



ES30C/ES31C Series Positioning System

ESPRIT® SYSTEM WITH IOP CAMERA AND OPTIONAL WIPER

Product Features

- Receiver, Pan/Tilt, and Enclosure with an Integrated Optics Package (IOP)
- Auto Focus with Manual Override
- Programmable Camera Settings
- On-Screen Compass, Tilt, and Zoom Display
- Auto Iris with Manual Override
- Integral Multi-protocol Receiver/Driver
- Variable Speed Pan: 0.1° to 100°/second with Proportional Pan
- 360° Continuous Pan Rotation
- Zone Blanking – Allows up to eight zones (programmable in size) to be set to output blank video
- Operational in 90 mph Wind Conditions; Can Withstand Wind Velocity Up to 130 mph
- Pan Preset Speed of 100° Per Second in 50 mph Winds and 50° Per Second in 90 mph Winds
- Tilt Range of +33° to -83° from Horizontal
- Preset Positioning, Patterns, Multiple Scan Modes
- Designed for Minimal Maintenance, No Gears to Adjust



ESPRIT IOP SYSTEM WITH WIPER
(SHOWN WITH WALL MOUNT AND POLE ADAPTER)

The **ES30C** and **ES31C** are innovative additions to the successful product line of Esprit® Series Integrated Positioning Systems. The **ES30C** and **ES31C** not only combine a receiver, pan/tilt, and enclosure in a single, easy-to-install system, they also include an Integrated Optics Package (IOP). The Integrated Optics Package contains an auto-focus camera and lens module with programmable features.

For a wide range of applications, the **ES30C** and **ES31C** Series feature a choice of three different IOP cameras: a color camera (470 TVL) with a 16X zoom lens (16X optical, 10X digital), a high-resolution camera with LowLight™ color technology and 22X zoom lens (22X optical, 10X digital), and a low-light, high-resolution, day/night camera (520 TVL) with an infrared cut filter and 24X zoom lens (24X optical, 10X digital).

A powder-coated, aluminum construction makes the **ES30C** and **ES31C** ideal for either indoor or outdoor applications. The system has an absolute operating temperature range of -50° to 140°F (-45° to 60°C). Within two hours after power-up, the entire unit can de-ice and be operational from a temperature of -13°F (-25°C).

The **ES31C Series** includes a window wiper. The wiper is completely integrated into the enclosure and does not interfere with the viewing

range of the system. The wiper can be programmed to delay between wipes and to automatically shut off after a specified period. The wiper design also allows for easy replacement of the wiper blade. A built-in heater, window defroster/defogger, sun shroud, and insulation blanket are standard features on the **ES30C** and **ES31C** units. All units also include an open collector auxiliary output that functions for two seconds before deactivating.

The **ES30C** and **ES31C** Series variable pan and tilt speeds range from 0.1 to 40 degrees per second in manual pan mode and 0.1 to 20 degrees per second in manual tilt. Pan preset and turbo speeds are 100 degrees per second in wind speeds of 50 mph and 50 degrees per second in the 90-mph wind-speed profile. Tilt preset speed is 30 degrees per second. The **ES30C** and **ES31C** are capable of 360 degrees of continuous pan rotation. The tilt range allows for horizontal viewing of +33 to -83 degrees. There are 64 programmable preset positions with a preset accuracy of one-quarter degree.

The systems are available with an input voltage of 24 VAC or with a selectable power source of 120/230 VAC. The **ES30C** and **ES31C** also have a power-up recovery mode that allows the user to specify what operation the system will resume whenever the power is cycled.



TECHNICAL SPECIFICATIONS

PRODUCT FEATURES

- Deterrent Surveillance
- Integral Multi-Protocol (Coaxitron®, RS-422 D and P) Receiver/Driver
- Digital Position and Zoom Control and Feedback Via D Protocol
- Integral Camera Enclosure
- Variable Speed 0.1-100°/Second
- 360° Continuous Pan Rotation
- Quick and Easy Installation
- +33° to -83° Tilt Range
- Operational in 90 mph Winds, Can Withstand Wind Velocity Up to 130 mph
- Pan Preset Speed of 100° Per Second in 50 mph Winds and 50° Per Second in 90 mph Winds
- Meets NEMA Type 4X and IP66 Standards – Pan/Tilt and Enclosure
- Variable Scan Speeds (1-40°/Second)
- Translator Boards for Selected Competitive Protocols
- Easy to Install – Quick and Simple Electrical Connections
- 24 VAC or 120/230 VAC Selectable
- Designed for Minimal Maintenance, No Gears to Adjust
- Full Continuous-Duty Warranty

