



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.

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