WFM8200 and WFM8300 Video Monitors Declassification and Security

Instructions

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077-0262-00

Tektronix

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Preface

This document helps customers with data security concerns to sanitize or remove memory devices from the WFM8200 and WFM8300 Video Monitors.

These products have data storage (memory) devices and data output devices (USB ports). These instructions tell how to clear or sanitize the memory devices and disable the data output devices. The instructions also tell how to declassify an instrument that is not functioning.

Products

The following Tektronix products are covered by this document:

- WFM8200 (Options SDI, 3G, CPS, EYE, PHY, AD, DDE)
- WFM8300 (Options SDI, 3G, CPS, EYE, PHY, AD, DDE, PROD)

Related Documents

The following table lists the documentation that is available for the product and shows where you can find it: in a printed manual, on the product documentation CD-ROM, or on the Tektronix Web site.

Table i: Product documentation

Item	Purpose	Location
User Manual (077-0253-XX)	Provides operation and application information. This manual is available in English, Japanese, and Simplified Chinese.	Product Documentation CD and available at www.tektronix.com/manuals
Online Help (076-0182-XX)	In-depth instrument operation and UI help.	On the instrument
Specifications and Performance Verification Technical Reference (077-0259-XX)	Specifications and procedures for checking instrument performance.	Product Documentation CD and available at www.tektronix.com/manuals
WFM and WVR Series Management Information Database (MIB) Programmer Manual (077-0261-XX)	SNMP command reference for remotely controlling the instrument.	Product Documentation CD and available at www.tektronix.com/manuals
Service Manual (077-0393-XX)	Provides information about adjustments, repair, and replaceable parts.	Available at www.tektronix.com/manuals
Installation and Safety Instructions (071-2639-XX)	Provides safety and compliance information along with hardware installation instructions to present the associated safety warnings. This manual is available in English, Japanese, and Simplified Chinese.	Printed manual and also available in electronic format at www.tektronix.com/manuals

Terms

The following terms may be used in this document:

- **Clear.** This removes data on media/memory before reusing it in a secured area. All reusable memory is cleared to deny access to previously stored information by standard means of access.
- **Erase.** This is equivalent to clear.
- **Media storage/data export device.** Any of several devices that can be used to store or export data from the instrument, such as a USB port.
- **Nonvolatile memory.** Data is retained when the instrument is powered off.
- **Power off.** Some instruments have a “Standby” mode, in which power is still supplied to the instrument. For the purpose of clearing data, putting the instrument in Standby mode does not qualify as powering off. For these products, you will need to either press a rear-panel OFF switch or remove the power source from the instrument.
- **Remove.** This is a physical means to clear the data by removing the memory device from the instrument. Instructions are available in the product Service Manual.
- **Sanitize.** This eradicates the data from media/memory so that the data cannot be recovered by other means or technology. This is typically used when the device will be moved (temporarily or permanently) from a secured area to a non-secured area.
- **Scrub.** This is equivalent to sanitize.
- **User-modifiable.** The user can write to the memory device during normal instrument operation, using the instrument interface or remote control.
- **Volatile memory.** Data is lost when the instrument is powered off.

Clear and Sanitize Procedures

Memory Devices

The following tables list the volatile and nonvolatile memory devices in the standard instrument and listed options. Detailed procedures to clear or sanitize these devices, if any, are shown following each table.

