Scope of this Document:

This document covers the installation and operations of Dataprobe's Serial iBootBar (sBB) series of remote power control units. These 1U rack mounted power strips are controlled via RS-232 serial communications and via contact closure inputs. The following models are covered in this document:

Model	Power Feed / Total Capacity	Outlets
sBB-N15	NEMA 15 Amp	8 x NEMA 5-15
sBB-C10	IEC C14 10 Amp	8 x IEC C13
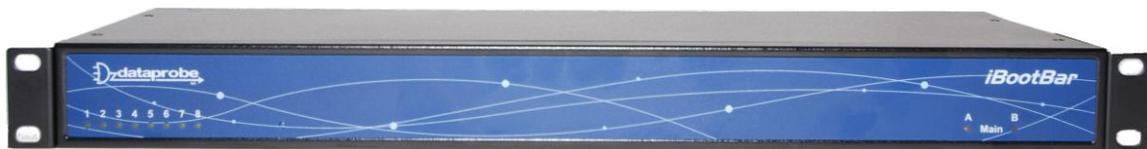
Front Panel, All Units

Rear Panel sBB-C10

Rear Panel sBB-N15

Table of Contents
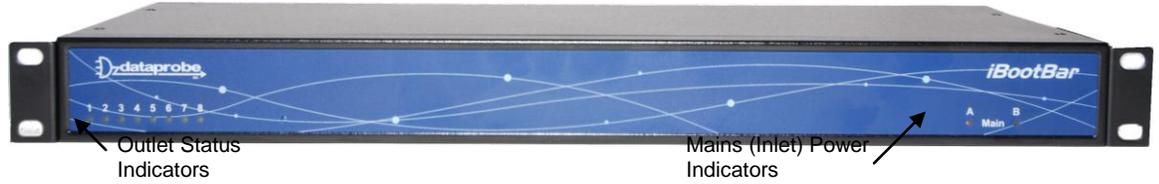
Important Safety Information

When using this product, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

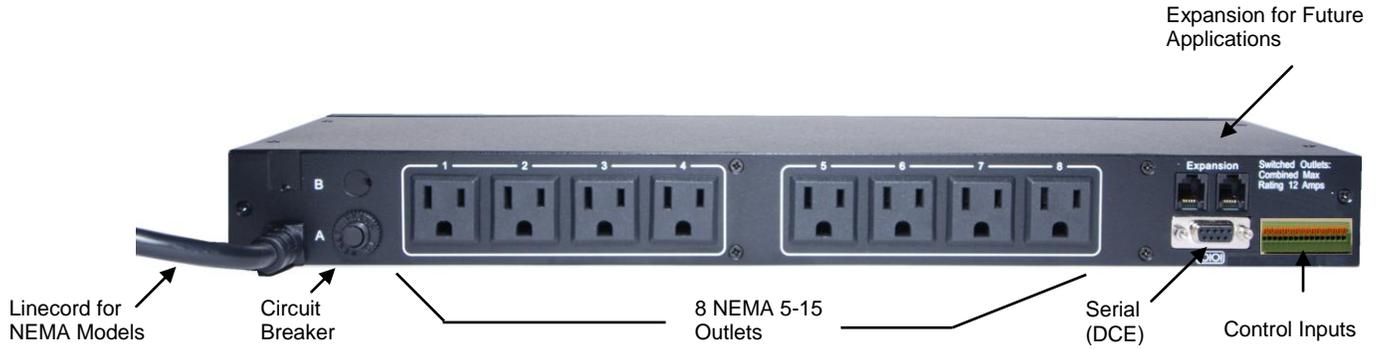**Disconnect all power cords before servicing!**

