



Features & Benefits

- Versions for US and EU Mobile Wireless Bands
- Versions Available for TDD Services
- Distances 2,000 ft and more
- Point-to-Point or Distributed Up to 8 Locations
- Compact, IP67 Weatherproof Antenna Unit
- Local or Remote Power Options

Applications

- Collocate BDA at DAS Headend with remote Donor Antenna
- Simulcast Off-Air Wireless to Multiple Sites
- Temporary Off-Air Services for DAS

ANTENNA EXTENDER

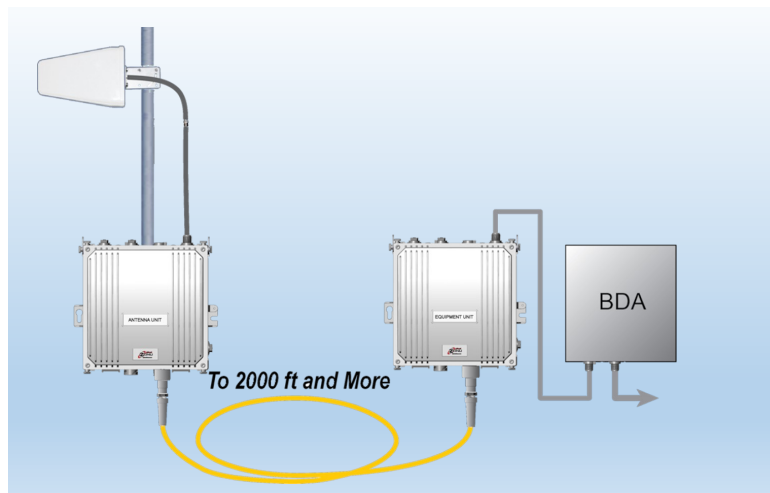
Description

Extending wireless coverage indoor based on outdoors donor antenna becomes simpler. Where it is impractical to install coax from the donor antenna to the signal booster, Optical Zonu offers the Antenna Extender. This RF-Over-Fiber bi-directional link provides transmission of the mobile wireless bands to distances up to 2,000 ft and more. There are versions for the 5 primary US FDD bands, the T-Mobile 2.5 TDD band and the 5 primary EU bands. Mini-DAS configuration with up to 8 BDA fed by single antenna is supported as well.

The Antenna Extender has two components. The **Antenna Unit** is connected to the donor antenna. It can be powered locally or remotely with hybrid fiber + conductor cable. The unit can be mounted indoors or outdoors near the antenna. Connection to the antenna is N-type coax cable connector

The **Equipment Unit** is connected to the BDA or Signal Booster. It is powered locally by a -48V external supply. The RF connection to the indoor equipment is via N-type connector.

The unit installs easily with no adjustments or computer set up. Optional support for multi-mode fiber.



Donor-to-BDA Extender Specifications

RF Parameters

		Base to Mobile (Downlink)	Mobile to Base (Uplink)
Gain (Typical)	1 m Fiber Cable	0 dB	0 dB (AGC above +17 dBm input)
Passband Ripple		< 2 dB per Band	
Maximum Input Power		-30dBm (-65 to -50dBm Typical)	+24 dBm
Output Power		-	+17 dBm Max Composite
Noise Figure		< 22 dB	< 48 dB
Impedance		50 Ω	
VSWR		< 1.5 : 1	

