



# **ESCORT iMINI USB *pdf*** **CRYOPAK iMINI USB *pdf***



## **User Guide**

**Ver. 2.0**

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# 1. Introduction

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Crypak Verification Technologies (CVT) offers a new advanced plug and play **USB** temperature data logger. The device is a true plug and play: it does not require any software to download the data. Data can be viewed and downloaded as **PDF, CSV & TXT** on PC, MAC, and ANDROID.

- Economical single use data logger
- Report output in .pdf, .csv & .txt format, no custom software required
- Smaller than a credit card; lays flat
- Durable lightweight; weighs less than 13 grams
- Easy programming with Console Plus software or pre-programmed
- LED indicators provide status alert of logger

The new iMINI USB *pdf* is now available for storage and transit temperature monitoring solutions. It is completely food safe with IP rating 65. The iMINI USB *pdf* is an internal temperature sensor data logger with four alarm conditions, start and stop buttons, and much more...

## 2. Safety Instructions

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In no circumstance should heavy force be applied to your iMINI USB *pdf* logger. Applying heavy force to any part of your iMINI USB *pdf* could result in logger malfunction and/or injury.



Your iMINI USB *pdf* logger should only be operated within the parameters specified in the technical data discussed within this user manual. A failure to follow these instructions could result in your iMINI USB *pdf* logger malfunctioning and cause permanent damage to the unit.



iMINI USB *pdf* loggers are vulnerable to damage when contact with water takes place. Please check your iMINI USB *pdf* loggers IP rating before placing your iMINI USB *pdf* logger in such conditions.



Your iMINI USB *pdf* logger is not to be subjected to a naked flame. Exposures to such conditions may damage the logger or possibly cause an explosion of the battery.



Never operate your iMINI USB *pdf* logger with a low battery.



Do not attempt to repair or modify any part of this logger. Such actions will result in a loss of warranty. All repairs are to be made by an official Cryopak Verification Technology service center.



The iMINI USB *pdf* logger has a one trip warranty. For more information refer page 16.



Battery life depends greatly on the temperature environment and recording frequency of your iMINI USB *pdf* logger.

### 3. Product Code

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The product code for CVT products is represented in a modular fashion to allow distributors and customers the possibility of easily recognizing and ordering a variety of different products.

***For ease of communication, the dashes within the product code may be omitted.***

The product codes of iMINI USB *pdf* Data Loggers have the following format:

**[XX] - [YY] - [T] - [M] - [Options]** (e.g. MS-ST-S-8)

✚ The initial letters “**XX**” indicates product family as detailed below:

MS	iMINI USB <i>pdf</i> ESCORT iMINI USB <i>pdf</i>	New generation Intelligent MINI plug and play
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The field “**YY**” represents the sensor combination code with following options:

ST	Single trip logger (usually with internal temperature sensor only)
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✚ The next field “**T**” identifies the temperature measurement range:

Code	Sensor location	Temperature range
S	internal	-40°C to +80°C

✚ “**M**” identifies the Memory capacity of the logger. The following options are available:

