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INTRODUCTION

This manual provides description of kits, components, installation and the processes used to implement Crane Merchandising Systems telemetry and cashless devices. This process covers two specific types of products:

A. Merchant Media and BevMax Media machines.
B. Navigator telemetry and cashless implementation for retrofit in older machines.

All cashless usage requires a wireless connection to the outside world, to communicate with the Streamware Device Management Server (DMS), and to the selected credit card processor. This communication requires a specific method of assignment to insure that the unit is properly registered to the customer.

MEDIA MACHINES

Media machines can be assigned by one of two methods: using a properly formatted USB stick containing an atlas folder, and a single unique customer VIX Configuration file; or using a recommended handheld device containing the proprietary Streamware installation software (VIX Installer Express)

NAVIGATOR APPLICATIONS

The process to properly assign a Navigator also uses two methods:

A. Using a recommended handheld device containing the proprietary Streamware installation software (VIX Installer Express). Using a handheld for this application follows the same steps as described for the Media products.

B. A properly prepared USB stick containing USB assignment files. These are multiple files extracted and customized from an archive file.

One advantage to using a handheld device to perform either of the assignment processes is the valuable troubleshooting information provided by the handheld during assignment. The firmware in the Media products provides a comparable level of troubleshooting information via the interactive screen in the machines.

All customers must complete the initial step to create a Streamware account. Much of this process is done working with the Crane Area Sales Manager and Streamware personnel. The process can take up to two weeks. A checklist has been included in the appendix of this manual to aid in assembling the data needed to complete the process. Once the account has been activated, a VIX file is created. Existing Streamware Customers can contact their Streamware Support member for additional information.
FCC REGULATORY GUIDE:

General Statements:

Warning: Changes or modifications to this device not expressly approved by Crane Merchandising Systems Inc. could void the user’s authority to operate the equipment.

FCC Statements:

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.

NOTE: 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 or more 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.

INDUSTRY CANADA STATEMENTS:

The term “IC:” before the radio certification number only signifies that Industry Canada technical specifications were met.

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. 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.

Cet appareillage numérique de la classe [B] répond à toutes les exigences de l'interférence canadienne causant des règlements d'équipement. L'opération est sujette aux deux conditions suivantes: (1) ce dispositif peut ne pas causer l'interférence nocive, et (2) ce dispositif doit accepter n’importe quelle interférence reçue, y compris l'interférence qui peut causer l'opération peu désirée.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication."

This device has been designed to operate with the antennas listed below, and having a maximum gain of 2 dB. Antennas not included in this list or having a gain greater than 2 dB are strictly prohibited for use with this device. The required antenna impedance is 50 ohms. 1. EAD WiMag 2.4GHz ¼ Wave Element

RF Exposure:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
GETTING READY TO GO ON LINE
GETTING READY TO GO ON-LINE FOR MEDIA MACHINES

Once the account has been activated, a VIX file is created. The file has the name (VIXConfigData.cfg). The VIX file is a file that contains all the data needed to assign the Media machine, as well as activate cashless operations and initiate communications between other Navigator units and the DMS.

The VIX file is customer specific, not generic, and may be sent in an E-mail, or sent already loaded onto a USB memory stick inside an atlas folder. If the wrong VIX file is used, problems can occur, such as the Media unit being assigned to the wrong customer, or the money from cashless sales being credited to the wrong account.

Included in the VIX file is a customer specific account number and name code, which is created by Streamware. It is used to identify the customer for the Device Management Server (DMS). Terminal ID’s are also made available, which will be assigned to the machine or the Navigator unit during the assignment process.

The data from the customer specific VIX file is applied in the assignment process using two different methods.

A. A USB memory stick, properly set up.

B. An approved handheld device which has been properly set up.

PREPARING A MEMORY STICK FOR MEDIA

A memory stick, or USB flash drive, can be prepared and used to assign the unit. A one Gb stick is preferred, but a stick with up to four Gigabytes of memory can be used.

The Media machine does not need to be pre-assigned, but for other types of machines, the Navigator must be pre-assigned in DMS before beginning the assignment process. The pre-assignment process requires a call to Streamware with the serial number of the unit to be assigned. The DMS will be looking for a match in order to complete the process.

1. To prepare a memory stick for use, plug the memory stick into an available USB port on a computer.

2. See that the stick is empty of all data. If the stick needs to be re-formatted, use the FAT 32 option in your computer.

3. Create a new folder and give it the name, "\atlas".

4. Copy and paste, or drag, the customer specific VIX file (VixConfigData.cfg) to the inside of the "\atlas" folder.

If necessary, a read me file can be placed outside the atlas folder for identification purposes. It should be noted that an "\atlas" folder like this one can be created but may contain different data to perform other functions. This data should not be combined inside the "\atlas" folder.

When assigning -units that are equipped with Mesh Devices, it is required that the Gateway units be assigned first, then the Solo units, then the Client units.
VIX CONFIGURATION FILE FORMAT

In order to assign an Atlas board in a Media machine unit to activate and assign the telemetry, certain configuration parameters must be set, including the URL for the DMS server, customer account information, and radio login information.

These values are defined in a VIX Configuration file that the Service Mode, Telemetry module uses. The file is loaded onto a USB flash stick inside a top level folder labeled “\:atlas”. The file has the name “VIXConfigData.cfg”.

During assignment, the Telemetry module looks for this file to verify that the configuration loaded in the Atlas unit agrees with the file information. If the information does not agree, or is not present, the file information is used to overwrite the information in the Atlas configuration and the system is rebooted before the assignment process can continue.

The format of the file allows two specific items to be set for the assignment process: NV Account number, and the Vending Customer Code. Two examples of the VIXConfigData.cfg file are shown below, one for GSM radios, and a second one for CDMA applications.

Either file can either be edited using a standard text editor (Notepad or Wordpad). Recognize that the syntax of the contents of this file must be followed exactly.

Editing the fields highlighted in yellow will permit you to make a copy of the VIX Configuration file, and provide it to the customer for any future installations of Media machines. Only the highlighted fields should be changed, and the syntax and format of the rest of the file is critical. Make sure all punctuation and other symbols are correct.

A. The first Line highlighted in yellow is <NVAccountNum value="#####" />. The data that needs to be edited is the specific customer account number, which has been underlined here for clarity.

B. The second line highlighted in yellow is <VendingCompanyCode value="XXXXXXXX" />. The data that needs to be edited is the Specific Company name code, which has been underlined here for clarity.

Editing these two pieces of data will allow a VIX configuration file to be easily written for a customer that already has an account in DMS.

C. An additional feature that was added during the third quarter of 2013, is the ability to add a comment line within a file to better identify which customer the file belongs to. This is indicated in the samples in the blue highlight, it is the first line in the sample, (<!— Hickory Ridge HS - - >). The syntax of this comment must remain exactly as shown, but the text between the dashes can be changed so the file becomes customer specific.
GSM Sample

<?xml version="1.0" ?>
<VIXConfigFile>
  <ConfigItem name="W-VSURL" value="http://streamwareonline.com:8081/WANServiceSB.asmx" />
  <ConfigItem name="GSM-APN" value="attz.cranems.com" />
  <ConfigItem name="GSM-USR" value="" />
  <ConfigItem name="GSM-PWD" value="" />
  <NVAccountNum value="123456" />
  <VendingCompanyCode value="compname" />
  <AssignRules value="\raid,V,40,AN-_@:,Machine ID" />
</VIXConfigFile>

CDMA Sample

<?xml version="1.0" encoding="UTF-8" ?>
<VIXConfigFile>
  <ConfigItem name="GSM-APN" value="attz.cranems.com" />
  <ConfigItem name="GSM-USR" value="" />
  <ConfigItem name="GSM-PWD" value="" />
  <ConfigItem name="W-VSURL" value="http://216.211.240.85:8081/WANServiceSB.asmx" />
  <NVAccountNum value="123456" />
  <VendingCompanyCode value="compname" />
  <AssignRules value="D\raid,V,40,AN-_@:,Machine ID" />
</VIXConfigFile>
**THE MOTOROLA MC70 HANDHELD DEVICE**

**GENERAL INFORMATION ABOUT A HANDHELD DEVICE**

Handheld devices, such as the Motorola MC70 device, are being used more commonly by route personnel to collect DEX data. They can also be used by service personnel to assign a unit, if the handheld unit is using the VIX Installer Express software.

If multiple machines are to be assigned or un-assigned on a regular basis, the handheld device may be the preferred method to use. This is because more information about the process can be seen on the handheld’s screen and details can be called up if there is a problem.

It is important to have the time and date set correctly in the handheld device because it is used when communicating with the DMS and it must be fairly accurate. Tapping on the time and date displayed will open a window that will allow the time and date to be changed as needed.

Once the handheld device has been powered up, tapping on the Windows Icon in the top left corner of the touchscreen will bring up a list of the available programs loaded into the handheld device.

Another tap on the title of the desired program will start the program and display the beginning screen for that program.
For assignment purposes, the handheld device would need to have a program installed named, “VIX Installer Express”, and the minimum version to be used should be at least “Build 276”.

With the VIX installer program opened, several pieces of data need to be entered before the assignment can begin.

A. The URL address and code, in the options window will need to be correctly set.
B. The customer’s account number and name code, as defined by Streamware, in the VIX file would need to be entered in the customer ID window.

The Account Number and name code, as defined by Streamware, is customer specific and must be entered correctly for the assignment to be successful.

If the handheld is used to assign units for more than one customer, the account number and name code would need to be changed for each customer.

The handheld device can retain the customer data for multiple customers in order to be re-used.

There are many opportunities throughout the assignment process to view data that can be used to diagnose current conditions. These range from the background color identifying assigned and un-assigned units, to pictured Icons that, when tapped, display results of test functions conducted on the hardware in use.

SOME MAJOR FEATURES ON THE HANDHELD DEVICE

THE TOUCHSCREEN – The touch screen can be used to select buttons, menus and items in the handheld device. It is recommended that a stylus be used when inputting data or initiating actions to protect and preserve the touch screen.

THE VIRTUAL KEYBOARD – The virtual keyboard is accessed by tapping an Icon located in the lower right corner of the touch screen. It is used to input numeric or alphabetical characters in the assignment process.

Tapping the character enters the character into the open window for the current action being taken.

The character set can also be changed in order to display capital letters or numeric figures as needed.

THE HOT KEYS FOR DATA ENTRY – These hot keys be used to input data. They are usually used for a simple entry, such as a number. This is an alternative to the use of the virtual keyboard.

THE HOT KEYS FOR NAVIGATION – The keypad navigation buttons can be used to re-locate the highlighted window on the touchscreen for data entry or action selection. This is an alternative to tapping the desired button or window with the stylus.

THE BARCODE SCANNER – The barcode scanner is not usually used in the assignment process. A barcode Icon will be displayed if the option is available.
PREPARING A HANDHELD DEVICE FOR USE
VISUAL INFORMATION DISPLAYED BY THE HANDHELD DEVICE

There are some visual indicators that are displayed on the touch screen to identify conditions or hardware on the currently connected Navigator unit.

A light blue background indicates an un-assigned Navigator unit.

A light beige background indicates an assigned Navigator unit.

Hardware that is being tested is identified by an Icon displaying an image representing the type of hardware.

The results of functionality tests are indicated by a green check mark for success, and a red “X” for failure, which is located in the lower right corner of the icon as indicated in the drawing below.

Regardless of the outcome of the tests, details concerning the results of the functionality tests can be displayed on the screen by tapping on the Icon in question. When finished viewing the details, return to the results screen by tapping on the finished or O.K. button.

Icons with motion that are displayed on the screen are used to indicate current activity.

A. This Icon is used to indicate scanning or mesh communication.

B. This Icon is used to indicate device communication with the server.

C. This Icon is used to indicate handheld communication with the remote device.
THE FIRST SCREEN

To start to use the handheld device, it must be powered up. A screen like the one to the right will be displayed.

Tapping the windows Icon, located in the top left corner of the screen, next to the word “Start” will display a list of the available programs.

Assuming that the program has been installed in handheld device, this is where the program named **VIX Installer Express** will be found. Tapping on the title will start the **VIX Installer Express** program.

![Image of VIX Installer Express](image)

**TECH TIP**

It is important to be sure that the Time and Date are set correctly. This is the Time and Date that will be given to the DMS during the assignment process and they need to be fairly accurate.

Tapping on the Time and Date will open windows that will allow them to be re-set. The correct time and date should be set along with the correct time zone where the machine will be located.

SET UP THE VIX INSTALLER EXPRESS PROGRAM FOR USE

The **VIX Installer Express** program is the program that is used to complete the assignment process with a handheld device.

When the program is started, a screen like the one to the left will be displayed. In order for the assignment to be completed correctly, some settings must be checked and possibly reset.

1. Tap the button labeled “Options”. The Options menu will be displayed.
2. Check the current setting for the type of Device Communication to be used, the current setting will be displayed.
3. If necessary, tap the button named “Device Comms” to toggle and display the correct setting.

DEVICE COMMS MODE: (Current setting listed)

Sets the type of communication the handheld device will use. The setting can be toggled between WIRED and BLUETOOTH. The current setting is displayed on the screen as with the image on the right.

The WIRED Option – is used when a DEX harness is connected between the handheld device and the unit’s DEX port.

The BLUETOOTH Option – is used when the handheld device is capable and a Bluetooth memory stick has been installed into USB port 1 on the Navigator unit so that wireless communications are possible.
CUSTOMER ID’S

From the Options Menu, tap the Customer ID’s Button to display the first of two screens that will allow entry of the customer specific data that identifies the customer to the DMS.

