

# 4000 Series Release Notes

dBm Optics

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For a brief overview of changes in each release, please see Appendix [A](#).

## **Firmware Release 4.55.014**

### **New Features or Changes**

- Allow scaling on currently selected trace
- X-Axis is now maintained between sweeps
- Added ability to set a TLS wavelength offset
- Alternate Display can now be changed over SCPI
- “Active Displays” settings are retained on reboot
- Added more gas cell wavelengths for wavelength referencing
- Changing the sweep mode now changes the current Alternate Display

### **Bugs Fixed**

- Remote module communication problem
- GUI displays WaveRef units as picoseconds
- Large SplitCal operation causes GUI lockup
- PDL RefSet Ignore/Use button does not work

### **Known Issues**

- No issues have been reported at this time, please visit <https://bugzilla.dbmoptics.com/> or contact your dBm Optics representative to report issues.

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## **Firmware Release 4.54.013**

### **New Features or Changes**

- Added Santec laser to TLS wizard
- Internal TLS screen available for all models, if installed

### **Bugs Fixed**

- Graph gridlines do not match the axis labels

### **Known Issues**

- Remote module communication problem
- GUI displays WaveRef units as picoseconds
- Large SplitCal operation causes GUI lockup
- PDL RefSet Ignore/Use button does not work

## **Firmware Release 4.53.012**

### **New Features or Changes**

- PDL Reference Set feature added
- Added support for GPIB control of Model 4300

### **Bugs Fixed**

- Progress indicator starts at 75%
- Display takes a long time to render
- Santec laser not found

### **Known Issues**

- Graph gridlines do not match the axis labels

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## **Firmware Release 4.52.011**

### **New Features or Changes**

- Added TLS activity icon to top bar
- Improved support for absolute units
- Improve rendering time for large sweeps
- Enable numeric keypad for entering IP address
- Enable TLS view for non-4200 models with an internal TLS

### **Bugs Fixed**

- Various minor GUI fixes
- Various fixes to support model 4300
- Fix “loop” number of sweeps restarts the GUI

### **Known Issues**

- Display takes a long time to render
- Progress indicator starts at 75%
- Santec laser not found

## **Firmware Release 4.51.010**

### **New Features or Changes**

- Fix version comparison for Web upgrades
- Fix problem with loss of autoranging configuration
- GUI Option to change the TLS Trigger Edge added
- Add GUI support for selecting the filename of saved measurement data

### **Bugs Fixed**

- X-Axis displays unreadable text beneath values
- Y-Axis displays incorrect values on Time display

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## **Known Issues**

- No issues have been reported at this time, please visit <https://bugzilla.dbmoptics.com/> or contact your dBm Optics representative to report issues.

## **Firmware Release 4.50.009**

### **New Features or Changes**

- Added support for DUT Switch (option 3302)
- Added support for Source Switch (option 974)
- Added support for Internal TLS on model 4650

### **Bugs Fixed**

- Improper calculation of ORL gain
- Y-Axis displays values for the previous sweep
- Improper Passthru command hangs instrument
- Long-running execution can cause the GUI to reset

## **Known Issues**

- X-Axis displays unreadable text beneath values
- Y-Axis displays incorrect values on Time display
- **Performing an upgrade changes installed options**

## **Firmware Release 4.49.008**

### **New Features or Changes**

- Added +/- symbol to numeric keypad
- Support for Model 210 Channel Card added
- “Configure Y Axis” buttons now allow for nine decimal places
- “Configure Y Axis” dialog now shows numbers in the simplest form

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## **Bugs Fixed**

- Rel/Zero does not un-zero
- Autoranging reports errors in logfile
- Email Log to Tech Support locks GUI
- “Data From” button causes the GUI to crash
- GUI crashes infrequently with no user interaction

## **Known Issues**

- Improper calculation of ORL gain
- Y-Axis displays values for the previous sweep
- Improper Passthru command hangs instrument
- Long-running execution can cause the GUI to reset

## **Firmware Release 4.48.007**

### **New Features or Changes**

- Better support for Variable Optical Attenuator
- Support for autoranging in Power Meter Mode
- Open/Save file dialogs now only require one click
- Save System Settings dialog allows selection of existing files

### **Bugs Fixed**

- WaveRef II displays incorrect traces
- WaveRef II reading spacing returns to default on sweep with TLS installed
- Garbage GUI Version displayed in some circumstances
- Changing between dBm/mW does not properly update the output power dialog on the TLS

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## **Known Issues**

- Rel/Zero does not un-zero
- Autoranging reports errors in logfile
- Email Log to Tech Support locks GUI
- “Data From” button causes the GUI to crash
- GUI crashes infrequently with no user interaction

## **Firmware Release 4.46.006**

### **New Features or Changes**

- Auto-detect DHCP/BOOTP IP on cable insertion

### **Bugs Fixed**

- GPIB Address can be set to 0
- Math traces can not be enabled
- Saved traces can not be enabled
- Digital Filtering does not update GUI correctly
- Incorrect firmware version shown until reboot
- Searching for DHCP IP with no DHCP server on the network bogs down GUI

## **Known Issues**

- WaveRef II displays incorrect traces
- Garbage GUI Version displayed in some circumstances
- WaveRef II reading spacing returns to default on sweep with TLS installed
- Changing between dBm/mW does not properly update the output power dialog on the TLS

## **Firmware Release 4.44.005**

### **Known Issues**

This release did not repair the issues it was meant to, please see release 4.46.006.