8	8K memory	Logger can store 7,928 data points
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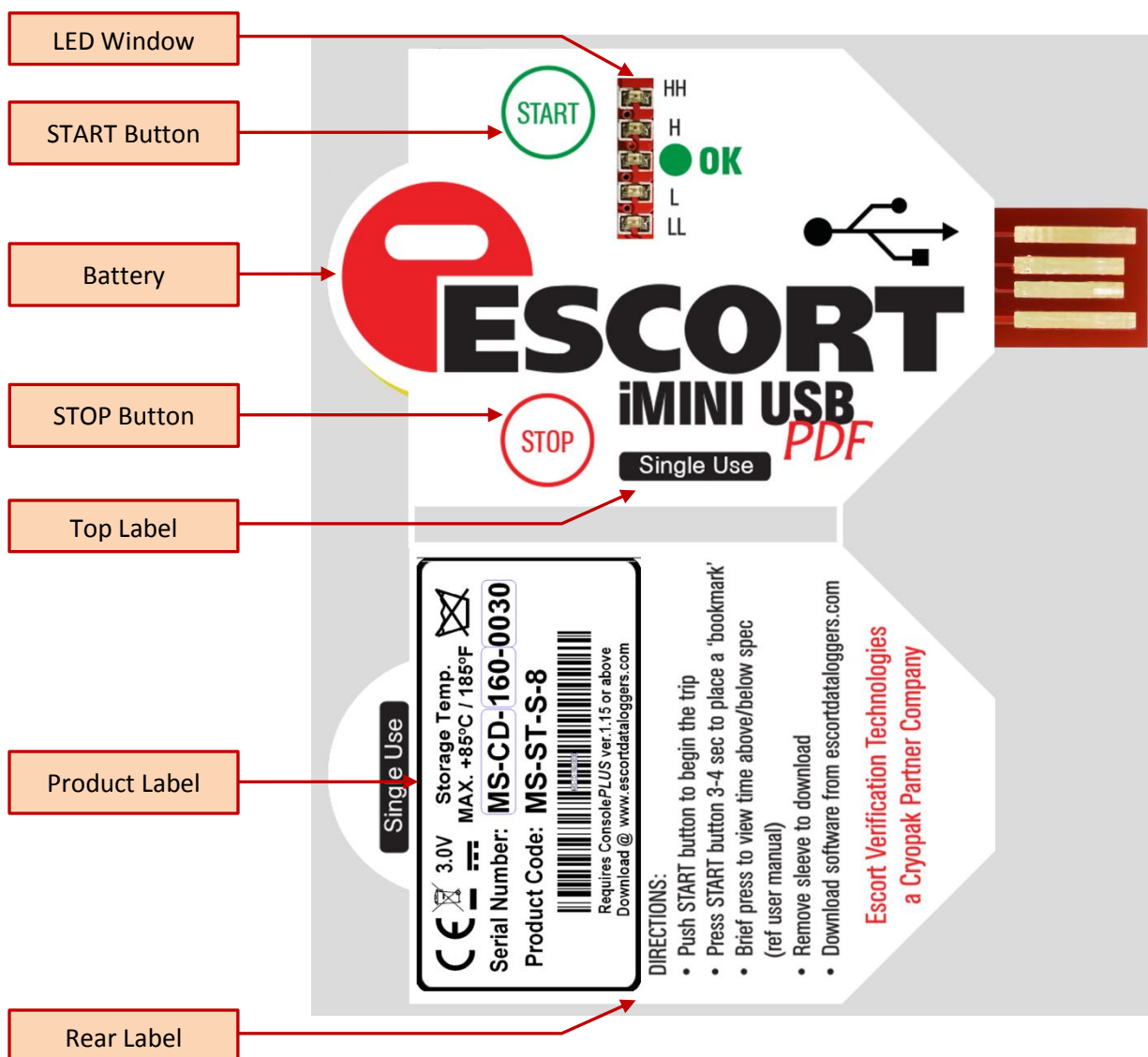
✚ “**Options**” identifies if the logger has built-in traceable calibration certificate

For pharma compliant units “P” is added with the product code i.e. MS-ST-S-8-P (21 CFR part 11 compliant)

The specification sheets detail in more depth which logger models are available with which memory options. All iMINI USB *pdf* data loggers are fitted with five LED's.

## 4. iMINI USB *pdf* Features

- Internal temperature sensor, single use plug and play PDF data logger
- Product label specifying product code and serial number plus bar coded serial number according to EAN 128.
- Five LED's displays temperature above or below specification, depending on the set alarm conditions. LOWLOW, LOW, OK, HIGH and HIGHHIGH
- Start the logger via START button immediately or with delay and pre-program to start at a specific date and time.
- Logging interval as low as 5 second per reading and as high as 17 hours



## 5. Size and Dimensions

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**Weight:** 13 grams (with protective sleeve)

## 6. Software

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All new products from CVT will be supported by *ConsolePlus*. Software has built-in auto update feature. When a new release is available it will prompt user to upgrade to newest version.

