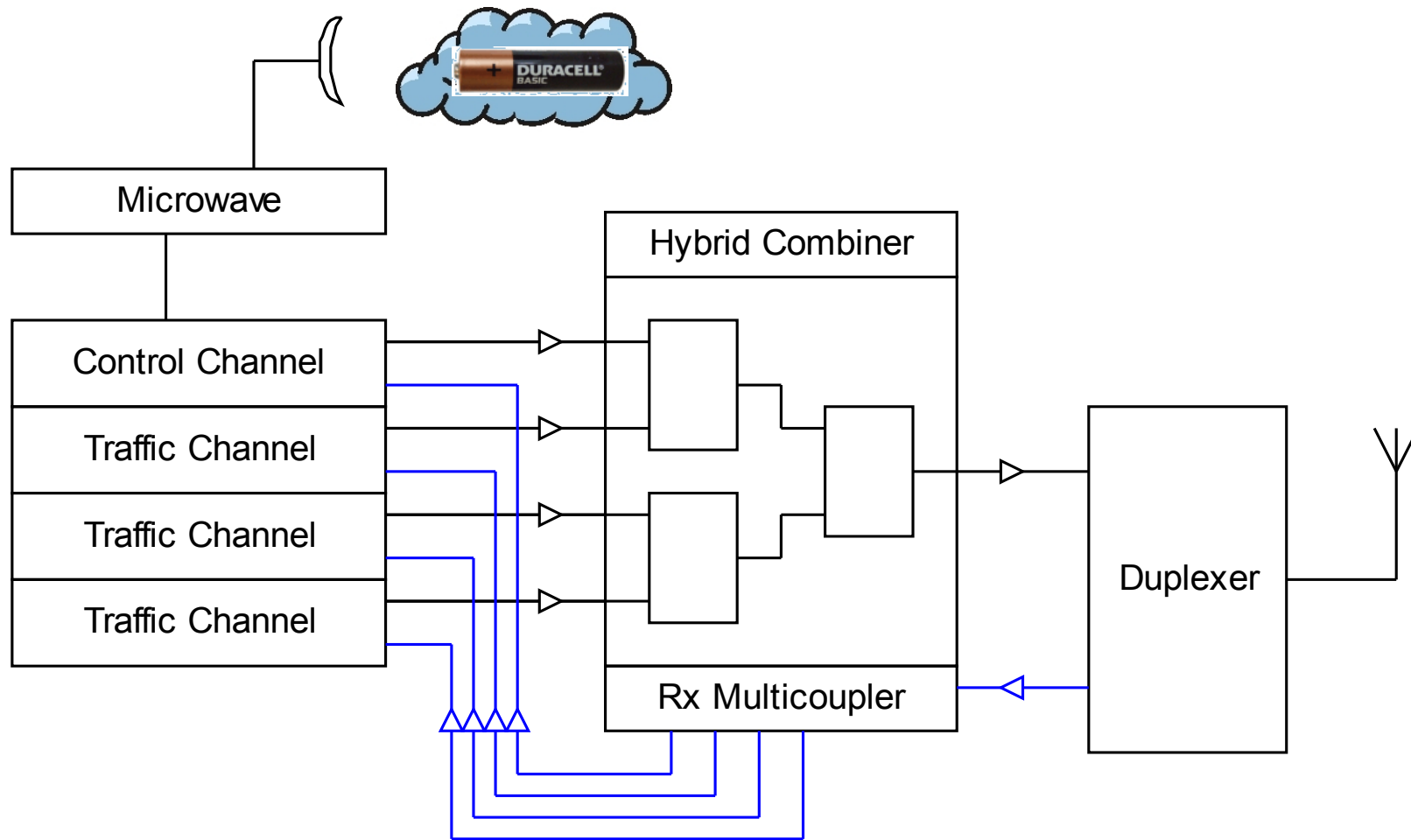


THE ECO FUTURE

Existing Analog Trunked Radio Site

