ToughEye-1700™ Spec Sheet

Version 1.3

ToughEye-1700™ follows the same principles as the ToughEye-3100™ line of cameras, providing industry leading, zero maintenance, self-cleaning operation, suitable for any industrial application where a clear view is critical to the success of the operation. It continues to incorporate a rugged single-piece design, equipped with our field-proven and innovative ClearSight™ technology. The ToughEye™ family of cameras excel at three things: **reliability, zero-maintenance operation** and **image clarity**.
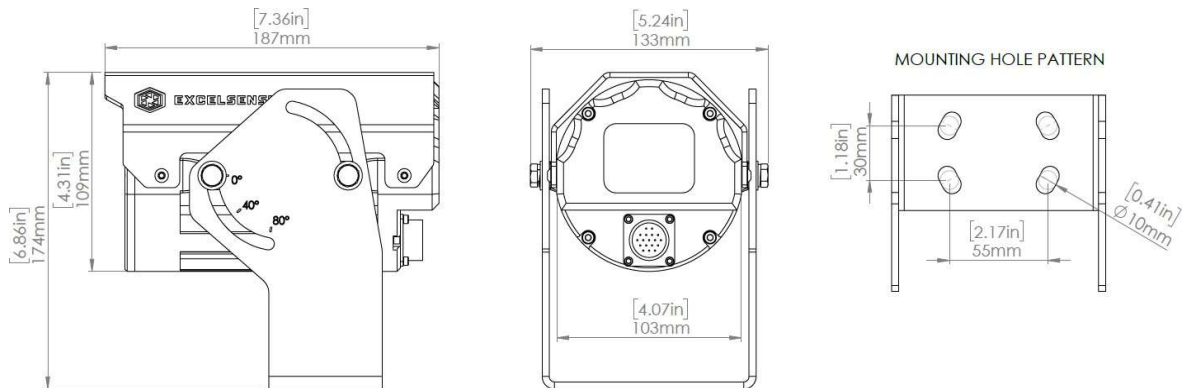
ExcelSense can customize ToughEye-1700™ installations for almost any application. Please inquire with info@excelsensetechnologies.com.
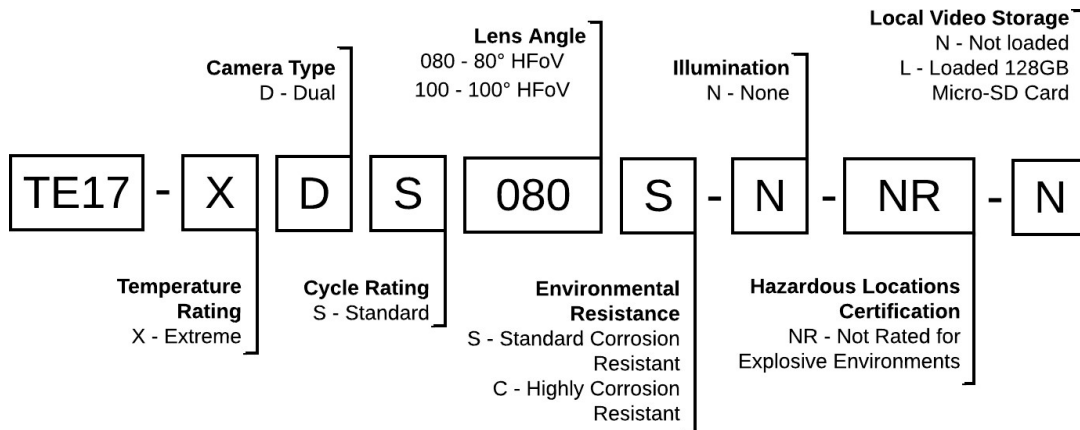
SPECIFICATIONS