Setup file can be downloaded from [www.escortdataloggers.com](http://www.escortdataloggers.com)

For installation and program/download information refer to the *ConsolePlus* user Manual

No special software is required to view and download the data from iMINI USB *pdf* logger. It is a true plug and play logger, hence no device driver needed. Once plugged in, a computer recognizes the logger as a mass storage device named "iMINI USB". It contains two files:

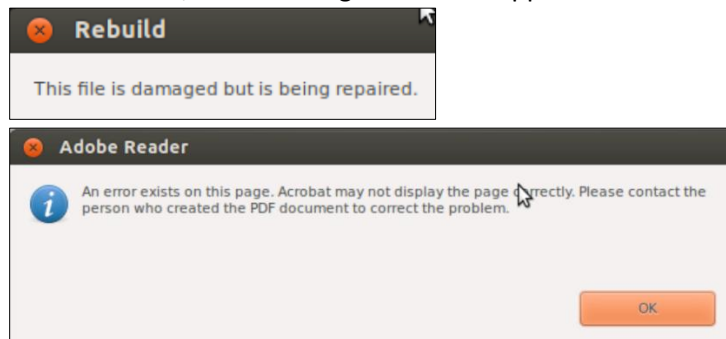
- |                  |  |
|------------------|--|
| 1. IMINI USB.CVT | User can open this file with <i>ConsolePlus</i> software   |
| 2. RECORD.PDF    | PDF file double click to open (adobe pdf or other pdf software must be installed to view the data) |

## 7.iMINI USB *pdf* minimum system requirements

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Operating System	PDF Software		
	Adobe Reader	Foxit Reader	Preview
Windows 2000 - Service Pack 4	Ver 9.0 or above	Ver 5.4.3 or above	N/A
Windows XP - Service Pack 2	Ver 9.0 or above	Ver 3.0 or above	N/A
Windows 7	Ver 11.0 or above	Ver 5.4.3 or above	N/A
Windows 8	Ver 11.0 or above	Ver 5.4.3 or above	N/A
Android - Ver 4.1.1	Ver 10.6.1 or above	Ver 1.7.0.0809 or above	N/A
MAC OSX -Ver 10.7.5	N/A	N/A	5.5 or above
Linux -Ubuntu Ver 12.04	Ver 9.5.5 or above*	N/A	N/A

\*with Linux OS, error messages as below appears which does not affect the data or pdf





## 8. Accessories / Connection

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No accessories are required. The logger is direct plug and play.

## 9. Files format

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iMINI USB pdf logger when connected to computer or tablet, appears as mass storage device. A drive letter is automatically assigned and drive name is by default "iMiniUSB". Double click to open the contents of the folder. There are four files in the folder "iMiniUSB" and all files are named with serial number (prefix is removed). For example if the connected logger has serial number MS-CD-123-4567, the files will be as follows:

D1234567.CSV

D1234567.CVT

D1234567.PDF

D1234567.TXT

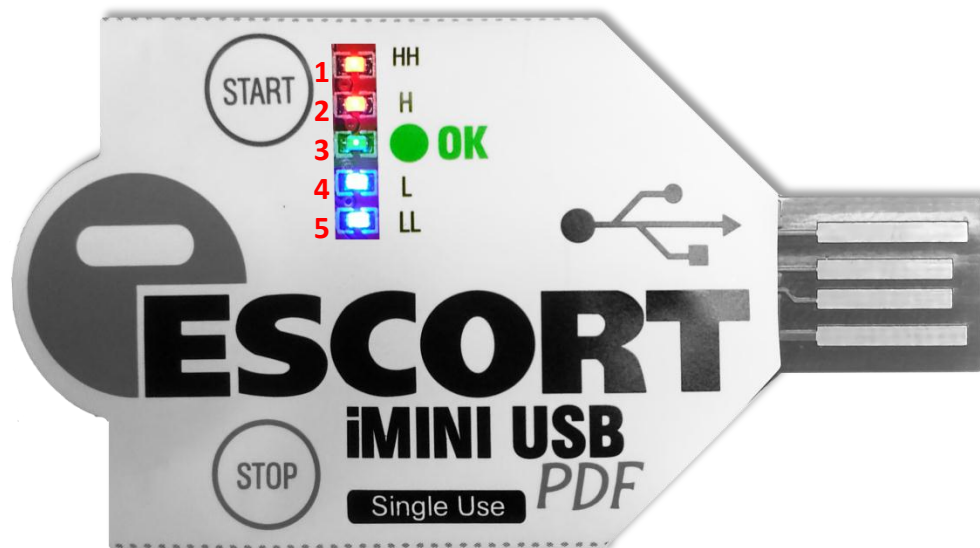
Drive name	Files	File size (full mem)	File format	Application	Pages
<b>iMiniUSB</b> Drive letter: (automatically assigned)	D1234567.CSV	249KB	CSV	Excel	159-170
	D1234567.CVT	17KB	CVT	ConsolePlus	N/A
	D1234567.PDF	14KB	PDF	PDF reader	2
	D1234567.TXT	249KB	TXT	Notepad / textedit	159-170