Mechanical Parameters

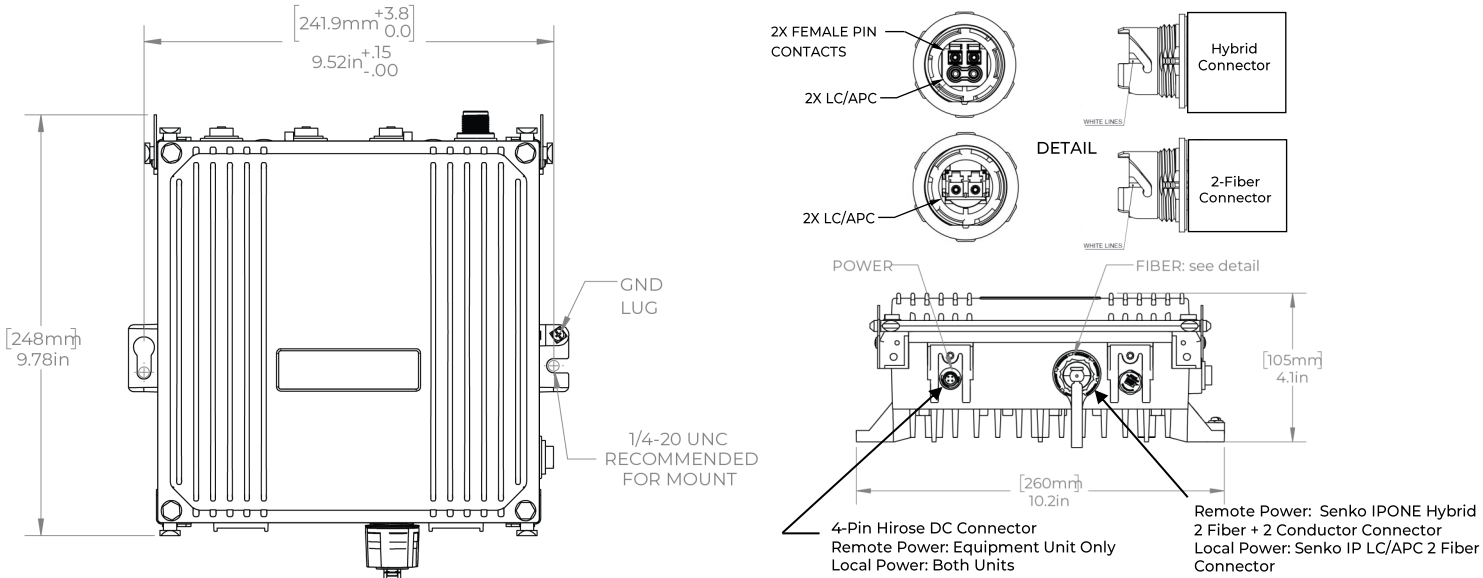
Dimensions	Each Unit	9.5"W x 8.9"H x 4.1"D	
		Optical: IP-LC/APC (Senko IP-68 Dual LC/APC)	
	Local Power	DC Power: Hirose LF Series, Bayonet Lock, 4 Contacts	
Connectors	Remote Power	Optical + Power: Senko Female IP1-2xLC/APC (GRN) Hybrid Pwr 2x	
		DC Source Power (Eqpt Unit Only): Hirose LF Series, Bayonet Lock, 4 Contacts	
	RF	N(F)	

Electrical Parameters

Power	Each Unit	Antenna Unit: -48VDC; 0.23A Max
		Equipment Unit: -48VDC; 0.1A Max

Environmental Parameters

Operating Temp	Antenna Unit	-20 to +50°C
	Equipment Unit	0 to +40°C
Storage Temperature	Each Unit	-20 to +85°C
Maximum Altitude		2,000 m