SOFTWARE/HARDWARE

- 64 Programmable Presets with Labels
- Auto, Frame, and Random Scan
- Programmable Power-up Mode
- Programmable Park
- Programmable Manual Limit Stops (Pan)
- Programmable Scan Limit Stops (Pan)
- Patterns
- Proportional Pan/Tilt
- Eight Zones (programmable in size) Can Be Labeled with Up to 20 Characters Each
- Up to Eight Zones (programmable in size) Can Be Set to Output Blank Video
- 10-Inch Integrated Enclosure with Pre-Assembled, IOP Camera
- Sun Shroud, Heater/Window Defroster, and Insulation All Standard
- One Auxiliary Output
- Integrated Window Wiper with Programmable Delay and Shut-Off (ES31C Models)

ALL CAMERAS

- Auto Focus with Manual Override
- Auto Iris with Manual Override
- Programmable Settings
- AC Line Lock
- NTSC/PAL

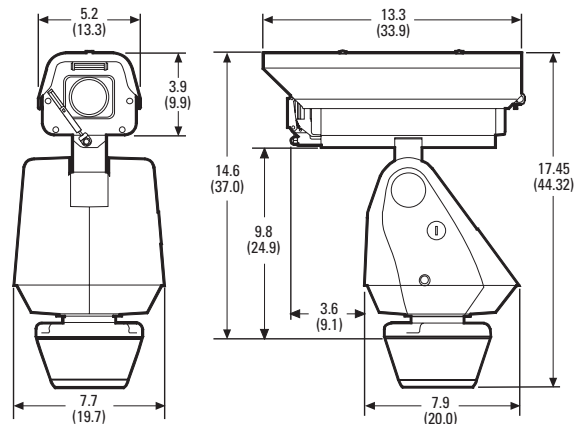
ELECTRICAL

| | | |
|------------------------|---|-------------------------|
| Input Voltage | 24, 120, or 230 VAC, 50/60 Hz; switch selectable for 120/230 VAC inputs | |
| Input Voltage Range | ±10% | |
| Power Consumption | Maximum 70 VA per system | |
| Heater and Defroster | Thermostatically controlled | |
| Electrical Connections | Two power source connections made at mount location with wire splices and one ground wire splice; one BNC receptacle and four wire splices at mount location for RS-422 D and P protocols; two wire splices for open collector auxiliary output | |
| Aux 2 | Open collector output with 2-second activation; connected relay must require no more than 32 VDC and 40 mA to energize relay coil; wire length between Esprit and relay must be less than 100 feet (30 m) | |
| Video Coaxial Cable | <u>Cable Type*</u> | <u>Maximum Distance</u> |
| Max. Wiring Distances | RG59/U | 750 feet (229 m) |
| | RG6/U | 1,000 feet (305 m) |
| | RG11/U | 1,500 feet (457 m) |

*Minimum cable requirements:
75 ohms impedance; all-copper center conductor; all copper braided shield with 95% braid coverage

MECHANICAL

| | |
|-------------------------|--|
| Pan Movement | 360° Continuous pan rotation |
| Vertical Tilt | Unobstructed +33° to -83° |
| Variable Pan/Tilt Speed | |
| Pan | 0.1° to 40°/sec variable-speed operation, 100°/sec Turbo |
| Tilt | 0.1° to 20°/sec variable-speed operation |
| Preset Speeds | |
| Pan | 100°/sec |
| Tilt | 30°/sec |
| Camera Mounting | Integrated camera sled assembly |
| Latches | One link-lock, No. 3 stainless-steel latch; can be secured with padlock (not supplied) |



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

TECHNICAL SPECIFICATIONS

GENERAL

| | |
|-----------------------|---|
| Construction | Die-cast, extruded and sheet aluminum; stainless steel hardware |
| Finish | Gray polyester powder coat |
| Viewing Window | 0.23" (5.84 mm) thick, optically clear impact/scratch-resistant coated Lexan® |
| Operating Temperature | -50° to 122°F (-45° to 50°C) for sustained system operation or 140°F (60°C) absolute maximum. Within two hours after power-up, the entire unit can de-ice and be operational from a temperature of -13°F (-25°C). |
| Operating Environment | Will remain operational in 90 mph wind conditions; withstands 130 mph |

| | | |
|--------------------|-----------------------|-----------------|
| Weight | With Pedestal Adapter | With Wall Mount |
| Unit | | |
| Standard w/IOP | 20 lb (9.0 kg) | 22 lb (9.9 kg) |
| With Wiper and IOP | 21 lb (9.5 kg) | 23 lb (10.4 kg) |
| Shipping | | |
| Standard w/IOP | 25 lb (11.3 kg) | 28 lb (12.6 kg) |
| With Wiper and IOP | 26 lb (11.7 kg) | 29 lb (13.1 kg) |

CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B (all models)
- UL Listed (NTSC models)
- UL Listed to Canadian safety standards (NTSC models)
- FCC, Class B (NTSC models)
- Meets NEMA Type 4X and IP66 standards
- U.S. Patents 340,940 and 5,224,675

CAMERA/OPTICS

| | Day/Night (24X) | Color, LowLight™ (22X) | Color, LowLight™ (16X) |
|-----------------------------|---|---|---|
| Signal Format | NTSC, PAL | NTSC, PAL | NTSC, PAL |
| Scanning System | 2:1 Interlace | 2:1 Interlace | 2:1 Interlace |
| Image Sensor | 1/4-inch CCD | 1/4-inch EXview HAD™ CCD | 1/4-inch interline transfer CCD |
| Effective pixels | | | |
| NTSC | 768 (H) x 494 (V) | 768 (H) x 494 (V) | 768 (H) x 494 (V) |
| PAL | 752 (H) x 582 (V) | 752 (H) x 582 (V) | 752 (H) x 582 (V) |
| Horizontal Resolution | | | |
| NTSC | >520 TV lines | >470 TV lines | 470 TV lines |
| PAL | >520 TV lines | >460 TV lines | 460 TV lines |
| Lens | f/1.2 (f = 3.8–91.2 mm optical) | f/1.6 (f = 4–88 mm optical) | f/1.4 (f = 4–64 mm optical) |
| Zoom | 24X optical, 10X digital | 22X optical, 10X digital | 16X optical, 10X digital |
| Zoom Speed | 3.9 seconds | 3.9 seconds | 3.6 seconds |
| Horizontal Angle of View | 50.7° at 3.8 mm wide zoom; 2.3° at 91.2 mm telephoto zoom | 47.3° at 4.0 mm wide zoom; 2.2° at 88 mm telephoto zoom | 43° at 4.0 mm wide zoom; 3° at 64 mm telephoto zoom |
| Focus | Automatic with manual override | Automatic with manual override | Automatic with manual override |
| Maximum Sensitivity @35 IRE | | | |
| NTSC | 0.005 lux at 1/2 sec shutter (color) 0.015 lux at 1/60 sec shutter (B-W) 0.0005 lux at 1/2 sec shutter (B-W) | 0.02 lux at 1/2 sec shutter | 0.05 lux at 1/2 sec shutter |
| PAL | 0.005 lux at 1/1.5 sec shutter (color) 0.015 lux at 1/50 sec shutter (B-W) 0.0005 lux at 1/1.5 sec shutter (B-W) | 0.02 lux at 1/1.5 sec shutter | 0.05 lux at 1/1.5 sec shutter |
| Sync System | Internal/AC line lock, phase adjustable via remote control, V-Sync* | Internal/AC line lock, phase adjustable via remote control, V-Sync* | Internal/AC line lock, phase adjustable via remote control, V-Sync* |
| White Balance | Automatic with manual override* | Automatic with manual override* | Automatic with manual override* |
| Shutter Speed | Automatic (electronic iris)/Manual | Automatic (electronic iris)/Manual | Automatic (electronic iris)/Manual |
| NTSC | 1/2–1/30,000* | 1/2–1/30,000* | 1/2–1/30,000* |
| PAL | 1/1.5–1/30,000* | 1/1.5–1/30,000* | 1/1.5–1/30,000* |
| Iris Control | Automatic Iris Control with manual override* | Automatic Iris Control with manual override* | Automatic Iris Control with manual override* |
| Gain Control | Automatic/OFF* | Automatic/OFF* | Automatic with manual override* |
| Video Output | 1 Vp-p, 75 ohms | 1 Vp-p, 75 ohms | 1 Vp-p, 75 ohms |
| Video Signal to Noise | >50 dB | >50 dB | >46 dB |

*Manual control of camera setup functions can be done with CM6700, CM6800, CM8500, CM9500, CM9700 Series, KBD200A, KBD300A, and MPT9500 controllers, but not with CM7500, MPT9000 or KBD9000 controllers.