## 10. LEDs

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The iMINI USB *pdf* has five LEDs: two RED LEDs, two BLUE LEDs and one GREEN LED.

These LEDs will function during programming, downloading and when any of four alarms are triggered.



## 1. During connection with PC, MAC, ANDROID

All 5 LEDs will start in running flash mode quickly in the direction of LL → L → OK → H → HH → H → OK → L → LL every time it is connected to USB.

## 2. During programming

All 5 LEDs will flash quickly (once), when the iMINI USB *pdf* is programmed. Two BLUE LEDs sometimes are not viewable in all lighted environments.

## 3. After program (not started)

When the logger is programmed but not yet started with START button and has no delay in start, GREEN LED will blink (once) every 8 seconds.

## 4. During start (when configured - no delay)

By pressing and holding START button for 3-5 seconds, HH (RED LED) will flash once and then all LEDs will flash in running light mode, quickly from LL → L → OK → H → HH.

## 5. During start (when configured - with delay)

By pressing and holding START button for 3-5 seconds, HH (RED LED) will flash once and then all LEDs will flash in running light mode, quickly from LL → L → OK → H → HH.

When there is delayed start, GREEN LED will blink each second. When delay time is met, all LEDs will flash in running light mode once again, quickly from LL → L → OK → H → HH. This time logger will actual starts recording.

## 6. During recording / logging

Immediately after start, GREEN LED will start blinking twice every 4 sec interval. When any alarm is activated, respective LED(s) will blink twice every 4 sec interval. If there is no alarm activated during entire logging period GREEN LED will blink until the end of the logging trip,

## 7. Alarm

The iMINI USB *pdf* supports four alarm conditions, if temperature goes out of specification then corresponding LEDs will start flashing during logging or when stopped.

▪ HIGH HIGH	HH	LED 1	RED LED
▪ HIGH	H	LED 2	RED LED
▪ OK	●	LED 3	GREEN LED
▪ LOW	L	LED 4	BLUE LED
▪ LOW LOW	LL	LED 5	BLUE LED

Alarms LEDs will stop flashing after 7 days after the logger is connected to USB port to download or view the data. In ideal mode if alarm LEDs need to be viewed again, a brief press of START button will enable

'alarm mode' for next 7 days. After 7 days alarm LED's will go in sleep mode again. This feature helps preserve battery life.

## 8. Stopped mode

When the logger is stopped after finishing the trip, and no alarm was activated, the GREEN LED will blink (once) every 4 seconds.

When the logger is stopped after finishing the trip, and an alarm was activated, then the respective LED(s) will blink (once) every 4 seconds.

## 9. During stop

If STOP button is enabled during configuration /programming, by pressing and holding STOP button for 3-5 seconds or when the trip is completed then all LEDs will flash in running light mode, quickly from HH → H → OK → L → LL (reverse direction of start LEDs)

## 10. During download

When PDF file is opened, LL (BLUE) LED will constantly lit, till the file is open

When CSV file is opened, LL & L (both BLUE) LEDs will constantly lit, till the file is open

When TXT file is opened, LL (BLUE) LED will constantly lit, till the file is open

When CVT file is opened, no LED will lit or blink

# 11. How did logger stop?

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Easily represented by the logger when a PDF is download, a letter is added at the end of stop time, which signifies how did the logger actually stopped recording.