This data must be entered correctly for the assignment to be successful. The data will be validated by the DMS during the assignment process.

1. A screen with an open window will be displayed asking for an NV Account number.
2. Enter the NV Account number using the virtual keyboard or the numbered hot keys.
3. Tap on the “OK” button to accept the entry and display a second screen asking for a Vending Company Code.
4. Enter the Vending Company Code. The virtual keyboard is commonly used for this action.
5. Press “OK” or “Done” to accept and save the entries. The touchscreen will return to the Options menu.

The above entries are customer specific and will need to be set every time a new or different customer’s machines are being assigned.

DMS URL

From the Options menu, tap the “DMS URL button to display the first of two screens that are used to identify the location of the DMS that the telemetry units will be communicating with.

1. A screen titled DMS URL will be displayed. There will be a window below the title which may be displaying the current setting for the DMS URL.
2. Tap the Icon in the lower right corner of the touchscreen to display the virtual keyboard and use the stylus to enter the correct web location. (In this case, streamwareonline.com)
3. Press “OK” to accept the web location and open a second window titled “DMS Port”.
4. There will be a window below the title which may be displaying the current setting for the DMS Port.
5. Tap the icon in the lower right corner to display the virtual keyboard and enter the correct DMS Port. (In this case, 8081)
6. Press the “OK” or “Done” button to accept and save the entries.

The touchscreen will return to the Options menu.
USE OF AN ALTERNATE URL

**Standard URL with alphabetic base**
http://streamwareonline.com:8081/WANServiceSB.asmx

Field practice has shown that for some CDMA applications, it has been found that replacing the URL shown above with the numeric equivalent IP address noted below works more consistently.

**Alternate URL with numeric base**
http://216.211.240.85:8081/WANServiceSB.asmx
MAJOR COMPONENTS IN THE SYSTEM
THE NAVIGATOR TELEMETRY UNIT – Part # CR0006673

The Navigator Unit is a telemetry device that contains an onboard computer which collects data from the vending machine. The types of data which are collected can include: remote DEX, Temperature monitoring, Machine door openings and closings, and the ability to create a wireless network if desired.

It also replaces the machine’s DEX port so that a handheld device can still interface with the system.

When a radio unit is installed, along with its antenna(s), the Navigator unit uses two way communications to transmit and receive data in order to verify and complete cashless sales. It also transmits and receives data concerning the vending machine’s current condition in terms of sales and service needs.

Many of the components for the Navigator Unit have been built into the Atlas Control Board in Media machines, so in some cases, only a radio connected with a USB cable would be required. (Normally, when a DEX only type of operation is desired)

The USB Cable, Part # CR0006822 is what is used to connect the Navigator unit to the radio unit. It is six feet long to allow more freedom to place the units as needed within the cabinet. Excess cable can be coiled and attached to the loop molded onto the side of the Navigator unit in order to dress out the cable neatly.

A. The Red Button – Is located on the front of the Navigator unit. It is used to reset the unit. (Like a power down/up)

B. The Blue Button – Is located on the front of the Navigator unit. It is used to get and send a DEX report from the machine when pressed and held for one to three seconds.

C. USB 1 – It is a low power USB port located on the front of the Navigator unit. It is used for updating the Navigator unit with a memory stick. It can also be used to connect a Bluetooth memory stick when wireless handheld devices are being used.

D. The LED – The unit has a single status LED that displays using three colors.

   A. Solid Green – The Navigator unit has finished booting up.
   B. Yellow – The Navigator unit has detected the presence of a USB memory stick.
   C. Fast blinking Green – The memory stick is updating, data is being read.
   D. Slow Blinks Green – The memory stick has finished successfully, data has been accepted.
   E. Slow Blinks Red – The memory stick has failed, data has not been accepted.

E. The Mesh Connection – The mesh connection is made up of two banks of pin connectors inside the Navigator unit. They are located above the red and blue colored buttons under the blue tinted removable cover on the front of the Navigator unit. They are also located on the Atlas control board.

   Mesh Devices, and their antennas, are installed into Navigator units or Atlas control boards for “Gateway” and “Client” configurations. The assembly created by adding a Mesh Device and antenna to a Navigator unit is what creates a network. Installation details can be found on pages 22 and 33 of this manual.
THE RADIOS

There are two types of radio units currently in use, the CDMA unit and the GSM unit. The radio units should not be placed near fluorescent lights or ballasts, or near other high voltage lines.

Both types of radios operate with an effective signal strength range of -65dbm, which would equal 5 bars, to -90dbm, which would equal 1 bar. A reading of -112dbm would indicate no signal at all.

For best results, a signal strength of -90dbm or greater is desired, but some have been able to operate successfully at as much as -100 to -105dbm, provided the signal is steady and not fluctuating.

It is possible for an Ethernet adaptor to be used in place of a radio if no card reader is being used, (normally, DEX only operations), but this is not a common practice due to the cashless limitations.

CDMA Radio Units – Part # CR0010542 for Sprint – and – Part # CR0020705 for Verizon

Used when the access provider is either Verizon or Sprint. It currently uses a primary antenna as well as a secondary antenna. The primary antenna connector is located to the right of the USB port on the lower end of the body of the radio. The secondary antenna connector is located alone on the opposite end of the radio body.

If an external antenna is used, it should be connected as the primary antenna to the connector adjacent to the USB port on the radio.

The antenna(s) should always be mounted vertically, not horizontally, and the leads need to be dressed out so they will not interfere with moving parts inside the cabinet.

The CDMA radio has two status LED’s.

A. Green – Will be lit continuously to indicate that the unit is powered up.

B. Yellow – Used to indicate the current condition of the radio,
   1. Slow Blink – A normal condition, it is seeing the network but not talking, A Heartbeat.
   2. Fast Blink – A normal condition, it is seeing the network and is talking to/from the network.
   3. 20 blinks, pause/repeat – A normal condition, actively talking on the network.
   4. Steady On – The radio can see the network, but there is no activity.
   5. No LED – The radio does not see a network at all.

GSM Unit – Radio, Part # CR0006674

Used when the access provider is AT&T. This type of radio includes the use of a SIM Card, Part # CR0006824. It is similar to the type used in cell phones. The SIM Card is inserted into a small socket in the radio underneath the blue cover. It must be inserted in the proper orientation, note the cut-off corner of the card. It is used for authentication purposes.

This radio uses only a primary antenna. It must be mounted vertically, and the lead needs to be dressed out so it won’t interfere with moving parts in the cabinet.

The GSM radio has one status LED. It will be flashing yellow only when it is communicating.
ANTENNAS TYPES USED IN THE SYSTEM

Three types of antennas are used, as needed, in setting up the Navigator System.

1. **The Radio Antenna – Part # CR0006929**

   The Radio Antenna is an antenna that attaches to the machine magnetically. It has a shorter lead, (about 18 inches) and connects to both GSM and CDMA radios.

   This is the antenna that is used to enable communication with the outside world.

   Two antennas are used for a CDMA radio, one as a primary antenna and one as a secondary antenna. The GSM Radio only uses one of these antennas.

   The inside of the threaded connector contains a small protruding Pin Connector in the center which the Mesh Antenna does not have. Care needs to be taken not to confuse them or damage could result.

2. **The Mesh Antenna – Part # CR0006933**

   The Mesh Antenna is an antenna that attaches to the machine magnetically. It has a longer lead, (about 72 inches) and connects to the “Mesh Device”.

   This is the antenna that is used to enable communication between “Gateway” and “Client” units within a location.

   The inside of the threaded connector is a socket, not a Pin, connector in the center. It is the opposite of the radio antenna. Care needs to be taken not to confuse them or damage could result.

3. **The External Antenna – Part # SWCA000004**

   The External Antenna is a low profile dome style antenna that is placed outside the cabinet for optimal function. It is normally used when the cell signal is weak on the radio. It should be connected as the primary antenna.

   It can also be used as a “Mesh Antenna” when the machines in a location are placed at longer distances from each other in order to increase the ability to connect between “Gateway” and “Client” units.

   Careful identification of the correct connection, using the information noted above is critical to correct operation of the telemetry. Unused connectors need to be secured neatly.

---

**TECH TIP**

- Shorter Lead
- Longer Lead
- Center Socket Connector
- Two Leads (about 36 inches)
- Protruding Center Pin Connector - Radio
- Protruding Center Pin Connector - Mesh
- Center Socket Connector - Mesh

---
MESH DEVICE – Part # CR0006098

When a series of Mesh Devices are installed in multiple Navigator units in a location, a network is created. The units included in the network will be either “Client” or “Gateway” units.

“Client units” have the ability to communicate only with a host or “Gateway unit” within the location.

The “Gateway unit” communicates with the “Client units” within the location and also with the outside world. This is what creates a wireless network.

The “Gateway unit” should be chosen based on the fact that it has the optimal Signal strength with the outside world.

The “Mesh Device” has two status LED’s. They are located on either side of the antenna connector.

A. Green – On steady indicates power is being supplied to the device.
B. Yellow – Is an activity indicator and will only be flashing when communication is happening.

When connecting several machines together to create a network, the unit with the optimal signal strength should be chosen as the Gateway Unit. There can be more than one Gateway unit included in the network.

TO INSTALL THE MESH DEVICE INTO A NAVIGATOR UNIT

1. To install the Mesh Device into the Navigator unit, carefully slide the blue cover off the top of the Navigator unit.

2. Align the pins on the Mesh Device with the two banks of sockets in the Navigator unit, and push them in, being careful to have the threaded antenna connector positioned away from the colored buttons.

3. Insert the pins on the “Mesh Device” into the sockets on the Navigator unit carefully, so the pins are not bent or damaged. Replace the blue cover by sliding it back onto the Navigator Unit.

4. With the “Mesh Device” installed in the Navigator unit, the proper antenna can be attached.

A Note about the antenna used with a Mesh Device

The “Mesh Device” has its own antenna. There are differences between it and a radio antenna.

A. The antenna has a longer lead, about 72 inches in length.
B. The inside of the threaded connector has a Center Socket Connector, not a center Pin Connector.

Verify it is the correct antenna before use or damage could result.

The antenna needs to be mounted vertically, not horizontally, and the lead needs to be dressed out so that it will not interfere with moving parts inside the cabinet.

Do not locate the antenna next to fluorescent lamp ballasts, or other high voltage wiring.
THE THREE CONFIGURATION TYPES
THE STANDARD SOLO SETUP

A Solo Setup is one machine set up with a Navigator system properly connected with a radio and the correct antenna(s) attached. The radio can be a CDMA or a GSM type. The machine will be a “stand alone” unit and will not communicate with the server concerning any other machines in the location. It is not part of a network.

The telemetry and radio units can be snapped together or mounted separately in order to fit them neatly into the machine cabinet wherever space is available. The only limitation is by the length of the USB cable being used to connect the components.

THE STANDARD SOLO ASSEMBLY

A. The Navigator unit, with no Mesh Device installed.
B. The Radio unit, in this case, a CDMA unit.
C. The USB cable, connecting the Navigator to the Radio.
D. The Primary and Secondary antennas attached to the radio.

The USB cable that is used is a six foot cable to provide more freedom in placement of the units within the cabinet. In the interest of clarity, a shorter cable was used in the images to the right.

THE MEDIA MACHINE SOLO SETUP

In the case of Merchant Media machines, most of the Navigator components have been built into the Atlas Control Board.

This means that in some cases, only the radio, with its antenna(s), will need to be connected to the Atlas Control board thru the USB cable.

The “On Board” card reader connects directly to the Atlas Control Board using a separate harness and will function without the Navigator unit in the Media machine.

If the use of another type of card reader setup is needed, a Navigator unit will be required to connect the card reader into the system using the EXP 1 connector on the telemetry unit.

THE MEDIA MACHINE SOLO ASSEMBLY

A. The Radio unit, in this case, a CDMA unit.
B. The USB cable, connecting the radio to the Atlas control board, without a Mesh Device installed.
C. The Primary and Secondary Radio antennas, attached to the radio unit.

It should be noted that the reason that both of the above configurations are “Solo” type setups is because there is no Mesh Device installed in either the telemetry unit or the Atlas control board.

There is no network, so there will be no communication with other machines within the location.
THE GATEWAY SETUP

A Gateway Setup is the first part of a wireless network that will enable a group of machines to communicate with each other and to the server thru the radio.

The machine that is chosen to be the “Gateway unit” should be the machine with the optimal signal strength. There can be more than one “Gateway Unit” in the network.

STANDARD GATEWAY ASSEMBLY

A. Has a Navigator unit, with Mesh Device and Mesh Antenna installed.
B. A Radio unit, in this case a CDMA unit, with both Primary and Secondary Antennas attached.
C. A USB cable connecting the Navigator unit to the Radio unit.

These components are mounted into any compatible machine neatly, as space inside the cabinet allows, and are tied into the system thru the MDB harness and the DEX harness.

The Primary Antenna is placed vertically as far forward as possible to maximize signal strength. The other antennas get placed in a convenient location.

The optional card reader is connected to the Navigator unit at the EXP 1 connector.

INTEGRATED MEDIA MACHINE ASSEMBLY

A. An Atlas control board, with the Mesh Device and its Antenna installed.
B. A Radio unit, in this case, a CDMA unit with both Primary and Secondary Antennas attached.
C. A USB cable connecting the Atlas Control board to the Radio unit.

The Radio unit is usually attached to the control board cover using velcro strips.

