying and Handling the DuraScan NFC/RFID Reader:

The Socket Mobile D600 contains sensitive components. Do not disassemble, open, crush, bend, deform, puncture, shred, microwave, incinerate, paint, or insert foreign objects into this unit.

Do not attempt to disassemble the product. Should your unit need service, contact Socket Mobile technical support at <https://support.socketmobile.com/>

Changes or modifications of this product, not expressly approved by Socket Mobile may void the user's authority to use the equipment.

Do not charge the DuraScan tag reader using an AC adapter when operating the unit outdoors, or in the rain.

Operating Temperature - this product is designed for a maximum ambient temperature of 50° C or 122° F.

Pacemaker Disclaimer: We do not have specific information on the effect(s) of vibration or Bluetooth devices on pacemakers.

Socket Mobile cannot provide specific guidance.

Individuals who are concerned with using the tag reader should immediately turn the device off.

FCC ID: LUBD600



Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. This 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

IC ID: 2529A-D600



Industrie
Canada

Industry
Canada

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CE Marking & European Union Compliance



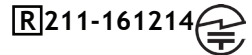
Products intended for sale within the European Union are marked with a CE Mark, which indicates compliance to applicable Directives and European Normes (EN), as follows. Amendments to these Directives or ENs are included: Normes (EN), as follows:

Applicable Directives:

- Bluetooth Products: R&TTE Directive 2014/53/EU
- Low Voltage Directives: 2014/35/EU, and 2006/95/EC
- EMC Directive: 2004/108/EU
- RoHS Directive: 2011/65/EU
- WEEE Directive: 2012/19/EU

SAFETY: EN 60950-1: 2006/A11
:2009/A1
:2010/A12
:2011/A2:2013

Telec Marking Compliance



Products intended for sale within the country of Japan are marked with a Telec mark, which indicates compliance to applicable Radio Laws, Articles and Amendments.

BATTERY WARNING STATEMENTS

This device contains a rechargeable Lithium-Ion battery.



Stop charging DuraScan D600 if charging isn't completed within the normal specified time (approx. 6 hours).

Stop charging the battery if the DuraScan D600 case becomes abnormally hot, or shows signs of odor, discoloration, deformation, or abnormal conditions is detected during use, charge, or storage.

Stop using the DuraScan D600 if the enclosure is cracked, swollen or shows any other signs of misuse. Discontinue immediately and promptly dispose of unit.

Your device contains a rechargeable Lithium-Ion battery which may present a risk of fire or chemical burn if mistreated. Do not charge or use the unit in a car or similar place where the inside temperature may be over 60 degrees C or 140 degrees F.

- Never throw the battery into a fire, as that could cause the battery to explode.
- Never short circuit the battery by bringing the terminals in contact with another metal object. This could cause personal injury, or fire, and could also damage the battery.
- Never dispose of used batteries with other ordinary solid wastes. Batteries contain toxic substances.

BATTERY WARNING STATEMENTS

- Dispose of used batteries in accordance with the prevailing community regulations that apply to the disposal of batteries.
- Never expose this product or the battery to any liquids.
- Do not shock the battery by dropping it or throwing it.



If this unit shows any type of damage, such as bulging, swelling or disfigurement, discontinue use and promptly dispose.

Product Disposal

Your device should not be placed in municipal waste. Please check local regulations for disposal of electronic products.

CE MARKING AND EUROPEAN UNION COMPLIANCE

Testing for compliance to CE requirements was performed by an independent laboratory. The unit under test was found compliant with all the applicable Directives, 2004/108/EC and 2006/95/EC.

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT

The WEEE directive places an obligation on all EU-based manufacturers and importers to take-back electronic products at the end of their useful life.

RoHS STATEMENT OF COMPLIANCE

This product is compliant to Directive 2011/95/EC.

NON-MODIFICATION STATEMENT

Changes or modifications not expressly approved by the party responsible for compliance.



Socket Mobile Incorporated (Socket) warrants this product against defects in material and workmanship, under normal use and service, for one (1) year from the date of purchase. Product must be purchased new from a Socket Authorized Distributor or Reseller. Used products and products purchased through non-authorized channels are not eligible for this warranty support.

Warranty benefits are in addition to rights provided under local consumer laws. You may be required to furnish proof of purchase details when making a claim under this warranty.

Consumables such as batteries, removable cables, cases, straps, and chargers: 90 day coverage only

For more warranty information, please visit:
<https://www.socketmobile.com/support/downloads>

CONFIGURATION CARDS

Read configuration card(s) to quickly configure the Reader.

Extend Your Warranty...



Receive Priority Service and Personal Care.

You have 60 Days from purchase date to enroll in a SocketCare Service Program!

For detailed information visit:

<https://www.socketmobile.com/socketcare>