1. Read and understand all instructions.
2. Follow all warnings in the manual and marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product in an outdoor environment or near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in this product and the back or bottom are provided for ventilation to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on the bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
8. This product is equipped with a three wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug. Do not use a 3-to-2 prong adapter at the receptacle; use of this type adapter may result in risk of electrical shock and/or damage to this product.
9. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it.
10. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
11. Never push objects of any kind into this product through slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electrical shock. Never spill liquid of any kind on the product.
12. To reduce the risk of electrical shock, do not disassemble this product, but take it to a qualified serviceman when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect re-assembly can cause electric shock when the appliance is subsequently used.
13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
a) When the power supply cord or plug is damaged or frayed.
b) If liquid has been spilled into the product.
c) If the product has been exposed to rain or water.
d) If the product does not operate normally by following the operating instructions. Adjust only those controls, that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
e) If the product has been dropped or has been damaged.
f) If the product exhibits a distinct change in performance.
14. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
15. Do not use the telephone to report a gas leak in the vicinity of the leak.
16. Do not exceed the maximum output rating of the auxiliary power receptacle.
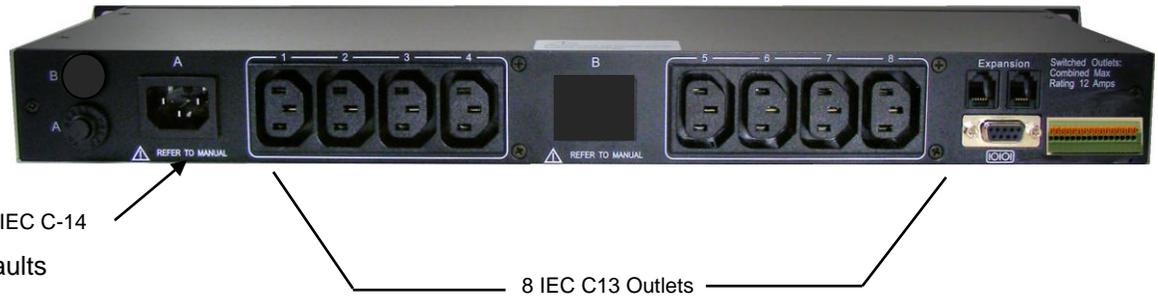
Quick Start

Front Panel

Outlet Status Indicators
Mains (Inlet) Power Indicators

Rear Panel – sBB-N15

Expansion for Future Applications

Linecord for NEMA Models
Circuit Breaker
8 NEMA 5-15 Outlets
Serial (DCE)
Control Inputs

Rear Panel – sBB-C10

IEC C-14
8 IEC C13 Outlets

Quick Start Defaults

Serial Parameters 115,200 bps, 8 Data Bits, No Stop Bits, One Parity Bit (115200, 8, N, 1)

Command Line Quick Start:
Username: admin
Password admin
To view outlet status   iBootBar> get outlets
To turn on off outlet 1   iBootBar> set outlet 1 off
To reboot outlet 2   iBootBar> set outlet 2 cycle

8 Independently controllable outlets

The Serial iBootBar (sBB) series is designed to provide power distribution and remote power control. Each sBB allows eight outlets to be independently switched on and off for reboot, energy management and security. The sBB has many features to make the management of power distribution simple and cost effective:

Serial RS-232 Control

RS-232 serial control allows for direct control of the sBB outlets, and complete setup of all parameters.

Contact Closure Control

Each outlet is associated with a discrete input that can be connected to a physical switch or relay. Changing the state of the input will operate the outlet. Outlets are individually configurable for On and Off state relative to contact closed or open.

Multiple users with assigned rights and simultaneous control

Up to 16 users can be assigned administrator or user only rights, plus access to specific outlets and groups. Users only see the outlets and groups they are assigned to.

Grouping of outlets for simultaneous management

Multiple outlets can be linked together in named groups and managed together. Example: power cycling all devices of a certain type together.

Installation
Rack Mounting
The iBootBar is designed for mounting in a standard 19" equipment cabinet.

There are two L-shape brackets marked as "L" and "R", install the "L" bracket on the left side of the sBB chassis then the "R" bracket on its right side.

 Install the sBB to the standard 19-inch rack.

Serial Port
The iBootBar has a 9 pin D subminiature connector for RS-232 serial control. The connector is configured as DCE for direct connection to a laptop or other terminal device. Default serial parameters are 115,200 bps, 8 data, no parity, 1 stop bit (115200,8,n,1).
Serial Port pinout:

Control

Pin No	Description
2	Receive Data
3	Transmit Data
5	Signal Ground

Inputs

Serial iBootBars have 16 terminal block connections for control of individual outlets using contact closure / contact open connections. Each connection marked 1 through 8 controls the outlet of the same number. The remaining 8 connections are ground, and are interchangeable. Using a small flat-blade screwdriver, depress the wire release mechanism for one of the terminals on the terminal block and insert the bare wire into the terminal. Remove the screwdriver to secure the wire. Gently tug on the wire to verify that it is secure in the terminal block.

The default setting for the sBB is:

Contact Open = Power On
Contact Closed = Power Off

This setting is changeable through the serial port.