Available Versions

US FDD Bands

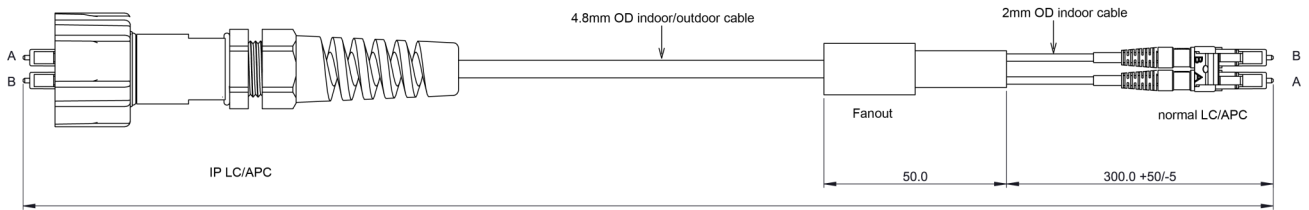
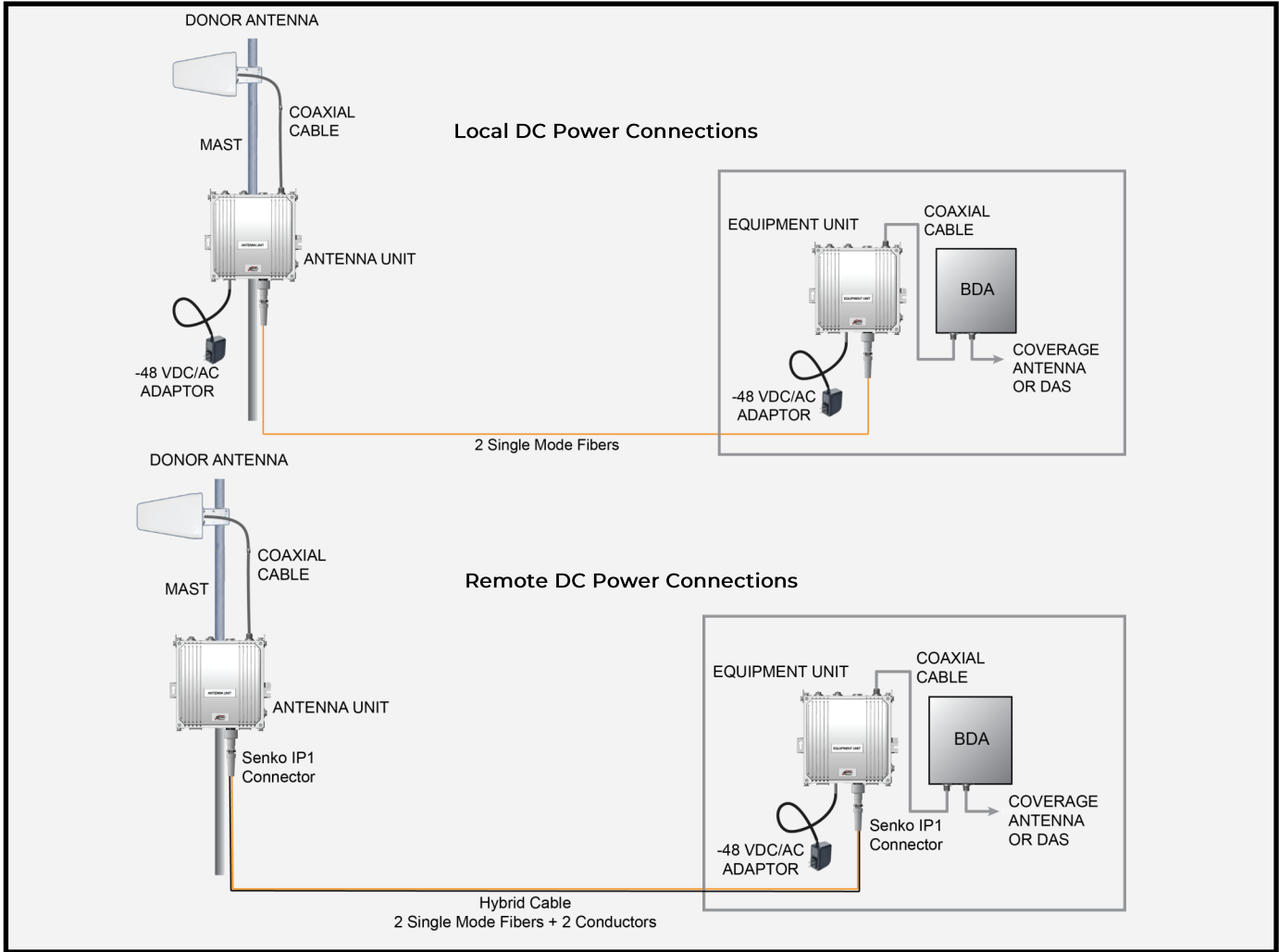
Frequency Range	Band	Base to Mobile (Downlink)	Mobile to Base (Uplink)
	700	728 – 757 MHz	698 – 716 MHz, 776 - 787 MHz
	800/Cell	862 – 894 MHz	817 – 849 MHz
	PCS	1930 – 1995 MHz	1850 – 1915 MHz
	AWS 1	2110 – 2155 MHz	1710 – 1755 MHz
	WCS	2350 - 2360 MHz	2305 - 2315 MHz

FirstNet

Frequency Range	Band	Base to Mobile (Downlink)	Mobile to Base (Uplink)
	14	758 – 768 MHz	788 – 798 MHz

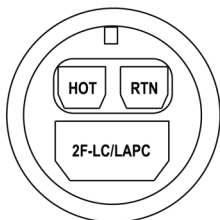
EU Bands

Frequency Range	Band	Base to Mobile (Downlink)	Mobile to Base (Uplink)
	20	791 – 821 MHz	832 – 862 MHz
	8	925 – 960 MHz	880 – 915 MHz
	3	1805 – 1880 MHz	1710 – 1785 MHz
	1	2110 – 2170 MHz	1920 – 1980 MHz
	7	2620 - 2690 MHz	2500 - 2570 MHz



Recommended Senko Cable Assembly for Outdoor Installation of the Antenna Unit (Local Power)