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## **Firmware Release 4.42.004**

### **New Features or Changes**

- Added Support for Switching
- New graphical rendering back-end
- Added command-passthru for controlled devices
- Additional method for accessing the “Remote Assistance” tool
- Storing Wavelength Referencing Sweep Data is now supported in the GUI
- Activating Wavelength Referencing now turns on the Wavelength Reference Channel

### **Bugs Fixed**

- Unusable buttons display on Model 4100
- Unable to save data files directly to USB drive
- GUI performance degrades when running for several days
- GUI performs a soft-reset when sweeping continuously for several hours
- Execution of nearly simultaneous commands locks up the internal TLS

### **Known Issues**

- GPIB Address can be set to 0
- Math traces can not be enabled
- Saved traces can not be enabled
- WaveRef II displays incorrect traces
- Digital Filtering does not update GUI correctly
- Incorrect firmware version shown until reboot
- WaveRef II reading spacing returns to default on sweep with TLS installed
- Searching for DHCP IP with no DHCP server on the network bogs down GUI

## **Firmware Release 4.40.003**

### **New Features or Changes**

- Added ORL Configuration Wizard

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## **Bugs Fixed**

- “Remote Assistance” button missing from GUI menu
- IP Address Dialog crashes when changing the IP

## **Known Issues**

- Unusable buttons display on Model 4100
- Unable to save data files directly to USB drive
- GUI performance degrades when running for several days
- GUI performs a soft-reset when sweeping continuously for several hours
- Execution of nearly simultaneous commands locks up the internal TLS

## **Firmware Release 4.40.002**

### **New Features or Changes**

- Added support for changing the GPIB address
- Added support for Raw Wavelength Reference Traces
- Added a visual keypad for the Numeric Entry Dialog
- Added “Infinite Loop” sweep option to Model 4200

### **Bugs Fixed**

- Changing the View or Update status of a trace remotely not reflected by the front panel
- Auto-ranging uses difficult max/min and division values
- PDL Graphs always autorange

### **Known Issues**

- “Remote Assistance” button missing from GUI menu
- IP Address Dialog crashes when changing the IP

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## **Firmware Release 4.34**

### **New Features or Changes**

- Support for markers when multiple graphs are displayed
- System Re-imaging using a USB DVD-ROM
- Improved data rendering performance
- Infinite “Sweep Repeat” Option

### **Bugs Fixed**

- Repeated sweeps do not wait for GUI to update
- Legend overlapping with markers enabled
- Remote FTP access not responding

### **Known Issues**

- Changing the View or Update status of a trace remotely not reflected by the front panel
- Auto-ranging uses difficult max/min and division values
- PDL Graphs always autorange

## **Firmware Release 4.32**

### **New Features or Changes**

- Remote assistance tool added (requires Internet access and service password)
- Soft reboot button added

### **Bugs Fixed**

- Right arrow key causes soft reboot
- First touch-screen press does not work
- GUI settings do not always save on shutdown/reboot

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## **Known Issues**

- Repeated sweeps do not wait for GUI to update
- Legend overlapping with markers enabled
- Remote FTP access not responding

## **Firmware Release 4.28**

### **New Features or Changes**

- Support for Internal Polarization Controller
- Support for Current Controlled Lasers

### **Bugs Fixed**

- Corrupted GPIB and Serial Device Driver configuration files

## **Known Issues**

- The “right arrow” key can cause a soft reboot under a very specific set of circumstances
- First touch-screen press does not work, clicks the middle of the screen rather than the requested location
- GUI settings do not always save on shutdown/reboot

## **Firmware Release 4.26**

### **New Features or Changes**

- Trace Statistics now defaults to the first trace of the first channel rather than “All”
- Digital Smoothing now defaults to 11 readings rather than 101
- Align Polarization with DUT Dialogs Added
- Semi-Transparent Graph Foreground Labels
- Markers

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## **Bugs Fixed**

- Memory leaks greatly reduced performance over time
- Run-away task caused rotary knob to run slow
- Bottom status text too small

## **Known Issues**

- There are corrupted GPIB and Serial Device Driver configuration files, if you are unable to update to Firmware Release 4.28 then please contact your dBm Optics representative for assistance.

## A Brief Firmware History

The table below shows which components of the 4000 Series Firmware were modified in each release. The GUI refers to the graphical rendering application that supplies the Front Panel on the instrument, the Core/Engine is the internal software that handles communications and processing of all commands, and Support Files are any operating system config files or applications.

Version	GUI	Core/Engine	Support Files
4.26	X	X	X
4.28	X	X	X
4.32	X	X	X
4.34	X	X	X
4.40.002	X	X	
4.40.003	X		
4.42.004	X	X	X
4.44.005	-	-	-
4.46.006	X	X	X
4.48.007	X	X	
4.49.008	X	X	
4.50.009	X	X	
4.51.010	X	X	
4.52.011	X	X	
4.53.012	X	X	
4.54.013	X	X	
4.55.014	X	X	X