The Primary Antenna is placed vertically as far forward as possible to maximize signal strength. The other antennas Antennas are placed vertically in a convienent location.

The integrated card reader is connected directly to the Atlas Control Board.

If a card reader other than the integrated card reader is to be used in a Media machine, the standard assembly will be used because the card reader can only be tied into the system thru the Navigator unit at the EXP 1 connector.

When dressing out the harnessing, use caution to route and secure them neatly so that;

A. They are not stressed when the monetary section is opened.
B. They do not interfere with any moving parts within the cabinet.
C. They do not get pinched when the monetary section is closed.
D. They are not routed next to fluorescent lamp ballasts or other high voltage wiring.

TECH TIP

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THE CLIENT SETUP
A Client setup is the second part of a wireless network that will enable more than one machine to communicate with the server thru the radio.

The Client setup is a Navigator unit that does not have a radio connected, but does have a Mesh Device and antenna installed.

Communications with a Client unit are limited and must come and go thru a Gateway unit.

The typical effective range for a Client to see a Gateway is about 30 feet. Depending on conditions within the location, this range can vary greatly.

THE STANDARD CLIENT ASSEMBLY
The standard assembly for a Client setup.

A. A Navigator unit, usually attached inside the cabinet with velcro strips
B. A Mesh Device, properly inserted into the Navigator unit.
C. A Mesh Antenna, properly connected to the Mesh Device.

These components are mounted into to any compatible machine neatly, as space inside the cabinet allows, and are tied into the system thru the MDB harness and the DEX harness.

The Primary Antenna is placed vertically as far forward as possible to maximize signal strength. The other antennas may be placed in a convenient location.

The optional card reader is connected to the Navigator unit at the EXP 1 connector.

THE MEDIA MACHINE CLIENT ASSEMBLY
The assembly for a Media Machine Client setup.

A. Includes an Atlas Control Board, installed in a Media Machine and properly connected.
B. A Mesh Device, properly installed into an Atlas Control Board.
C. A Mesh Antenna, properly connected to the Mesh Device.

The Primary Antenna is placed vertically as far forward as possible to maximize signal strength. The other antennas are placed vertically in a convenient location.

The integrated card reader is connected directly to the Atlas Control Board. If a card reader other than the integrated card reader is to be used in a Media machine, the standard assembly will be used because the card reader can only be tied into the system thru the Navigator unit.

When dressing out the harnessing, use caution to route and secure them neatly so that;

A. They are not stressed when the monetary section is opened.
B. They do not interfere with any moving parts within the cabinet.
C. They do not get pinched when the monetary section is closed.
D. They are not routed next to fluorescent lamp ballasts or other high voltage wiring.
HARNESS CONNECTIONS FOR THE SYSTEM
### Table of Contents

- **A**: CABLE, MDB/DEX (P/N CR0006635)
- **B**: CABLE, USB TYPE A/B PLUG, 72" (P/N CR0006822) to the Lower USB (high power) connector (or 12" USB)
- **C**: DEX Pass through (Hand Held) Cable (P/N 1679056)
- **D**: Mesh Radio Antenna (optional) 72" cable
- **E**: Other end of USB Cable, P/N CR0006822
- **F**: WAN ANTENNA MAGNETIC MOUNT P/N CR0006929
- **F1**: WAN ANTENNA MAGNETIC MOUNT P/N CR0006929
- **G**: Cashless harness: Determined by make & Model of Cashless device (optional)
- **H**: Cashless device (optional)
- **J**: Mesh Radio module

### Description

<table>
<thead>
<tr>
<th>ITEM</th>
<th>FUNCTION</th>
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</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>CABLE, MDB/DEX</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>CABLE, USB TYPE A/B PLUG</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>CABLE, DEX Pass Thru</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>Optional Mesh Radio Antenna</td>
</tr>
<tr>
<td><strong>E</strong></td>
<td>CABLE, USB TYPE A/B PLUG</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>WAN Radio Antenna</td>
</tr>
<tr>
<td><strong>F1</strong></td>
<td>WAN Radio Antenna</td>
</tr>
<tr>
<td><strong>G</strong></td>
<td>Optional Cashless Harness</td>
</tr>
<tr>
<td><strong>H</strong></td>
<td>Optional Cashless Device</td>
</tr>
<tr>
<td><strong>I</strong></td>
<td>Mesh Device</td>
</tr>
</tbody>
</table>

**PART #**

| **A** | CR0006635 |
| **B** | CR0006822 |
| **C** | 1679056 |
| **D** | CR0006633 |
| **E** | CR0006822 |
| **F** | CR0006829 |
| **F1** | CR0006929 |
| **G** | TBD |
| **H** | TBD |
| **I** | CR0006988 |

### Block Diagram For CDMA Connections

[Diagram showing connections and components]
SYSTEM HARNESS CONNECTIONS AND INSTALLATION

It is a good idea to take a few moments to plan out the placement and securing of the components and wiring so that nothing will interfere with the operation of the machine when the installation is complete. When dressing out the harnessing, use caution to route and secure them neatly so that;

1. They are not stressed when the monetary section is opened.
2. They do not interfere with any moving parts within the cabinet.
3. They do not get pinched when the monetary section is closed.
4. They are not routed next to fluorescent lamp ballasts or other high voltage wiring.

The following instructions are intended to be used along with the block diagrams which have been included on pages 28 and 29 in this manual. Together, they will provide a visual guide as well as written steps to assist in the installation of the system.

A. CABLE, MDB/DEX – Harness connections between the machine control board and the Navigator unit.
   1. Disconnect the MDB validator harness from the machine MDB harness and set aside for the moment.
   2. Connect the Male six pin connector on the Navigator MDB/DEX harness to the Female six pin connector on the machine MDB harness.
   3. Reconnect the male six pin connector on the MDB validator harness to the open female six pin connector on the Navigator MDB/DEX harness.
   4. Insert the Male DEX connector on the Navigator MDB/DEX harness into the Female DEX connector on the machine DEX harness. Be sure to snap it in completely for a good connection.
   5. Connect the black eight pin connector on the opposite end of the Navigator MDB/DEX harness to the MDB/DEX connector on the Navigator unit.

B. CABLE, USB TYPE A/B PLUG – Type-A cable connection to the Navigator unit.
   1. Insert the USB cable type-A connector into the connector on the Navigator unit labeled “WAN”. Do not use USB Port 1 on top of the Navigator unit or USB Port 2 on the side of the Navigator unit. The WAN connector is the only high power USB Port capable of running the radio.
   2. Route and secure the USB cable back to the radio unit so that it will not interfere with the normal operation of the machine and connect it as described in the step E instructions.

C. CABLE, DEX PASS THRU – Since the machine DEX harness is being used by the Navigator system, this becomes the new access point for all handheld device connections.
   1. Connect the four pin connector of the Navigator DEX harness to the four pin connector on the Navigator unit marked Handheld Interface.
   2. The other end of the DEX harness should be routed to a convenient spot inside the cabinet and secured so that a handheld device can be easily connected.
D. **OPTIONAL MESH RADIO ANTENNA**

The Optional Mesh Antenna is only used when a Mesh Device has been installed in the unit to create a network.

The Mesh Antenna has a threaded connector at the end of the lead that is different than the radio antenna. In the center of the connector, there is a socket connector, not a pin. Do not connect the wrong antenna or damage may result.

1. With the Mesh Device installed in the Navigator unit or Atlas control board, thread the female antenna connector onto the male connector on the Mesh Device, and see that it is snug.
2. Route and secure the antenna lead to the location where the antenna is to be attached, and see that it will not interfere with the normal operation of the machine.
3. Always attach the magnetic antenna in a vertical position, not horizontal.

E. **CABLE, USB TYPE A/B PLUG** – Type-B connection to the radio unit.

1. Insert the USB cable B-type connector into the connector marked USB on the radio.
2. Route the cable to the Navigator unit and secure it as needed so that it will not be stressed and pull loose during the normal operation of the machine.
3. Insert the type A USB cable connector into the WAN connector on the Navigator unit as described in the step B instructions.

F. **WAN RADIO ANTENNA** – Magnetic mount antenna connected as the primary antenna.

THE Radio antenna has a shorter lead than the Mesh antenna, about eighteen inches long. It is used on both types of radio units. The CDMA radio uses two of them, one as a primary antenna and the other as a secondary antenna. The GSM radio uses only one, connected as the primary antenna.

The radio antenna has a threaded connector on the end of the lead. In the center of the connector, there is a Pin connector, not a socket. Do not connect the wrong antenna or damage could result.

1. With the radio unit in place, thread the female antenna connector onto the WAN antenna connector on the radio unit near the USB connector, and see that it is snug.
2. Attach the primary antenna as far forward in the cabinet as possible for optimal signal strength. Route and secure the antenna lead to the location where the antenna is to be attached, and see that it will not interfere with the operation of the machine.
3. Always attach the magnetic antenna in a vertical position, not horizontal.
F1. **WAN RADIO ANTENNA** – Magnetic mount antenna, connected as the secondary antenna in a CDMA radio unit.

1. If a CDMA Radio unit is being used and a second antenna is required, thread the female antenna connector of a second antenna, onto the connector on the opposite end of the CDMA radio unit as the primary antenna, and see that it is snug.

2. Attach the secondary antenna in a place that is convenient. Route and secure the antenna lead to the location where the antenna is to be mounted, and see that it will not interfere with the operation of the machine.

3. Always attach the magnetic antenna in a vertical position, not horizontal.

G. **OPTIONAL CASHLESS DEVICE HARNESS** – Used to connect a cashless device into the system.

The cashless setup normally used can be divided into two basic groups, the integrated card reader in a media machine, and the added device which can be a third pay option or can be mounted to a bill validator as a dual purpose bezel.

A. The integrated card reader in a Media machine is a card swipe built into the face of the monetary panel of the machine. This card swipe has a harness that is routed thru the monetary panel directly to the Atlas control board in the machine.

   The monetary panel can be updated to include the integrated card reader but there are more parts involved than just a simple card reader and an attached harness. For details, contact Crane Merchandising Systems Tech Support team at 800-628-8363.

B. The added device can be a card reader which is mounted into an available third pay port or a dual purpose bezel mounted on the front of a Bill validator in order to take advantage of the existing port.

   There are multiple manufacturers of bill validator units and card reader devices, and each type has its own extension harness connecting it to the Navigator unit.

   1. Attach the optional card reader extension harness to the card reader device.

   2. Mount the card reader into the available port in the monetary panel.

   3. Route and secure the optional card reader extension harness to the location where the Navigator unit is mounted, and check to see that it will not interfere with the operation of the machine.

   4. Connect the extension harness to the EXP 1 connector on the Navigator unit.

   There is a molded loop on the Navigator unit that can be used to secure excess lengths of cable with a zip tie. Note the picture displayed above to identify the location of the loop.
H. **OPTIONAL CASHLESS DEVICE** – Multiple manufacturers produce cashless devices and extension harnesses which can be connected to the system via the EXP 1 connector on the Navigator unit. Some examples are listed below.

<table>
<thead>
<tr>
<th>Example</th>
<th>Cashless Device</th>
<th>Required Harness #</th>
<th>Navigator Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Currenza Cashless Bezel</td>
<td># 5900678</td>
<td>EXP 1</td>
</tr>
<tr>
<td>2.</td>
<td>Mars 3 in 1 Cashless Bezel</td>
<td># CR0013093</td>
<td>EXP 1</td>
</tr>
<tr>
<td>3.</td>
<td>Mars 4 in 1 Cashless Bezel</td>
<td># CR0013093</td>
<td>EXP 1</td>
</tr>
<tr>
<td>4.</td>
<td>Crane Swipe and Tap Cashless Card Reader</td>
<td># CR0014477 – 3 FT or #CR0014989 – 10 FT</td>
<td>EXP 1</td>
</tr>
</tbody>
</table>

J. **OPTIONAL MESH DEVICE** – It should be noted that a mesh device can also be installed into a Media machine with no Navigator unit using an identical set of sockets mounted on the Atlas control board.

1. To install the *Mesh Device*, carefully remove the cover from the top of the Navigator unit or control board.
2. Align the pins on the *Mesh Device* with the two banks of sockets in the Navigator unit, or control board, and push them in, taking note of the position of the threaded antenna connector.
3. Insert the pins on the “Mesh Device” into the sockets on the Navigator unit carefully, so the pins are not bent or damaged.
4. With the “*Mesh Device*” installed, the proper antenna can be attached, and the cover replaced.

Additional details concerning the use of the proper antenna are listed on page 22 of this manual.
NAVIGATOR USB TELEMETRY ASSIGNMENT
USB ASSIGNMENT PROCESS FOR NAVIGATOR – BEFORE YOU BEGIN

Remember that the Navigator unit must have been pre-assigned to the customer in the DMS before beginning the assignment process.

To Pre Assign a Navigator unit, or Atlas Control Board, involves a call to Streamware Technical Support team at 1 (800) 765-2545 (Ext 2) to inform them of the serial number of the Navigator unit, or the Atlas Control Board which is to be assigned, so that it can be entered into the DMS.

A Navigator Assignment archive file will also be needed. Obtain the Navigator Assignment archive file by contacting Crane Merchandising Systems Tech Support team at 1 (800) 628-8363.

Please be prepared to supply your NV account number and an email address where the 2.5 Mb archive file can be sent. Upon receipt save this file to a desktop or other preferred folder.

The DMS will be looking to match up the serial number during the assignment process in order to verify that the assignment is legitimate. If the DMS cannot match up the numbers, the assignment will not be allowed to complete successfully.

