

The image features a Siemens SIMATIC MV500 control unit in the foreground, with a blurred industrial background. A digital overlay of binary code (0s and 1s) is visible in the upper half. A glowing, multi-colored circular graphic is positioned in the center, overlapping the control unit. The Siemens logo and slogan are in the top right, and the product name and migration title are in a teal box at the bottom left.

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SIMATIC MV500

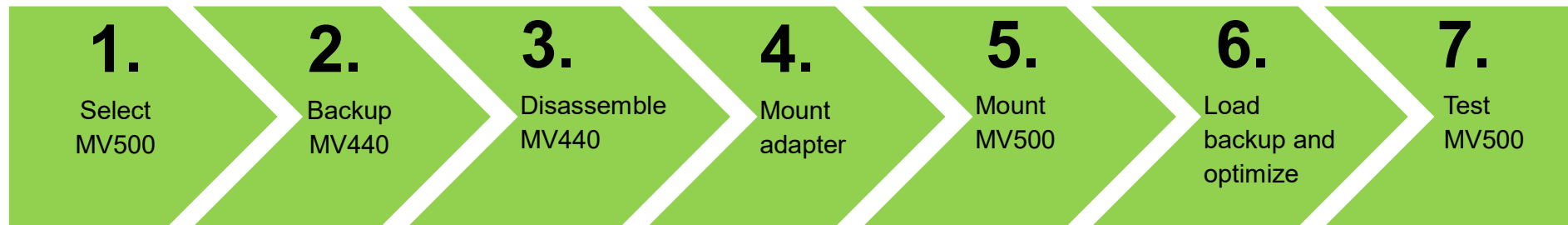
Migration from MV440 to MV500

Migration at a Glance

The purpose of this document is to describe the replacement of an MV440 with an MV500.

As many components of the MV440 as possible should be reused.

Thanks to the innovations of the MV500, it is possible at the same time to improve the lighting and optics, for example. Whenever this is possible, it is indicated by the following symbol.



Migration at a Glance






Terms Used

WBM: Web Based Management

Start WBM: Open a HTML5-capable web browser (Google Chrome; Microsoft Edge) and enter the IP address of the MV440 or MV500 (if CONNECT: 192.168.100.100)

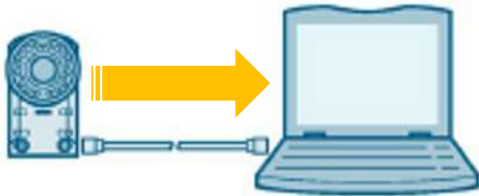
ASM/CM: Interface Module / Communication Module is a device to operate the camera on PROFIBUS / PROFINET. PROFINET is also possible with the integrated interface.