Caution: Use only dry switch or relay closures, or open collector relay drivers to connect to the sBB inputs. If you have any doubts about proper connections, consult Dataprobe Technical support.
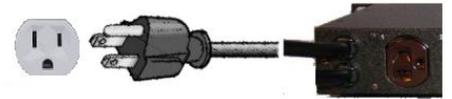
Expansion
Future Expansion. No function in the current Serial iBootBar.
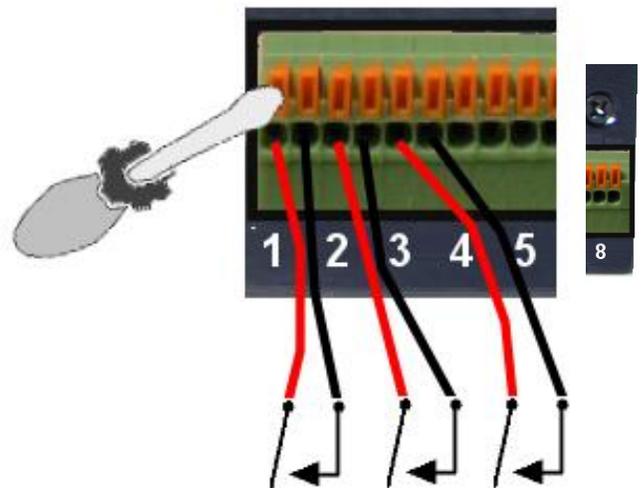
Power Source

The **sBB-N15** provides a linecord for connection to a 15 Amp 115VAC service. The total maximum current load for all outlets on the sBB-N15 cannot exceed 12 Amps.	
The **sBB-C10** is for international applications and can be used on 100V to 240VAC. The sBB-C10 provides an IEC 320 style universal inlet for connecting a detachable power cord. A standard IEC to CEE7 European cord set is supplied with the unit for use on 10 Amp 240VAC service*. The total maximum current load for all outlets cannot exceed 12 Amps at 115VAC or 10 Amps when used at 240VAC.	

* Power cords for other countries are available from your local source. If a power cord with a different terminating plug is required, be sure it is properly rated and meets all the required local electrical standards.

Serial Operation
Command Line Interface
The Command Line Interface provides complete setup of all function of the iBootBar. Some commands of the CLI require administrative rights. These are indicated in the table below.

To access the sBB, connect to the serial port and type Enter, the user will be prompted for Username and Password. The default for both is **admin**

Outlet Commands

Command	Description	Access	Fact Def
get outlets	Returns the status of ALL the outlets the user has rights to.	User	
get outlet <1-8>	Returns the status of the designated outlet. The user must have rights to the selected outlet.	User	
set outlet <1-8> <on/off/cycle>	Sets the selected outlet to the selected state. The user must have rights to the selected outlet.	User	
set outlet <1-8> name <name>	Sets the name of the selected outlet of the selected iBootBar. 20 characters max.	Admin	Outlet <#>
get outlet <n> control.on set outlet <n> control.on <open/closed>	Gets or sets the state that the control input causes the corresponding outlet to turn On.	Admin	Open
get outlet <1-8> initial.state set outlet <1-8> initial.state <on/off/last>	Get or set the initial state of the selected outlet of the currently selected iBootBar. Initial state is the condition of the outlet when the iBootBar is powered up. This command will be ignored if external control is enabled with **set external control enable**	Admin	Last

User Commands

Command	Description	Access	Fact Def
get users	Return a list of all current users	Admin	
get user <username>	Returns the selected user's details	Admin	
add user <username>	Added a user to the root iBootBar's user table. 16 users maximum. 20 Characters max. Note: the new user's password will default to the same as the username. Users default to no rights to any outlets. Add user rights to outlets and groups.	Admin	
del user <username>	Deletes the selected user from the root iBootBar's user table	Admin	
ren user <username> <newname>	Renames the selected user in the root iBootBar's user table. 20 character max.	Admin	
set user <username> outlet <1-8/all> <yes/no>	Sets the users right to the selected outlet	Admin	No Rights
set user <username> group <name> <yes/no>	Sets the user's rights to the selected group	Admin	No Rights
set user <username> role <admin/user>	Sets the user's roll.	Admin	User
set user <username> password <password> <confirm>	Sets the user's password. 20 characters max.	Admin	User's Name