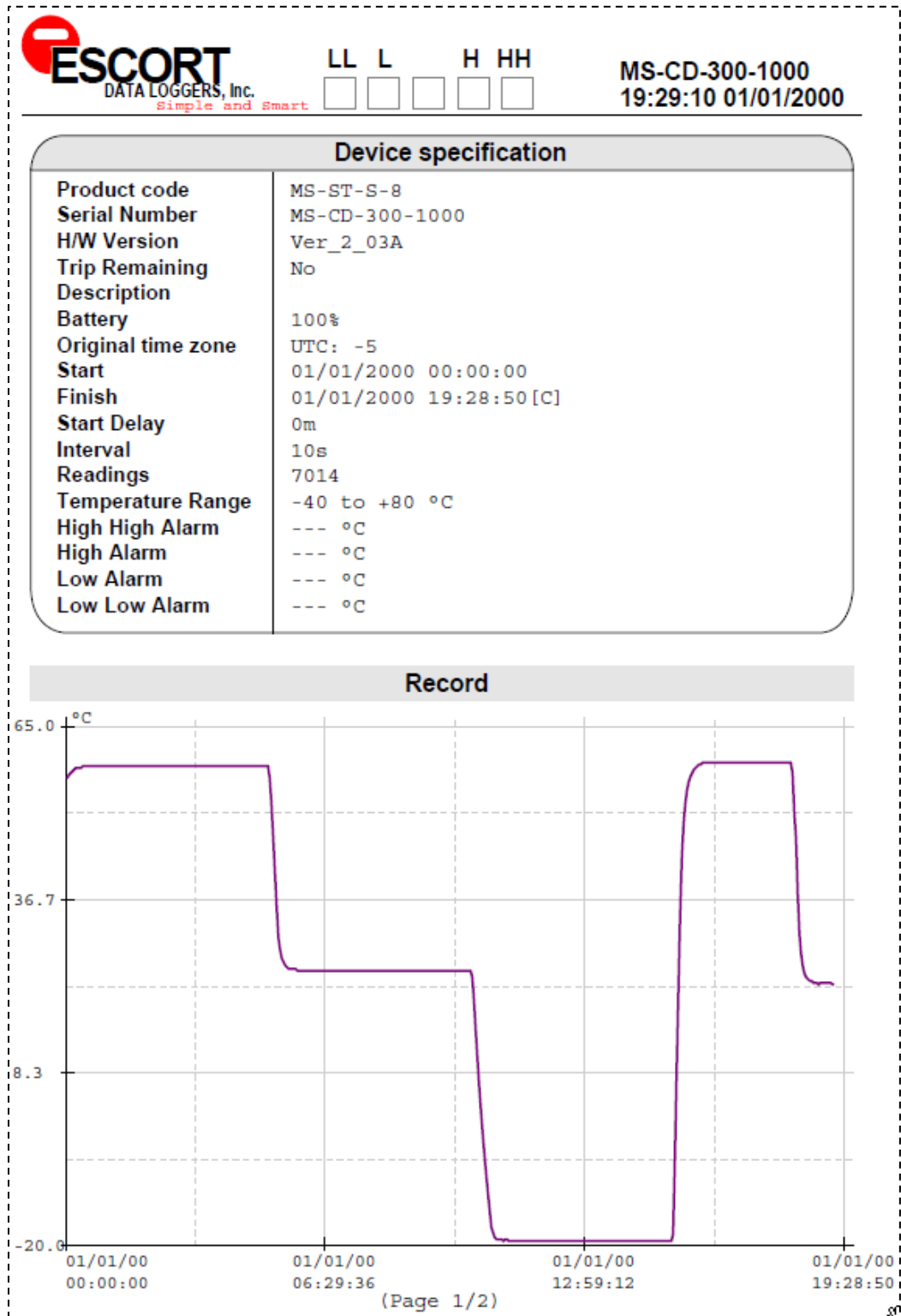
This information is available in generated PDF on 1<sup>st</sup> page under device specification

<b>Start</b>	30/10/2013 05:53:58
<b>Finish</b>	30/10/2013 06:32:23 [C]

Text	Description
[B]	Logger is stopped by STOP button (if enabled)
[R]	Logger is stopped by readings (less than maximum readings)
[T]	Logger is stopped by timer (to be implemented)
[F]	Logger is stopped after recording full memory
[C]	Logger is plugged in with computer/phone/tablet & stopped recording
[X]	Logger was RESET by unknown reason – flat battery / moisture / damage