Step 1: Select MV500

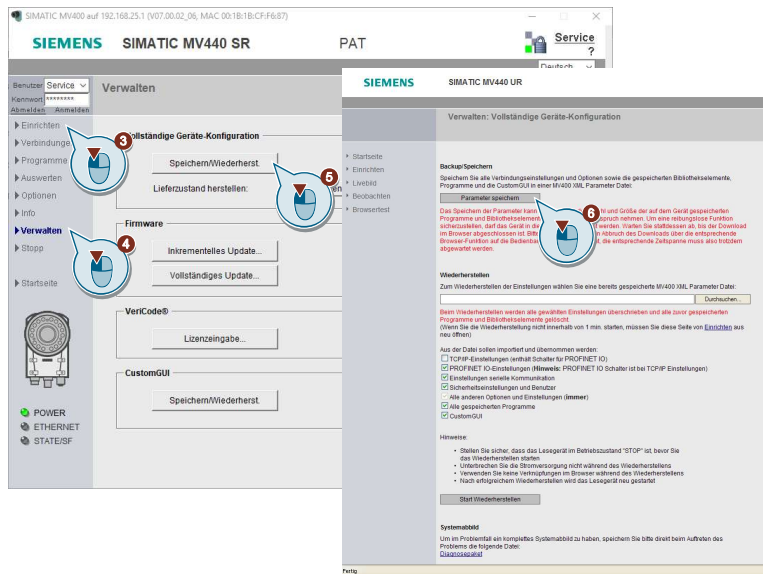
	MV440	Action	MV500
Camera	MV440 SR (6GF3440-1CD10) MV440 HR (6GF3440-1GE10) MV440 UR (6GF3440-1LE10)	Replace with* Replace with Replace with	MV540 S (6GF3540-0CD10) MV540 H (6GF3540-0GE10) MV560 U (6GF3560-0LE10)
Optics	C-mount lens 6, 12, 16, 25, 35, 50, 75mm	Use identically 	C-mount lens E-focus 25mm (6GF3540-8EA03-0LL0)
Built-in ring light	RED (6GF3440-8DA11) IR (6GF3440-8DA41)	Use identically 	RED MULTI (6GF3540-8DA13) IR BASIC (6GF3540-8DA41)
Lens protection tube	Metal-glass (6GF3440-8AC11)	Use identically 	Metal-glass (6GF3440-8AC11) (absolutely necessary with new ring light)
Cable – PROFINET – ASM – Power IO	Ethernet (6XV18070-8Axx) If: ASM cable (6GT2891-0Fxx) If: Power IO cable	Use identically In addition In addition	ASM adapter cable (6GF3500-8BA11) Power adapter cable (6GF3500-8BA20)



Step 2: Backup MV440

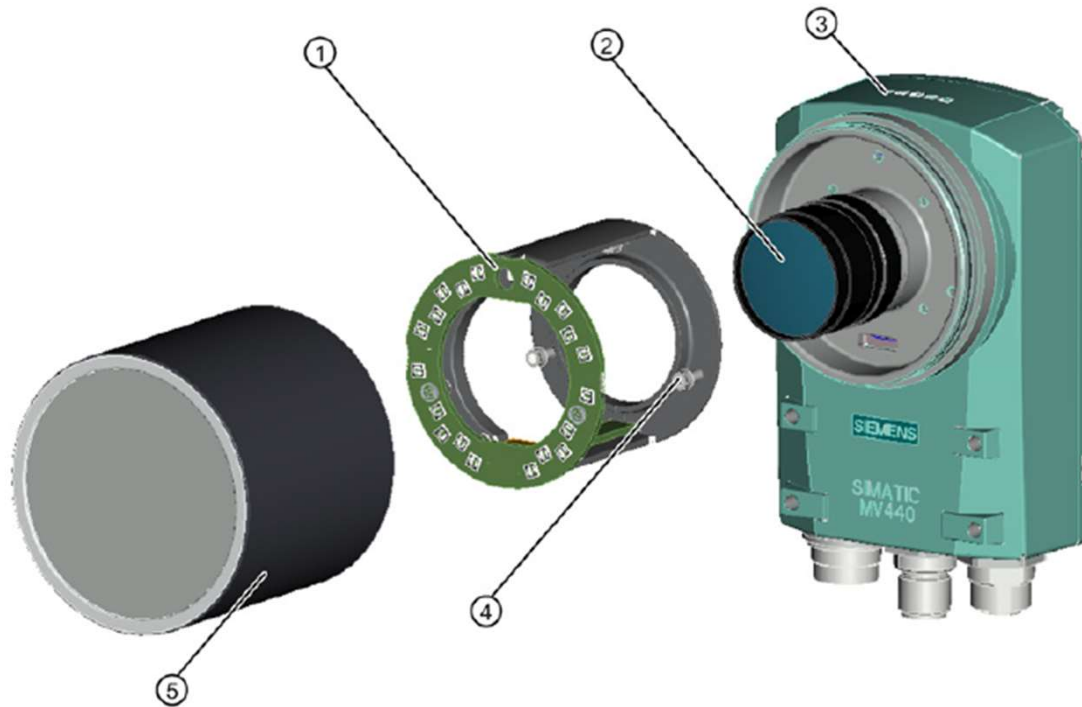


1. Connect PC with MV440.
Note: Set IP address and subnet mask accordingly on the PC.
2. Start WBM, in other words start the web browser and enter the IP address of the MV440.
3. Navigate from the portal side to "Setup".
4. Select the menu item "Manage".
5. Click the "Save/Restore" button.
6. Click the "Save parameters" button and save the "myBackup.xml" file on the PC.



