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Long Reach PoE over Coaxial Injector and Extender Datasheet

Product overview

The IES1100W-2PD features 1x 10/100BASE-T PoE+ RJ45, 1x BNC female connector, and the IES1101W-2PD features 1x BNC female connector, 1x 10/100BASE-T PoE+ RJ45, they are designed especially for long distance PoE solutions. The IES1100W-2PD and IES1101W-2PD are ideally suited for harsh environments, operating within a temperature range of -20 to 70°C. When paired with each other or a multi-channel long-distance PoE switch, they support simultaneous data transmission and PoE power delivery (up to 25W) over coaxial cables, reaching distances of up to 1,000 meters. Their robust performance make them an ideal long distance extension solution for various industrial automation applications, including rail transportation, security surveillance, automotive manufacturing, chemical plants, and electronics production facilities.

Product highlights

- Delivers Power and Data up to 1km over Coax
- Complies with 802.3af/at Standards, Up to 25W PoE
- Plug and Play, No Configuration Needed
- Automatic PD Detection Ensures Accurate Wattage Allocation (Only for IES1100W-2PD)
- Supports Extensive LED Indicators for Real-time Diagnostics
- No External Power Cable Installation Required

Product specifications

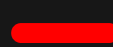
Table 1 shows the product specifications for the IES1101W-2PD Long Reach PoE over Coaxial Injector and IES1101W-2PD Long Reach PoE over Coaxial Extender.

Table 1. Product specifications

Model		IES1100W-2PD	IES1101W-2PD
Functions		Long Reach PoE Injector	Long Reach PoE Extender
Hardware Specifications			
Ethernet Interface	Copper	10/100BASE-TX RJ45, auto-negotiation / auto-MDI/MDI-X	
	Power over Ethernet Standard	IEEE 802.3af/at PoE PD (Powered Device)	IEEE 802.3af/at PoE PSE (Power Source Equipment)
	PoE Input	Supports both Mid-span and End-span PSE Input Range: 48-56VDC	-
	PoE Output	-	56VDC, 600mA max.
	PoE Budget	-	25W (via PoE+ switch) 30W (via power adapter)
	PoE Mode	-	End-span, RJ45 Pin 1/2(+), 3/6(-)
	Data Rate	100/100Mbps	
	Cabling	Cat5e or above	
	Maximum Distance	100m	
	Maximum Frame Size	1522 bytes	

Long Reach PoE Interface	Connectivity	1x BNC female connector (Long Reach PoE over coaxial PSE)		1x BNC female connector (Long Reach PoE over coaxial PD)	
	Power Input	-		37-56VDC	
	Power Output	41-56VDC		-	
	Power Pin Assignment	- BNC center pole: DC+ - BNC shield: DC -		- BNC center pole: DC+ - BNC shield: DC -	
	Cabling	Coaxial cable: 75 ohm RG-6/U cable, less than 12Ω/1,000ft. RG-59/U cable, less than 30Ω/1,000ft.			
	Maximum Distance	Max. 200m with PoE+ output (656ft.) Max. 600m with PoE output (1,968ft.) Max. 1200m without PoE output (3,937ft.)			
	Long Reach Ethernet Standard	IEEE 1901			
	Modulation Type	Wavelet-OFDM			
	Security	128-bit AES encryption			
	Frequency Band	2-28 MHz			
	Encryption	AES 128-bit			
	Performance**	Distance	Data Rate* (Upload / Download)	IES1101W-2PD IEEE 802.3af/at PoE Output Capability**	
				IES1100W-2PD with 56VDC in	IES1100W-2PD with 30W PoE+ in
		200m	93 / 93 Mbps	29W	16W
		400m	93 / 93 Mbps	22W	14W
		600m	87 / 91 Mbps	13W	10W
		800m	75 / 83 Mbps	10W	8W
		1000m	55 / 73 Mbps	8W	7W
	LRP Compatibility	IES1101W-2PD - 1-Port LRP Extender		With power over coaxial input: - IES1100W-2PD, 1-Port LRP Injector - IES3220-8T4F-U, 8-Port GbE L2+ Managed Industrial PoE++ Switch - IES3220-8T4F, 8-Port GbE L2+ Managed Industrial Switch	
LED Indicators		4 x LEDs - PWR - LRP LNK - PoE IN - LNK/ACT		4 x LEDs - PWR - LRP LNK - PoE-in-use - LNK/ACT	

ESD Protection	4KV DC	
EFT Protection	2KV	-
Enclosure	Metal case	
Installation	Wall mount or DIN rail	
Dimensions (HxWxD)	1.03"×2.77"×3.70" (26.2x70.3x94 mm)	
Weight	200g	375g
Power Requirements	RJ45 PoE Input: 802.3af/at 48-56VDC DC Input: 48-56VDC	BNC Power over Coaxial Input: 44-56V DC
Standards Conformance		
Standards Compliance	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3af Power over Ethernet (802.3af Type 1) IEEE 802.3at Power over Ethernet (802.3at Type 2)	
Regulation Compliance	FCC Part 15 Class A, CE	
Environment		
Temperature	Operating: -20 to 70°C (-4 to 158°F) Storage: -40 to 75°C (-40 to 167°F)	
Humidity	Operating: 5% to 95% (non-condensing) Storage: 5% to 95% (non-condensing)	
Note	*1. Upload: IES1101-2PD to IES1100-2PD, data stream. Download: IES1100-2PD to IES1101-2PD, data stream. 2. As there are various resistance values in the category of RG-59/U or RG-6/U cable, the actual data rate will vary on the quality of the copper wire and environment factors. ** Depending on what the DC/PoE Power Input and the length of coaxial cable are.	



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