Interruption-Free View	View uninterrupted during cleaning
Resolution	Full HD (1920 x 1080)
Min Illumination	Color: 0.001 Lux @ (F1.2, AGC ON) B/W: 0.0001 Lux @ (F1.2, AGC ON)
Wide Dynamic Range	True WDR (>120dB)
Horizontal FoV	Approx. 80°, 100° (customization available)
Video (IP)	H.265 / H.264 / MJPEG
Video (Analog)	720x486 (NTSC), 720x576 (PAL)
Network	IPv4/IPv6, 802.1x, HTTP, HTTPS, TCP/IP, UDP/IP, RTSP, DHCP, NTP, RTCP/RTP, PPPoE, SMTP, DNS, UPnP, FTP, ARP, SNMP
ONVIF	Profile S, Profile G
Recording	Network recording, Continuous, Motion Local on-board recording option available - 128GB storage capacity
Dimensions	102mm dia x 178mm [4in dia x 7 in]
Weight	3.0kg [6.5lb] - 4.3kg [9.5lb] with Bracket and Sunshield
Clean Cycle	Configurable Timer Based, Electrical Trigger (up to 24 VDC)
Max Wattage	25W
Input Voltage	PoE+ (Power over Ethernet IEEE 802.3at), 24 VDC
Temperature Range	-40°C to 60°C (All Versions)
IP Rating	IP69
Vibration	11g

MECHANICAL DRAWING

ORDERING OPTIONS

TE17 - ToughEye-1700™ camera

Temperature Rating
X - Extreme: -40ºC to 60ºC

Camera Type
D - Dual: IP / Analog Camera

Cycle Rating
S - Standard Cycle Rating 40,000 cycles

Lens Angle (customization available)
080 - Approx. 80° Horizontal FoV
100 - Approx. 100° Horizontal FoV

Environmental Resistance
S - Standard Corrosion Resistant
C - Highly Corrosion Resistant

Illumination
N - No Illumination

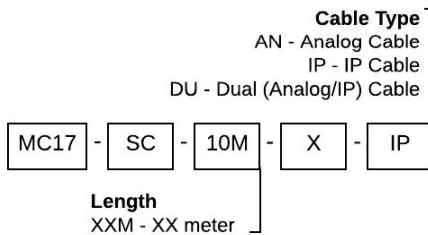**Hazardous Locations Certification**
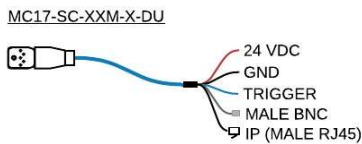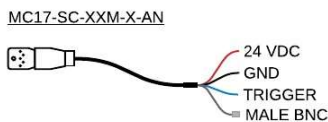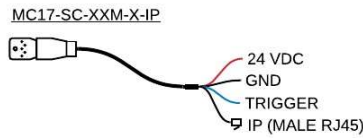**NR** - Not Rated for Explosive Environments

Local Video Storage
N - Not Loaded
L - Loaded 128GB Micro-SD Card

ACCESSORIES

MAIN CABLE

MC17-SC-XXM-X-IP

- 24 VDC
- GND
- TRIGGER
- IP (MALE RJ45)

MC17-SC-XXM-X-AN

- 24 VDC
- GND
- TRIGGER
- MALE BNC

MC17-SC-XXM-X-DU

- 24 VDC
- GND
- TRIGGER
- MALE BNC
- IP (MALE RJ45)

Cable Type
AN - Analog Cable
IP - IP Cable
DU - Dual (Analog/IP) Cable
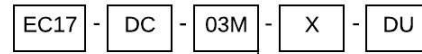
| MC17 | - | SC | - | 10M | - | X | - | IP |

Length
XXM - XX meter

Main cable can be used in all ToughEye-1700 installations. The analog cable includes a 75-ohm coaxial cable for CVBS transmission. The IP cable includes a shielded Cat-5e cable for 10/100 Base-T signal transmission.

Available in: **10m, 20m, 30m, 40m** lengths

EXTENSION CABLE
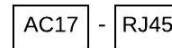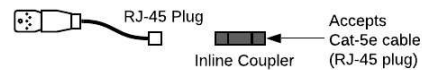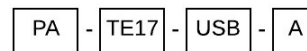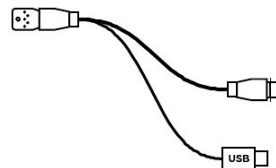

| EC17 | - | DC | - | 03M | - | X | - | DU |

Length
XXM - XX meter

Extension cables can be used to increase the length of existing cables. Available in: **3m, 10m** lengths

POE ADAPTER KIT

RJ-45 Plug

Accepts Cat-5e cable (RJ-45 plug)

Inline Coupler

| AC17 | - | RJ45 |

The PoE adapter kit provides a waterproof RJ-45 connection using the IP67 inline coupler, which accepts an RJ-45 plug. When connected to a IEEE802.3at compliant PSE (e.g. PoE+ Injector or switch), it is the simplest way to power and operate the camera.