USB ASSIGNMENT PROCESS FOR NAVIGATOR – STAGE ONE

1. Power down the vending machine and physically install the Navigator system in the machine. Place the components and dress out the harnessing neatly.
2. Power the machine back up and the LED on the Navigator will illuminate. Wait for the LED to turn solid green. This will take about two minutes.
3. Insert the prepared stick into USB port 1 on the top of the Navigator unit. After a couple seconds, the LED will turn yellow, and then begin to do a fast blinking green. The yellow indicates that the memory stick has been detected, and the fast blinking green indicates that the memory stick is updating the Navigator unit.
4. Wait for about thirty to forty seconds, or until the LED changes to a slow blinking green. This indicates that the update has completed successfully.
5. Remove the memory stick from USB port 1 on the Navigator and power down the machine. Wait for a count of ten, then power the machine back up to reboot the system.

USB ASSIGNMENT PROCESS – STAGE TWO

1. When the machine is powered up for the second time, wait until the LED turns solid green. This will take about two minutes.
2. Re-insert the USB memory stick into USB port 1 on the top of the Navigator unit for a second time. The Navigator LED will begin to do a fast blinking green. This indicates the second stage of the assignment process is underway. Wait for it to complete, it could take up to one hundred thirty seconds.
3. When completed, the Navigator LED will reflect the outcome of this stage of the assignment process.
A. **Slow Blinking Green** – The second stage of the assignment process has *completed successfully*. In most cases, this will result in an automatic reboot of the Navigator unit within about ten seconds. Wait for about two minutes for this to complete.

B. **Slow Blinking Red** – The second stage of the assignment process has *not completed successfully*. This may indicate a communication problem. Logs from the Navigator unit are automatically copied to the memory stick and can be sent to Crane Merchandising Systems and Streamware for an investigation as to the cause.

C. **Solid Green** – The Navigator unit has rebooted. Remove the memory stick from the USB port 1. Check for indications that the assignment has been successful.

4. Write down the Navigator unit’s serial number, asset number/VEQ, and an equipment description to be seen on the reports. Send these Navigator to Asset associations to Pat Ryan at pryan@cranems.com

**ASSIGNMENT VERIFICATION**

This process allows you to verify that a successful assignment has occurred on your Navigator unit or Media machine.

1. Complete the assignment process using the procedure listed above and allow the machine to completely boot up.

2. Send a DEX report using one of two methods.
   A. On a Media machine – Enter the service mode functions and choose the telemetry menu, choose the option to send a DEX report.
   B. On a Navigator unit – Press the blue button located on top of the navigator unit, hold it down for three seconds.

3. Take note of the time the report was sent and wait two minutes for the report to complete sending and become available for viewing.

4. Open an internet browsing session using either a computer or a smartphone with web access.

5. Open a connection to [http://streamwareonline.com/hiadinfo.mvc](http://streamwareonline.com/hiadinfo.mvc) and a screen will appear.

6. Enter the serial number of the Navigator unit or the Atlas control board into the ISN box, and click on send.

If the assignment was successful, the response will show the ISN, the SW code, and the POS code, which should match the ISN. The response will also show the DEX read.
Check the time and date of the “last DEX”, it should match the time that the blue button was pressed fairly accurately.

Also listed below are two examples of an unsuccessful assignment and some troubleshooting tips.

**INDICATIONS OF TROUBLE**

If the report shows no time and date for last activity and last DEX read, as well as no DEX read, the report is indicating that there is a potential communication problem. Possibly there is a radio or antenna issue.

If the report shows a time and date for last activity and last DEX, but no DEX read, the report is indicating that there is no DEX communication at the machine. Possibly there is a DEX cable issue.

**FOR HELP WITH, OR QUESTIONS ABOUT THE ASSIGNMENT PROCESS**

Crane Customer Support Team 1(800)628-8363
Streamware Customer Support Team 1(800)765-2545 Ext 2
ASSIGN AN ATLAS CONTROL BOARD
TO ASSIGN TELEMETY IN A MEDIA MACHINE – for Cashless, Remote DEX, and Alert functions

To assign a Media machine that uses an Atlas control board, a properly prepared memory stick may be required. Refer to the section on preparing a memory stick for details.

A hand held device, properly configured, can also be used. If the handheld device is used, the process is the same as a Gateway or Solo setup in any other machine.

If the memory stick is used, the Atlas Control Board functions as the Navigator unit because most of the components are built into the Atlas board and the process is completed using the machine keypad or touchscreen. The memory stick can be inserted into any available port on the Atlas control board.

The steps described here are reflective of a Media machine equipped with a keypad. The Media machine equipped with a touchscreen uses the same methods, but the touchscreen is tapped instead of a button being pushed on the keypad.

THE ASSIGNMENT PROCESS USING A MEMORY STICK

The first step in the process is to power up the machine and let it boot up completely. This will take about five minutes.

With the monetary panel slid out, the display will be asking for a PIN to be entered. The default PIN is four three’s (3, 3, 3, 3). Enter the PIN and a diagnostic screen may come up listing any current errors.

Press the machine’s red “X” button and the display will change to the service home screen listing the twelve categories of service functions.

1. Insert the USB Memory stick into any available USB port on the Atlas Board.
2. Press or Tap the service category button labeled “Telemetry”. (normally it is a zero)
3. Press or Tap the service function button labeled “Assign Unit”. (normally a one but can be a four)

The Atlas Control Board will update the data from the memory stick to the control board.

When the update is complete, the machine will reboot. This will take about five minutes.

Since the monetary panel is still open, the display will again be asking for a PIN to be entered.

The default PIN is four three’s (3, 3, 3, 3). Enter the PIN and a diagnostic screen may again come up listing any current errors.

Press the machine’s red “X” button and the display will again change to the service home screen listing the twelve categories of service functions as shown above.

1. Press or Tap the service category button labeled “Telemetry” again.
2. Press or Tap the service function labeled “Assign Unit” again.
The Atlas Control Board will verify the customer information on the memory stick, and a screen will be displayed indicating that this is happening.

When the customer information has been verified, a screen will be displayed asking for a machine ID number to be entered.

3. Press the button labeled “Machine ID” (normally a one) and a screen with an empty window and an image of a keypad will come up which is used to enter the machine ID number.

The numeric keypad that is used is similar to the older style cell phone keypads.

The machine’s “Information” button (the button with the character to the left) is used to toggle between lower case, upper case and numeric characters.

The same button may need to be pressed or tapped more than once to bring up the correct character because each button is used to call up multiple characters.

The characters being entered must be put in slowly, a delay is built in which must be satisfied before the cursor moves to the next character.

4. When the correct Machine ID Number is displayed in the window, Press the machine’s “OK” button.

The previously seen screen asking for a machine ID number will return, except now the number that was entered will be displayed and a second option will be displayed labeled “Validate Entries”.

5. Press or Tap the “Validate Entries” button (normally a two)

A Validating User Entries screen will come up indicating that the entries are being validated.

When the validation is completed successfully, A Finalizing Assignment screen will come up indicating that the assignment is being finalized.

A screen will come up reading that the “unit has been assigned.

Below the message a button will be labeled “Reboot to complete Assign”

6. Press the button to reboot the machine. (Normally a one)

7. Allow the machine to reboot completely.

8. Remove the memory stick from the USB port.
BASIC MACHINE SETTINGS TO CHECK AFTER THE ASSIGNMENT IS DONE

After the assignment is done, there are some things that need to be checked to see that they are set correctly.

1. Go to the “Product Configuration” functions (Button 5) and enter the “Selection Configuration” function (Button 1), then perform an Auto Configuration on the machine. This will help to clear any communication issues with the I/O board and enable all the motors that are present.

2. Go to Monetary (Button 7) in the service functions and check for the correct settings for the coin mechanism, bill validator and, if installed, an integrated cashless device or other MDB cashless device.

3. Check and if necessary, set the time and date.

   Once the time and date has been reset, the machine will need to do another complete reboot. Close the monetary panel or push in the door switch to begin. This will take about five minutes.

ASSIGNMENT VERIFICATION

The success of the assignment can be verified using the same procedure as described previously. Refer to the section titled Assignment Verification on page 36 for details.

FOR HELP WITH, OR QUESTIONS ABOUT THE ASSIGNMENT PROCESS

Crane Customer support team  1(800)628-8363
Streamware Customer Support Team  1(800)765-2545 Ext 2
ASSIGN A UNIT WITH A HANDHELD DEVICE
ASSIGN A MEDIA OR NAVIGATOR AS A GATEWAY

The machine, with the telemetry system already installed, should be allowed to boot up completely before attempting to connect the handheld device to the Navigator system. This will take about two to three minutes.

A Media machine with an Atlas Control Board may take longer to completely boot up. The process of assignment is the same for both Navigator and Media machines when using a handheld.

1. Power up the handheld device and tap the windows icon next to the start button. A drop down list of available programs will be displayed.

ESTABLISH A LINK WITH THE DEVICE

2. Tap on the VIX Installer Program to start it. Tap the button labeled “Establish Link with Device”. Depending on the type of communication being used, there are some small differences in procedure, but the object is the same, to establish a link with the device.

A. Wired Connection

1. Connect the DEX cable from the handheld device to the DEX port on the Navigator or Media Control board (Atlas) system.
2. From the handheld’s main screen, tap “Establish Link with Device”
3. The handheld will connect to the system.

B. Bluetooth Connection

1. Install the Bluetooth Memory stick into USB port 1 or 2 on the Navigator unit.
2. Power up the machine and wait for two to three minutes for the unit to completely boot up.
3. From the handheld’s main screen, tap “Select Device”
4. From the handheld’s screen, tap “Scan For Nearby Devices” and the handheld will locate any Navigator unit within close range, about thirty feet.
5. From the available list, tap the unit with the serial number to be assigned and tap “OK”.
6. The handheld device will connect to the Navigator system.

ASSIGN THE NAVIGATOR

Once connected, the highlighted screen will be asking to assign the Navigator. And again, depending on the type of communication used, there are some small differences in procedure, but the object is to connect to the device.

3. Tap the button labeled Assign Navigator.

A. The handheld using a wired connection will move forward with the assignment process.
B. The handheld using a Bluetooth connection will display a list of available gateway units and ask you to choose one. After one is chosen, the assignment process will move forward.
When the process moves forward, a series of screens doing system checks will be displayed. Wait until they are complete. Then, a Hardware Diagnostics screen will be displayed.

**HARDWARE DIAGNOSTICS**

When the Hardware Diagnostics screen is displayed, there are icons for the hardware in the system, (Navigator on the left, then radio, and, if included, cashless). In the lower right corner of each icon, the results of the systems checks are indicated.

A. A green check will be displayed if the hardware is good.
B. A red “X” will be displayed if there is a problem with the hardware.

Tapping on an icon will bring up a screen displaying the details concerning the hardware you are interested in. When done viewing the data, tap the “OK” button to return to the hardware diagnostics screen.

At the bottom of the screen, there are buttons allowing three choices, Back, Refresh, and Next.

**NETWORK CONFIGURATION**

4. To continue with the assignment process, tap the “Next” button. It is possible for two similar Network Configuration screens to be displayed depending on whether or not an APN string needs to be set.

A. The first time a hand held device is used, an APN communication string may need to be set. This is usually seen with GSM radios. The handheld screen will display a message reading “GSM on Device does not match Settings” followed by “Mesh must be configured”.

   1. The button marked Settings will be bright and active. Tap the “Settings” button to verify the settings.
   2. A screen will be displayed with an empty window. Input **attz.cranems.com** as the preferred GSM APN using the virtual keypad and tap “Done” in the lower right corner.
   3. This will bring up a second screen which has an empty window.

   Do not input anything as the preferred GSM user and tap “Done” in the lower right corner.

   This will display a third screen.
4. With a third screen displayed which has an empty window, do not input anything as the preferred GSM password.
5. Tap “Done” in the lower right corner. A screen will display a message reading “Mesh must be configured”. This time, the “Settings” button will be dim and will not be active.
6. Tap the button labeled “Re-configure Device” and the device will be configured.
7. When the mesh has been reconfigured, a confirmation screen will be displayed. Press the OK button to continue to the next step in the assignment process.

B. If the APN communication string does not need to be set, the process will jump forward to a network configuration screen that displays “Mesh must be configured”
1. Tap the button labeled “Re-configure Device” and the device will be configured.
2. When the mesh has been reconfigured, a confirmation screen will be displayed. Press the OK button to continue to the next step in the assignment process.

NETWORK CONNECTION TEST

5. In the next step in the assignment process, a Network Connection Test screen will display a message reading that the Navigator unit (identified by its serial number) is a Gateway. And, that the Network is ready, and whether or not it has any Clients. There are some options here.
If needed, tapping the “Details” button will bring up a screen displaying the Gateway information. When finished looking at the data, tap “OK” to return.
A. Tap “Next” to proceed with the assignment process.

DEVICE FIRMWARE CHECK

6. A Device Firmware Check screen will be displayed with a message listing the Current Version of firmware. There are some options here.
A. Tap the “Check FW” button to see that the Firmware Version is up to date.
Another screen will be displayed, with a message confirming that the firmware version is up to date.
B. Tap the “Next” button to proceed to the next step in the assignment process.
MDB TEST

7. The next screen in the process is one that will only be displayed if cashless is being installed. It is an MDB Test screen. It is normal for the MDB Test to fail. A red “X” will be displayed in the lower right corner of the icon. The test fails because the Navigator unit does not have the cashless configuration yet. There are some options here.