## 12. Sample PDF

- Page 1




- Page 2

1. Product code **MS-ST-S-8** (non pharma compliant)  
Without 21 CFR part11 compliance & NIST traceable certificate

		<b>LL L H HH</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<b>MS-CD-300-1000</b> <b>19:29:10 01/01/2000</b>
<b>Statistics</b>			
Highest	59.3 °C		
Average	27.7 °C		
Lowest	-19.1 °C		
High High Alarm	Disabled		
High Alarm	Disabled		
Low Alarm	Disabled		
Low Low Alarm	Disabled		
<b>Out of specification</b>			
Above High High Alarm	00h00m00s		
Above High Alarm	00h00m00s		
Below Low Alarm	00h00m00s		
Below Low Low Alarm	00h00m00s		
<b>Informations</b>			
Security #	5204		

2. Product code **MS-ST-S-8-P** (pharma compliant)  
With 21 CFR part11 compliance & NIST traceable certificate

		<b>LL L H HH</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<b>MS-CD-300-1000</b> <b>14:03:45 05/11/2013</b>
<b>Statistics</b>			
Highest			
Average			
Lowest			
High High Alarm	Disabled		
High Alarm	Disabled		
Low Alarm	Disabled		
Low Low Alarm	Disabled		
<b>Out of specification</b>			
Above High High Alarm	00h00m00s		
Above High Alarm	00h00m00s		
Below Low Alarm	00h00m00s		
Below Low Low Alarm	00h00m00s		
<b>21 CFR part 11 Compliant</b>			
Security #	9F2D		
ID-User name	#12-Parinder Singh		
<b>Traceable Accuracy Certificate</b>			
Certificate No	TT-MS-CD-300-1000		
Certificate Date	05/11/2013		
Certificate Validity	One Year or One Trip		
Reference	58.77°C	25.32°C	-19.12°C
Logger	58.70°C	25.30°C	-19.10°C
Variance	0.07°C	0.02°C	0.02°C
Pass / Fail	Pass	Pass	Pass
<p>S Range Temperature range: (-40°C to +80°C) Resolution: 0.1°C</p> <p>Traceable Accuracy: ±0.5°C (-40°C to -10°C), ±0.3°C (-10°C to +80°C)</p> <p>This product is certified using standards traceable to NIST. It has been tested and validated according to CRYOPAK's Standard Operating Procedures following guidelines set forth in ISO 9001:2008.</p> <p>All temperatures are in degrees Celsius. These results do not incorporate the tolerance of the sensor.</p> <p>The associated uncertainty is 0.2</p>			
(Page 2/2)			

## 13. Alarm Settings Options

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### **HH (HIGH HIGH) enable**

Triggers an alarm when the temperature is greater than the HIGH HIGH specification that has been recorded. The **HH** LED will start blinking.

### **H (HIGH) enable**

Triggers an alarm when the temperature is greater than the HIGH specification that has been recorded. The **H** LED will start blinking

### **L (LOW) enable**

Triggers an alarm when the temperature is lower than the LOW specification that has been recorded. The **L** LED will start blinking

### **LL (LOW LOW) enable**

Triggers raise an alarm when the temperature is lower than the LOW LOW specification that has been recorded. The **LL** LED will start blinking

### **Consecutive delay before alarm (1 to 254)**

A preset alarm will trigger when conditions goes out of specification: 'consecutive alarm delay' has been met. For example if the value is set '5' in this field, as soon as 5 consecutive readings are out of specification, logger will trigger an alarm, if the consecutive readings are 4 or less, there will be no alarm.