Table 1: Volatile memory devices

Type and minimum size	Function	User modifiable[1]	Data input method	Location	To clear	To sanitize
FPGA 1.3 K	Audio measurement	No	Programmed by onboard flash memory	Plugs into optional Digital Audio board, IC8 on Dolby Audio board	None	Remove the power source from the instrument for at least 20 seconds
FPGA 920 KB	Audio measurement	No	Written by processor system	U521 on Audio board	None	Remove the power source from the instrument for at least 20 seconds
DDR2 RAM 32 M x 16	Microprocessor system memory	No	Written by processor system	Main board, U6, U36, U53, U73	None	Remove the power source from the instrument for at least 20 seconds
FPGA DSP1 4.3 MB	Rasterizer #1	No	Written by processor system or serial flash	Main board, U97	None	Remove the power source from the instrument for at least 20 seconds
QDR2 RAM, 1 MB X 18	DSP1 RAM	No	Dynamic memory for FPGA DSP1	Main board, U4, U43	None	Remove the power source from the instrument for at least 20 seconds
DDR2 32 M X 16 RAM	DSP1 RAM	No	Dynamic memory for FPGA DSP1	Main board, U21	None	Remove the power source from the instrument for at least 20 seconds
FPGA DSP2 4.3 MB	Rasterizer #2	No	Written by processor system or serial flash	Main board, U161	None	Remove the power source from the instrument for at least 20 seconds
QDR2 RAM, 1 MB X 18	DSP2 RAM	No	Dynamic memory for FPGA DSP2	Main board, U20, U162	None	Remove the power source from the instrument for at least 20 seconds
DDR2 32 M X 16 RAM	DSP2 RAM	No	Dynamic memory for FPGA DSP2	Main board, U163	None	Remove the power source from the instrument for at least 20 seconds
FPGA, DSY 2.5 MB	Display FPGA	No	Written by processor system	Main board, U93	None	Remove the power source from the instrument for at least 20 seconds

Table 1: Volatile memory devices (cont.)

Type and minimum size	Function	User modifiable[1]	Data input method	Location	To clear	To sanitize
DDR2 DSY 32 MB X 32	Frame Buffer #1 for DSY FPGA	Yes	Written by processor system	Main board, U23, U65	None	Remove the power source from the instrument for at least 20 seconds
DDR2 DSY 32 MB X 32	Frame Buffer #2 for DSY FPGA	Yes	Written by processor system	Main board, U44, U45	None	Remove the power source from the instrument for at least 20 seconds
DDR2 DSY 32 MB X 80	Capture Buffer for DSY FPGA	Yes	User can initiate capture to this memory	Main board, U91, U92, U94, U95, U96	None	Remove the power source from the instrument for at least 20 seconds
SRAM DSY 512 K X 32	System display graphics buffer	No	Written by processor system	Main board, U46, U47, U48, U49	None	Remove the power source from the instrument for at least 20 seconds

1 During normal instrument operation.

Table 2: Nonvolatile memory devices

Type and minimum size	Function	User modifiable[1]	Data input method	Location	To clear	To sanitize
PLD	Control logic	No	Programmed by software during software upgrade	SDI board, U641	None	None
Serial EPROM	Stores SDI calibration coefficients	No	Programmed during calibration	SDI board, U343	Recalibrate SDI	Reload the system software per the loading instructions
PLD	Control logic	No	Programmed by software during software upgrade	Eye board, U641	None	None
Serial EPROM	Stores Eye calibration coefficients	No	Programmed during calibration	Eye board, U343	Recalibrate Eye	Reload the system software per the loading instructions
Flash Memory 4 MB	Audio measurement	No	Programmed by software during software upgrade	Plugs into optional Digital Audio board, IC9 on Dolby Audio board	None	Reload the system software per the loading instructions
Serial EEPROM 256 X 8	Stores audio calibration coefficients	No	Programmed during calibration	U421 on Analog board	Recalibrate Audio	None
Serial EEPROM 256 X 8	Stores Composite calibration coefficients	No	Programmed during calibration	U12 on Composite board	Recalibrate Composite	None

Table 2: Nonvolatile memory devices (cont.)