A. Tap the “Info” button to look at the details of the test. Tap the OK button to return to the MDB Test screen.
B. Tap the “Next” button to proceed to the next step in the assignment process.

DEX READ TEST

8. The next screen that will be displayed in the assignment process is a DEX Read Test screen. A message will be displayed on the screen which reads “Reading DEX” and the Navigator will get a DEX read from the machine.

When the DEX read is completed, another screen will be displayed that will show the results of the test. There are some options here.

A. Tap the “Test DEX” button to do the test again.
B. Tap the “View DEX” button to look at the DEX read data.
C. Tap the “Next” button to proceed to the next step in the assignment process.

ENTER THE MACHINE ID NUMBER

9. The next screen that will be displayed will have an open window and will be asking for a machine identification number to be entered.

A. Enter the ID Number by tapping the virtual keypad access icon in the lower right corner of the screen.

The on screen characters can also be used by tapping the same button multiple times to display the chosen character.

B. Choose the characters and tap them to enter and display them on the screen.

C. When finished, tap the “Done” button.

TECH TIP

The ID number that is used needs to be unique to the DMS, one that will not be repeated. Some types of numbers that have been used include;

A. The serial number from the machine being assigned.
B. An Asset Control Number determined by the operator's bookkeeping processes.
C. Another unique assigned number which can be used to identify the machine and, that will not be repeated.
ID NUMBER VALIDATION

10. In the next step in the process VIX will validate the ID number against the DMS and a screen will display the result. The result will be valid or invalid. There are two options here.

A. If the result is invalid, tap the “Change” button to enter a different ID number.
B. If the result is valid, tap the “Next” button to proceed with the assignment process.

FINALIZE ASSIGNMENT

11. The next screen that comes up will be a Finalize Assignment screen. A message will list the Navigator serial number and the machine ID number. There are some options here.

A. Tap “Check Assignment Info” to see Point of Sale information. It is a good idea to verify that the Navigator is being assigned to the correct vendor so that cashless sales are not directed to the wrong account.
B. Tap “Assign” to complete the assignment process.

12. The next screen that is displayed is second Finalize Assignment screen. A message will read Finalizing Assignment along with an estimation of the time needed to finish the task.

The next screen to be displayed will be a third Finalize Assignment screen. A message will read “Assignment completed successfully. Navigator is rebooting”.

If cashless is being installed an additional message will be included reading that “Credit Card processing has been configured”.

The time needed to finish the task will vary depending on the available connectivity, signal strength, and will generally run between twenty and one hundred twenty seconds.

EXIT THE PROCESS WHEN DONE

13. Tap “Done” to exit the process. If a DEX cable is being used to assign the Navigator, it can now be unplugged.

Allow the Navigator to reboot. The assignment of the gateway is now complete.

The assignment of clients can begin as soon as the reboot is complete.
DIFFERENCES IN THE PROCESS WHEN ASSIGNING A NAVIGATOR AS A CLIENT

Assigning a Navigator unit as a Client uses the same process as does the Gateway assignment. There are some small differences displayed on some screens.

A. The hardware Diagnostics screen is the first screen where there is a difference. When the icons are displayed, the radio icon will have a red “X” in the lower right corner.

1. If the icon is tapped to display the details, the network will appear as not ready and there will be no Gateway. This is because a client has no radio and the Mesh has not been configured.
2. Tap “Next” to proceed with the assignment process and configure the mesh.

B. The Network Connection Test screen is the next screen where there is a difference.

On the Network Connection Test screen the Navigator unit will identify itself as a Client and identify the Gateway it has found.

1. Tap the Details button to view the client information
2. Tap “Next” to continue with the assignment process.

DIFFERENCES IN THE PROCESS WHEN ASSIGNING A NAVIGATOR AS A SOLO UNIT

Assigning a Navigator unit as a Solo unit also uses the same process as does the Gateway assignment.

On the Network Connection screen the Navigator unit will identify itself as a Solo unit.

No mesh device was installed, so this unit will not communicate with any other units, there is no network created. There will be no Gateway and no Clients.
NAVIGATOR SYSTEM QUESTIONS
# COMMON NAVIGATOR SUPPORT QUESTIONS – LED INDICATORS

<table>
<thead>
<tr>
<th>Problem or Symptom</th>
<th>Possible Solutions</th>
</tr>
</thead>
</table>
| **1.** What can be checked if the LED on the Navigator unit never comes on?       | 1. Check all the connections on the MDB harnessing between the Navigator unit and the control board.  
2. Swap the Navigator unit with one that is known to be functional.              |
| **2.** What can be checked if the LED on the Mesh radio never comes on?           | 1. Check the connector pins on the CCM to have been properly inserted into the pin connectors on the Navigator unit or control board  
2. Swap the Navigator unit with one that is known to be functional.  
3. Swap the CCM unit with a unit that is known to be functional.                 |
| **3.** What does it mean when the LED on the Navigator unit stays red or amber indefinitely? And, what can be done to correct it? | 1. The Navigator unit has corrupted firmware.  
2. Replace the Navigator unit with a unit that is known to be functional.         |
| **4.** What does it mean when the LED on the Navigator unit blinks red or amber?  | 1. This condition indicates a failed DEX read from the VMC.  
2. The DEX file could be too large. Check to see that unnecessary lines have been eliminated.  
3. The file could be taking too long to download. Check to see that the cache has been enabled in system settings under DTS.  
4. The password could be set incorrectly, it needs to be either six or twelve zeros.  
5. Some machines require a shielded cable be used. This would include Vendo machines. |
| **5.** What can be checked if the radio does not display any LED?                  | **For CDMA Radios**  
1. Check the connections on the USB cable, Both on the radio and to see that the cable is connected to the WAN USB port on the Navigator unit.  
2. Swap the radio with one that is known to be functional.  
**For GSM Radios**  
1. Check the USB cable as listed above.  
2. Check the radio as listed above.  
3. Check to see that the SIM card is present and has been properly inserted into the radio unit.  
4. Call the Streamware Customer Support Team to verify that the SIM card is active. |
## COMMON NAVIGATOR SUPPORT QUESTIONS - DEX

<table>
<thead>
<tr>
<th>Problem or symptom</th>
<th>Possible solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What do I check if the Navigator unit won't DEX the vendor?</td>
<td>1. Check the DEX cable connection to the VMC and the Navigator unit.&lt;br&gt;2. Check the DEX cable connection to the handheld device.&lt;br&gt;   A. Make sure the male connector is inserted completely into the socket and twisted for a good contact.&lt;br&gt;   B. Make sure the handheld cable is correctly snapped into the handheld device and that the contacts are clean.&lt;br&gt;3. Check to see that the software version is up to date and that the VMC is the latest revision board.&lt;br&gt;4. For Vendo machines, a shielded cable is required. Check to see that it is present.</td>
</tr>
<tr>
<td>2. What can I check if I can’t connect to the Navigator unit using the DEX cable?</td>
<td>1. Check for a good connection in all the cables&lt;br&gt;   A. Between the handheld device and the Navigator DEX harness.&lt;br&gt;   B. Between the Navigator DEX harness and the Navigator unit.&lt;br&gt;2. Ensure that the machine and the Navigator unit have both completely booted up before attempting to connect the handheld device for the DEX read.&lt;br&gt;3. Verify that the Vendmax program is not running on the handheld device.&lt;br&gt;4. Perform a “warm boot” on the handheld device.&lt;br&gt;5. Close out the VIX program and re-start the VIX program.&lt;br&gt;6. Verify the firmware on the Navigator using log reader.&lt;br&gt;7. Send in the log files for investigation.</td>
</tr>
</tbody>
</table>
### COMMON NAVIGATOR SUPPORT QUESTIONS – CARD READER

<table>
<thead>
<tr>
<th>Problem or symptom</th>
<th>Possible solution</th>
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</table>
| 1. What can be done when the card reader can’t get a good swipe? | 1. Clean the card reader path with an alcohol based cleaner.  
2. Try a different card reader or harness.  
3. Check the card reader settings to be activated. |
| 2. What can be done when the card is swiped and it “feels tight”? | 1. Check the “On Board” card reader to see that it has not been over-tightened, bending the card path.  
2. Check for a blockage in the card reader opening. |

### COMMON NAVIGATOR SUPPORT QUESTIONS – VIX INSTALLER PROGRAM

<table>
<thead>
<tr>
<th>Problem or Symptom</th>
<th>Possible Solutions</th>
</tr>
</thead>
</table>
| 1. What does it mean when the VIX program displays a red “X” on the card reader Icon? And what can be checked? | 1. It means that the card reader is not being seen by the Navigator unit.  
2. Check to see that the Harness and bezel are properly connected to EXP 1 on the Navigator unit. |
| 2. What does it mean when the VIX program displays a red “X” on the Navigator Icon? | 1. The VIX program has lost communication with the Navigator unit.  
2. Verify that all the cable connections are correct and making a good contact.  
A. From the handheld device to the Navigator DEX harness.  
B. From the Navigator DEX harness to the Navigator unit connection at EXP 1. |
| 3. What can I do if VIX fails when Verifying the Navigator owner with the D.M.S. | 1. Verify that the correct Vending Company Code is being used.  
2. Verify that the correct National Vendors Account Number is being used.  
3. Check to see that the communications functions are in good working order. |
| 4. What do I do if VIX is displaying a red “X” in the radio Icon? | 1. Check the RSSI (signal strength) to be greater than -100 dBm.  
A. If this requirement is not met, try an alternate carrier or stop the installation.  
2. Check the network status, if it is not ready,  
A. With a GSM radio, it could indicate that there is no 2G service functioning.  
B. With a CDMA Verizon radio, it could indicate that it is on a roaming network. |
### COMMON NAVIGATOR SUPPORT QUESTIONS – VIX INSTALLER PROGRAM (continued)

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<tbody>
<tr>
<td><strong>5.</strong></td>
<td><strong>What does it mean when VIX reports that customer ID’s do not match?</strong></td>
</tr>
</tbody>
</table>
|   | 1. The *Vending Company Code* and/or the *National Vendors Account* number may have been incorrectly set in the handheld device.  
A. Check and, if necessary, reset the *Vending Company Code* and/or the *National Vendors Account* number in the handheld device.  
2. The Navigator unit may be listed as being owned by a different owner.  
A. Call Streamware support to have the listing updated to indicate the correct owner. |
| **6.** | **What can be done when a Navigator unit, set up as a Client, cannot find a Gateway?** |
|   | 1. Verify that the *Gateway* has been assigned first, and that the unit is completely powered up.  
2. Verify that the antenna(s) are properly connected and mounted.  
3. Ensure that the units are placed within an acceptable distance to allow communication to take place.  
The maximum distance can be 50 to 300 feet, depending on conditions. |
| **7.** | **What should be done when the Navigator unit reports that the MDB test failed?** |
|   | 1. Nothing needs to be done.  
It is expected that the test will fail because the configuration is not complete.  
2. Proceed with the next step in the assignment process. |
| **8.** | **What needs to be checked when the Navigator reports that the DEX Test Failed?** |
|   | 1. Verify that the Navigator DEX harness, with the male connector, is properly connected to the machine DEX connector.  
2. Verify that the VMC options and security settings are set to allow DEX operations.  
3. Verify that the proper version of software has been installed.  
4. Check the vendor for errors and clear them. |
| **9.** | **What needs to be checked when the Navigator unit reports that it failed to verify the machine ID?** |
|   | **For Vendmax Customers**  
1. Verify that the correct *Vending Equipment Code (VEQ)* is being used for the machine ID.  
2. Verify DMS connectivity to Vendmax.  
**For Non-Vendmax customers**  
1. Verify that the ID number which was used has not already been used for another unit. |
| **10.** | **What causes VIX to fail to finalize assignment? And, what can be checked?** |
|   | 1. Poor or weak cell signal can be the cause. Check the RSSI (signal strength) of the radio.  
2. Switch to an alternate carrier and try again.  
3. Connect an external antenna the primary antenna and try again. |
### COMMON NAVIGATOR SUPPORT QUESTIONS – VIX INSTALLER PROGRAM (continued)

| 11. | What causes VIX to skip the step of entering the Machine ID? | 1. A missing line of code in the “vix.reg” file can be the cause.  
2. Call Streamware support and tell them that a new “vix.reg” file is needed in the handheld device. |
| 12. | What needs to be checked if there is no Cashless configuration after the assignment is complete? | 1. Verify that the Cashless bezel has been enabled in the handheld device.  
2. Verify that the cashless bezel and its extension harness have been properly connected and routed to the EXP 1 connector Navigator unit.  
3. Contact Streamware support and verify that there are TID’s available for use. |

### COMMON NAVIGATOR SUPPORT QUESTIONS – CASHLESS

<table>
<thead>
<tr>
<th>Problem or Symptom</th>
<th>Possible solutions</th>
</tr>
</thead>
</table>
| 1. Why would the cashless bezel display “Not Accepting Cards” after the assignment? | 1. Check to see that the Navigator unit is assigned.  
2. Call Streamware support to check for available TID’s that can be used. |
| 2. Why would the Crane Tap and Swipe bezel display a “Thank You” message immediately after a card swipe? | **For N.V. equipment**  
1. Check to see that the MDB card setting in the machine is enabled.  
2. Verify that the Card Revalue setting in the machine is turned off. |
| 3. Why would a MEI/CZE bezel display “Thank You” message immediately after swiping a card. (With no credit on the vending machine) | **For N.V. equipment**  
1. Check to see that the MDB card setting in the machine is enabled.  
2. Verify that the Card Revalue setting in the machine is turned off. |
| 4. What does it mean when a Crane Tap and Swipe bezel displays “Please Tap or Swipe Card” and there are no runway lights? | 1. The Bezel is not connected to the Navigator unit at EXP 1 on the Navigator, but is connected to MDB power.  
A. Check to see that the bezel harness is routed thru the notch properly to prevent damage to the harness.  
2. Check to see that the harnessing is routed to the Navigator unit and connected to the EXP 1 connection on the Navigator unit. |
## COMMON NAVIGATOR SUPPORT QUESTIONS – CASHLESS (continued)

