FLIR® Camera Integration
Guide

SIMRAD

FLIR® Camera Integration

FLIR® is a camera manufacturer specializing in Marine/Military grade night vision and thermal video cameras.

Navico is introducing control integration of a certain range of FLIR® Pan Tilt Zoom cameras with certain Navico multifunction displays. This manual details how to setup the camera in order to receive control commands from a Simrad multifunction displays

Compatibility

. At the time this document was written the following models of FLIR® cameras can be used:

Compatible FLIR M-Series cameras

M-625XP, PAL, 25MM SP 25HZ	EN	432-0003-10-00
M-625XP, PAL, 25MM SP <9HZ	EN	432-0003-10-00S
M-625XP, NTSC, 25MM SP 30HZ	EN	432-0003-09-00
M-625XP, NTSC, 25MM SP <9HZ	EN	432-0003-09-00S
M-625L, PAL, 25MM DP 25HZ	EN	432-0003-14-00
M-625L, PAL, 25MM DP <9HZ	EN	432-0003-14-00S
M-625L, NTSC, 25MM DP 30HZ	EN	432-0003-13-00
M-625L NTSC, 25MM DP <9HZ	EN	432-0003-13-00S
M-618CS, PAL, 25HZ	EN	432-0003-32-00
M-618CS, PAL, <9HZ	EN	432-0003-32-00S
M-618CS, NTSC, 30HZ	EN	432-0003-31-00
M-618CS, NTSC, <9HZ	EN	432-0003-31-00S
M-612L, PAL, 50MM DP 25HZ	EN	432-0003-24-00
M-612L, NTSC, 50MM DP 30HZ	EN	432-0003-23-00
M-612L, NTSC, 50MM DP <9HZ	EN	432-0003-23-00S
M-612L PAL, 50MM DP <9HZ	EN	432-0003-24-00S
M-324XP, PAL, 19MM SP 25HZ	EN	432-0003-06-00
M-324XP, PAL, 19MM SP <9HZ	EN	432-0003-06-00S
M-324XP, NTSC, 19MM SP 30HZ	EN	432-0003-05-00
M-324XP, NTSC, 19MM SP <9HZ	EN	432-0003-05-00S
M-324L, PAL, 19MM DP 25HZ	EN	432-0003-12-00
M-324L, PAL, 19MM DP <9HZ	EN	432-0003-12-00S
M-324L, NTSC, 19MM DP 30HZ	EN	432-0003-11-00
M-324L, NTSC, 19MM DP <9HZ	EN	432-0003-11-00S

Pre requisites

FLIR Software Version

Flir Camera Systems that shipped prior to Aug 2013 will require a M-Series software update to Nexus 2.5.9.17 or later. The update procedure for an M-Series is not automated and requires a manual upload using a PC. Please contact FLIR directly if a software update is required at 1-888-747-3547"

MFD compatibility

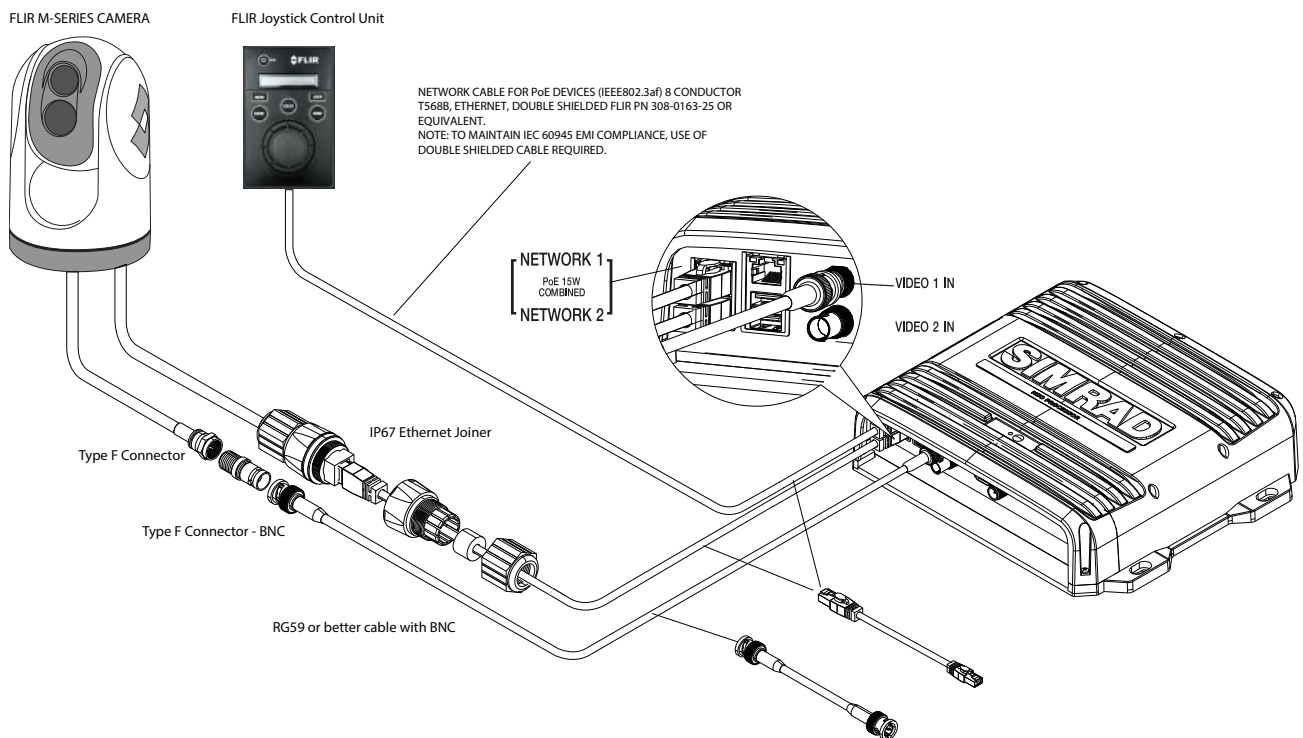The cameras can integrate to following Simrad Navigation systems with compatible software.

