



TEKTELIC
communications
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Gateway Power Over Ethernet (PoE) Guide

Gateway PoE Specifications

| Parameter | Kona Mega | Kona Macro | Enterprise & Micro |
|-------------------|-----------------------------------|---|---|
| PoE Standard | IEEE 802.3bt Class 6 | IEEE 802.3bt Class 4 (IEEE 802.3at compatible) | IEEE 802.3bt Class 3 (IEEE 802.3af compatible) |
| Modes | Mode A & Mode B together required | Mode A, Mode B, or Mode A & Mode B together | Mode A, Mode B, or Mode A & Mode B together |
| Polarity | Polarity Insensitive | Polarity Insensitive | Polarity Insensitive |
| Power Consumption | <30 W typical 40 W maximum | <20 W typical 25 W maximum | <5 W typical 8 W maximum |
| Passive PoE | 37 V to 57 Vdc operation | 37 V to 57 Vdc operation | 37 V to 57 Vdc operation |

PoE Overview

- There are two approaches for local Ethernet powering
 1. IEEE 802.3 compliant “Midspan Injector”
 - Follows IEEE 802.3 rules for negotiation and protection
 - Does not apply power unless a valid Powered Device (e.g. Gateway) is detected and confirmed
 - Recommended when the powered link is mixed with other Ethernet links
 2. Unconditional “Passive Injector”
 - Provides power as soon as connected, no negotiation
 - Lowest cost option, ideal for controlled point A to point B deployments

PoE Overview

- Environment
 - The PoE power source (PSE) may be an indoor unit or an outdoor unit
 - An outdoor unit will include surge suppression on the input and output ports and will be rated for an outdoor environment (solar loading, UV protection, ingress protection, e.g. IP67)
 - An indoor unit must be coupled with an Ethernet surge suppressor where the Ethernet cable exits the building
- Certification
 - The PoE source is expected to align with the Kona Gateway certifications
 - UL/CSA/EN 62368-1 or 60950-1
 - UL/CSA/EN 60950-22 in addition for outdoor models
 - FCC/CISPR Class B EMC

PoE Injectors

TEKTELIC offers both indoor and outdoor PoE injectors which can be used with all TEKTELIC Gateways

| T-Code | Description |
|----------|---|
| T0005669 | PoE passive injector, 55W, 100 – 240Vac, Indoor, 3 wire North America cord |
| T0005670 | PoE passive injector, 55W, 100 – 240Vac, Indoor, 3 wire United Kingdom cord |
| T0005671 | PoE passive injector, 55W, 100 – 240Vac, Indoor, 3 wire European cord |
| T0005672 | PoE passive injector, 55W, 100 – 240Vac, Indoor, 3 wire China cord |
| T0005673 | PoE passive injector, 55W, 100 – 240Vac, Indoor, 3 wire Australia cord |
| T0007600 | IEEE803.3bt injector, 60W, 100 – 240Vac, Outdoor, with Mounting bracket |

PoE Injectors

TEKTELIC Gateways will work with most IEEE802.3 compliant PoE injectors which have a sufficient power rating to meet the indicated Gateway requirement plus cable losses.

- Note that an exception is Microchip (Microsemi) "GR" model PoE injectors are not compliant with IEEE802.3bt Class 5 or higher and therefore will not work with the Mega Gateway.