<table>
<thead>
<tr>
<th>Problem or Symptom in Question</th>
<th>Possible solutions</th>
</tr>
</thead>
</table>
| **5.** What needs to be checked when the Currenza Bezel has no wording displayed on the LCD screen? | 1. The ribbon cable is supposed to be routed thru a notch in the back side of the bezel body and protected by the tape wrapped around the ribbon cable.  
A. Check to see that the ribbon cable has not been pinched or crushed or otherwise damaged by not having been routed correctly thru the notch.  
2. Check all the connections on the ribbon cable and extension harness for good contact all the way back to the EXP 1 connector. |
| **6.** What needs to be checked when the Currenza bezel has no runway lights working? | 1. Check to see that the bezel has been connected to the EXP 1 connector on the Navigator unit. |
| **7.** What needs to be checked when an MEI bezel has no wording displayed on the LCD screen and no runway lights working? | 1. Check to see that the bezel has been connected to the EXP 1 connector on the Navigator unit. |

## COMMON TELEMETRY SUPPORT QUESTIONS – MEDIA MACHINES

<table>
<thead>
<tr>
<th>Problem or Symptom in Question</th>
<th>Possible solutions</th>
</tr>
</thead>
</table>
| **1.** What would cause a message of “Cards Not Accepted” to be displayed when a card is swiped? (On a Media Machine) | 1. The on-board card reader setting is not enabled in the Monetary section of the service modes functions.  
A. Enter the service mode functions and select the monetary section.  
B. Reset the on-board card reader to an enabled condition.  
2. The telemetry system has not been assigned.  
A. Enter the service mode functions and select the telemetry section.  
B. Perform the assign process using the proper VIX configuration file loaded on a USB memory stick.  
3. The cashless terminal configuration file has not been loaded.  
A. Enter the service mode functions and select the telemetry section.  
B. Perform the un-assign process and allow the machine to completely reboot.  
C. Perform the assign process using the proper VIX configuration file. |
### COMMON TELEMETRY SUPPORT QUESTIONS – MEDIA MACHINES (continued)

|   | What would cause the card swipe not to be recognized? And, what can be checked? |   | 1. The mag head in the bezel is not reading the magnetic strip on the card.  
2. Replace the bezel with a bezel that is known to be functional. |
|---|:---|---|---|
| 2. | | | |
| 3. | What would cause a message of “Bad Swipe” or “Card Not Read” to be displayed when a card is swiped? | 1. The mag head is loose in the bezel.  
2. Replace the bezel with a bezel that is known to be functional.  
3. Super glue the heat stakes to the bezel to prevent movement of the mag head. |
| 4. | What would cause the card swipe to be accepted but then a message is displayed reading, Card Not Accepted after the “Authorizing” message is displayed during a vend? | 1. The time and date are not set correctly.  
A. Enter the service mode functions and select System Settings. Select the Time and Date Function.  
B. Reset the Time, Date and Time Zone settings.  
C. Allow the machine to reboot after resetting. |
| 5. | What could cause a message of “Card Not Read” to be displayed a couple of seconds after the green “Credit Card” screen is displayed? | 1. Either No or Poor signal strength could be the cause. Enter the service mode functions and select the Telemetry section.  
A. Select Network Status and check the reported signal strength.  
B. Select Ping Server and check to see if the device can successfully ping the server.  
2. The DMS may not be configured correctly.  
A. Call Streamware support to confirm. |
PARTS LISTS
### PARTS – KITS

<table>
<thead>
<tr>
<th>PARTS – KITS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>
| **5900739 – Kit Navigator (ATT) GSM Solo**  
Kit includes the following components to install a Navigator Solo System: Navigator, ATT Cell Radio, ATT SIM Card, 18” internal magnetic antenna, 6’ USB A to B Cable, 3’ MBD/DEX Cable, DEX Pass-through Cable, Velcro Fastener, Tie Wraps, and Quick Start Instructions.  
*Additional Hardware maybe required.* |
| **5900740 – Kit Navigator (Verizon) CDMA Solo**  
Kit includes the following components to install a Navigator Solo System: Navigator, Verizon Cell Radio, 2 - 18” internal magnetic antenna, 6’ USB A to B Cable, 3’ MBD/DEX Cable, DEX Pass-through Cable, Velcro Fastener, Tie Wraps, and Quick Start Instructions.  
*Additional Hardware maybe required.* |
| **5900741 – Kit Navigator (Sprint) CDMA Solo**  
Kit includes the following components to install a Navigator Solo System: Navigator, Sprint Cell Radio, 2 - 18” internal magnetic antenna, 6’ USB A to B Cable, 3’ MBD/DEX Cable, DEX Pass-through Cable, Velcro Fastener, Tie Wraps, and Quick Start Instructions.  
*Additional Hardware maybe required.* |
| **5900742 – Kit Navigator Mesh Client**  
Kit includes the following components to install a Navigator Client System: Navigator, Crane Communications Module (CCM), 6’ internal magnetic antenna, 3’ MBD/DEX Cable, DEX Pass-through Cable, Velcro Fastener, Tie Wraps, and Quick Start Instructions.  
*Additional Hardware maybe required.* |
| **5900743 – Kit Navigator Gateway Add-on**  
Kit includes the following components to make a Solo Unit a Gateway: Crane Communications Module (CCM) and 6’ internal magnetic antenna.  
*Requires Kit 5900739, 5900740, or 5900741* |
| **5900737 – Kit Currenza VT Swipe and Tap Bezel**  
Kit includes the following components to add cashless to a Navigator: Currenza VT NFC Swipe and Tap Bezel, 3’ connection cable, mount plate, credit card stickers, and discount stickers.  
*Additional Hardware maybe required.* |
### PARTS – KITS - Continued

<table>
<thead>
<tr>
<th>PARTS – KITS Cont.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>
| ![](CURRENZA_CASHLESS_BEZEL.png) | **5900738 – KIT Currenza Cashless Bezel**  
Kit includes the following components to add cashless to a Navigator:  
Currenza Cashless Bezel, connection cable, mounting plate, credit card stickers, and discount stickers.  
*RRequires Currenza Bill Acceptor or Recycler* |
| ![](CURRENZA_STAND-ALONE_BEZEL.png) | **5900763 – KIT Currenza Stand Alone Cashless Bezel**  
Kit includes the following components to add cashless to a Navigator:  
Currenza Cashless Bezel, connection cable, mounting plate, credit card stickers, and discount stickers. |

### PARTS - COMPONENTS

<table>
<thead>
<tr>
<th>PARTS - COMPONENTS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>
| ![](CR0006673.png) | **CR0006673 Advanced Telemetry Unit w/enclosure (Navigator)**  
This is the heart of the Currenza Navigator System. The telemetry unit contains an on board computer and is responsible for collecting DEX data, MDB alerts, and throughput cashless activities. It can be configured as a solo, gateway, or client. With 10 connectors on board, options are virtually limitless. It also has 2 programmable buttons that, by default, send a DEX reading and a device reboot command. |
| ![](CR0006674.png) | **CR0006674 Wireless Wide Area Network Module (WWAN) with Enclosure (GSM)**  
A GSM cellular radio that sends data from Navigator to DMS (Device Management Server) over GSM cellular networks. It provides a secure gateway for cashless transactions. |
| ![](SIM_CARD_ATT.png) | **CR0006824 SIM Card ATT (GSM Only)**  
The SIM Card is used with GSM radio to limit its ability to be used on authorized networks. The SIM Card is only supported for data communications. |
<table>
<thead>
<tr>
<th>PARTS - COMPONENTS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>
| CR0010542          | Wireless Wide Area Network Module (Sprint) with Enclosure (CDMA)  
A CDMA cellular radio that sends data from Navigator to DMS (Device Management Server) over CDMA cellular network. It provides a secure gateway for cashless transactions. |
| CR0020705          | Wireless Wide Area Network Module (Verizon) with Enclosure (CDMA)  
A CDMA cellular radio that sends data from Navigator to DMS (Device Management Server) over CDMA cellular network. It provides a secure gateway for cashless transactions. |
| CR0006098          | Wireless Local Area Network Module (WLAN)  
“MESH DEVICE”  
The Wireless LAN Module allows communication across multiple Navigator units. It creates the mesh network between a gateway and client. It also provides a secure network for cashless transactions between a gateway (GSM or CDMA) and client. |
| CR0006671          | USB to Ethernet Adaptor  
This part allows Navigator to communicate over a wired Ethernet network to DMS (Device Management Server). It works as a DHCP client or can be configured with a static IP.  
(Cannot be used with credit card applications) |
| CR0006669          | Velcro Fastener (Pair)  
This heavy duty Velcro provides an easy way to attach the Navigator or radio to the vendor. It is recommended to clean the surface where the Velcro is going to be attached for a solid mount. |
| CR0006672          | Wireless Personal Area Network (WPAN) Bluetooth Dongle  
The Bluetooth Dongle is used with VIX (VendMax Installer Express) to configure a Navigator. It can be used with MC75 or MC9000. The dongle is typically installed in the USB1 port on the Navigator. |
## PARTS - ANTENNAS

<table>
<thead>
<tr>
<th>PARTS - ANTENNAS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CR0006933 Internal WLAN Antenna - Magnetic Base (Mesh Antenna)</strong></td>
<td>This antenna, used with Crane Communications Module, has a 48” wired connection. This antenna features a magnetic base for easy installation. It should be mounted in a vertical direction.</td>
</tr>
<tr>
<td><strong>CR0006929 Internal WWAN Antenna - Magnetic Base (Both CDMA and GSM Radio Antenna)</strong></td>
<td>This antenna, used with radio (GSM or CDMA), has a 13” wired connection. This antenna features a magnetic base for easy installation. It should be mounted in a vertical direction. NOTE: CDMA radio requires 2 antennas.</td>
</tr>
<tr>
<td><strong>SWCAN0000004 Combination WWAN/WLAN External Antenna (GSM/CDMA and Mesh Device)</strong></td>
<td>The combo antenna is for use with Mesh radio module and cellular radio (GSM or CDMA). It is useful when cell coverage is weak or vendors are far apart. This external antenna features a low profile dome and provides connections for both CDMA or GSM radio and CCM.</td>
</tr>
</tbody>
</table>

## PARTS – CABLES

<table>
<thead>
<tr>
<th>PARTS – CABLES</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CR0006635 MDB/DEX Cable - 3’</strong></td>
<td>This cable provides Navigator power from the MDB power or external power supply and provides connection to the resident DEX port on the vendor, to obtain DEX.</td>
</tr>
<tr>
<td><strong>CR0007575 Shielded DEX/MDB Cable 3’</strong></td>
<td>This cable is required for Vendo Vendors because of a required shield cable. It provides Navigator power from the MDB power or external power supply and a connection to the resident DEX port on the vendor, to obtain DEX.</td>
</tr>
<tr>
<td>PARTS – CABLES – Cont.</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>1679056 DEX Pass-through Cable</strong>&lt;br&gt;The DEX pass-through cable allows you the ability to obtain a DEX file via a handheld and programing a Navigator via VIX with a handheld device.</td>
<td></td>
</tr>
<tr>
<td><strong>CR0006822 USB Cable Type A to B 6’</strong>&lt;br&gt;This cable provides a power source and communications for GSM or CDMA radios. The cable is 6 foot long which allows for easy placement in difficult mounting vendors.</td>
<td></td>
</tr>
<tr>
<td><strong>9987852 Temperature Probe</strong>&lt;br&gt;The probe collects the temperature of the vendor. It is mounted inside the temperature control area. If the temperature gets above or below the set temperature, an alert is sent. NOTE: Temperature Probe Extension Cable is required.</td>
<td></td>
</tr>
<tr>
<td><strong>CR0006632 Temperature Probe Extension Cable</strong>&lt;br&gt;This cable connects the Temperature Probe to the Navigator. It is 10’ in length.</td>
<td></td>
</tr>
<tr>
<td><strong>CR0006847 External Power Supply 24VDC/120VAC</strong>&lt;br&gt;The external power supply is an option for vendors that do not have a MDB power source. It will power the Navigator and plug in accessories. Plugs into a standard wall outlet.&lt;br&gt;(Only used when cashless is not installed)</td>
<td></td>
</tr>
<tr>
<td><strong>CR0007463 In-Line Machine AC Power Cable</strong>&lt;br&gt;This power cable is an in-line power adaptor for AP and LCM vendors that do not have MDB. It is used in conjunction with the CR0006847 External Power Supply.</td>
<td></td>
</tr>
</tbody>
</table>
### PARTS – CABLES – Continued

<table>
<thead>
<tr>
<th>PARTS – CABLES – Cont.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>
| **CR0013606 Navigator to AP110 VMC Ground Cable**  
This ground cable is connected to AP110 Series Vendors to ground the Navigator to VMC. |
| **5900678 Cable - Navigator to Currenza Cashless Bezel**  
This cable connects the Currenza Cashless Bezel to Navigator. This cable is 34 inches in length. |
| **CR0013093 Cable - Navigator to MEI Cashless Bezel**  
This cable connects the MEI (4n1 or 3n1) Cashless Bezel to Navigator. This cable is 6 inches in length. |
| **CR0014477 Swipe and Tap Cashless Reader adaptor cable - 3’**  
This cable connects Swipe and Tap Cashless Reader to Navigator. The 3’ cable will work with most vending equipment. |
| **CR0014989 Cable – Swipe and Tap Cashless Reader 10Ft**  
This cable connects Swipe and Tap Cashless Reader to Navigator. The 10’ cable is available for vending equipment where extra length is needed. |
### Parts – Bezel

<table>
<thead>
<tr>
<th>PARTS – BEZELS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><strong>5900666 Currenza Cashless Bezel</strong>&lt;br&gt;This Cashless Bezel fits the Currenza Bill Acceptor. Do you have Currenza Bill Acceptor and want to add cashless? This easy to install bezel will give your existing Currenza Bill Acceptor or Recycler the added support for credit and debit cards.</td>
</tr>
<tr>
<td><img src="image2.png" alt="Image" /></td>
<td><strong>5900758 Currenza Stand Alone Cashless Bezel</strong>&lt;br&gt;This Cashless Bezel is a “stand alone” unit. It is designed to fit in a POS window or in an extra validator knock-out.</td>
</tr>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td><strong>5900714 Currenza Swipe &amp; Tap Card Reader</strong>&lt;br&gt;The Swipe &amp; Tap cashless and NFC (Near Field Communications) Bezel supports credit and debit cards plus NFC devices. Recommend when a Currenza Bill Acceptor is not present.</td>
</tr>
</tbody>
</table>
TROUBLESHOOTING
ERROR MESSAGES SENT FROM THE DMS

Four error messages can be sent back from DMS during the assignment process. Explanation of the four errors and next steps are provided below.