Step 3: Disassemble MV440

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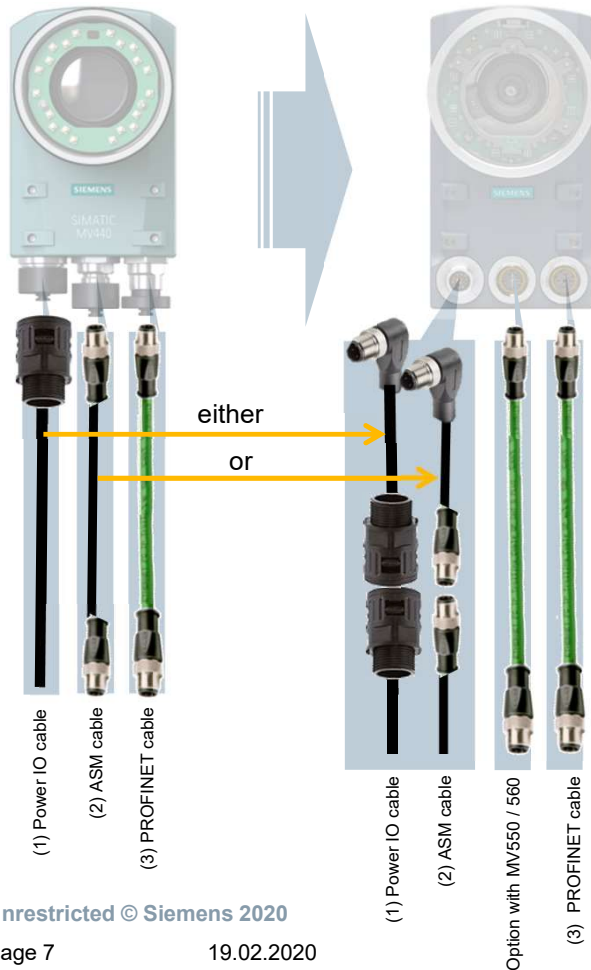


1. Unscrew the MV440 from mounting bracket.
2. Unscrew the MV440 protective lens barrel (5).
3. Unscrew the MV440 lens (2).
Note: Tighten the locking screws on the lens to ensure that the diaphragm and lens aperture rings do not move.
4. Unscrew MV440 ring light (1).

- ① Built-in LED ring light
- ② Lens
- ③ Reader

- ④ M2.5 hexagon socket-head screws
- ⑤ Protective lens barrel \varnothing 65

Step 4: Mount Adapter



- If connected with (1) **POWER IO cable**:
Mount MV500 POWER IO adapter
- or
- If connected with (2) **ASM cable**:
Mount MV500 ASM adapter
- The (3) **PROFINET cable** can be replugged 1:1.

Step 5: Mount MV500

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1. Screw in MV440 lens.
 - UP GRADE Use MV500 E-focus lens
2. Screw on MV440 ring light.
 - UP GRADE Use MV500 ring light and SD card holder
3. Screw on MV440 lens protection tube.
 - UP GRADE MV500 lens protective lens barrel (absolutely necessary with MV500 ring light)
4. Screw MV500 onto mounting bracket.
5. Establish communication: Plug in PROFINET cable
6. Connect the power supply: Plug in ASM or Power IO cable

Step 6: Load Backup ...

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1. Connect PC with MV440.