PROGRAMMING ADAPTER

USB

| PA | - | TE17 | - | USB | - | A |

Programming adapter is used to modify configurable device parameters, retrieve cleaning cycle data, and update internal microcontroller firmware. Suitable for inline connection to TE-1700
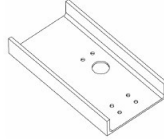
STANDARD MOUNTING BRACKET

| MB | - | TE17 | - | S |

Standard mounting bracket. Suitable for installations requiring 0° to 80° down camera orientations

WELDING ADAPTER BRACKET

| MB | - | TE | - | WE |

Suitable for welding to existing horizontal or vertical surfaces when bolting is not an option

PoE+ INJECTOR

Industrial Version

PoE   LAN

12-24VDC INPUT

Standard Version

PoE
LAN

100-240VDC INPUT

ExcelSense Part Number

| POE | - | INJ | - | N |

Manufacturer
American Electrical Inc.
Manufacturer Part Number
POE-24

Industrial PoE+ injector with integrated DIN-rail mount for use with PoE adapter cable or the IP main cable. Recommended for industrial applications. Accepts 12-24VDC, 33W max.
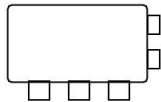
ExcelSense Part Number

| POE | - | INJ | - | S |

Manufacturer
TrendNet
Manufacturer Part Number
TPE-115GI

Standard PoE+ injector for use with PoE adapter cable or the IP main cable. Recommended for non-industrial indoor applications. Accepts 100-240VAC, 50/60Hz, 0.6A max.
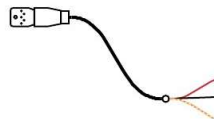
ANALOG JUNCTION BOX

| JB17 | - | AN | - | AM | - | 3C |

Standard TE-1700 3-channel analog junction box. Comes with 3 cable glands for TE-1700 main cables, and Mil-Spec connectors for power and monitor cables. Suitable for outdoor installations. Compatible with the ExcelSense junction box power cable (P/N: PC-SC-03M) and 7" monitor (P/N: AM-3C-7IN-MB).

POWER CABLE

| PC | - | SC | - | 03M |

Power cable is used to power the standard TE-1700 analog junction box (P/N: JB17-AN-AM-3C). Typically terminated through a cable gland into an existing electrical cabinet. Comes standard with **3m** length.

7" MONITOR WITH MOUNT

| AM | - | 3C | - | 7IN | - | MB |

7" Monitor with included adjustable mount. Comes standard with attached 1m aviation cable and 5m extension cable adapter to Mil-spec connector for direct connection to the analog junction box (P/N: JB17-AN-AM-3C).
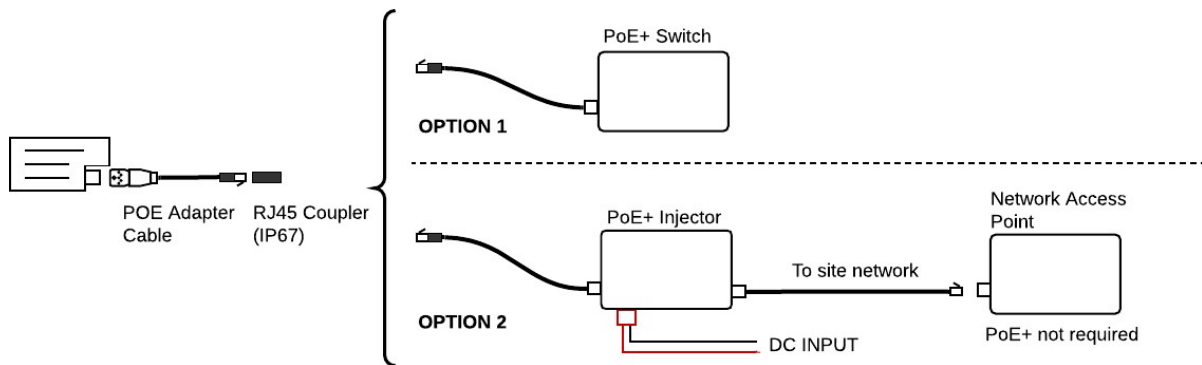
TYPICAL INSTALLATIONS

