

Central Control Unit with Layer-one Converter For Remote Electrical Tilt (RET) and Tower Mounted Amplifier (TMA) Control

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For indoor use

The **Central Control Unit with integrated Layer-one Converter** (CCU-LOC) combines the features of the standard Kathrein CCU (86010026) with the functionality of an additional RF-modem for layer-one conversion according to AISG specification. The CCU provides on its outputs a DC voltage with an OOK-modulated carrier signal at 2.176 MHz for controlling all connected AISG devices via feeder cables. In order to feed-in the output signal (DC voltage / carrier-signal) into the feeder cable, a passive Bias-T with appropriate lightning protection is required (Kathrein 78210429). The measures taken to protect against static discharge and lightning ensure a high level of reliability and operational safety.

- Supports AISG 1.1 & AISG 2.0 / 3GPP simultaneously
- 13 VDC or 29 VDC output voltage - switchable with external jumper
- LED signalling for output power and alarming



CCU with Layer-one Converter

Type No.	86010068
RET-Interface	3 x Coaxial Interface 13 VDC or 29 VDC; OOK modulated carrier at 2.176 MHz
Connector of RET-Interface	3 x SMB; female acc. IEC 169-10
Power supply from BTS	DC: -48V / max. 1.7A
Power supply to RET	3 x +13 VDC (3.8 A in total) or 3 x +29 VDC (1.7 A in total) switchable with external jumper Over current protection per SMB output: 1.8 A / 13 VDC 1.0 A / 29 VDC
Total output power	max. 50 W (in total)
Protocol to RET	HDLC command set, conform to AISG
Interface to BTS	PPP; IP; TCP; UDP; ICMP/PING; HTTP/HTML; DHCP; FTP; SNMP
Alarm Interface to BTS	8 x open collector output, user programmable
LED signalling	1 x green POWER ON 1 x red ALARM SMB-connectors: 3 x green POWER ON 3 x red ALARM
Max. number of TMA's and RCU's	max. 1 x DTMA and 9 x RCU per output (Kathrein devices) depending on system configuration
Temperature range	-25 °C ... +55 °C ambient temperature
Weight	3.7 kg
Packing size (h x w x d)	597 mm x 367 mm x 148 mm
Dimensions (h x w x d)	19" 1 HU* (43.6 mm x 483 mm x 250 mm)

Standards EN 60950-1 (Safety)
EN 55022 (Emmission)
EN 55024 (Immunity)

Certification: CE
Scope of supply: CCU-LOC
Manual
DC-cable



Internet: <http://www.kathrein.de>

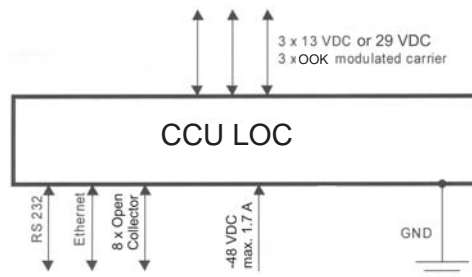
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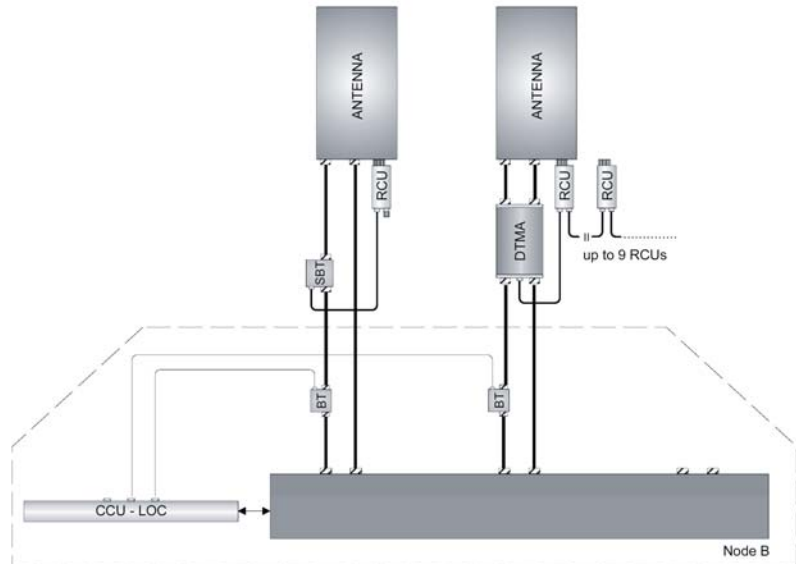
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block diagram:



applications:



Please note:

In order to achieve spurious emission requirements acc. to the AISG and 3GPP specifications, the CCU must be operated with a suitable Bias-Tee (Kathrein 78210429). The Bias-Tee must provide a minimum attenuation of 55 dB from 400MHz to 2170MHz and 30 dB from 2,17 GHz to 12,75 GHz between the DC-port and both RF-ports.

Kathrein's comprehensive RET-system consists of the following components:

- CCU-LOC (Central Control Unit with Layer One Converter)
- RCU (Remote Control Unit)
- AISG-DTMA (Tower Mounted Amplifier)
- Bias Tee
- Smart Bias Tee
- SMB-Control Cable
- Control Cable
- DC Power and Signal Splitter
- ASM (Antenna System Manager)

For detailed information about all RET system components and RET accessories, please kindly refer to the Kathrein catalogue:

790MHz-6000MHz Base Station Antennas for Mobile Communications

or visit the Kathrein web site:

www.kathrein.de/en/mca/index_ret-system.htm