camera setup instructions to invert the image
the image to be inverted electronically. See your
requires the camera to be mounted upside down or
maintain very low distortion inverts the image. This
(LOT) which allows the ultra wide angle lens to
320° after mounting. The slip ring is tensioned and
mount which allows the user to rotate the lens up to
optical lenses designed for megapixel class cameras.

Installation
Most Theia varifocal lenses have a slip ring CS
mount which allows the user to rotate the lens up to
320° after mounting. The slip ring is tensioned and
will have more resistance to lens rotation. The slip
ring has a hard stop that allows the lens to be
removed. Do not over-torque the mount when
tightening.

If the lens has an autoriris or p-iris, plug the cable into
the receptacle on the camera.

---

Iris operation

Manual iris lens
Adjust the iris opening by loosening the thumb screw
and rotating until the desired illumination is allowed
through the lens. To allow more illumination, open
the iris by rotating counter clockwise (looking at the
front of the lens). Tighten the thumb screw to hold
the iris in place.

Autoriris and p-iris lenses
The iris operation is controlled electronically by the
camera with DC autoriris control or precision iris (p-
iris) control. The autoriris cable should be connected
to the camera’s iris cable receptacle. Refer to your
camera manufacturer’s operators manual to set the
camera’s iris control the proper type of iris control.

---

DC auto iris Pin Function
1 Control -
2 Control +
3 Drive +
4 Drive -

P-iris Pin Function
1 B+
2 A+
3 A-
4 B-

---

Adjusting lens focus

Adjust focus using this procedure:
- For autoriris lens; place a dark neutral density
density filter in front of the lens to fully open the autoriris
for focusing.
- For manual iris lens; make sure the iris is fully
opened by rotating the iris ring towards “open”.
- Loosen the focus thumb screw, rotate the focus
ring until the proper focus is achieved, and then
tighten the thumb screw to lock the focus in place.

If focus cannot be achieved you may have to adjust the
back focus of the camera. Start by positioning the
lens focus to the middle of the focus range. Using
the camera operating instructions, adjust the camera
back focus to bring the image into focus. Now
slightly readjust the lens focus ring to find the best
overall focus.

If the lens is still not in focus or the camera does not
have a back focus adjustment, verify that there is not a
C-CS adapter ring between the camera and lens (some
CS-mount cameras come with this additional part so a
C-mout lens can be used). This C-CS adapter is not
required for lens models starting with “SY” or “SL”.

Adjusting zoom on varifocal lenses
Adjust zoom using this procedure:
- Loosen the zoom thumb screw, rotate the zoom ring
until the desired image size is achieved, and then
tighten the thumb screw to lock the zoom in place.
- On some varifocal lenses the image will go out of
focus when the zoom ring is adjusted. Simply
refocus the lens using the focus adjustment procedure.

Compliance
All products listed in this manual comply with
applicable requirements for RoHS and CE marks.
Compliance certificates are available by request.

Routine service
Remove any dust or dirt accumulated on the lens with
compressed air or a blower brush.

To remove oil or fingerprints from the lens use a soft
lint-free cloth or lens tissue dampened with alcohol or
cleaner fluid. Wipe lightly in a spiral motion
starting from the center of the glass element and
working towards the edge. Repeat as necessary
with a fresh area of cloth or lens cleaning tissue.

---

Lens specifications
Lens specifications are available on Theia’s

Patents
Theia Technologies has multiple issued and
pending US and international patents for lens

technologies.

Contact information
Theia Technologies
29765 SW Town Center Loop W, Suite 4
Wilsonville, OR 97070, USA
Phone: +1 (503) 570-3296
Email: CustomerService@TheiaTech.com
Website: www.TheiaTech.com

---

Lens information

Lens model | Focal length | LOT design | Day/Night | Iris type | Mount type
--- | --- | --- | --- | --- | ---
SY125A | 1.3mm | Yes | No | Auto iris | CS*
SY125M | | | | Manual iris | CS*
MY125M | | | | Manual iris | CS*
SY110A | | | | Auto iris | CS*
SY110M | 1.7mm | Yes | Yes | Manual iris | CS*
MY110M | | | | Manual iris | CS*
SL183A | 1.8mm – 3mm | Yes | Yes | Auto iris | CS*
SL183M | | | | Manual iris | CS*
ML183A | | | | Auto iris | C*
ML183M | | | | Manual iris | C*
SL940A | 9mm – 40mm | No | Yes | Auto iris | CS
SL940P | | | | P-iris | CS
SL940M | | | | Manual iris | CS
SL410A | 4mm – 10mm | No | Yes | Auto iris | CS
SL410P | | | | P-iris | CS
SL410M | | | | Manual iris | CS
ML410A | | | | Auto iris | C
ML410M | | | | Manual iris | C
SL1250A | 12mm-50mm | No | Yes | Auto iris | CS
SL1250P | | | | P-iris | CS
SL1250M | | | | Manual iris | CS

*no slip ring available