Network Configuration

The installations shown below illustrate the two main methods of powering and connecting to the ToughEye-1700™: through PoE+ or 24VDC.
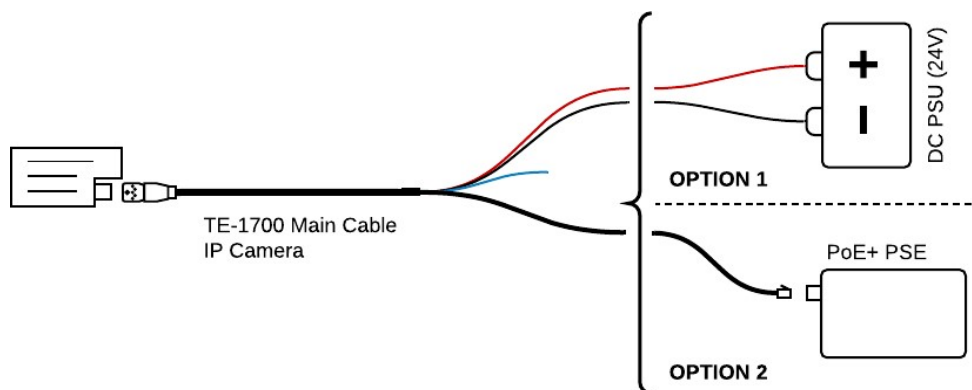
Power and Stream with PoE+

This configuration allows any Cat-5e cable to be used to power and communicate with the ToughEye-1700™ camera. No custom cabling is required to be routed, as the Cat-5e cable plugs into the custom short adapter cable for plug and play functionality. As seen in the diagram below, either a PoE+ compliant power sourcing equipment or a non-compliant switch with a PoE+ injector can be used to power the camera.
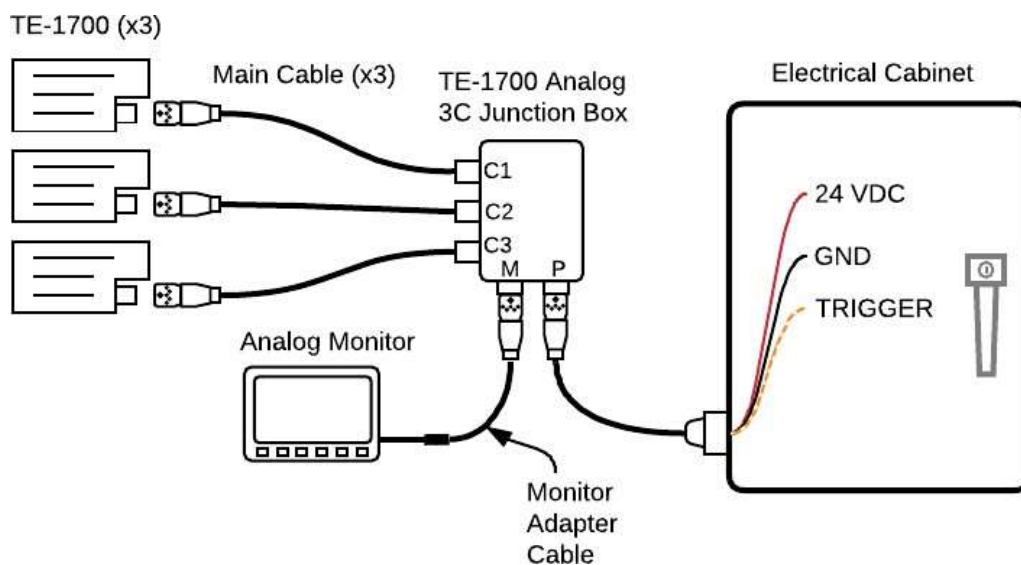

Power with PoE+ or DC Supply

This option is preferred when an extremely rugged cable is required. As seen below, the camera can be powered via a suitable 24V PSU or a suitable PoE+ source.

Analog Configuration

ExcelSense Standard 7″ Monitor

The monitor can be integrated into the ToughEye-1700™ analog camera system using the analog junction box shown below. The trigger wire can be tied to an external switch to initiate cleaning cycles. Alternatively, the camera can automatically initiate cleaning cycles which can be set based on a timer or scheduled at specific times throughout the day. The system shown below supports up to three channels.

Note: When connecting the monitor to the junction box, the 5m monitor extension cable must be used. This cable, which converts the monitor's aviation style connector to the Mil-spec connector that mates into the junction box, comes standard with the ExcelSense analog monitor.