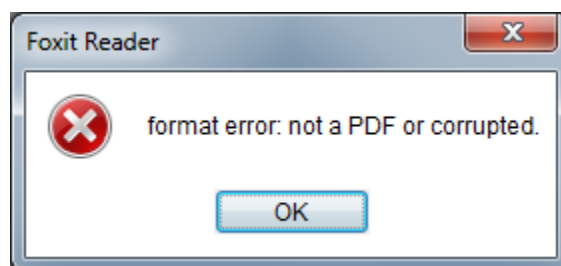
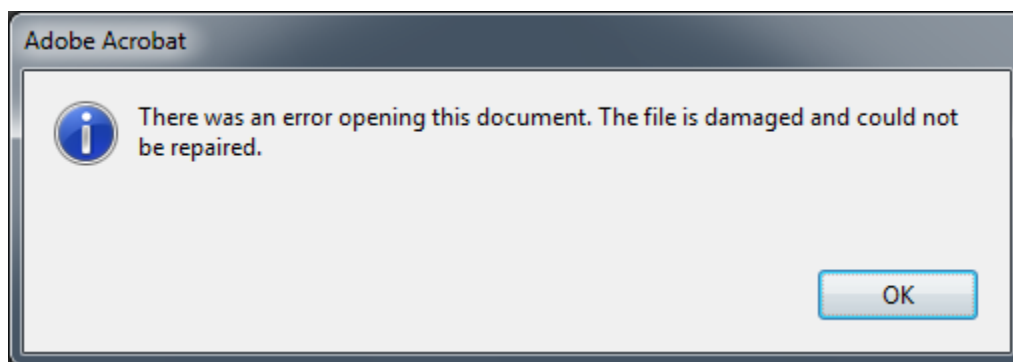
### **Total delay before alarm (1 to 254)**

The preset alarm will trigger when conditions goes out of specification: when 'total alarm delay' has been met. For example if the value is set '5' in this field, as soon as 5 readings (in any order) are out of specification, the logger will trigger an alarm. For example, if 2 readings were above or below spec and then readings come within the specifications followed by another 3 readings being out of specification then, once the total of 5 readings are above or below spec, there will be an alarm.

## 14. Important Notes

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- The protective sleeve must not be removed until the download, if removed during the trip logger may encounter issues.
- The iMINI USB *pdf* logger will finish the logging trip when connected to USB. The device will not record further
- If 'corrupt pdf' message appears, re-connect the device to USB and re-open the PDF



- The maximum number of bookmarks is 8
- If during connection, the logger LEDs keep continuously flashing in running light mode, then disconnect the logger and reconnect. If the problem persists, short the battery terminal for 1 second.



# 15. Warranty Information

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*(Clause from CVT Terms and Conditions)*

9.1 CVT warranties in respect of the Product are:

- (a) The warranties and conditions implied by the Uniform Commercial Code Article 2, Part 3 312(Warranty of Title and Against Infringement), 313-2(b) (sale by description) and 314-2, 315 (merchantable quality); or
- (b) A specific warranty or Product specification included in the Order Confirmation or on the CVT website [www.escortdataloggers.com](http://www.escortdataloggers.com).

9.2 The warranty in sub clause 9.1 is to the exclusion of all other warranties, conditions and liabilities wherever expressed or implied and whether arising in contract, court or by statute or otherwise.

9.3 No representation in relation to the Products shall be binding on CVT unless in writing and signed by CVT or one of its Directors, or included in either of the warranties detailed in clause 9.1.

9.4 CVT will not be liable for any personal injury, property damage, consequential or contingent loss or damage caused through the negligence or otherwise of CVT, its servants or agents or arising out of the goods being defective or otherwise not in accordance with any warranty given.

## 10. Specific Warranty Provisions

10.1 Warranty is understood as “return to base”. You will be responsible for freight/taxes and duties back to CVT; CVT will pay the return freight back to You.

10.2 Product Warranty is twenty four months ex works on all products, except for the Single Trip loggers where the warranty term is limited to a single trip to be performed within the 24 month period. This does not include batteries.

10.3 The warranty does not cover:

- (a) RH calibration later than 1 year after production, or if the unit has been subject to environmental conditions outside those specified.
- (b) Willful damage, mistreatment, misuse or abuse of the goods.
- (c) Loss or damage caused by ingress of moisture unless ordered with immersion rating;
- (d) Batteries
- (e) Circumstances where the unit has been modified from EVT specifications.
- (f) Exposure of the logger to temperatures outside the specified storage temperature or operating temperature.
- (g) Exposure to environmental conditions outside the specified conditions.