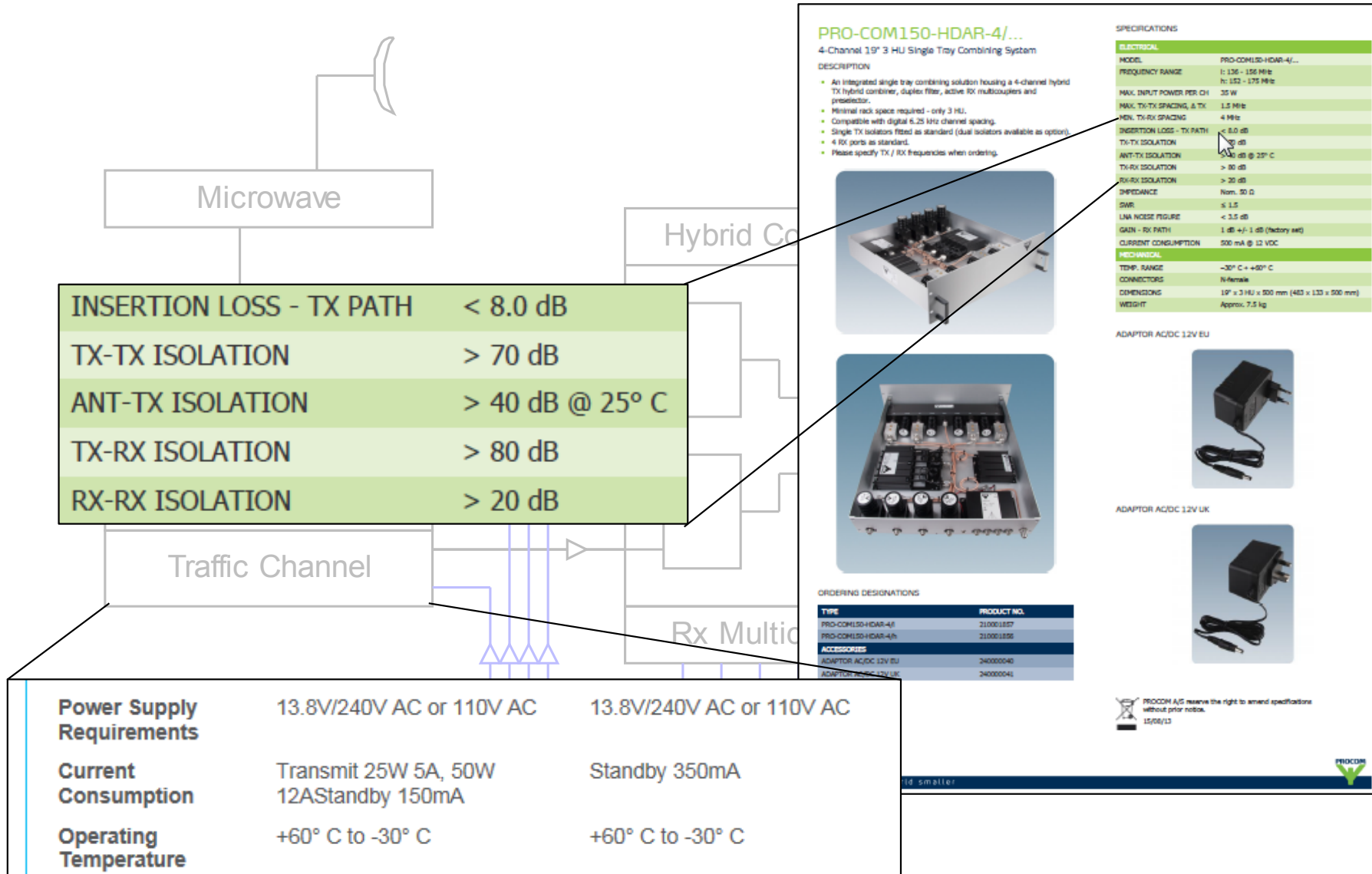


The reference is an analog 4 channel trunked system

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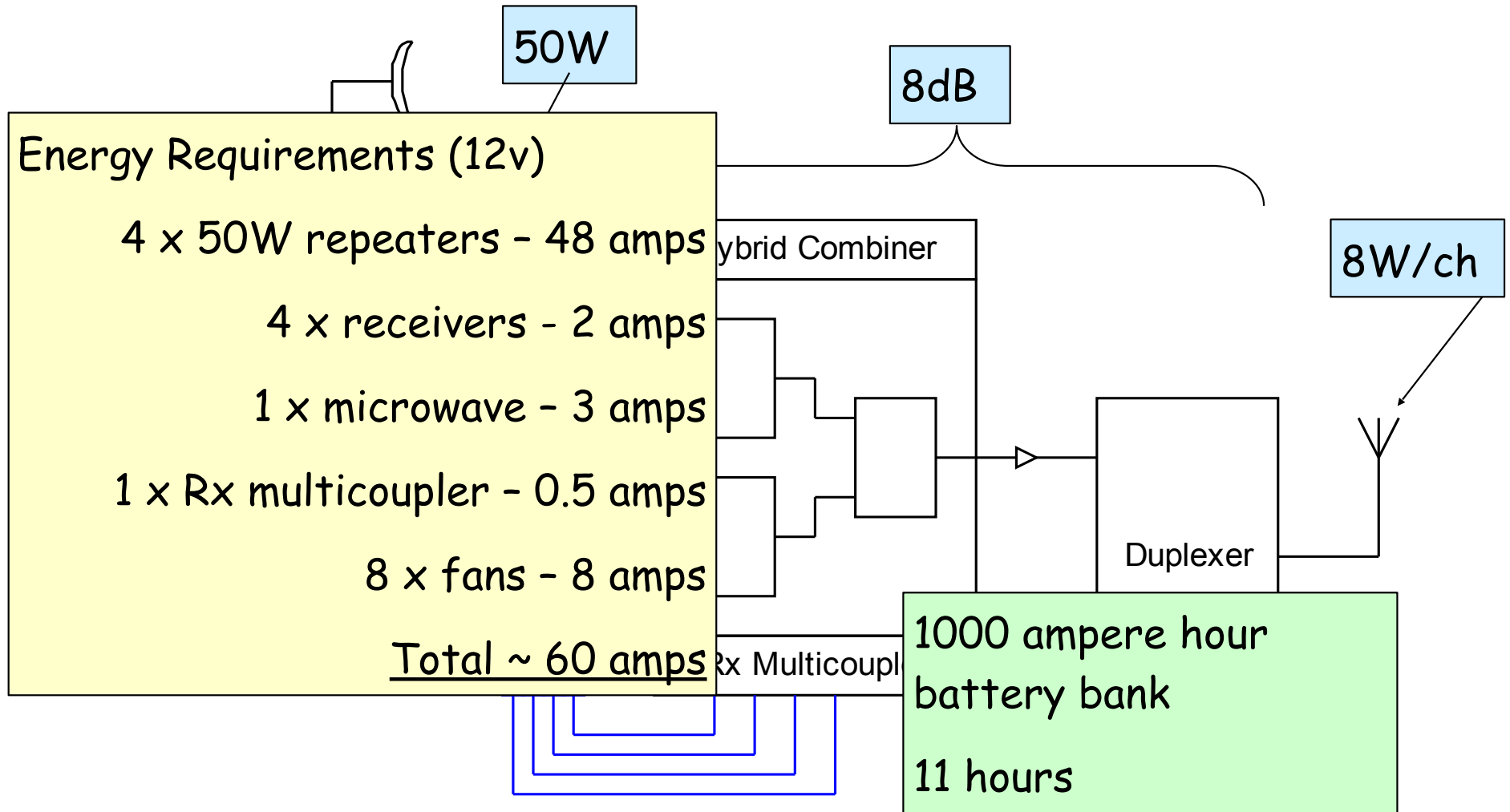
2

Existing Analog Trunked Radio Site



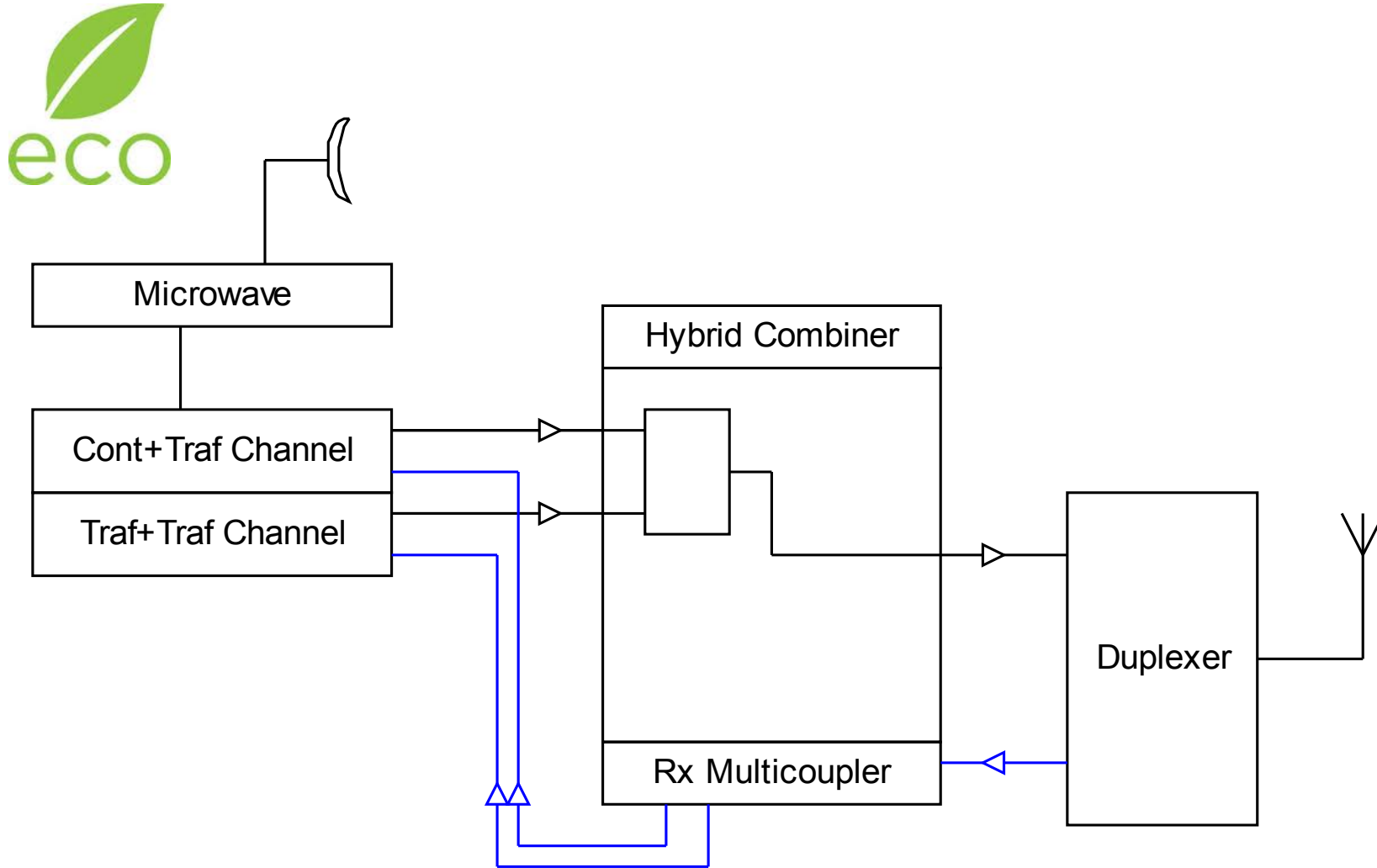
Now add the equipment characteristics

Existing Technology Analogue Trunked Radio Site



And calculate the energy use. Batter assumed 70% energy recovery

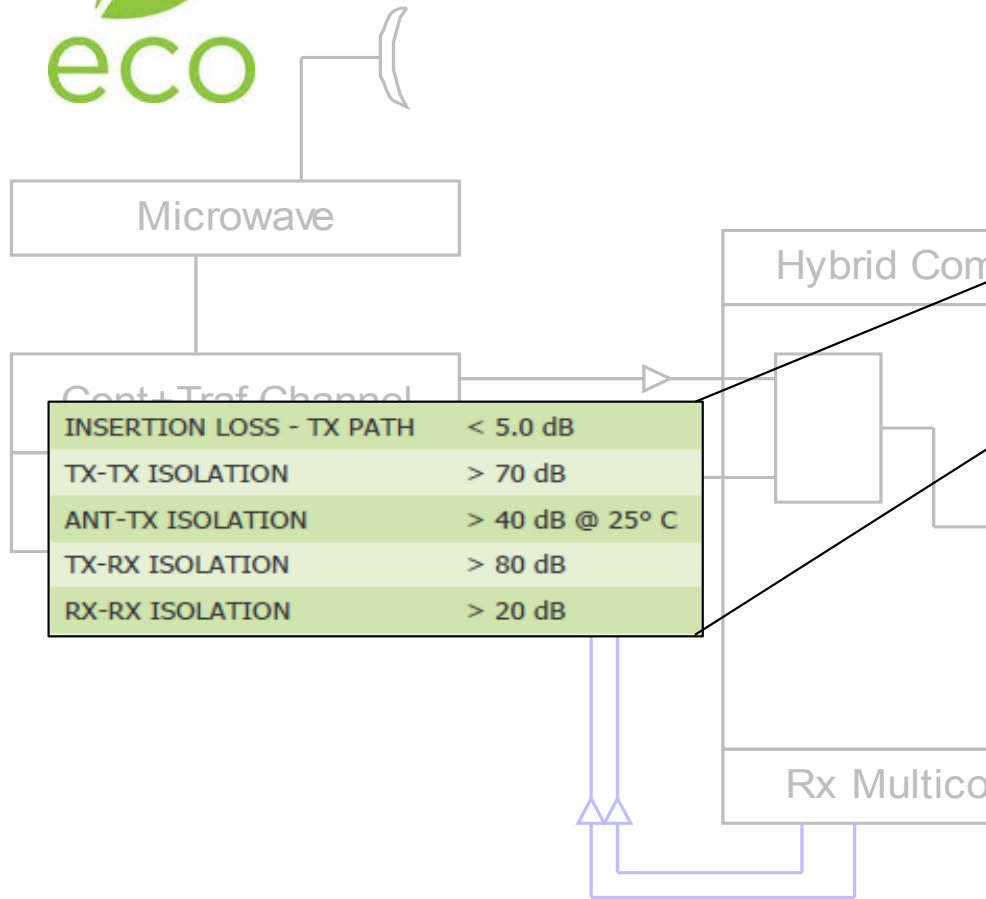
New Technology (DMR)



DMR is TDMA so only two repeaters needed

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DMR(2)



PRO-COM150-HDAR-2/...
2-Channel 19" 3 HU Single Tray Combining System

DESCRIPTION

- An integrated single tray combining solution housing a 2-channel hybrid TX hybrid combiner, duplex filter, active RX multicouplers and preselector.
- Minimal rack space required - only 3 HU.
- Compatible with digital 6.25 kHz channel spacing.
- Single TX isolators fitted as standard (dual isolators available as option).
- 2 RX ports as standard (4 ports available as option).
- Please specify TX / RX frequencies when ordering.

SPECIFICATIONS

ELECTRICAL	
MODE	PRO-COM150-HDAR-2/...
FREQUENCY RANGE	f1: 136 - 150 MHz f2: 152 - 175 MHz
MAX. INPUT POWER PER CH	33 W
MAX. TX-TX SPACING, & TX	1.5 MHz
MIN. TX-RX SPACING	4 MHz
INSERTION LOSS - TX PATH	< 5.0 dB
TX-TX ISOLATION	> 70 dB
ANT-TX ISOLATION	> 40 dB @ 25° C
TX-RX ISOLATION	> 80 dB
RX-RX ISOLATION	> 20 dB
IMPEDANCE	Nom. 50 Ω
VSWR	≤ 1.5
LNA NOISE FIGURE	< 3.5 dB
GAIN - RX PATH	1 dB +/- 1 dB (factory set)
CURRENT CONSUMPTION	500 mA @ 12 VDC
MECHANICAL	
TEMP. RANGE	-30° C + 40° C
CONNECTORS	N-female
DIMENSIONS	19" x 3 HU x 400 mm (483 x 133 x 400 mm)
WEIGHT	Approx. 6.3 kg

ADAPTOR AC/DC 12V EU

ADAPTOR AC/DC 12V UK

ORDERING DESIGNATIONS

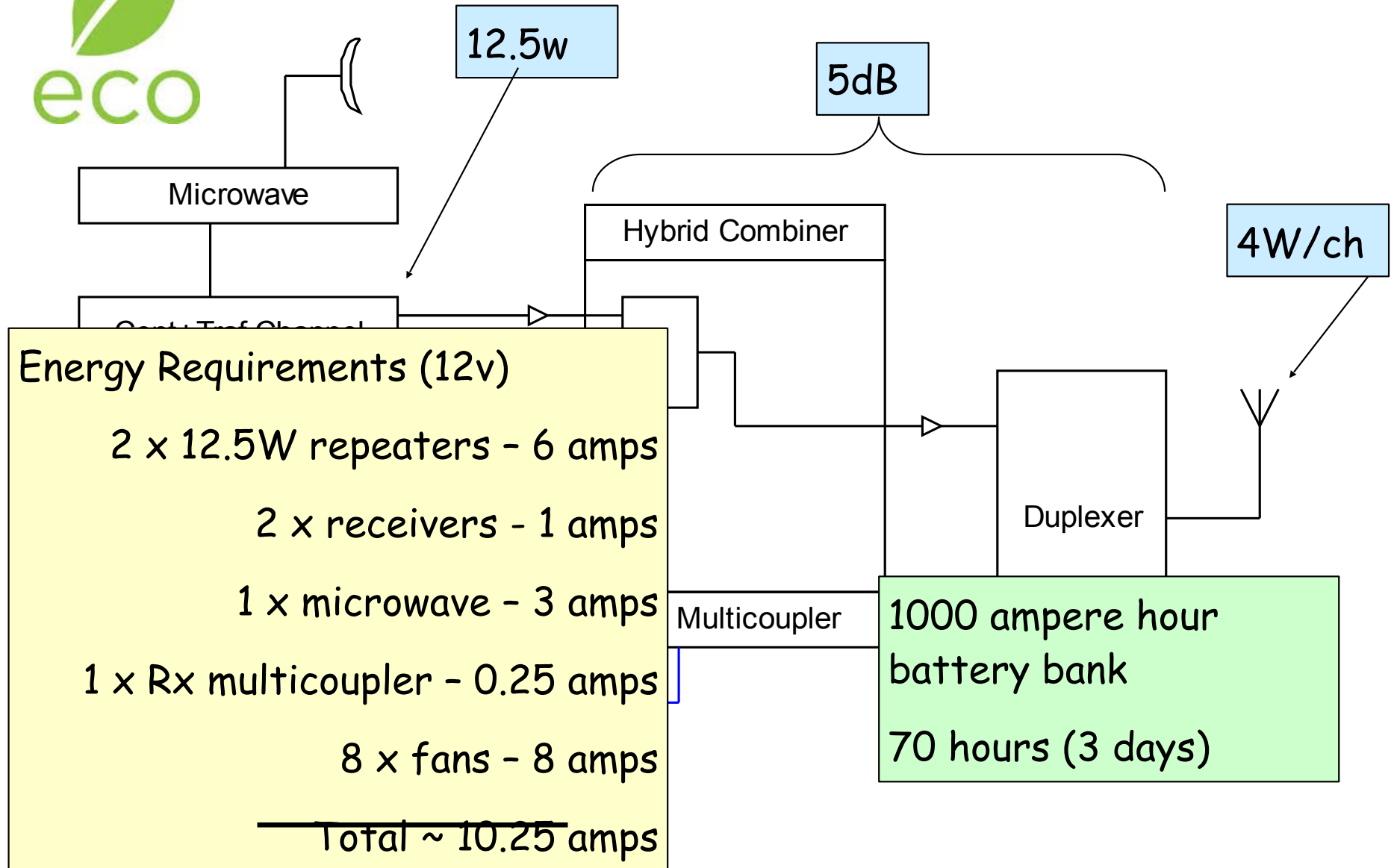
TYPE	PRODUCT NO.
PRO-COM150-HDAR-2/E	210001727
PRO-COM150-HDAR-2/N	210001726
ACCESSORIES	
ADAPTOR AC/DC 12V EU	240000040
ADAPTOR AC/DC 12V UK	240000041

PROCOM A/S reserve the right to amend specifications without prior notice.
15/06/13

making the world smaller

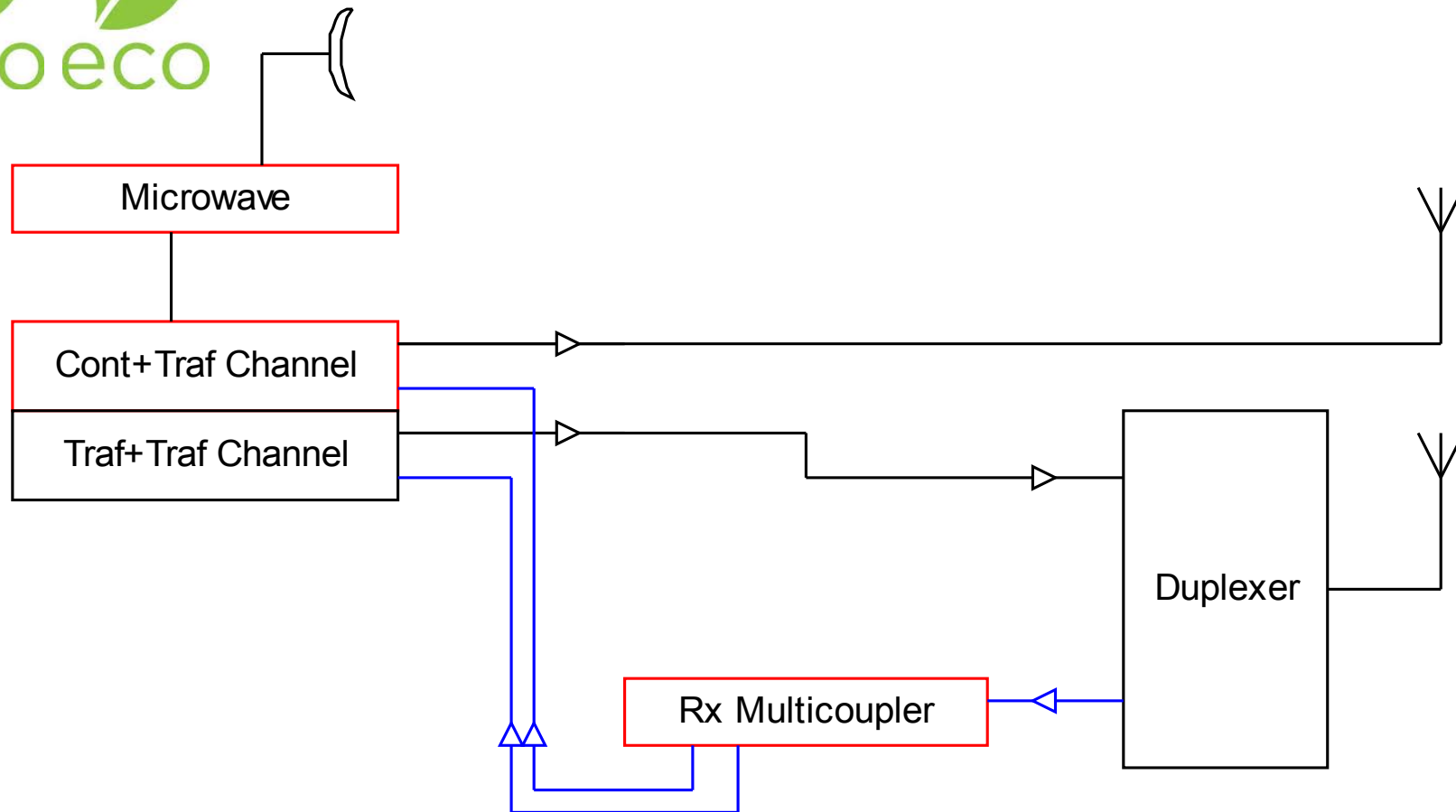
Combiner losses less because only two ports needed

DMR(3)



Modest DMR range advantage. 4w/ch
Saving in transmit power

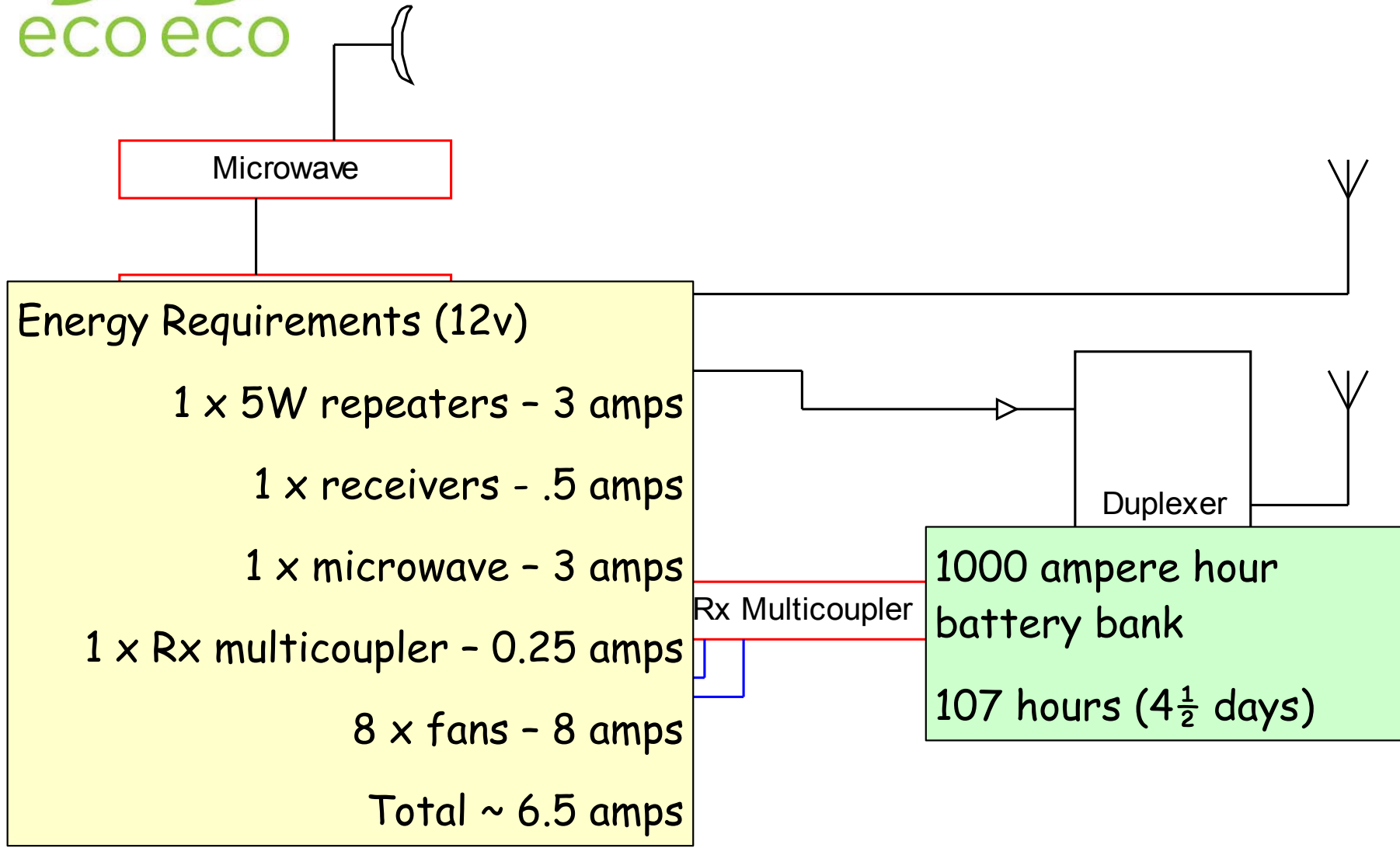
DMR(4)



Add an extra transmit antenna. Tx combining not needed. Also saves power as no losses in combiner

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DMR(5)



Final configuration

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The case for Migration is Overwhelming (ISO 14001 compliance?)



- Inherent privacy - encryption built in
- Greater range
- Good reciprocity for hand portables
- Half the spectrum (from a $12\frac{1}{2}$ kHz ch)
- Half the licence cost?
- Sixth the energy use
- Six times standby power endurance
- Electricity cost saving
- No moving parts (fans), low maintenance
- Smaller site footprint. Less site rent
- Green credentials
- **Saving of 3.6 tons CO₂/year**

brian@seedle.co.uk