

IBEC BPL Products

Customer Access Unit (CAU)



IBEC's Broadband over Power Line equipment has been specifically engineered to meet the needs of rural and underserved markets. Its cutting-edge BPL Headends, Broadband Regenerator Units (BRU), Customer Access Units (CAU), Couplers and Modems have been designed to cost effectively cover long distances with low population density, while working equally well in densely-populated areas.

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Empowering
the World's Broadband®



Customer Access Unit (CAU) Technical Specifications

- Based on 200 Mbps DS2 technology, dual DSS9001 chipsets
- Frequency division bypass of medium voltage transformers for customer access
- SNMP, telnet, or web-managed
- Integrated coexistence filters (mode 7 LV, mode 1, 2, 3 MV)
- BPL output: 50 Ohm (F-type female), unbalanced
- Operating temperature: -20°C to +60°C
- Storage temperature: -30°C to +85°C
- FCC part 15, class A, class G type certification
- EN61000-4-5 surge-compliant
- Designed to UL1950 requirements
- IEC IP67-compliant waterproof enclosure
- Power: 90-250 VAC, 50/60 Hz universal supply
- Simple in-field replacement
- 16 Watts power consumption
- Dimensions: 11.5 x 5.5 x 1.75 inches; .29 x .14 x .05 meters (LxWxD)
- Weight: <6 lbs; <2.7Kg
- U.S. patents 5,864,284 6,040,759
- U.S. and International patents pending



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DEPARTAMENTO DE EDUCACIÓN

Cost Proposal



Department of Education BPL Project PROJECT PROPOSAL

PROJECT PARAMETERS	QUANTITY
Schools	1,483
Estimated Number of Transformers	28,177
Electrical Rooms (One transformer)	7,415
Electrical Rooms (Two transformers)	2,966
Electrical Rooms (Three or more transformers)	4,449
Lab Rooms (including Computer, Library, etc.)	0
Class Rooms	100,000
Computer Clusters	0
HeadEnds per School	1.00
CAUs per Electrical Room (One Transformer)	1.00
BRUs per Electrical Room (Two transformers)	1.00
BRUs per Electrical Room (Three or more transformers)	2.00
Couplers per Headend	2.00
Couplers per CAU	1.00
Couplers per BRU	3.00
Spare Equipment for Repairs & Maintenance	0.0%

LABOR & SERVICES	UNITS	TOTAL
Project Management	1,500.00 per School	1,483 \$ 2,224,500.00
School Survey & Assessment	1,000.00 per School	1,483 1,483,000.00
System Design & Engineering	1,000.00 per School	1,483 1,483,000.00
System Installation	250.00 per BPL unit	20,762 5,190,500.00
System Configuration & Testing	125.00 per BPL unit	20,762 2,595,250.00
Tools, Materials and Miscellaneous G&A Overhead Deployment Expenses	Labor and Equipment 5%	\$ 1,900,636.25
Network Monitoring & Support Services(1 year)	1,500.00 per School	1,483 2,224,500.00
TOTAL LABOR & SERVICES		\$ 17,101,386.25

EQUIPMENT	UNITS	TOTAL
NOC Equipment		
Jeizer & BPL Collectors	\$ 995.00 UNC	1,483 1,475,585.00
		NOC Equipment Sub-Total \$ 1,475,585.00
BPL Equipment		
BRU (Broadband Regeneration Units)	895.00 20007	13,347 11,945,565.00
CAU (Customer Access Unit) - Low Voltage Repeater	395.00 40015	7,415 2,928,925.00
Inductive Couplers	25.00 PREMO	47,456 1,186,400.00
CPE Consumer Modem	75.00 CPE PB-200	100,000 7,500,000.00
		Transformer Equipment Sub-Total \$ 23,560,890.00
Software Licensing (Perpetual Use Licenses)		
Grid2020 NMS Complete	\$ 1,500.00 one-time license fee	1,483 2,224,500.00
		Software Licensing Sub-Total \$ 2,224,500.00
Sub-total Equipment & Software - FOB Origin		27,260,975.00
Estimated Insurance, Shipping & Handling		1,363,048.75
Sales Taxes (7% IVU)		-
TOTAL EQUIPMENT		28,624,023.75

TOTAL PROJECT ESTIMATED COST 45,725,410.00

** All figures were estimated based on BPL equipment requirements for Tomás Masó Rivera school used for pilot project.*

*** Manufacturer's defects warranty for all equipment is 1 year from date of installation. BRUs and CAUs rated for 10 year service lifespan.*

**** Proposal only includes infrastructure for BPL deployment and connection to school existing network IP switch. Any ISP services, WAN communications equipment and network management software hosting will have to be provided by the Department of Education.*

