

A flexible, integrated solution for adjusting the electrical downtilt of Kathrein FlexRET antennas.

- Compliant to 3GPP/AISG 2.0/AISG 3.0
- Single RETs or Multi RET displayed
- Individual user-specific configuration possible:
 - Antenna sharing-assignment of certain RET-submits to RET-ports
 - Antenna tilt consolidations for RET control of several arrays by one RET-submit
- Daisy Chain feasibility
- Pre-configured



Type No.		86010165
Protocols		compliant to 3GPP/AISG 2.0/AISG 3.0
Logical interface ex factory		3GPP/AISG 2.0
Operates as		Single RETs or Multi RET
Ex factory		Single RETs
Input voltage range	V	10 ... 30 (pin 6)
Power consumption	W	Typically < 1; < 10 (motor activated)
Connectors		2 x 8 pin connector according to IEC 60130-9; according to AISG-C 485 Daisy chain in: male; Daisy chain out: female
Hardware interfaces		RS 485A/B (pin 5, pin 3); power supply (pin 6); DC return (pin 7); according to AISG / 3GPP
Adjustment time (full range)	sec	40 (typically, depending on antenna type)
Adjustment cycles		> 50,000
Temperature range	°C	-40 ... +60
Protection class		IP 24 (installed)
Lightning protection		AISG interface (each pin) 2.5 kA (10/350 µs) 8 kA (8/20 µs) according to IEC 61000-4-5
Housing material		Profile: Aluminum anodized; cover: Aluminum die cast coated
Weight	g lb	350 0.77
Packing size (H x W x D)	mm inches	245 x 93 x 102 9.6 x 3.6 x 4
Dimensions (H x W x D)	mm inches	142 x 71 x 51 5.6 x 2.8 x 2



Please note:

If the Primary which controls the FlexRET system does not support the default ex-factory interface setting, then the FlexRET must be switched to the appropriate standard of the Primary before installation. Please contact Kathrein for further information.

The FlexRET needs to be powered by a LPS (Limited Power Source, Class: P2) according to IEC/EN 62368-1.

If the FlexRET of an antenna has to be replaced, the FlexRET gets the information stored in the antenna after power on automatically. It is not necessary to configure the FlexRET manually.

- Standards:
- EN 62368-1 (Safety)
 - EN 60950-22 (Safety – Equipment installed outdoor)
 - ETSI EN 301489-1 (EMI)
 - ETSI EN 301489-3 (EMI)
 - ETS 300019-1-4 (Environmental)
 - ETSI EN 300330 (Radio equipment)
 - EN 50364 (Health)
- EU-RED:
- Hereby, KATHREIN SE declares that the radio equipment type 86010165 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <http://www.kathrein.com>
- Certification:
- CE, FCC
- Scope of supply:
- FlexRET
- Optional:
- Site Sharing Adapter** (86010154 or 86010155) to create independent logical interfaces at one antenna or site. Makes it possible to operate with more than one independent Node B. Operation in AISG 2.0 mode only.
 - Gender Adapter** (86010162) to convert the AISG out (female) to an AISG in (male) port in order to operate one FlexRet with exactly 2 BTS. Detailed information is given in the data sheet of the Gender Adapter.
 - Port Extender** (86010163) to convert the existing AISG input and output in order to operate FlexRet with exactly 2 BTS while maintaining the daisy chain capability. Detailed information is given in the data sheet of the Port Extender.

Please note:

In general, the addressing of the FlexRET is automatically performed. Only in case the FlexRET is manually addressed, the serial number has to be extended by the corresponding colour coding extension (e.g. CSG351234-R1). The respective information can be found on the site documentation which is included in the scope of supply.

Startup of FlexRET

The FlexRET module included in the antenna is preconfigured with the following information: Antenna model no., Antenna Serial no., Antenna configuration data. After connecting a control cable and scanning the antenna line devices (ALD) the used primary (e.g. NodeB, ALC, etc.) will find the FlexRET. You only need to insert your additional data.

Connecting the control cables:



Connect a control cable to the daisy chain input of the FlexRET. The tightening torque for fixing the connector must be 0.5 – 1.0 Nm ('hand-tightened'). The connector should be tightened by hand or by a special torque screw driver (order no. 85010080). See also data sheet for Kathrein AISG-cable (86010007, ...).

Please note: To ensure the tightness of the RET System, Kathrein recommend the use of Kathrein components only.

Please note: If the daisy chain output is not used, do not remove the protection cap.



For daisy chain operation, remove the protection cap and attach a control cable to interconnect with the daisy chain input of the subsequent FlexRET or external RCU.

Please note: Do not remove the protection cap on the daisy chain output of the last FlexRET or RCU device.

FCC – Statements**FCC § 15.19**

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC § 15.105

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canada CNR-Gen Section 7.1.3

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ICES-003

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

FCC § 15.21 (Warning Statement)

[Any] changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Compliance Information Statement (Declaration of Conformity Procedure)

Responsible Party: Kathrein USA

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Type of Equipment:



Model Name: FlexRET
FCC ID SP3-86010165