Device Commands

Command	Description	Access	Fact Default
get outlets	This command displays a list of connected devices, and their current status.	User	
set name <name>	Set the name of the selected iBootBar. 20 characters max.	User	
get current	Gets the measured current of the iBootBar	Admin	
get external control	Get or set external control capability. Enabling this will allow the external inputs to control its corresponding outlet.	Admin	enable
set external control <enable/disable>			
get cycle	Get or set the cycle time in seconds. Cycle time is the time that the outlet will be off during a reboot (on – off – on) or on during a cycle (off – on – off)	User	10
set cycle <1-99>			
get delay	Get or set the delay time in seconds. When multiple outlets are turned On by a single command, this delay controls the interval between powering up of the outlets. This delay is used to limit power up inrush.	User	1
set delay <0-99>			
get current alarm	High and Low alarms are used to monitor current conditions and send an alert via the serial port when the high or low thresholds are exceeded. From 0.0 to 10.0/15.0 (depending on max current for device) in 0.1 amp increments.	Admin	Highalarm: 10.0 for 10 Amp Models 15.0 for 15 Amp Models Lowalarm: 0.0 Amp
set main a highalarm <nn.n>			
set main a lowalarm <nn.n>			
get logon	Disabling logon bypasses the username and password requirements and allows direct machine to machine communications. No logon prompt will be issued.	Admin	Enabled
get logon <enable/disable>			

Command	Description	Access	Fact Def
set logging <yes/no>	Turns on or off event logging		
get logging	Gets the current logging setting		
set alarms <yes/no>	Turns on of off current alarm reporting		
get alarms	Gets current alarm reporting status		
get console	Displays the current console configuration, Timeout and Baud Rate	Admin	
set console timeout <30-3600/disable>	Console can be set to automatically logout with no activity for 30 seconds to 1 hr in seconds, or disabled.	Admin	120
set console baudrate <2400/4800/9600/19200/38400/ 57600/115200>	The baud rate of the serial port. 400,4800,9600,19200 ,38400,57600,115200 bps	Admin	115200
set factory defaults	Resets all parameters to their factory settings Confirmation is required. Note: This command can take up to 30 seconds to execute.	Admin	
logout	Ends the session	User	
reboot	Reboots the selected iBootBar. This will not change the status of the outlets.	Admin	

Group Commands

Command	Description	Access	Fact Def
get groups	Returns a list of the groups that the current user has rights to.	User	
get group <groupname>	Returns the details of the selected group	User	
set group <groupname> <on/off/cycle>	Controls the selected group	User	
add group <groupname>	Adds a new group. 20 characters max. Up to 8 groups maximum	Admin	
set group <groupname> outlet <1-8/all> <yes/no>	Adds or deletes a specific outlet on a specific device from the selected group.	Admin	
ren group <groupname> <newname>	Renames the selected group. 20 characters max.	Admin	
del group <groupname>	Deletes the selected group.	Admin	

Firmware Upload Commands

Command	Description	Access	Fact Def
get upload enable	Get or set the ability for the root iBootBar to accept a firmware	Admin	

Command	Description	Access	Fact Def
set upload enable	upload.	Admin	No

Control Input Operation

The eight control inputs can be used to operate the outlets. Shorting any of the inputs to ground will change the state of the outlet with the same number as the input. (Input 1 controls Outlet 1, Input 2 controls Outlet 2, etc.)

Caution: Use only dry switch or relay closures, or open collector relay drivers to connect to the sBB inputs. If you have any doubts about proper connections, consult Dataprobe Technical support.

The default control is Input Open = Outlet On, Input Grounded = Outlet Off.
This can be changed using the set outlet <n> control.on <open/closed> command.

Example:
set outlet 3 control.on closed Causes Outlet three to be Input Closed (to Ground) = Outlet On, Input Open = Outlet Off
get outlet 3 control.on   will check the current setting.

Advanced Operation

Logging and Alarm

Logging and Alarm capabilities allow messages to be sent via the serial port when state changes occur. Logging messages indicate a change in outlet state. Alarm messages occur when current draw measurements go in our out of alarm. Both these message types occur only when an administrator or user is not logged into the Serial iBootBar.