NSO-evo2 with RTM 1 software or above

NSS evo 2 with RTM 1 software or above

NSE with RTM 4.0 software or above

NSS with RTM 3.0 software or above

With a GoFree module	Without a GoFree module
GoFree acts as a DHCP server and assigns an IP address to the camera	No DHCP server on the network. The MFDs won't be able to control the camera
No additional setup required	Set Static Address in the camera

Tools Required

PC with Windows 7 or later.

Ethernet patch cable (not crossover)

Microsoft Internet explorer web browser

Systems without a GoFree module (no DHCP)

FLIR M-SERIES CAMERA

FLIR Joystick Control Unit

NETWORK CABLE FOR PoE DEVICES (IEEE802.3af) 8 CONDUCTOR
T568B, ETHERNET, DOUBLE SHIELDED FLIR PN 308-0163-25 OR
EQUIVALENT.
NOTE: TO MAINTAIN IEC 60945 EMI COMPLIANCE, USE OF
DOUBLE SHIELDED CABLE REQUIRED.

NETWORK 1
PoE 15W
COMBINED
NETWORK 2

VIDEO 1 IN

VIDEO 2 IN

SIMRAD

IP67 Ethernet Joiner

Type F Connector

Type F Connector - BNC

RG59 or better cable with BNC

If a FLIR® Camera is installed into a system without a GoFree module, it will not be automatically be recognized by the Multifunction Displays (MFDs) as the FLIR® camera expects to get an IP address assigned from a DHCP server and the MFDs will not be able to control the camera.

In order for the MDFs to be able to control the pan tilt zoom of the FLIR® camera, the camera will need to be configured with a static IP address in the ZeroConfig subnet. The Flir camera must have a software version greater than "Nexus 2.5.9.17" Please contact FLIR® for further information 1-888-747-3547 and upgrade information.

## Give the camera a Static IP address

To browse to the FLIR® web interface, you will first need to discover FLIR®'s current IP address.

Determine the IP address of the camera

1 Connect the FLIR® Camera directly to the computer via Ethernet. Disable the computer's Wi-fi adapter so the camera and the computer are the only devices on the network
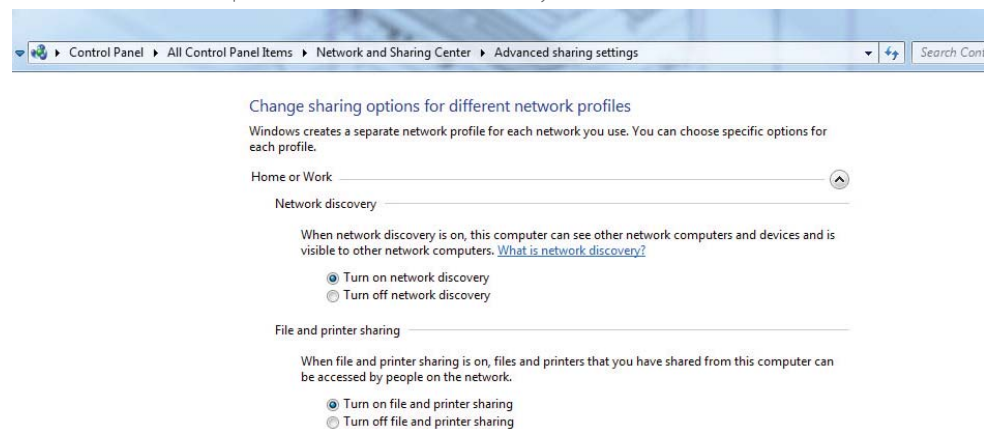
FLIR M-SERIES CAMERA