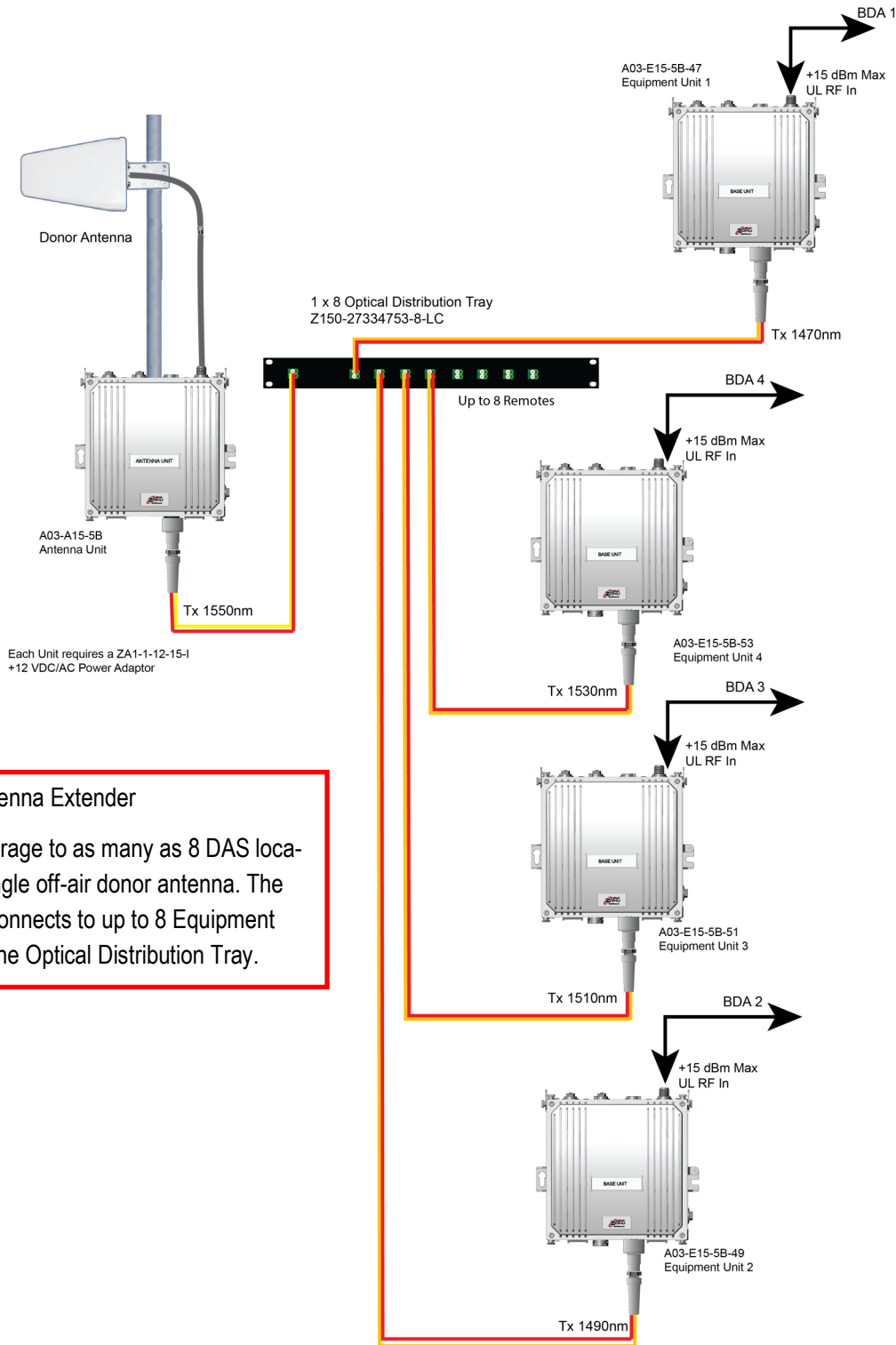
Z122-HIP1LC-xx, 2F Hybrid Cable with 2x Male contacts, 20AWG copper inside



Back View. Pin Out, IP1-LC/LAPC male. Top & Bottom Inner Connector Clips.			
HOT	20 AWG	Red	Male Pin Contact
RTN	20 AWG	Black	Male Pin Contact

Recommended Senko Cable Assembly with Remote Power for Outdoor Installation of the Antenna Unit

Distributed Antenna Extender



Distributed Antenna Extender

Simulcast coverage to as many as 8 DAS locations from a single off-air donor antenna. The Antenna Unit connects to up to 8 Equipment Units through the Optical Distribution Tray.

Ordering: Contact Factory

Ordering Information

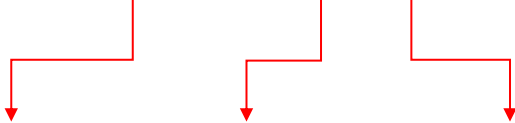
A03 - A15 - **XX** - **XX** - **X** **Antenna Unit**



5B - 5 Wireless Bands **blank** - US Bands **blank** - local power only

B14 - Band 14 **EU** - EU Bands **H** - Hybrid fiber + power connector for remote power from Equipment Unit

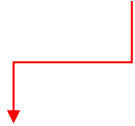
A03 - E15 - **XX** - 55 - **XX** - **X** **Equipment Unit**



5B - 5 Wireless Bands **blank** - US Bands **blank** - local power only

B14 - Band 14 **EU** - EU Bands **H** - Hybrid fiber + power connector for remote power from Equipment Unit. Local -48VDC power

ZA1 - 1 - 48 - **XX** - **H** **Power Supply**



08 - local power only—both units

13 - remote power—Equipment Unit only

Contact

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