CUSTOMER MISMATCH: Device S/N (Atlas board or Navigator) are already assigned to another customer – use another device.

UNABLE TO CONTACT SERVER: Radio not communicating – low cell strength (RSSI), connection problem w/ antenna or antenna type or placement, Old Atlas board with J27 incorrectly set.

SERVER RETURNS ACK: NV Account Number or Vending Company Code not right or don’t match – check VIX Configuration File contents carefully in text editor, and correct error before trying again.

CONFIG FILE NOT FOUND: File not named correctly (correct name is: VIXConfigData.cfg) or not in in top level \atlas folder; or insert USB memory stick in socket before entering Service Mode (PIN 3333) or insert USB memory stick in socket, and reboot machine.

TO CHECK SIGNAL STRENGTH

WITH AN ATLAS BOARD

1. Enter service mode by pressing four three’s. (Default code)
2. Enter the Telemetry function by pressing zero.
3. Press the Show Network Status button.
4. The RSSI line is the signal strength.

WITH A HANDHELD DEVICE

1. Connect the device to the machine.
2. Establish a link to the device.
3. Let the device do the hardware system checks.
4. When the Icons are displayed, tap on the radio Icon for details.
5. The RSSI line is the signal strength.

Check to see that the RSSI (Signal Strength) is within an acceptable range to allow communication.

Both types of radios operate with an effective signal strength range of -65dbm, which would equal 5 bars, to -90dbm, which would equal 1 bar. A reading of -112dbm would indicate no signal at all.

For best results, a signal strength of -90dbm or greater is desired, but some have been able to operate successfully at -100 to -105dbm, provided the signal is steady and not fluctuating.

PING THE SERVER WITH AN ATLAS BOARD

1. Enter service mode by pressing four three’s. (Default code)
2. Enter the Telemetry function by pressing zero.
3. Press the Ping Server button.
4. The results will be displayed on the screen.
IF THE PING SERVER TEST FAILS

1. **Check the connections for the antenna(s).** If the antenna is not connected, the radio cannot reach the outside world.

   A. The CDMA radio has two antenna connections. The primary connection is located next to the USB port on the radio. The primary magnetic antenna should be routed to the front of the machine and mounted vertically as far forward as possible for optimal signal strength.

   B. The secondary antenna connects to the radio at the opposite end of the radio and can be routed to and mounted vertically wherever it can be conveniently located.

   C. When the External Radome antenna is used, it should be noted that there are two connectors, one female and one male. If one of the leads is not being used, it needs to be secured so that it does not interfere with the operation of the machine.

      1. The female connector is only used in a Gateway/Client Configuration and should only be connected to the Mesh Device.
      2. The male connector should operate as the primary antenna on a CDMA radio. The GSM radio has only one antenna connector. It should only be connected to the radio.

   After the antenna(s) have been connected correctly, the machine will need to be powered down and restarted before the Ping Server test can be repeated.

2. **Check the power LED on the radio.** If the radio has no power it will not function.

   A. Check the connections on the USB Cable between the control board and the radio.

   B. Check the power supply to the USB Port 1 by plugging the cable into USB Port 3 instead and see if the LED will illuminate.

   C. Remove the control board cover and check the jumper at J-27 to be in contact with pins 2 and 3 allowing power to flow to the USB Port 1 connector.

   After the antenna(s) have been connected correctly, the machine will need to be powered down and restarted before the Ping Server test can be repeated.

3. **Look at the “Get Network Status” details.** Be sure that there is sufficient signal strength for the radio to communicate.

   A. Both types of radios operate with an effective signal strength range of -65 dbm, which would equal 5 bars, to -90dbm, which would equal 1 bar. A reading of -112 dbm would indicate no signal at all.

   For best results, a signal strength of -90 dbm or greater is desired, but some have been able to operate successfully at -100 to -105 dbm, provided the signal is steady and not fluctuating.

4. **Use an alternate URL.** Some CDMA tests will fail due to a DNS name resolution problem that requires the configuration file to be updated.

   A. Load the configuration file using a USB Memory Stick and the “Load Network Configuration” menu. After the re-boot of the machine is complete, repeat the Ping Server Test.

   The update consists of changing the configuration file from a text based URL to a numeric based URL.

   Both URL’s are listed below. Refer to the section titled “VIX Configuration File Format” for details.
Text Based URL

http://streamwareonline.com:8081/WANServiceSB.asmx"/>

Field practice has shown that for some CDMA applications, replacing the URL shown above with the numeric equivalent noted below works more consistently.

Numeric Based URL

http://216.211.240.85:8081/WANServiceSB.asmx

Once the Configuration File has been updated using a computer, the machine can be updated using the “Load Network Config” menu. After the machine reboot is complete, repeat the Ping Server Test.

MAKING USE OF THE DIAGNOSTIC TOOLS IN THE HANDHELD DEVICE

Power up the handheld device and start the VIX Installer Express program. Plug in to the DEX port on the machine after it has completed the boot-up process.

1. Establish Link with the Device by tapping the labeled button. There are two possibilities.

   A. The handheld establishes a link successfully – This indicates that the handheld and the Navigator system are communicating and the process can move forward.

   B. The handheld fails to establish a link – This indicates that the handheld and the Navigator system are not communicating.
      1. Check the connections between the handheld device and the DEX harness in the machine.
      2. Check the machine DEX harness for bad connections or broken wires.
      3. Possible bad board that is not able to respond to the handheld device.

2. Assign the Navigator by tapping the labeled button once the link has been established.

   This will begin the assignment process. The first step in the process is for the VIX program to retrieve data and do hardware tests to check the readiness of the system. The results of the tests will be displayed when complete.

   The handheld device will display a screen with up to three Icons representing the Navigator unit, the radio, and the card reader, if present.

   A. If all the tests were successful, the screen will display a green check in the lower right corner of each Icon.

   B. If one or more of the tests failed, the screen will display a red “X” in the lower right corner of the Icon representing the hardware with the problem.

Regardless of the success or failure of the test, the details of the test can be viewed by pressing or tapping the affected Icon or information button. These details can be useful in determining the current state of the system or cause of a failure or problem in the operation of the system.
ADDITIONAL TESTS TO CHECK SYSTEM CONDITIONS

At most screens throughout the assignment process there are information buttons to view details about the step being displayed. Below are listed more items that may be of interest.

1. **Check the Mesh** – This test checks to see that the settings in the Navigator unit match the settings in the handheld device and if not, reconfigures them.

2. **Verify the Network Status** – This is a check that is looking at the network connection. It gives the Navigator unit’s serial number, and whether it is a *Solo* unit, or a *Gateway*.
   A. Details will also list the radio type and signal strength.
   B. If there is *Mesh* hardware present, and whether the settings match or not.

3. **Device Firmware Check** – Looks at the Firmware that is currently in use. This is the version of software installed in the machine.
   A. A check can be made to see if newer versions are available.

4. **MDB Test** – This test checks the status of **MDB** communications. If the unit is being assigned, this test normally fails because the configuration is not complete. The test looks to see if the unit is communicating, if it has been initialized, and if Cashless functions have been enabled.

5. **DEX Read Test** – This test checks to see if a **DEX** read can be taken from the machine. In Details at this step, the **DEX** read can be viewed.

6. **ID Number entry and Validation** – At this step, the ID number, entered by the customer, is checked. The validity of the number can be viewed, and if necessary, the number can be changed.

7. **Finalize Assignment** – This last step lists the Machine ID, serial number, and possibly the make and model number. The success or failure of the assignment will be listed and if credit card processing has been enabled.
GLOSSARY OF TERMS
## NAVIGATOR TERMINOLOGY

<table>
<thead>
<tr>
<th>ACRONYM</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCM</td>
<td>Crane Communication Module – is a local radio device that permits a machine without a cellular radio to communicate with a machine designated as a gateway. Might be referred to as a mesh radio or a Zigbee™ Module.</td>
</tr>
<tr>
<td>CDMA</td>
<td>Code Division Multiple Access: format for cellular communications, in the USA this is Verizon, Sprint and others. Rarely used outside the USA</td>
</tr>
<tr>
<td>dBm</td>
<td>Decibal-Milliwatt - The standard unit of measurement used for expressing transmission gain or loss and relative power levels. (signal strength)</td>
</tr>
<tr>
<td>DEX</td>
<td>Data Exchange- Communication protocol and industry standard for accountability communication between a machine and any number of devices or methods to the outside world</td>
</tr>
<tr>
<td>DMS</td>
<td>Device Management Server: Central remote server that handles all configuration and communication from all the devices</td>
</tr>
<tr>
<td>GSM</td>
<td>Global System for Mobile: format for cellular communications, in the USA this is AT&amp;T, outside the US, almost all cellular carriers operate using this format and frequency</td>
</tr>
<tr>
<td>ICR</td>
<td>Interactive Card Reader</td>
</tr>
<tr>
<td>ISN</td>
<td>Interactive Serial Number: Unique electronic serial number for a Navigator device or Media control board. Format is 9 digits, with a Navigator begins with a 2, and a Media control board begins with a 1 (example: 100054321)</td>
</tr>
<tr>
<td>LAN</td>
<td>Local Area Network</td>
</tr>
<tr>
<td>MDB</td>
<td>Multi Drop Bus</td>
</tr>
<tr>
<td>MID</td>
<td>Merchant Identification: unique number that identifies the vending company</td>
</tr>
<tr>
<td>PAN</td>
<td>Personal Area Network</td>
</tr>
<tr>
<td>RSSI</td>
<td>Received Signal Strength Indication: Represents the signal strength of the appropriate cellular signal strength. This signal is measured in dbm. Excellent signal strength is -55dbm, and the minimum acceptable strength is -98 to -102dbm.</td>
</tr>
<tr>
<td>SIM Card</td>
<td>Subscriber Identity Module</td>
</tr>
<tr>
<td>TID</td>
<td>Terminal Identification: unique number that represents the machine</td>
</tr>
<tr>
<td>USB</td>
<td>Universal Serial Bus: a communication protocol and access port</td>
</tr>
<tr>
<td>VIX</td>
<td>VendMax Installer Express: software program or files referring to the files required for assigning and initializing telemetry and cashless</td>
</tr>
<tr>
<td>WAN</td>
<td>Wide Area Network: Refers to a hardwired communication network</td>
</tr>
<tr>
<td>WLAN</td>
<td>Wireless Local Area Network: Network used for the machine to machine interface using Mesh interface</td>
</tr>
<tr>
<td>WWAN</td>
<td>Wireless Wide Area Network: Refers to a wireless cellular communication network (GSM or CDMA)</td>
</tr>
</tbody>
</table>
DATA NEEDED TO SET UP AN ACCOUNT

NAVIGATOR/MEDIA CHECK LIST

Pre-Installation Checklist

IMPORTANT: The checklist should be completed and verified well in advance of a Navigator or Media installation. This form should be completed by the customer and sent to Pat Ryan (pryan@cranems.com) as soon as the customer has placed their first order for Navigators or Media equipment.

A. Company Information

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Contact Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Vendors (NV) Acct. No.</td>
<td></td>
</tr>
<tr>
<td>Contact Email Address</td>
<td></td>
</tr>
<tr>
<td>Office Phone</td>
<td></td>
</tr>
<tr>
<td>Cell Phone</td>
<td></td>
</tr>
<tr>
<td>VendMax User?</td>
<td></td>
</tr>
</tbody>
</table>

If no, what Vending Management System (VMS) do you use?