MODEL NUMBERS

MODELS

| Model | Format | Pedestal Mount | | Wall Mount | | |
|----------------------|------------|----------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| | | 24 VAC | 120/230 VAC | 24 VAC | 120/230 VAC | |
| 16X Color | Standard | NTSC PAL | ES30C16-2N ES30C16-2N-X | ES30C16-5N ES30C16-5N-X | ES30C16-2W ES30C16-2W-X | ES30C16-5W ES30C16-5W-X |
| | With Wiper | NTSC PAL | ES31C16-2N ES31C16-2N-X | ES31C16-5N ES31C16-5N-X | ES31C16-2W ES31C16-2W-X | ES31C16-5W ES31C16-5W-X |
| 22X Color | Standard | NTSC PAL | ES30C22-2N ES30C22-2N-X | ES30C22-5N ES30C22-5N-X | ES30C22-2W ES30C22-2W-X | ES30C22-5W ES30C22-5W-X |
| | With Wiper | NTSC PAL | ES31C22-2N ES31C22-2N-X | ES31C22-5N ES31C22-5N-X | ES31C22-2W ES31C22-2W-X | ES31C22-5W ES31C22-5W-X |
| 24X Day/Night | Standard | NTSC PAL | ES30CBW24-2N ES30CBW24-2N-X | ES30CBW24-5N ES30CBW24-5N-X | ES30CBW24-2W ES30CBW24-2W-X | ES30CBW24-5W ES30CBW24-5W-X |
| | With Wiper | NTSC PAL | ES31CBW24-2N ES31CBW24-2N-X | ES31CBW24-5N ES31CBW24-5N-X | ES31CBW24-2W ES31CBW24-2W-X | ES31CBW24-5W ES31CBW24-5W-X |

REPLACEMENT INTEGRATED OPTICS PACKAGE (IOP CAMERA) MODULES

The following IOP modules are replacement components only; they are not interchangeable.

| | |
|--------------|---|
| ESIOPC16 | Esprit high resolution color camera and lens module, 16X, NTSC format |
| ESIOPC16-X | Same as ESIOPC16 except PAL format |
| ESIOPC22 | Esprit high resolution color camera and lens module, 22X NTSC format |
| ESIOPC22-X | Same as ESIOPC22 except PAL format |
| ESIOPCBW24 | Esprit high resolution day/night camera and lens module, 24X, NTSC format |
| ESIOPCBW24-X | Same as ESIOPCBW24 except PAL format |

OPTIONAL ACCESSORIES

| | |
|-----------------|--|
| ES-REPLBLADE-2 | Package of two window wiper replacement blades |
| ES-REPLBLADE-10 | Package of ten window wiper replacement blades |

RELATED PRODUCTS

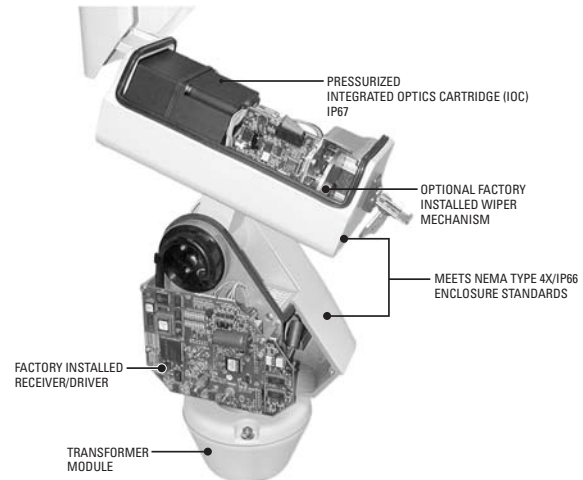
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|------------|---|
| IPS-RDPE-2 | Remote data port. 24 VAC, wall/pole mount video/data breakout box. Allows ground-level control/programming when used with the IPS-RMK. (No code upload.) |
| IPS-RMK | Remote monitor kit. Includes TFT-LCD monitor, PDA handheld, cables, and carrying case. Allows viewing of camera video, local PTZ control, and system setup. |
| TXB Series | Translator boards for AD Manchester, Bosch (Philips, Burle), Sensomatic, and Vicon protocols. |

RECOMMENDED MOUNTS

| | |
|---------------|---|
| Esprit Series | Includes mounts for wall, pedestal, corner, parapet, and pole applications. |
| PM2000/PM2010 | Pedestal mount with cable feedthrough. For use with Esprit systems with pedestal adapter plate. |

RECOMMENDED POWER SUPPLIES

| | |
|------------|---|
| MCS Series | Multiple 24 VAC camera power supply, indoor |
| WCS Series | Single/multiple 24 VAC camera power supply, outdoor |



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