

Technical data sheet

TRC-22 Universal Control System



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Airborne Control System for MLX & NGR Routers & Video Downlink Systems



The TRC-22 is a universal control system for use with BKM-MICRONIC video downlink transmitters and the airborne MLX100 cell network routers and the NGR421 & NGR221 network routers of team2applications for helicopters and fixed-wing aircraft.

The new NGR Routers feature VoLTE and VoIP audio telephony services with analog and digital audio interfaces. Pilots and passengers can do voice telephony over VoLTE or VoIP via the onboard intercom audio system. The TRC-22 control panel enables dial-pad and control functionality for telephony.

The well-known COFDM video transmitter system can be operated by the TRC-22 control panel to switch the transmitter OFF/ON, change transmit channels, power and bandwidth, choose encryption keys and several other transmission parameters.

The TRC-22 is suitable for use with Night Vision goggles and adheres to NVIS Class B rules. The backlight can be controlled by a central dimmer control line.

Built for DZUS mounting it integrates in the pilot control panel and at the Camera Operators position. Several control units can thus be combined to enable multi-point control of the radio devices. Accessory interfaces are RS232, RS422 and ARINC429, an additional I/O and a uncommitted SPTD contact is available as well.

The TRC-22 employs Ethernet networking and point-to-point serial communication.

The LRU is certifiable with all product variants, to be operated in-flight and on-ground in harsh aircraft environments.

Developed in close cooperation with BKM-MICRONIC, the TRC-22 installed with video downlink system and Radio routers is a fully integrated multichannel airborne solution in a light-weight single box. The low power CPU architecture does not require any active cooling.

As the system is fully designed for rugged airborne applications, we are a valued partner for full integration support and expert-based lifetime assistance.

The world's most cost-effective all-in-one connectivity solution certified for aircraft installations!

The BKM/team2 integrated communications platform enables all types of airborne installations for cockpit-, avionics-, cabin and mission systems connectivity. Typical applications are EFB- & mission system integration, emergency medical transport services (EMS/HEMS/telemedicine), passenger data- & telephony connectivity.

Features

- **Control head for**
 - BKM-MICRONIC video downlink systems
 - team2applications airborne routers
- **DZUS-mount**
- **NVIS Class-B compatible**
- **Alphanumeric dial-pad, backlight**
- **VoLTE & VoIP telephony control**
- **Video downlink transmitter control**
- **Multiple-Control-head support**
- **Interfaces**
 - Ethernet
 - RS232
 - RS422
 - SPTD
 - ARINC429

Certifications

- **RTCA DO160G compliant**
- **Rotorcraft and fixed-wing platforms**
- **OEM certifications pending**

Accessories

- **Installation kit**
- **NGR442 & NGR221 Routers**
- **BKM-Micronic Video downlink transmitters**



Technical data

Product part number:

A020-15-01.000 TRC-22 UNIVERSAL CONTROL SYSTEM (BKM P/N 850027)

General data:

Supply voltage & power demand	28VDC, 200ms hold-up, < 18W typical**
Cooling	Natural convection
Dimensions	146.5 x 76.0 x 100.0 mm (W x H x D), DZUS insertion size, plus front-panel**
Weight	Approx. 600 g**
Connectors	2x MIL-DTL-26482 Series I, shell size 12 plug/socket, 2x MIL-DTL-26482 Series I, shell size 08 plug/socket
Maintenance / Reliability	On condition / MTBF > 5,000hours

Interfaces:

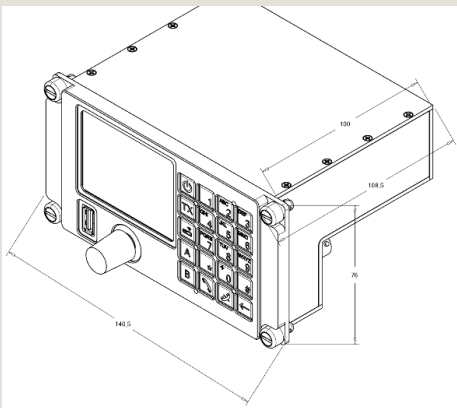
Display	2.8 inch IPS panel, 320x240 pixels, NVIS Green B compatible
Dial-pad	Alphanumeric dial-pad, backlit, dimmable
LAN/WAN ports	1x 100MBit/s Ethernet**
USB-port	USB-A jack (USB2.0) for maintenance purposes**
I/O ports	1x RS232; 1x CAN 2.0; optional: 1xRS422* or ARINC429* 1x SPTD contact

Environmental qualification:

Category code acc. RTCA DO-160G: Environmental certification is subject to definition during development phase**

Mechanical data:

Dimensions:



Front panel view:



team2technologies

team2applications is a supplier of electronics & system solutions for aerospace and transport applications. The product range covers solutions in the field of connectivity & in-flight entertainment, data communication, data interfaces, onboard computing and IoT edge computing, airborne antenna designs, control-head, as well as heat control systems in various applications. team2 acquired major IPR from a predecessor company with operations in aerospace and transport markets since 1992.

team2 is cooperation partner of EASA Subpart 21J design organizations with EASA Subpart 21G manufacturing and EASA/FAA Subpart 145 maintenance capabilities for the complete product range.

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