--------------------

B. Will you be offering Cashless Transactions (credit cards and near-field communications)\(^1\)?

- [ ] Yes
- [ ] No (if no please go to Section F)

C. Will you be offering discounts for cash payments (e.g. Cash Discounts)?

- [ ] No
- [ ] Yes

If yes, which machines will you put it on? (Please indicate fixed dollar amount e.g. $0.10, or percentage, e.g. 10%)

- [ ] All
- [ ] Some (Please list serial numbers of Navigator devices here)

<table>
<thead>
<tr>
<th>Fixed Amount?</th>
<th>Percentage?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Amount?</td>
<td>Percentage?</td>
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<tr>
<td>Fixed Amount?</td>
<td>Percentage?</td>
</tr>
</tbody>
</table>

\(^1\) Crane charges monthly fees to enable cashless transactions, please consult your Area Sales Manager for current pricing.
D. Before installing your Navigator devices, you must have established an account to work within the system. Please communicate with Pat Ryan, Crane’s Customer Success Manager, to verify that this step has been completed PRyan@CraneMS.com
Have you completed this step?
☐ Yes
☐ No (please complete this step before continuing)

E. The VISA Regulated Debit Small Ticket Program (VPP) is an optional program which and takes approximately 10 -14 days to process this application. By registering with this program, you will get lower transaction rates but you agree NOT to accept MasterCard debit cards. Do you want to participate?
☐ Yes, and I have sent in my application form
☐ Yes, but I have to send my application form (please complete this step before continuing)
☐ No

F. Do you want to receive alerts from your vending machines?
☐ No
☐ Yes, the email addresses I want them sent to are:

_______________________________
_______________________________
_______________________________

G. Do you want to receive remote Data Exchange (DEX) files?
☐ Yes
☐ No

H. Do all parts and kits match order and packing slip?
☐ Yes
☐ No (please contact your Field Service Engineer or your Area Sales Manager)

If you will be using a handheld device for handheld installation, please answer the following:

Is VendMax Installer Express (VIX) installed on a handheld (MC70/MC75/MC9000)? ☐ Yes ☐ No
Is VIX current build?
☐ Yes ☐ No
Is Navigator firmware up-to-date? (Check back of Navigator for version)? ☐ Yes ☐ No
Do you have a DEX Cable?
☐ Yes ☐ No
Is the Crane Streamware Customer ID and Vending Company code set-up on Crane’s internal system?
☐ Yes ☐ No

Do you have all these installation tools?

• Standard nut drivers (1/4, 5/16, 11/32)
• Cordless drill and bits
• Common & Phillips screwdriver
• Side cutters
• Zip ties
• Cleaning agent
## MACHINE COMPATIBILITY – Results indicated for machines with factory installed VMC

- **Green Checkmark** Indicates Compatibility
- **Red Circle** Indicates Non-Compatibility
- **Question Mark** Indicates Unknown

### AUTOMATIC PRODUCTS MACHINES

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<tr>
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<tr>
<td>223 - Coffee</td>
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<td>AP 310/320 - Cold / Frozen</td>
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<td>511 - Glassfront</td>
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<td>110 Series 111/112/113 - Snack</td>
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<td>Y Chip</td>
<td>Additional Parts: CR0006847, CR0007463, and CR0013606</td>
<td>Does not support MDB Alerts</td>
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<td>120 Series 121/122/123/128/129 - Snack</td>
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<td>5.24</td>
<td>Product Codes option in Security must be set &quot;Auto&quot;</td>
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<td>930/931/932/933/934/936 - Snack</td>
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<td>Rev 0023</td>
<td>Swipe-N-Tap or Currenza Validator and Cashless Bezel requires Part # CR0014989</td>
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<td>Merchant 980/981</td>
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<td>Rev 181.02.10</td>
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<td>Merchant Combo 948/949</td>
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<td>Dual Zone Combo 6500</td>
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### DIXIE NARCO MACHINES

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<th>COMMENTS</th>
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<tbody>
<tr>
<td>DN5800-4, 3800-4 (BevMax 4) - Glassfront</td>
<td>✔️</td>
<td>✔️</td>
<td>700.01/080.01</td>
<td>Swipe N’ Tap or stand alone bezel requires PN# 65700410K &amp; a cashless upper bezel</td>
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<tr>
<td>DN5800, 3800 (BevMax 3) - Glassfront</td>
<td>✔️</td>
<td>✔️</td>
<td>700.01/08.01</td>
<td>Swipe N’ Tap or stand alone bezel requires PN# 65700410K &amp; a cashless upper bezel</td>
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<tr>
<td>DN5800 (BevMax 2) - Glassfront</td>
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<td>✔️</td>
<td>080.01</td>
<td>Swipe N’ Tap or stand alone bezel requires PN# 65700410K &amp; a cashless upper bezel</td>
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<tr>
<td>DN5000, 3000 - Glassfront</td>
<td>✔️</td>
<td>✔️</td>
<td>990.81 (K0 board), 160.81 (Machine board)</td>
<td>Part # 804925220.01 maybe required.</td>
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<tr>
<td>DN 5500, 3500, 5400, 3400 - Glassfront</td>
<td>✔️</td>
<td>✔️</td>
<td>030.31</td>
<td>Verify resisters are in place on P1. Remove board and look at the back. If registers are not present, pan #804925220.01 is required.</td>
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<tr>
<td>DN2145 - Glassfront</td>
<td>✔️</td>
<td>✔️</td>
<td>030.31</td>
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<tr>
<td>DNCB640, 448 - Stacker</td>
<td>✔️</td>
<td>✔️</td>
<td>770.01 (Coke), 870.01 (Pepsi/Gen)</td>
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<tr>
<td>P Series 720P, 504P, 756P, 552P</td>
<td>✔️</td>
<td>✔️</td>
<td>770.01 (Coke)</td>
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<tr>
<td>DNCB630L, 600E, 522E, 501E, 276E, 630T, 600T, 501T, 440, 414, 368, 360, 348, 300, 276, 180, 168 (SBC)</td>
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<td>✔️</td>
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<td>DNCB630L, 600E, 522E, 501E, 276E, 630T, 600T, 501T, 440, 414, 368, 360, 348, 300, 276, 180, 168 (SBC)</td>
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<td>✔️</td>
<td>391.41 Coke EVS 2.2 or 230.01 Coke non EVS 2.2</td>
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<td>DNCB600T, 501T, 440, 414, 368, 360, 348, 300, 276, 180, 168 (SII (Series II)</td>
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<td>✔️</td>
<td>381.41</td>
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<td>DNCB600T, 501T, 440, 414, 368, 360, 348, 300, 276, 180, 168 (SII (Series II)</td>
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<td>780.01</td>
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### NATIONAL VENDORS MACHINES

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<th>Comments</th>
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<tbody>
<tr>
<td>630/638 - Coffee</td>
<td>✔️</td>
<td>✔️</td>
<td>630.07</td>
<td>✔️</td>
<td>Turn on MDB Card and turn off card revalue</td>
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<tr>
<td>631/639 - Coffee</td>
<td>✔️</td>
<td>✔️</td>
<td>639.11</td>
<td>✔️</td>
<td>Turn on MDB Card and turn off card revalue</td>
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<tr>
<td>636 - Coffee</td>
<td>✔️</td>
<td>✔️</td>
<td>633.19</td>
<td>✔️</td>
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<tr>
<td>653/655/657 - Coffee</td>
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<td>✔️</td>
<td>653.06</td>
<td>✔️</td>
<td>Turn on MDB Card and turn off card revalue</td>
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<tr>
<td>670/678 - Coffee</td>
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<td>✔️</td>
<td>675.04</td>
<td>✔️</td>
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<tr>
<td>674/676 - Coffee</td>
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<td>✔️</td>
<td>674.05</td>
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<td>Cafe 3/4 - Coffee</td>
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<td>431 - Cold Food</td>
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<td>431.19</td>
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<td>432/962 - Cold Food</td>
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<td>780/781 - Cold Food</td>
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<td>780.07</td>
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<tr>
<td>455 - Cold Food</td>
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<td>GPL 6500 - Combo</td>
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<td>158.23 (Tecumseh Reefer)</td>
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<td>158.28 (Embraco Reefer)</td>
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<td>147/148 - Snack</td>
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<tr>
<td>159/160 - Snack</td>
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<tr>
<td>167/168 - Snack</td>
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<td>158.19</td>
<td>158.26D is not support for VendMax customers, Turn on MDB Card and turn off card revalue</td>
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<td>PN# CR0009768 will be required when installing a bezel in a POS window</td>
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<td>267/268 - Snack</td>
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**FASTCORP MACHINES**

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**AMS MACHINES**

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### ROWE MACHINES

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<td>4900 Jr./Sr. - Snack</td>
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<td>5900 Jr./Sr. - Snack</td>
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### VENDO MACHINES

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<tbody>
<tr>
<td>Vue 30/40 - Glassfront</td>
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<td>Latest Manufacture Version</td>
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<td>VS 411/VSR 411 - Snack</td>
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<td>Latest Manufacture Version</td>
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<tr>
<td>V21 (621/721/821) - Stacker</td>
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<td>☑</td>
<td>12.1 ver. 33, 12.3 ver. 41</td>
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<td>Univendor 2 - Stacker</td>
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<tr>
<td>V-MAX 512, 540, 576, 603, 630, 680, 720, 800, 840 - Stacker</td>
<td>☑</td>
<td>☑</td>
<td>9.3-2042, 9.1-2050</td>
<td>requires part # CR0007575</td>
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</tr>
</tbody>
</table>

### ROYAL VENDORS MACHINES

<table>
<thead>
<tr>
<th>MACHINE MODEL AND TYPE</th>
<th>DEX</th>
<th>CASH</th>
<th>SOFTWARE</th>
<th>SPECIAL REQUIREMENTS</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RVV 500 - Glassfront</td>
<td>☑</td>
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</table>
### NAVIGATOR AND MEDIA TECHNICAL MANUAL

<table>
<thead>
<tr>
<th>Model</th>
<th>Compatibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>660/804 (GIII)</td>
<td>✓ ✓ 67015-8</td>
</tr>
<tr>
<td>GII - Stacker</td>
<td>✓ ✗</td>
</tr>
<tr>
<td>RVV 780 (TDV)</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>RVCC 768 (KO Merlin) - Stacker</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>RVCCE 476 (Merlin III) - Stacker</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>Merlin IV - Stacker</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>RVCDE 480-6 (EZ) - Stacker</td>
<td>✓ ?</td>
</tr>
<tr>
<td>RVCDE650 (HV) - Stacker</td>
<td>✓ ?</td>
</tr>
<tr>
<td>RVRB372) - Stacker</td>
<td>✓ ✓</td>
</tr>
</tbody>
</table>

#### USI – THE WHITTERN GROUP

<table>
<thead>
<tr>
<th>Model</th>
<th>Compatibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>3175/3176/3177 - Cold Food</td>
<td>? ?</td>
</tr>
<tr>
<td>15H/CGSGF15 - Cold Food</td>
<td>? ?</td>
</tr>
<tr>
<td>3003 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3004 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3087 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3114 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3160 Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3028A/2042/2042A/2043 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3097/2098/2099 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3129/3130/3140 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3133/3134/3135 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3136/3137/3138/3139 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3157/3158/3159 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3207/3208 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3503/3504 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3506/3507/3508 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3526/3510/3509 - Snack</td>
<td>? ?</td>
</tr>
<tr>
<td>3537/3538/3535/3536r</td>
<td>? ?</td>
</tr>
<tr>
<td>USI Need Model - Stacker</td>
<td>?</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---</td>
</tr>
<tr>
<td>USI Need Model - Stacker</td>
<td>?</td>
</tr>
</tbody>
</table>
Retrieving Log Files from Media Machines

When an issue is reported in a Media machine, it is important to capture a log file as soon as possible after the event to ensure the best possible data is captured. The log is limited to a maximum size, and duration, which is dependent upon how busy the machine is, but if a file is captured within 24 hours of a specific event or issue, the suspect event should be captured.

To have an archive file and instruction sheet E-mailed to your address, contact the Crane Customer Service team at 1 (800) 628-8363.

1) Prepare a USB stick for capturing log files.
   a) Insert an empty USB stick into one of the available USB ports on your computer.
   b) Unzip and extract the attached archive file (atlas Log File.rar) which will produce an atlas folder and the required contents to a blank USB stick.
   c) When you open the atlas folder, you should get something similar to one of the examples shown below in Figure 1.
   d) After the USB stick has been prepared, safely eject it from your computer.

2) Capturing a Log file
   a) Once the USB stick is prepared, you can insert the stick into any available USB socket on the Atlas board while the machine is powered up.
      i) USB 3 is rarely used, and is typically the most accessible – see Figure 2.
      ii) DO NOT power the machine off, as this will affect the content of the log files.
   b) The board will beep one time indicating that log file extraction has started.
   c) After the board beeps twice, the log file capture is complete,
   d) Remove the flash drive from the Atlas board.
      i) If the board does not beep, wait about 30 seconds before removing the USB stick.

Note: A prepared USB stick can be used to capture the log files from multiple machines, as each is saved with a unique filename.

3) Emailing a Log File
   a) The USB stick can then be removed from the Atlas board, and plugged into your PC, and the file copied from the USB stick (See Figure 3) and attached to an email.
   b) After verifying that the retrieved file is in the logs folder, right click on the log file, and select Copy, and then Paste this file to an email.
   c) Email should be sent to cmslogsmedia@cranems.com Please include any details you can provide about the customer, peripherals, cashless devices, and the problem encountered. An OOB report could be used in place of this separate information.

![Figure 1](image1.png)
![Figure 3](image2.png)