Type F Connector

Ethernet Cable
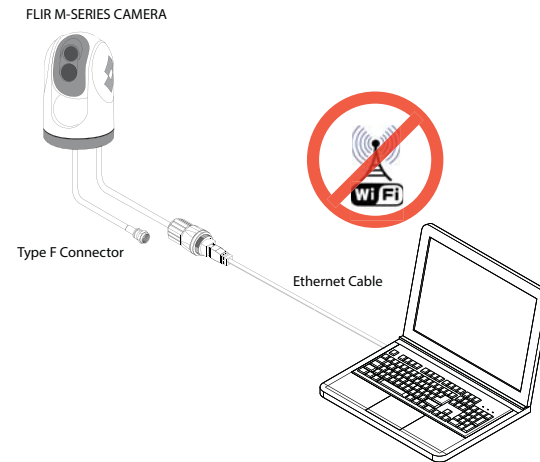
2 Apply power to the camera and wait for the camera to initialize itself

3 Open Windows Explorer.

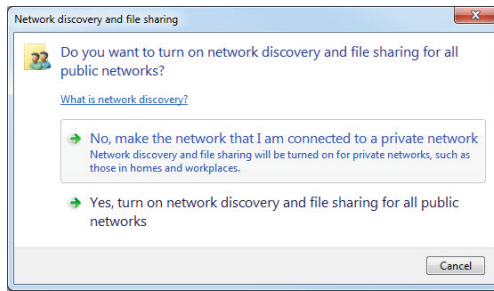**4** Click on Network
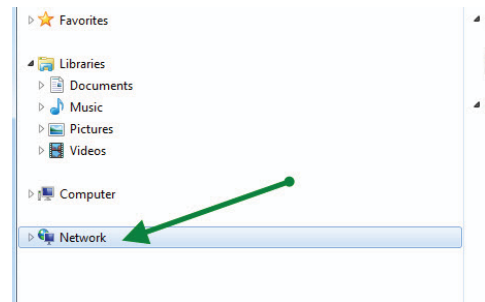
5 If necessary enable network discovery. A message will appear prompting you
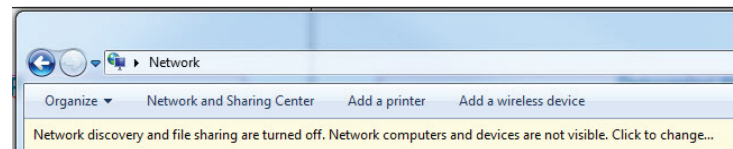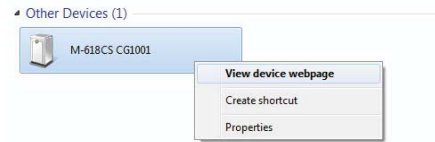

6 In the "Home or Work" profile turn on network discovery.

7 If prompted only enable network discovery on private networks

8 The camera should now appear under other devices

9 Double click on the device. This will open the camera's built in web page in your default web browser.

➔ *Note:* If your default web browser is not Microsoft Explorer the web interface may not work correctly. Copy the url and paste into Microsoft Explorer

Microsoft Internet supported Web browsers include Microsoft Internet Explorer version 7 or 8 on PC platforms running Microsoft Windows. Internet Explorer 8 may have to be configured to run in compatibility mode.