Type and minimum size	Function	User modifiable[1]	Data input method	Location	To clear	To sanitize
NAND Flash 256 M X 8	Future Expansion	No	Programmed by software during calibration software upgrades	Main board, U103	None	Remove the power source from the instrument for at least 20 seconds.
NOR Flash 128 M X 16	Contains instrument SW and user-defined presets	No	Programmed by software during software upgrade	Main board, U101, U102	None	Remove the power source from the instrument for at least 20 seconds.
NVSRAM plus Real Time Clock	Stores time set by user, network access parameters, software option key and current instrument state	Yes	User Interface	Main board, U11	Set to GMT	Set to GMT
PLD, Glue	Control logic	No	Programmed by software during software upgrade	Main board, U19	None	Reload the system software per the loading instructions
Serial Flash, DSP1 32 M	FPGA code storage for DSP1	No	Programmed by software during software upgrade	Main board, U16	None	Reload the system software per the loading instructions
Serial Flash DSP2 32 M	FPGA code storage for DSP2	No	Programmed by software during software upgrade	Main board, U164	None	Reload the system software per the loading instructions
Parallel Flash DSY 32 M	FPGA code storage for DSP2	No	Programmed by software during software upgrade	Main board, U63	None	Reload the system software per the loading instructions

[1] During normal instrument operation.

Clear Presets Procedure

1. Press and hold the **PRESET** button to display the preset configuration menu. Then select **Recall Preset > Factory Preset > SEL**. This restores the presets to the factory state.
2. Press and hold the **PRESET** button. Then select **Save Preset > Select Group A**. For all presets that are not empty “<e>”, select **Save** and then press **SEL** to overwrite that preset with the factory settings.
3. Check each group and overwrite presets that are not empty as described in the previous step.
4. Navigate to the top level menu and select **Rename Preset**. Rename all named groups and presets with the label “Default”.

Clear Diagnostic Log Procedure

1. Press the **CONFIG** button. Then press **Utilities > View Diagnostic Log**. Press **SEL** to display the log.
2. Press **>** until the box by "Erase Log" is highlighted. Then press **SEL** to remove all entries in the diagnostic log.
3. Press **>** until the box by "Exit" is highlighted. Then press **SEL** to exit the log display.
4. Press the **CONFIG** button to exit the configuration menu.

Clear IP and SNMP Address Fields Procedure

1. Press the **CONFIG** button. Then select **Network Settings**.
2. Set **IP Config Mode** to **Manual** to display the IP address.
3. Navigate to **IP Address**. Then press **>** to enter the edit mode. Enter "000.000.000.000" for the IP address.
4. Repeat Step 3 for the Subnet Mask, Gateway Address, and SNMP Trap Address 1 through SNMP Trap Address 4.
5. Press the **CONFIG** button to exit the configuration menu.

Data Export Devices

The following table lists the data export devices in the standard instrument and listed options. Detailed procedures to disable these devices, if any, are shown following the table.

Table 3: Data export devices

Type and minimum size	Function	User modifiable [1]	Data input method	Location	To disable
Ethernet	Communications	Yes	Standard Ethernet protocol	Rear of instrument	See *Disable Ethernet Access Procedure*
USB	Data storage	Yes	Standard USB protocol	Front of instrument	None

[1] During normal instrument operation.

Disable Ethernet Access Procedure

1. Press the **CONFIG** button. Then select **Network Settings**.
2. Navigate to the **Web Enable** and set it to **Off**.
3. Press the **CONFIG** button to exit the configuration menu.

Disable SNMP Access Procedure

1. Press the **CONFIG** button. Then select **Network Settings**.
2. Navigate to the **Web Enable** and set it to **Off**.
3. In the SNMP Setup dialog screen, select **Disabled** for the Remote SNMP Mode.
4. Press the **CONFIG** button to exit the configuration menu.

Enable Ethernet and SNMP Access Procedure

To enable Ethernet and SNMP access, use the same procedures you would use to disable these devices, but select **On** to enable each device.

Troubleshooting

How to Clear or Sanitize a Non-Functional Instrument

To sanitize a non-functional instrument, remove the Main board and return the instrument to Tektronix for installation of a new Main board. This procedure does not clear calibration constants stored on the Audio, Eye, and Composite boards.

How to Recover from Clearing or Removing the Instrument's Memory

Reload the system software per the loading instructions.