(h) Circumstances where the printed circuit board has been removed or tampered with.

10.4 In the case of a warranty claim CVT will repair the Product or, at its option supply an equivalent replacement.

10.5 In some circumstances, where a specific return is authorized, CVT, may permit the use of its Federal Express account number for returning Product. Such permission is valid ONLY for that authorized shipment. CVT will not accept any freight charges for goods that have been returned without its express permission.

10.6 You may return Product to CVT for accuracy testing, if there are reasonable doubts as to the Products overall accuracy.

10.7 If a Product is returned within the warranty period, a Traceability Certification will be performed. Should the logger read within the specifications, a Traceability Certificate will be issued and You will be charged with the cost and the cost of return freight. If the logger does not pass the certification, i.e.: the logger is at fault, the logger will be replaced or repaired. The new or repaired logger will be issued with a Traceability Certificate free of charge.

10.8 If the Product is returned outside the warranty period, a Traceability Certificate will be issued and charged regardless of the outcome of the test.

10.9 CVT will not pay for any performance tests undertaken by any outside organization, without prior approval.

### ***Recycling of electronic devices***

Some parts in products from Cryopak Verification Technologies consist of recyclable materials, but others should not be disposed of in household waste. To avoid pollution, we kindly ask you to adhere to national policies and regulations concerning waste disposal and recycling. iMINI USB *pdf* data loggers must be returned to your distributor for disposal (European Standard EN 50419:2005).

## 16. Contact Details

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If you require further information regarding Cryopak Verification Technologies products please contact us at:

### USA

Mailing Address: PO Box 309, Buchanan, VA 24066  
Office: 120 Parkway Drive, Buchanan, VA 24066  
Phone: +1-540-254-1433  
Orders: +1-732-346-9200 Ext.131 or 150  
Fax: +1-540-254-2433  
Email: [techsupport@escortdataloggers.com](mailto:techsupport@escortdataloggers.com)

### CANADA

Mailing Address: 6818 Jarry Street East  
St. Leonard, Quebec, H1P 1W3, Canada  
Phone: +1-514-324-4720  
Cell: +1-514-773-5966  
Fax: +1-514-324-9623  
Email: [B.Chedhomme@alternatives-tech.com](mailto:B.Chedhomme@alternatives-tech.com)

You can find additional information regarding all of our products on our website:

[www.escortdataloggers.com](http://www.escortdataloggers.com)  
[www.cryopak.com](http://www.cryopak.com)



# Information required from customer for Single Trip iMINI (MX-ST-S-8-L) Single Trip iMINIUSBpdf (MS-ST-S-8) Logger programming

Date: .....

Quantity: .....

MX-ST-S-8-L

MS-ST-S-8

Time Zone: .....

*Select one option in Check boxes*

<b>Description</b> MAX 32 Characters for MX-ST and MAX 16 Characters for MS-ST				
<b>Temperature Units</b>		°C	°F	
<b>Alarms:</b> - 40 to + 80 °C	<b>HIGH HIGH Enable</b>	Y	N	
	<b>HIGH HIGH Alarm Temperature</b>			
	<b>HIGH Enable</b>	Y	N	
	<b>HIGH Alarm Temperature</b>			
	<b>LOW Enable</b>	Y	N	
	<b>LOW Alarm Temperature</b>			
	<b>LOW LOW Enable</b>	Y	N	
	<b>LOW LOW Alarm Temperature</b>			
<b>Consecutive delay before alarm (1 to 254)</b>				
<b>Total delay before alarm (1 to 254)</b>				
<b>Time interval between each reading</b>		Hours	Minutes	Seconds
<b>Start with</b> (select either one or both)		Time	Start Button	
<b>Time Delay before logging starts</b> Available only if Start with START button is selected		Days	Hours	Minutes
<b>Start at time</b> (only if Time start is selected)				
<b>Stop at time</b> (optional)				
<b>No. of Readings</b> MAX 7808 for MX-ST and MAX 7928 for MS-ST				
<b>Stop button enable</b>		Y	N	
<b>Show Alarms</b>		Y	N	
<b>Show Temperature on LCD</b> Only for MX-ST-S-8-L		Y	N	

Other instructions (if any):

By: