

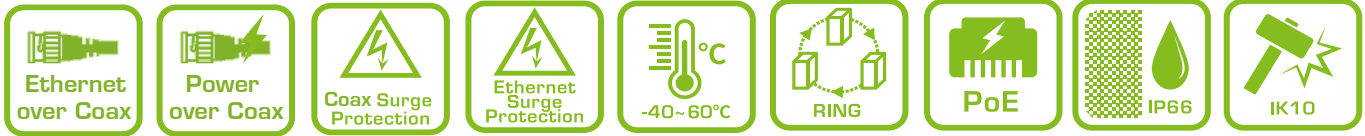
1200m(3937ft) Long Range EPoC Series

Fast Ethernet EPoC Extender

EPoC Camera Housing

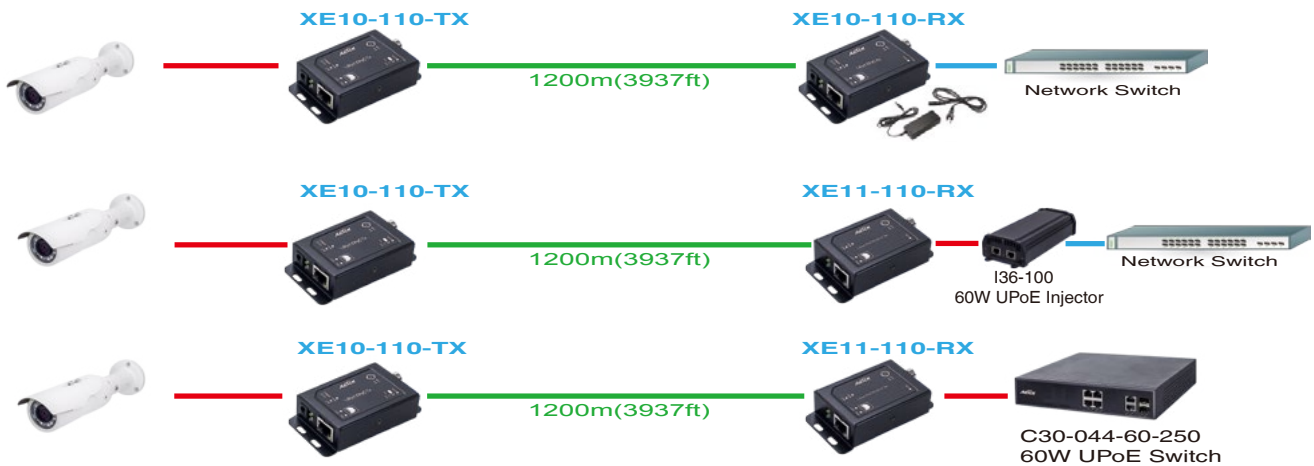


# EPoC series

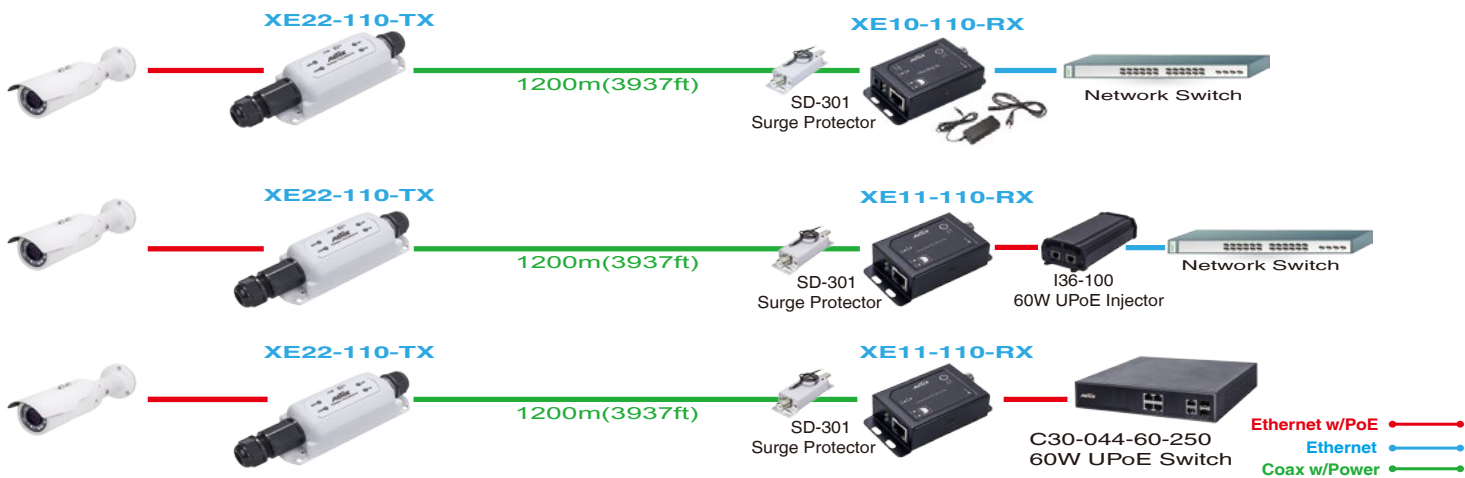


EPoC (Ethernet & Power over Coax) line is a long-reach solution providing Fast Ethernet and PoE over RG6 coaxial cable up to **1200m(3937ft)** for any brand of PoE IP camera. This product line also is often used to upgrade legacy of CCTV to IP surveillance without changing legacy RG59 coaxial cable. Furthermore, outdoor EPoC solution is a rugged and economical alternative to optical fiber. In addition, the power over coax to remote PoE IP camera is more convenient than optical fiber solution.

## Indoor EPoC Diagram



## Outdoor EPoC Diagram



## Features

- Extends Ethernet and PoE beyond 100m(328ft) limitation up to 1200m(3937ft) over RG6 coaxial cable
- Upgrades analog CCTV into IP surveillance supporting long range Ethernet and power over legacy RG59 or new RG6/RG11 coaxial cable
- Wall-mount installation

## EPoC RX series

### EPoC RX Series

|  |   |   |  |
|--|---|---|--|
|   | <p><b>XE10-110-RX</b></p> <ul style="list-style-type: none"> <li>• XE10-110-RX EPoC adapter(RX)</li> <li>• 65W power adapter@56VDC</li> </ul> |   | <p><b>XE11-110-RX</b></p> <ul style="list-style-type: none"> <li>• XE11-110-RX PoE EPoC adapter(RX)</li> <li>• Supports 30W/60W/95W PoE Input</li> </ul> |
| <p><b>XE10-110-RX Features</b></p> <ul style="list-style-type: none"> <li>• One BNC coax port &amp; one Ethernet port</li> <li>• Playing RX mode</li> <li>• Wall-mount installation</li> <li>• PoE pass through coax to remote PoE IP camera</li> <li>• Includes 65W@56VDC power supply</li> <li>• Optional 19" 4-bay rack mount chassis (CH-100)</li> </ul> |   | <p><b>XE11-110-RX Features</b></p> <ul style="list-style-type: none"> <li>• One BNC coax port &amp; one PoE PD port</li> <li>• Playing RX mode</li> <li>• Wall-mount installation</li> <li>• PoE pass through coax to remote PoE IP camera</li> <li>• Eliminates the need for local site power supply</li> <li>• Optional 60W UPoE Injector (I36-100) / 60W UPoE Switch (C30-044-60-250)</li> <li>• Optional 19" 8-bay rack mount chassis (CH-110)</li> </ul> |  |


## Optional Accessories

### Accessories

|  |   |   |  |
|--|---|---|--|
|   | <p><b>CH-100</b></p> <ul style="list-style-type: none"> <li>• 19", 1U 4-bay rack mount chassis</li> <li>• Works with XE10-110-RX &amp; 65W power adapter</li> </ul> <p><b>CH-110</b></p> <ul style="list-style-type: none"> <li>• 19", 1U 8-bay rack mount chassis</li> <li>• Works with XE11-110-RX</li> </ul> |   | <p><b>I36-100</b></p> <ul style="list-style-type: none"> <li>• 60W UPoE Injector</li> <li>• works with XE11-110-RX</li> </ul>      |
|  | <p><b>SD-301</b></p> <ul style="list-style-type: none"> <li>• EPoC Surge Protector</li> <li>• 6KV Surge Protection</li> </ul>   |  | <p><b>C30-044-60-250</b></p> <ul style="list-style-type: none"> <li>• 60W UPoE Switch</li> <li>• works with XE11-110-RX</li> </ul> |

## EPoC RX Adapter Specifications

|                                     | XE10-110-RX  | XE11-110-RX   |
|-------------------------------------|--|---|
| <b>Interface/Distance</b>           |  |   |
| 75Ω Coaxial BNC                     | 1  | 1   |
| 10/100Mbps Ethernet RJ45            | 1  | 1   |
| Transmission mode                   | RX mode  | RX mode   |
| MAX.(Power+Data) Distance           | 9.7W@1200m(3937 ft)                                      | 9.7W@1200m(3937 ft)   |
| <b>Power Specifications</b>         |  |   |
| Power supply                        | Input: 100-240 VAC<br>Output: 65W@56VDC<br>Power Adapter | Optional<br>I36-100 : 60W UPoE Injector<br>C30-044-60-250 : 60W UPoE Switch |
| PoE PD                              | -  | v   |
| PoE Pass Through                    | v  | v   |
| <b>Mechanical Specifications</b>    |  |   |
| Dimensions (WxHxD)                  | 85.4 x 47.1 x 23 mm (3.36x1.85x0.91")                    | 85.4 x 47.1 x 23 mm (3.36x1.85x0.91")                                       |
| Weight                              | 0.2 kg (0.44 lb)   | 0.26 kg (0.57 lb)   |
| Connectors                          | BNCx1 , RJ45x1, DC Jackx1                                | BNCx1 , RJ45x1  |
| <b>Environmental Specifications</b> |  |   |
| Operating Temperature               | -20°C ~ 60°C (-28°F ~ 140°F)                             | -20°C ~ 60°C (-28°F ~ 140°F)  |
| Storage Temperature                 | -20°C ~ 85°C (-28°F ~ 185°F)                             | -20°C ~ 85°C (-28°F ~ 185°F)  |
| Operating Humidity                  | 5% ~ 95% non-condensing                                  | 5% ~ 95% non-condensing   |
| <b>Certifications</b>               |  |   |
| EMC                                 | CE, FCC, VCCI, C-Tick                                    | CE, FCC, VCCI, C-Tick   |
| Safety                              | EN60950-1  | EN60950-1   |

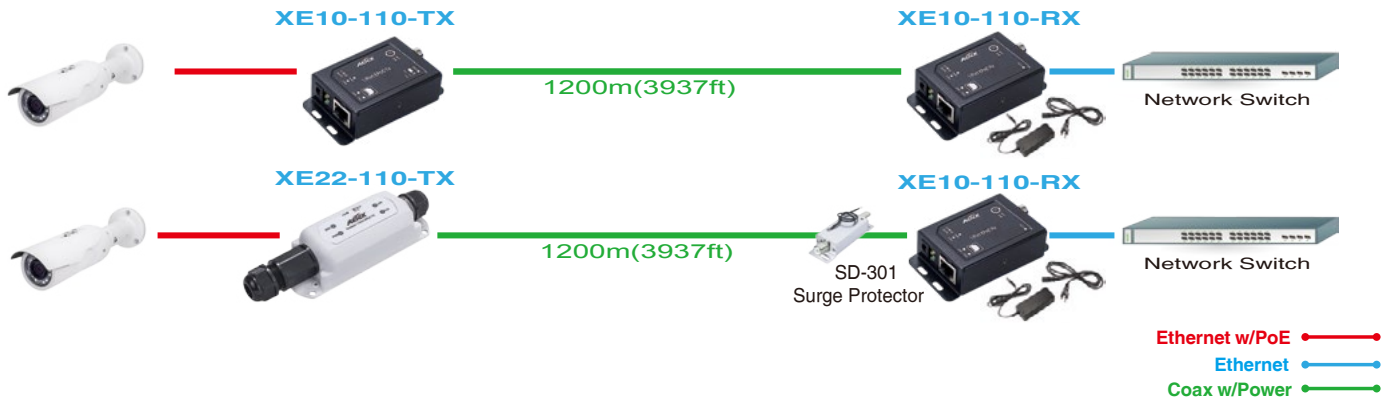
| EPoC TX Series  |  |  |  |
|---|--|--|--|
|    | <b>XE10-110-TX</b><br>• 1-to-1 EPoC adapter(TX)  |    | <b>XE12-120-TX</b><br>• 1-to-2 EPoC adapter(TX)  |
| <b>XE10-110-TX Features</b> <ul style="list-style-type: none"> <li>• One BNC coax port &amp; one PoE PSE port</li> <li>• Playing TX mode</li> <li>• Wall-mount installation</li> <li>• Eliminates the need for power supply beside remote PoE IP camera</li> <li>• Delivers up to 9.7 watts @ 1200m(3937ft) for one PoE IP camera</li> </ul>  |  | <b>XE12-120-TX Features</b> <ul style="list-style-type: none"> <li>• One BNC coax port &amp; two PoE PSE ports</li> <li>• Playing TX mode</li> <li>• Wall-mount installation</li> <li>• Eliminates the need for power supply beside remote PoE IP camera</li> <li>• Delivers up to 25 watts @ 500m(1640ft) shared between two PoE IP cameras</li> </ul>  |  |
|    | <b>XE22-110-TX</b><br>• 1-to-1, Outdoor EPoC adapter(TX) with IP66 / IK10 / 6KV Surge protection |    | <b>XE22-120-TX</b><br>• 1-to-2, Outdoor EPoC adapter(TX) with IP66 / IK10 / 6KV Surge protection |
| <b>XE22-110-TX Features</b> <ul style="list-style-type: none"> <li>• One BNC coax port &amp; one PoE PSE port</li> <li>• Outdoor IP66/IK10</li> <li>• Playing TX mode</li> <li>• Enclosure with wall-mount</li> <li>• 6KV Surge protection</li> <li>• Eliminates the need for power supply beside remote PoE IP camera</li> <li>• Delivers up to 9.7 watts @ 1200m(3937ft) for one PoE IP camera</li> </ul> |  | <b>XE22-120-TX Features</b> <ul style="list-style-type: none"> <li>• One BNC coax port &amp; two PoE PSE ports</li> <li>• Outdoor IP66/IK10</li> <li>• Playing TX mode</li> <li>• Enclosure with wall-mount</li> <li>• 6KV Surge protection</li> <li>• Eliminates the need for power supply beside remote PoE IP camera</li> <li>• Delivers up to 25 watts @ 500m(1640ft) shared between two PoE IP cameras</li> </ul> |  |






### EPoC TX Adapter Specifications

|                                     | XE10-110-TX                           | XE12-120-TX                            | XE22-110-TX                            | XE22-120-TX                              |
|-------------------------------------|---------------------------------------|--|--|--|
| <b>Interface/Distance</b>           |                                       |  |  |  |
| 75Ω Coaxial BNC                     | 1                                     | 1                                      | 1                                      | 1  |
| 10/100Mbps Ethernet RJ45            | 1                                     | 2                                      | 1                                      | 2  |
| Transmission mode                   | TX mode                               | TX mode                                | TX mode                                | TX mode                                  |
| MAX.(Power+Data) Distance           | 9.7W@ 1200m(3937 ft)                  | Two cameras share 25W@500m(1640 ft)    | 9.7W@ 1200m(3937 ft)                   | Two cameras share 25W@500m(1640 ft)      |
| <b>Power Specifications</b>         |                                       |  |  |  |
| Surge Protection                    | -                                     | -                                      | 6KV                                    | 6KV                                      |
| PoE Pass Through                    | v                                     | v                                      | v                                      | v  |
| <b>Mechanical Specifications</b>    |                                       |  |  |  |
| Dimensions (WxHxD)                  | 85.4 x 47.1 x 23 mm (3.36x1.85x0.91") | 103 x 86.6 x 28.9 mm (4.06x3.41x1.14") | 157 x 55.8 x 39.75 mm (6.18x2.2x1.56") | 167.5 x 72.8 x 39.8 mm (6.59x2.87x1.57") |
| Weight                              | 0.2 kg (0.44 lb)                      | 0.26 kg (0.57 lb)                      | 0.3 kg (0.66 lb)                       | 0.36 kg (0.79 lb)                        |
| Connectors                          | BNCx1 , RJ45x1                        | BNCx1 , RJ45x2                         | BNCx1 , RJ45x1                         | BNCx1 , RJ45x2                           |
| <b>Environmental Specifications</b> |                                       |  |  |  |
| Weather Rating                      | -                                     | -                                      | IP66                                   | IP66                                     |
| Vandal Proof                        | -                                     | -                                      | IK10                                   | IK10                                     |
| Operating Temperature               | -20°C ~ 60°C (-28°F ~ 140°F)          | -20°C ~ 60°C (-28°F ~ 140°F)           | -40°C ~ 60°C (-40°F ~ 140°F)           | -40°C ~ 60°C (-40°F ~ 140°F)             |
| Storage Temperature                 | -20°C ~ 85°C (-28°F ~ 185°F)          | -20°C ~ 85°C (-28°F ~ 185°F)           | -40°C ~ 85°C (-40°F ~ 185°F)           | -40°C ~ 85°C (-40°F ~ 185°F)             |
| Operating Humidity                  | 10% ~ 95% non-condensing              | 10% ~ 95% non-condensing               | 10% ~ 95% non-condensing               | 10% ~ 95% non-condensing                 |
| <b>Certifications</b>               |                                       |  |  |  |
| EMC                                 | CE, FCC, VCCI, C-Tick                 | CE, FCC, VCCI, C-Tick                  | CE, FCC, VCCI, C-Tick                  | CE, FCC, VCCI, C-Tick                    |

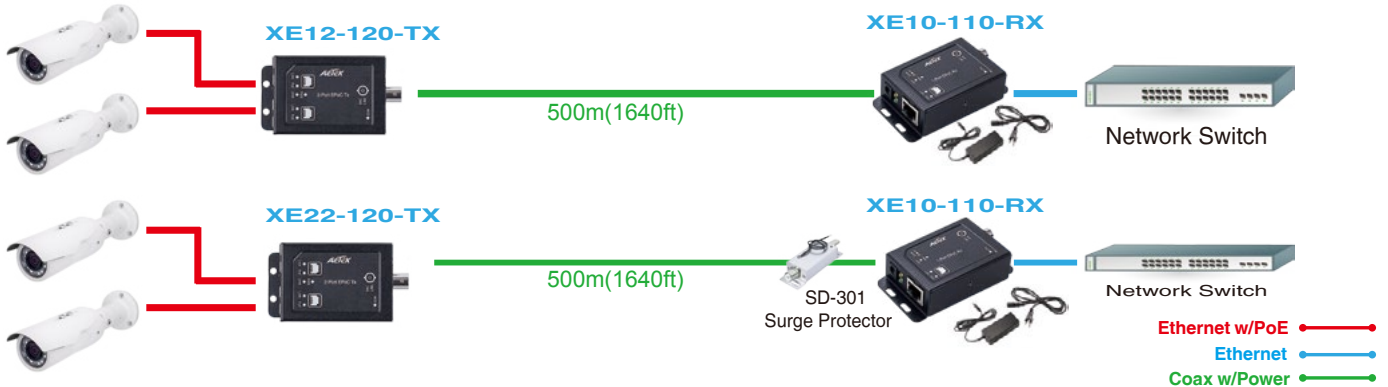
# EPoC Extender Solution Guide






## 1-to-1 EPoC Extender Application (PSU at RX site)



| TX   | RX  | PSU Power Budget           | PSU Location | Data Rate   | PoE Power Budget at TX end  |
|--|---|----------------------------|--------------|---|---|
| XE10-110-TX<br>   | XE10-110-RX<br>  | 65W@56VDC<br>Power Adapter | RX site      | 100Mbps@1200m(3937ft)<br>100Mbps@1000m(3280ft)<br>100Mbps@800m(2624ft)<br>100Mbps@500m(1640ft)<br>100Mbps@300m(984ft) | 9.66W @ 1200m(3937ft)<br>10W @ 1000m(3280ft)<br>13.1W @ 800m(2624ft)<br>25.2W @ 500m(1640ft)<br>34.7W @ 300m(984ft) |
| XE22-110-TX<br> | XE10-110-RX<br><br>+<br>SD-301<br> |                            |              |   |   |

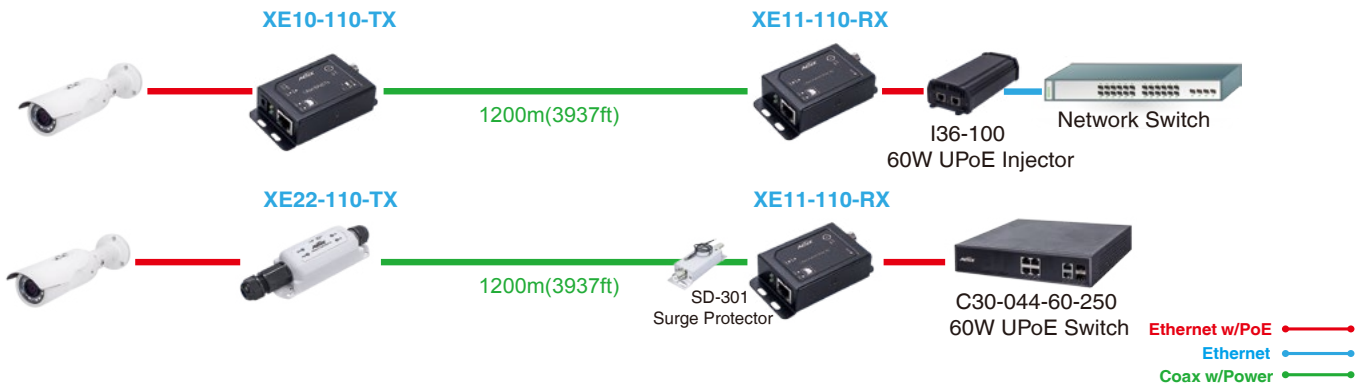
## 1-to-2 EPoC Extender Application (PSU at RX site)



| TX   | RX   | PSU Power Budget           | PSU Location | Data Rate   | PoE Power Budget at TX end  |
|--|--|----------------------------|--------------|---|---|
| XE12-120-TX<br> | XE10-110-RX<br>   | 65W@56VDC<br>Power Adapter | RX site      | 100Mbps@500m(1640ft)<br>100Mbps@400m(1312ft)<br>100Mbps@300m(984ft) | 25.2W @ 500m(1640ft)<br>30W @ 400m(1312ft)<br>34.7W @ 300m(984ft) |
| XE22-120-TX<br> | XE10-110-RX<br><br>+<br>SD-301<br> |                            |              |   |   |

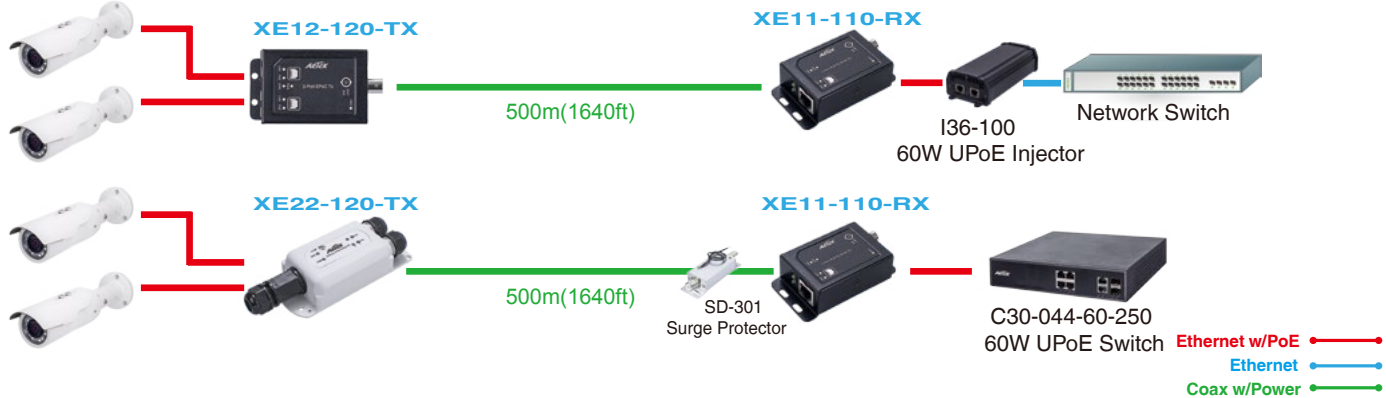
# EPoC Extender Solution Guide

## 1-to-1 EPoC Extender Application (UPoE PSE at RX site)



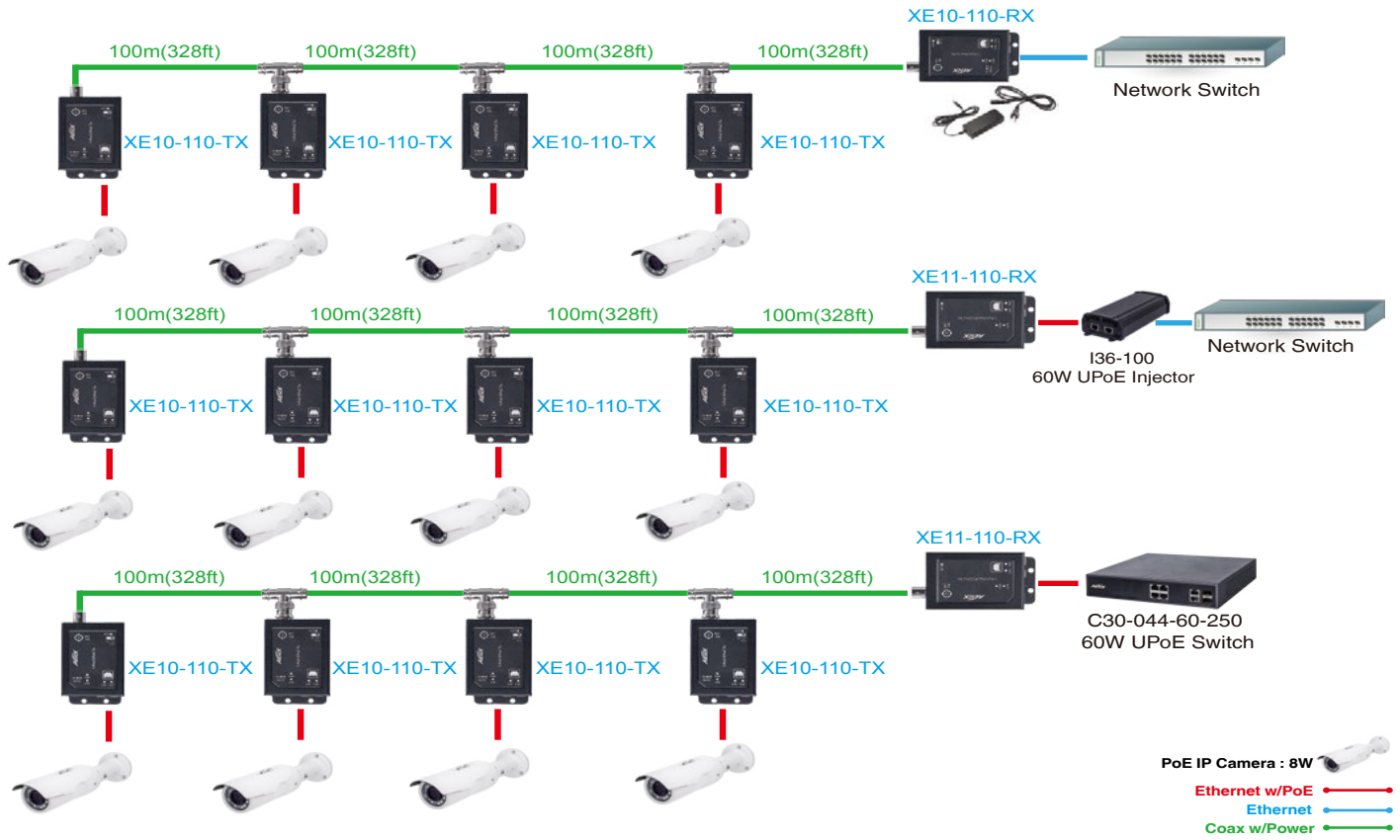
| TX | RX    | UPoE PSE Power Budget   | PSU Location | Data Rate   | PoE Power Budget at TX end  |
|----|-------|---|--------------|---|---|
|    |       | I36-100<br>60W UPoE Injector<br><br>OR<br>C30-044-60-250<br>60W UPoE Switch | RX site      | 100Mbps@1200m(3937ft)<br>100Mbps@1000m(3280ft)<br>100Mbps@800m(2624ft)<br>100Mbps@500m(1640ft)<br>100Mbps@300m(984ft) | 9.66W@1200m(3937ft)<br>10W@1000m(3280ft)<br>13.1W@800m(2624ft)<br>25.2W@500m(1640ft)<br>34.7W@300m(984ft) |
|    | +<br> |   |              |   |   |

## 1-to-2 EPoC Extender Application (UPoE PSE at RX site)

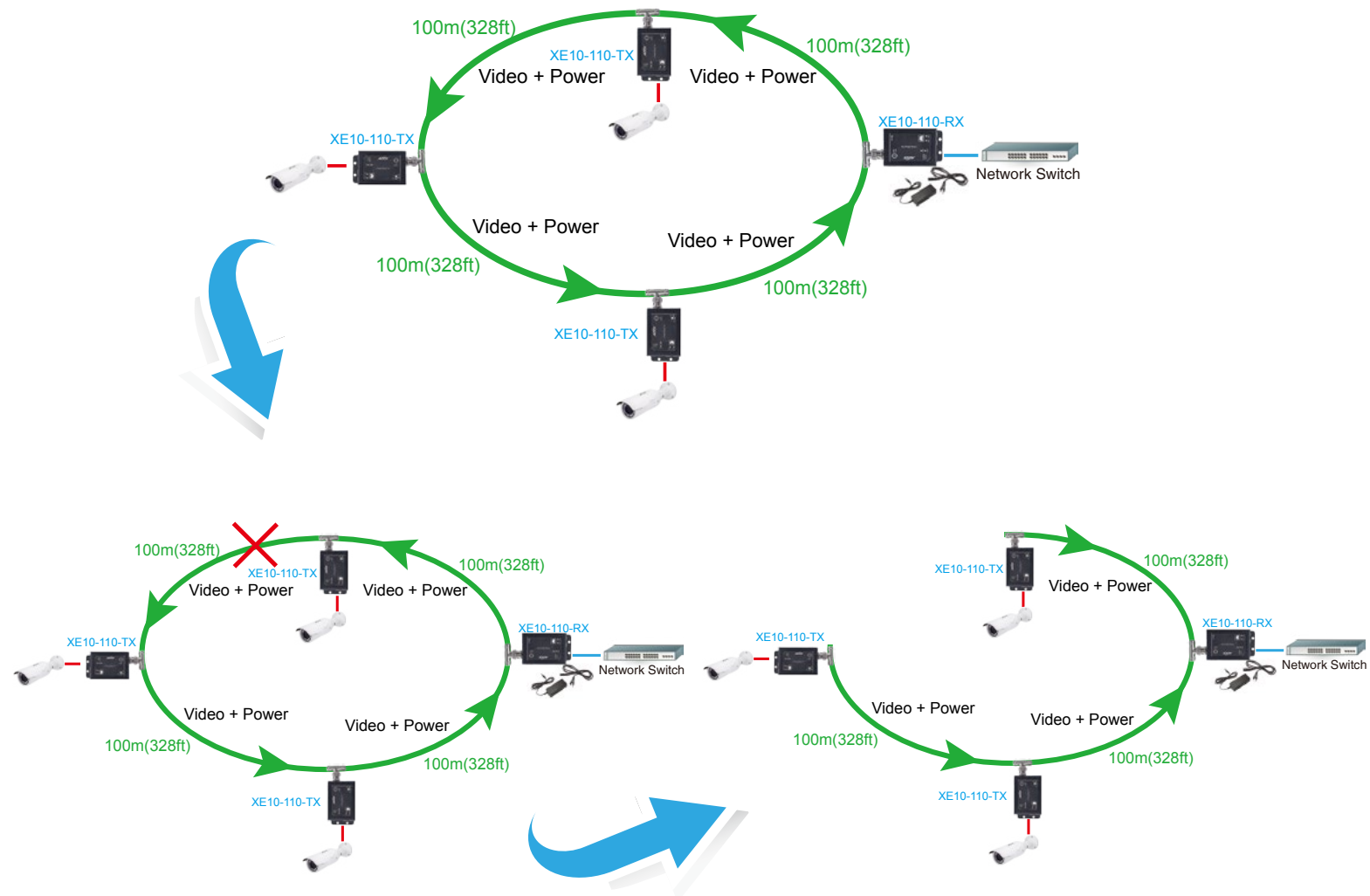


| TX | RX    | UPoE PSE Power Budget   | PSU Location | Data Rate   | PoE Power Budget at TX end                                  |
|----|-------|---|--------------|---|---|
|    |       | I36-100<br>60W UPoE Injector<br><br>OR<br>C30-044-60-250<br>60W UPoE Switch | RX site      | 100Mbps@500m(1640ft)<br>100Mbps@400m(1312ft)<br>100Mbps@300m(984ft) | 25.2W@500m(1640ft)<br>30W@400m(1312ft)<br>34.7W@300m(984ft) |
|    | +<br> |   |              |   |   |

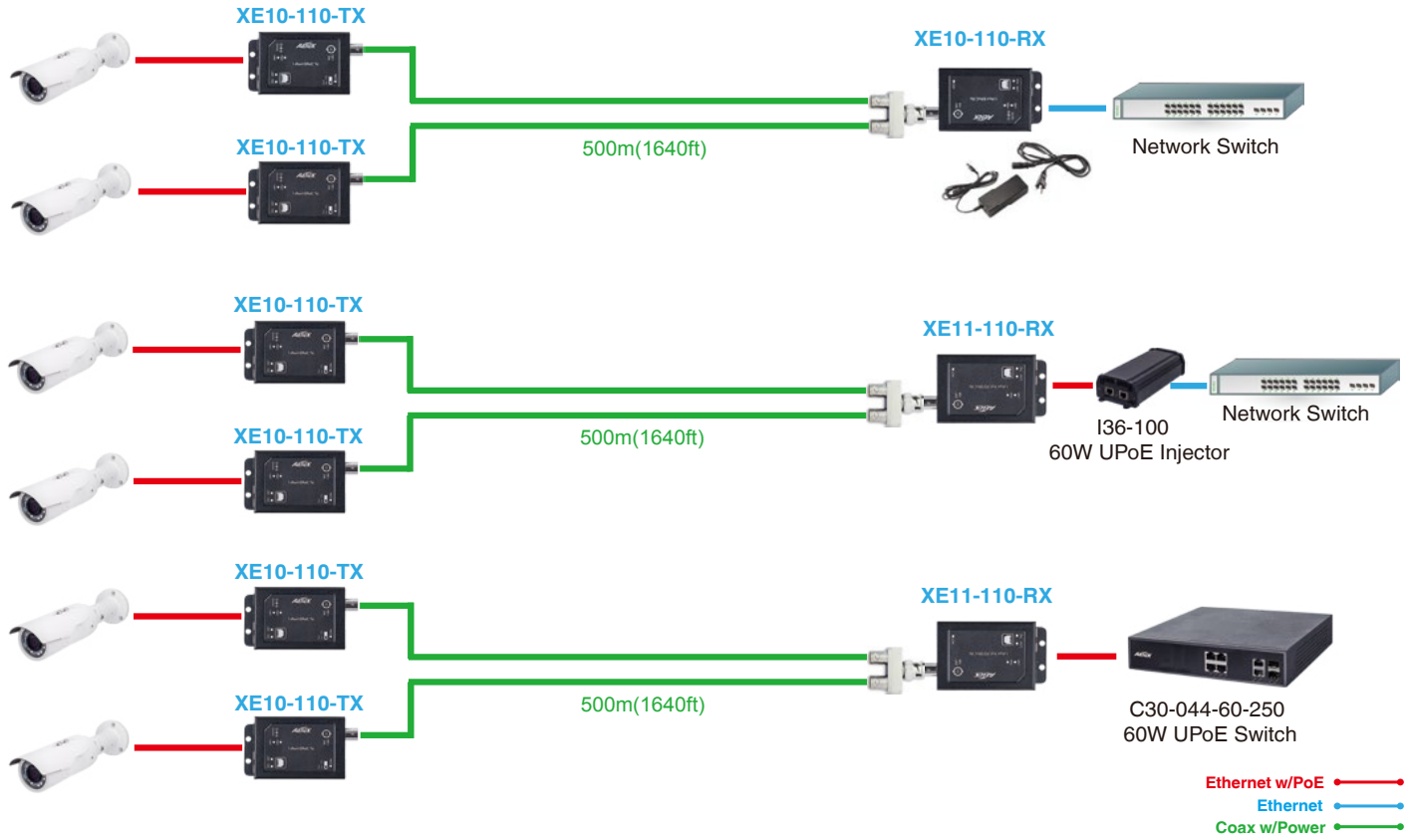
## Daisy Chain EPoC Application



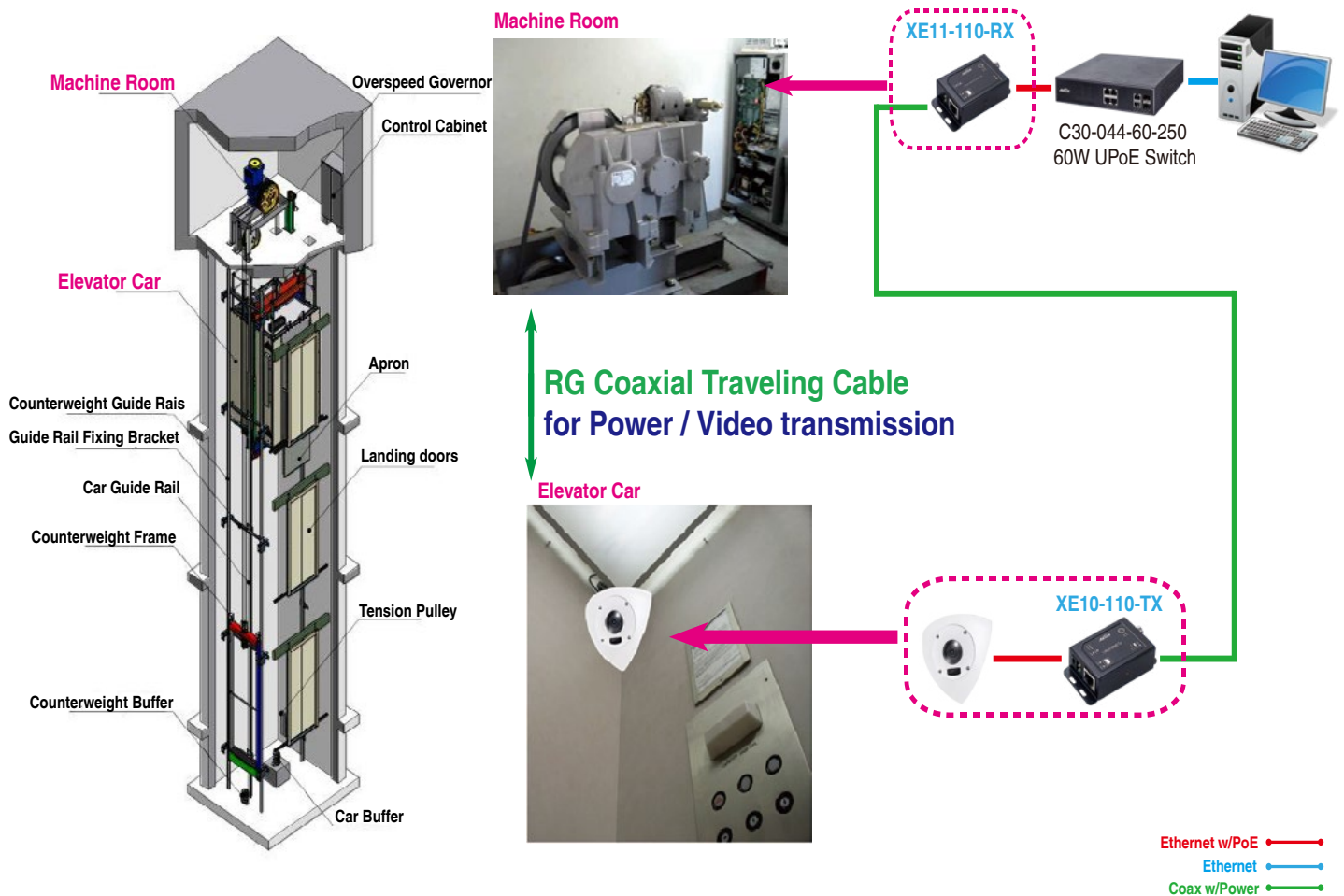
## Ring EPoC Application



## Splitter EPoC Application



## Elevator EPoC Application

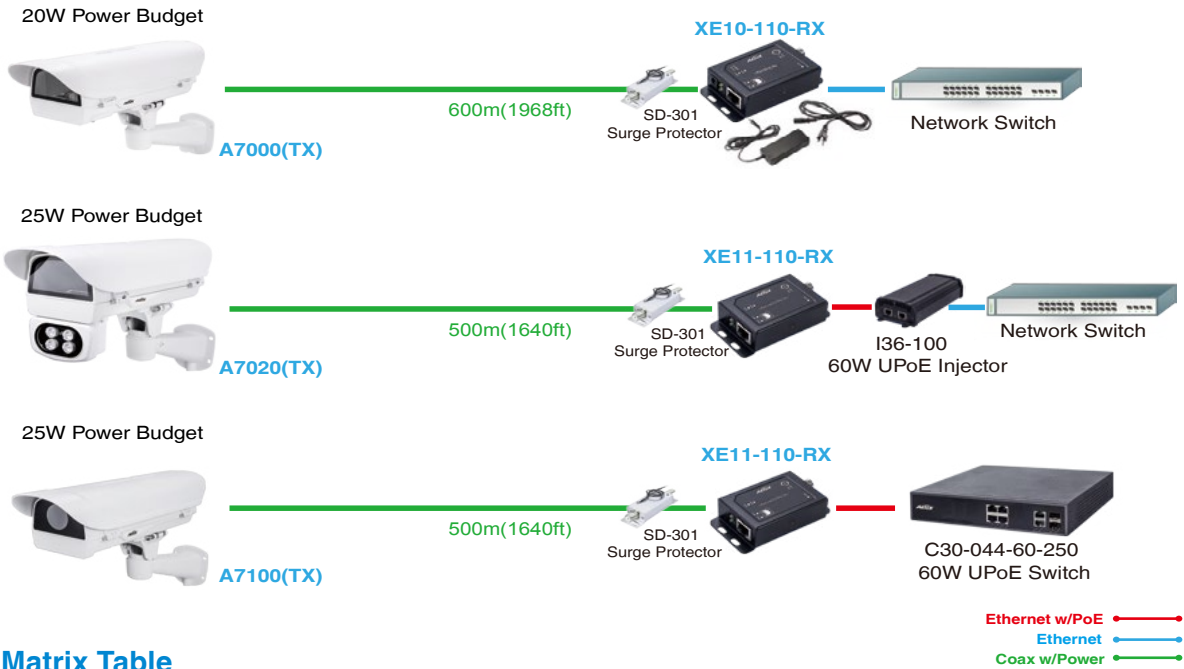




# Long Range EPoC Camera Housing



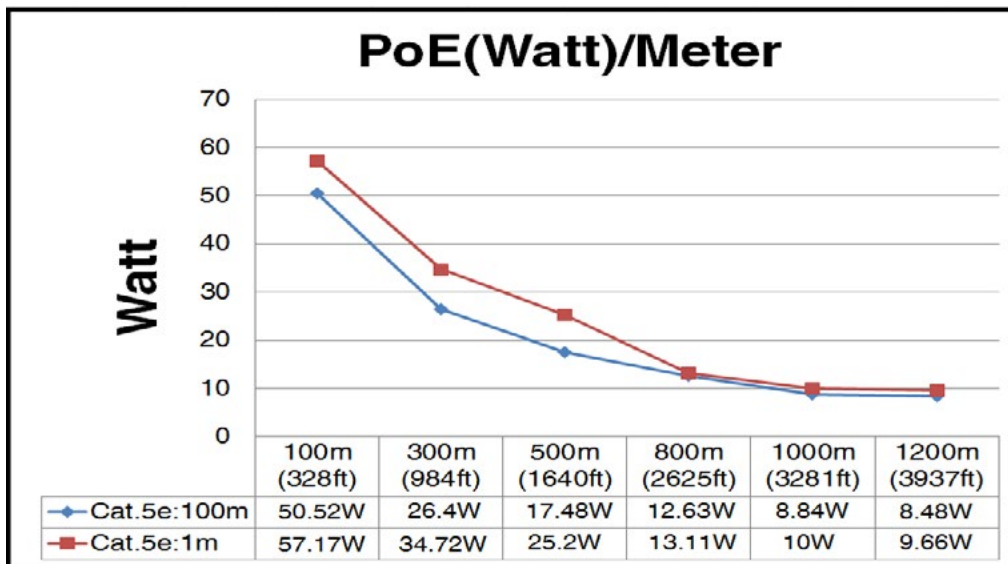
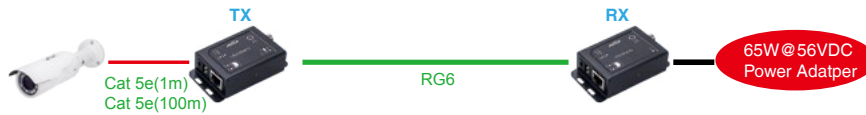
EPoC (Ethernet & Power over Coax) Camera Housing is a long-reach solution providing Fast Ethernet and PoE over coaxial cable up to 20W@600m(1968ft) or 25W@500m(1640ft) for any brand of PoE IP box camera. A70 Camera Housing also is often used to upgrade legacy of CCTV to IP surveillance without changing pre-deployed RG59-U/RG6/RG11 coax. Built-in 6KV surge protection is standard specification in A70 Camera Housing for outdoor environment





## A70 Series Matrix Table

|       | EPoC In | MAX Distance | Output Power Budget | Germanium window | Window Heater | Adjustable Sunshield | Blower | Built-in 6W Fixed IR | 6KV Surge Protection | IK10 | IP66 | IP68 |
|-------|---------|--------------|---------------------|------------------|---------------|----------------------|--------|----------------------|----------------------|------|------|------|
| A7000 | v       | 600m(1968ft) | 20W                 | -                | v             | v                    | v      | -                    | v                    | v    | -    | v    |
| A7020 | v       | 500m(1640ft) | 25W                 | -                | v             | v                    | v      | 50m (164ft)          | v                    | v    | v    | -    |
| A7100 | v       | 500m(1640ft) | 25W                 | v                | -             | v                    | v      | -                    | v                    | v    | -    | v    |


## Power / Distance Chart



## Part Number

| EPoC RX Series  |   |  |  |
|---|---|--|--|
|  | <b>XE10-110-RX</b> <ul style="list-style-type: none"> <li>XE10-110 EPoC adapter(RX)</li> <li>65W@56VDC power adapter</li> </ul> |  | <b>XE11-110-RX</b> <ul style="list-style-type: none"> <li>XE11-110 PoE EPoC adapter(RX)</li> <li>Supports 30W/60W/95W PoE Input</li> </ul> |

| EPoC TX Series  |   |  |   |
|---|---|--|---|
|  | <b>XE10-110-TX</b> <ul style="list-style-type: none"> <li>1-to-1 EPoC adapter(TX)</li> </ul>  |  | <b>XE12-120-TX</b> <ul style="list-style-type: none"> <li>1-to-2 EPoC adapter(TX)</li> </ul>  |
|  | <b>XE22-110-TX</b> <ul style="list-style-type: none"> <li>1-to-1, Outdoor EPoC adapter(TX) with IP66 / IK10 / 6KV Surge protection</li> </ul> |  | <b>XE22-120-TX</b> <ul style="list-style-type: none"> <li>1-to-2, Outdoor EPoC adapter(TX) with IP66 / IK10 / 6KV Surge protection</li> </ul> |

| EPoC TX Enclosure Series   |  |  |  |
|--|--|--|--|
|  | <b>A7000</b> <ul style="list-style-type: none"> <li>EPoC Camera Housing</li> </ul><br><b>A7020</b> <ul style="list-style-type: none"> <li>EPoC Camers Housing with IR illuminator(MAX: 50m)</li> </ul> |  | <b>A7100</b> <ul style="list-style-type: none"> <li>EPoC Camers Housing</li> <li>Germanium window</li> </ul> |

| EPoC Kit Series  |  |   |  |
|--|--|---|--|
|  | <b>XE10-110 kit A</b> <ul style="list-style-type: none"> <li>XE10-110-TX EPoC adapter x1</li> <li>XE10-110-RX EPoC adapter x1</li> <li>65W@56VDC power adapter x1</li> </ul> |  | <b>XE11-110 kit A</b> <ul style="list-style-type: none"> <li>XE11-110-RX PoE EPoC adapter x1</li> <li>XE10-110-TX EPoC adapter x1</li> </ul> |




## Accessories

| Accessories   |  |  |   |
|---|--|--|---|
|  | <b>CH-100</b> <ul style="list-style-type: none"> <li>19", 1U 4-bay rack mount chassis</li> <li>Works with XE10-110-RX &amp; 65W power adapter</li> </ul><br><b>CH-110</b> <ul style="list-style-type: none"> <li>19", 1U 8-bay rack mount chassis</li> <li>Works with XE11-110-RX</li> </ul> |  | <b>I36-100</b> <ul style="list-style-type: none"> <li>60W UPoE Injector</li> <li>works with XE11-110-RX</li> </ul>      |
|  | <b>SD-301</b> <ul style="list-style-type: none"> <li>EPoC Surge Protector</li> <li>6KV Surge Protection</li> </ul>   |  | <b>C30-044-60-250</b> <ul style="list-style-type: none"> <li>60W UPoE Switch</li> <li>works with XE11-110-RX</li> </ul> |

## Enclosure Brackets

| Wall Mount   |   |   | Ceiling Mount   |   | Standing Mount  |
|--|---|---|---|---|---|
|  |  |  |  |  |  |
| <b>BK-100</b><br>Wall Mount Bracket  | <b>BK-101</b><br>Wall Mount Bracket<br>Safety Wire<br>Concealing Cable              | <b>BK-102</b><br>Wall Mount Bracket<br>Concealing Cable                             | <b>BK-200</b><br>J-type<br>Ceiling Mount Bracket                                    | <b>BK-201</b><br>Flexible J-type<br>Ceiling Mount Bracket                             | <b>BK-300</b><br>Standing Mount Bracket   |

## Enclosure Adapters

| Pole Mount  | Corner Mount  |   |
|---|---|---|
|  |  |  |
| <b>AT-100</b><br>Pole Mount Adapter   | <b>AT-101</b><br>Pole Mount Adapter   | <b>AT-200</b><br>Corner Mount Adapter   |

## Enclosure Junction Box BNC Adapters

| Junction Box  | BNC Adapters  |   |
|---|---|---|
|  |  |  |
| <b>JB-100</b><br>Junction Box   | <b>BNC-T</b><br>T -Typer BNC Adapter  | <b>BNC-Y</b><br>Y -Typer BNC Adapter  |