Note:

Assign the IP address of the disassembled MV440 reader to the MV500 reader. Use one of the following tools: PRONETA, Primary Setup Tool (PST), STEP 7 or TIA Portal

2. Start WBM, in other words start the web browser and enter the IP address of the MV500.

3. Navigate from the portal side to "Home Page".

4. Select the menu item "System".

5. Under "Load" you enable the option "External data backup".

6. Click "Select file" and on the PC you select the backup of the MV440 reader "myBackup.xls".

7. Enable "TCP/IP Settings" and "Set PROFINET".


8. Click the "Start Restore" button.



Step 6. ... and Optimize

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1. Select the menu item "Options > Built-in lamp > Lamp: Other".
2. Enter the parameters of the MV440 lamp (see Appendix 2).
If you use an MV500 lamp, it is recognized automatically.
3. If you connect an ASM/CM, enable the option "Power via  PoE or CM".
Note: This limits the lamp wattage so as not to overload the power source.
4. In the menu item "Program" you select the current program.
Test: WBM shows a live image like the MV440 reader.
5. If necessary change the ROI/exposure parameters in the program.
Test: Test shows correct reader result.
6. Set the reader to RUN.

Step 7: Test MV500

1. With ASM: Restart the ASM and camera by switching the power off/on on the ASM.
2. Ensure correct initialization of FB45 / Ident Profile / Ident Blocks from the PLC.

Note: Normally this can be checked on the visualization or in the PLC program.

Test: Check the PLC signal "Initialization successful" (Visualization / User program / Block parameters).

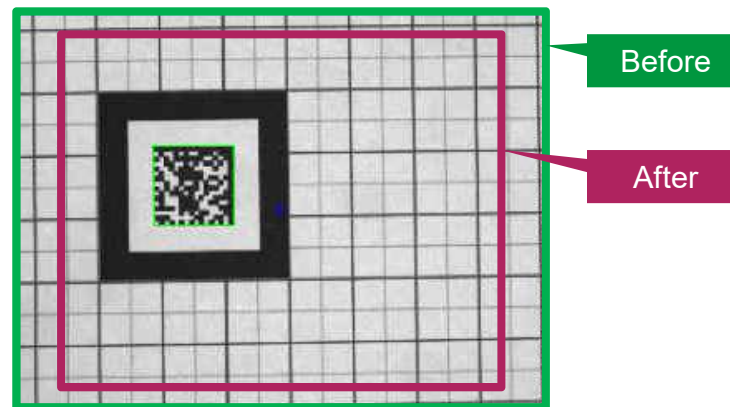
3. WBM: Monitor program (MV500 now waits for PLC/trigger).
4. Release trigger.

Test: Test shows correct reader result.



Appendix 1

Note on Replacing MV440 SR with MV500 S



Effect: Code increases, field of view decreases

If you replace the MV440 SR with the MV500 S, the resolution in px/mm increases. At the same time, in this constellation the visible image section decreases by a factor of 0.81. This means that 81% of the height and width of the original field of view remain.

Check your application to see if you use the previous image field to $\geq 81\%$. If yes, then replace the MV440 SR with an MV500 H.

Appendix 2 Parameters of the Built-in MV440 Lamps

Beleuchtung

Interne Lampe

Versorgen über PoE oder CM:

Lampe:

Produktname:

Blitz:

Dauerlicht:

Blitzverzögerung: us

Max. Blitzdauer: us

Max. Tastgrad: %

Wellenlänge: nm

Farbe:

	MV440 built-in red ring light 6GF3440-8DA11	MV440 built-in white ring light 6GF3440-8DA21	MV440 built-in IR ring light 6GF3440-8DA41
Flash delay	20 us	20 us	20 us
Max. flash duration	10,000 us	10,000 us	10,000 us
Max. duty cycle	8%	8%	8%
Wavelength	618 nm	0 nm	850 nm
Color	RED	WHITE	IR

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