Use the following commands to turn On or Off the logging and alarm capabilities.

set logging <yes/no>
set alarm <yes/no>

Logging Message Format
The messages will be formatted as follows:

<cr><lf><device name> - <outlet #> <outlet name> - <control type> - <source><cr><lf>

Where:
<cr>	=	ASCII carriage return
<lf>	=	ASCII line feed character
<device name>	=	User programmed name of the sBB
<outlet #>	=	The number of the outlet; 1-8
<outlet name>	=	the user programmed name of the outlet that has changed
<source>	=	"CLI ", "Expansion Port ", or "Control Port "

Example: **ServerRoom – ServerA – Off – Expansion Port.**

Alarm Message Format
The messages will be formatted as follows:

<cr><lf><device name> - <main> - <alarm message> - <current><cr><lf>

Where:
<cr>	=	ASCII carriage return
<lf>	=	ASCII line feed character
<device name>	=	User programmed name of the sBB
<main>	=	"Main A" or "Main B"
<message>	=	"High Alarm", "Low Alarm", or "Alarm Clear"
<current>	=	actual current measurement

Example: **ServerRoom – Main A – High Alarm – 8.7**

Specifications

Physical:
Height:	1U 1.75 in (4.5 cm)
Width:	19.0 in (48.25 cm)
Depth:	6.00 in (15.25 cm)
Weight:	7 lbs (3.25 Kg)

Environmental:
 Temperature
Operating:	0 to 40° C
Storage:	-10 to 85° C
Relative	0 to 95%
Humidity	Non-Condensing

Input Required	Model	Input	Output	Control
	sBB-N15	N15	8 x N15	I, S,
	sBB-N15-M	N15	8 x N15	I, S, M
	sBB-C10	C14	8 x C13	I, S
	sBB-C10-M	C14	8 x C13	I, S, M

Key:
Input:	N15	NEMA 5-15 Linecord 115VAC 15 Amps combined total switched
	C14	IEC320 C14 Receptacle 100-240VAC 10 Amps total at 240VAC Max

Outlet:	N15	NEMA 5-15 Receptacle 115VAC 12 Amps Max
	C13	IEC 320 C13 Receptacle 100-240VAC 10 Amps Max

Compliance Statements

FCC Part 15 Regulation
This equipment has been tested and found to comply with the limits for a Class A 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 or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Plug the equipment into an outlet on a circuit that is different from the one used by the receiver.
• Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation of this device is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may cause undesired operation.
WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

EMC, Safety, and R&TTE Directive Compliance
The CE mark is affixed to this product to confirm compliance with the following European Community Directives:

• Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of Member States relating to electromagnetic compatibility;
And

• Council Directive 73/23/EEC of 19 February 1973 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits;
and

• Council Directive 1999/5/EC of 9 March on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.

Industry Canada
This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe AB respecte toutes les exigences du Reglement Canadien sur le matériel brouilleur.

This product meets the applicable Industry Canada technical specifications

Warranty

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship for a period of Three Years from the date of initial purchase. If the product should prove defective within that period, Seller will repair or replace the product, at its sole discretion. Repairs may be made with new or refurbished components and replacements may be new or refurbished at the Sellers sole discretion. Repaired or replaced units shall be warranteed for the balance of the original warranty, or 90 days, whichever is greater.

If Purchased from Dataprobe Inc.; Service under this Warranty is obtained by shipping the product (with all charges prepaid) to the address below. Seller will pay return shipping charges within the United States. Call Dataprobe Technical Service to receive a Return Materials Authorization (RMA) Number prior to sending any equipment back for repair. Include all cables, power supplies, accessories and proof of purchase with shipment.

If purchased from an Authorized Dataprobe Reseller; Service under this Warranty is obtained by contacting your Authorized Dataprobe Reseller.

THIS WARRANTY DOES NOT APPLY TO NORMAL WEAR OR TO DAMAGE RESULTING FROM ACCIDENT, MISUSE, ABUSE OR NEGLECT. SELLER MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY EXPRESSLY SET FORTH HEREIN. EXCEPT TO THE EXTENT PROHIBITED BY LAW, ALL IMPLIED WARRANTIES, INCLUDING ALL WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR ANY PURPOSE ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE; AND THIS WARRANTY EXPRESSLY EXCLUDES ALL INCIDENTAL AND CONSEQUENTIAL DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from jurisdictions to jurisdiction.

WARNING: The individual user should take care to determine prior to use whether this device is suitable, adequate or safe for the use intended. Since individual applications are subject to great variation, the manufacturer makes no representation or warranty as to the suitability of fitness for any specific application.

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