Set the Static IP address

1 Click on Network Setup.

FLIR — **Network Settings**

IP: 169.254.88.88 [?]
Mask: 255.255.0.0 [?]
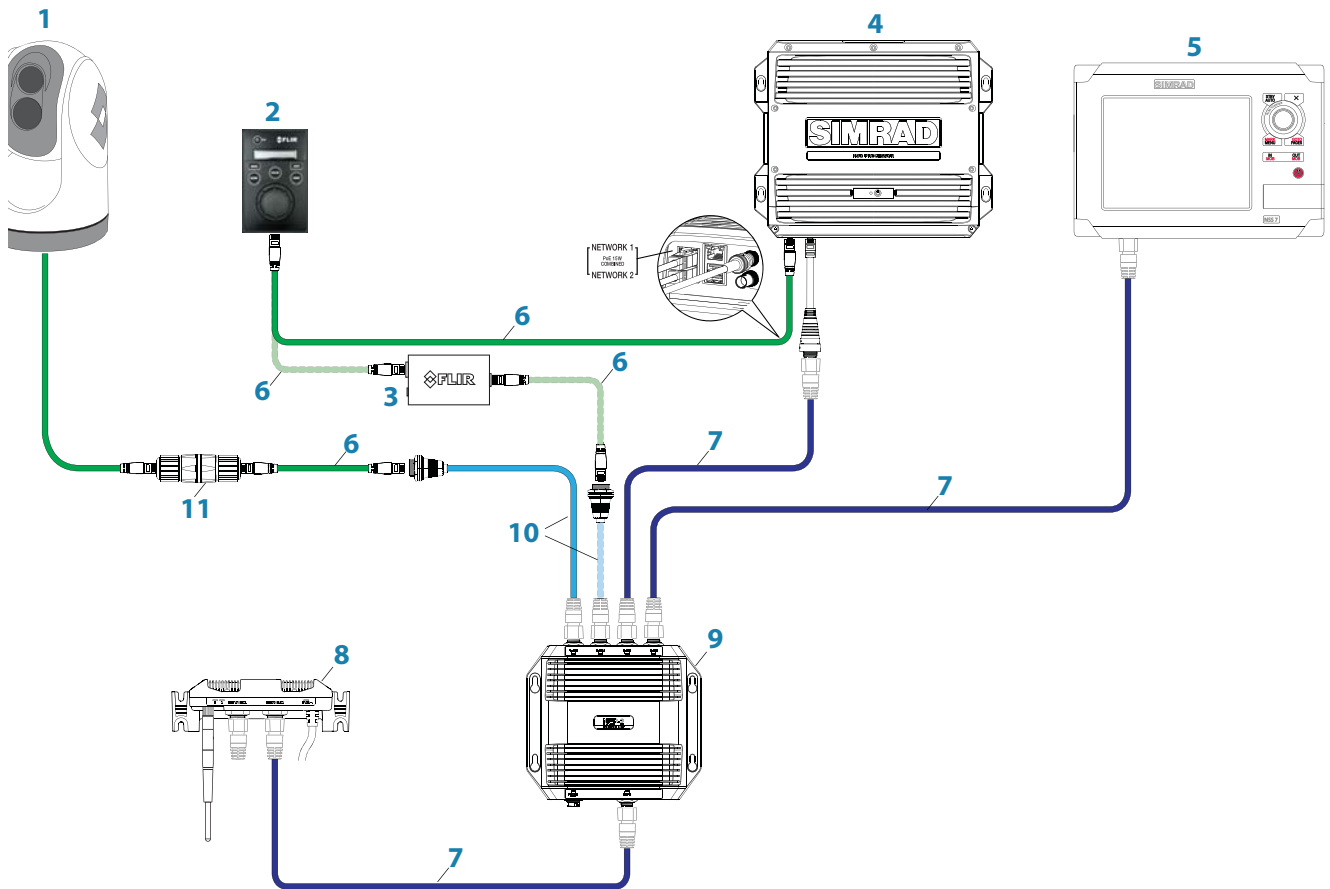Gateway: [ ] [?]

○ Dynamic ● Static

[Save] [Factory IP Defaults]

2 Select the Static radio button
3 Set the IP Address to 169.254.xxx.xxx (xxx= number between 1 and 254) e.g 169.254.88.88
4 Set sub mask to 255.255.0.0
5 Click on the save button
6 Disconnect the laptop
7 Reconnect the camera to Simrad Ethernet network
8 Power on the system and check operation.

Systems with a GoFree WiFi-1

System with a Go Free module should not require and additional setup

1	FLIR® M Series Camera
2	FLIR® Joystick Control Unit (JCU) (Requires Power over Ethernet from NSO Ethernet port 1 or 2 or via PoE injector (PN 4113746)
3	FLIR® Power over Ethernet Power (PoE) Power supply PN 4113746. Required if not connecting to a NSO evo2 for PoE
4	NSO evo2 Processor
5	SimRad MFD running compatible Software NSS evo2, NSE>v4.0, NSS >v3.0
6	3rd party network cable for PoE devices (ieee802.3Af) 8 conductor T568B, Ethernet, double shielded FLIR® PN 308-0163-25 or equivalent. Note: to maintain IEC 60945 EMI compliance, use of a double shielded cable is required.
7	Navico Ethernet cable 5 Pin Yellow. Choice of 000-0127-51: 1.8M(6ft) 000-0127-29: 4.5M(15ft) 000-0127-30: 7.5M(25ft) 000-0127-37: 15.15M(50ft)
8	GoFree WIFI-1 Module. Acts as DHCP server and simplifies software integration to the FLIR® Camera (recommended)
9	Optional Ethernet switch. NEP-2, StructureScan, SonarHub
10	000-0127-55/ Ethernet adapter 0.5 m (2ft) OR 000-0127-56/ Ethernet adapter 2m (6ft)
11	FLIR® RJ45 IPX6 Cable Joiner

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