

## AMU6500 RECEIVES ETSO AUTHORIZATION



Becker Avionics remains true to its 60-year track record. As a recognized premium manufacturer of audio communication systems (Inter-Com), the digital audio management unit (AMU6500) receives ETSO authorization from European Union Aviation Safety Agency EASA.



AMU6500

Developing the system component was not just about integrating Becker Avionics

values such as quality, longevity, and ease-of-use into the new product, but set an exclamation point for Becker Avionics as an innovation and technology leader in audio systems position. In close cooperation with our customers and the users, an intercom system was developed that focuses on voice quality (3D), scalability and the human machine interface. Particularly important for achieving this goal were the experiences of the DVCS6100 and the numerous suggestions for improvement from the daily use.

Becker Avionics GmbH's DVCS6100 (Digital Voice Communication System) was the first digital, software-configurable system on the market that revolutionized audio communications, especially for specialty aircraft and helicopters. So far, more than 3,000 systems of this type have been installed on a wide variety of aviation platforms.

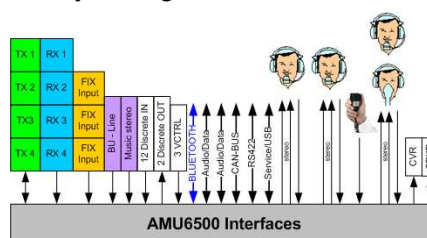
Based on the DVCS6100 and the wealth of experience gained from numerous practical applications, Becker designed and developed a completely new generic audio system concept and received the ETSO certificate from the European Aviation Safety Agency EASA according to the qualification standards:

- ETSO-C139a, DO-214A;
- Software-Qualification DO178C Level C;
- DO-254 Level C, complex Hardware;
- Environmental Conditions DO-160G.

### Product Description AMU6500

The AMU6500 is based on a completely new system architecture, which allows maximum scalability of the Inter-Communication System (ICS) for a wide variety of aviation platforms. The focus is always on the need of the customer for a safe flight and the optimal fulfillment of the assigned pilot and crew tasks. To ensure this, the new ICS architecture is able to be tailored to the specific needs of the pilot, crew and passengers in the aircraft.

Already a single AMU6500 forms a complete



AMU6500 Interfaces

intercom system for single-engine surface aircraft and small helicopters.

Up to 4 independent

users can be connected to an AMU6500 via headsets. In the generic system architecture, it is planned for the next expansion stage to provide each additional user with a separate control unit. The audio receiving inputs are designed as "general-purpose audio inputs" and are freely configurable using configuration software for use as a TX, RX or FIX audio input. Other configurable details are level and internal routing, so the final use of these inputs does not have to be determined before installation on the aircraft itself. The extensive configurability combined with the modern, digital signal processing enable an above-average and excellent audio quality.

Highlights for customer applications are the extensive interfaces of the AMU6500:

- Bluetooth® interface for connecting an external high-quality audio source;
- Stereo music input (high quality audio);
- Cockpit voice recorder interface;
- Integrated amplifier for an external speaker;
- USB, CAN-BUS, RS422 and Ethernet interfaces for various applications.

The HMI (Human Machine Interface) opens new, revolutionary paths. For the first time, it is possible for the user to determine large parts of his display and key assignments on the control unit of the AMU6500 itself. Using configuration software, 20 pushbuttons for selected functions can be defined and the associated display indications can be optimized. Defining the display colors, backlight and dimming are further gimmicks in the free choice of display parameters.

Predefined default settings can be added or changed by the user as desired using configuration software.

Thanks to the latest DSP and uC technology, high clock rates, future-proof computing and storage capacity, complex audio techniques have been implemented.

Examples are:

- 3D audio function, allows together with the use of stereo headphones to position defined audio sources in the room (configurable);
- COM playback function for two transceivers (repeats the last 90 seconds of the received audio signal with manual forward and backward function);
- Dual and Multi Transmit freely selectable during operation;
- Special mission applications for "Special Forces";
- Up to four (4) intercom groups configurable;
- Voice Message Player integrated (planned).

Using a Becker proprietary interface (based on the standard Ethernet BUS), it is already possible today to connect up to three AMU6500s in such a way that all audio, control and status information are simultaneously and completely available on each individual AMU6500. Such an expansion of the system performance allows optimized use even in much larger aircraft or very complicated deployment variants in the field of search & rescue, fire brigade or police forces.

By cascading multiple AMU6500s, it is possible to double or even triple the number of users and audio interfaces to radios, receivers and other audio sources as needed. In addition, the Becker-BUS between all AMU6500 ensures that every user can access all available audio sources. With the aid of the configuration software, the customer requests determine which audio sources are provided to the user.

The modular system architecture of the DVCS6500 will be supported by further components in the next expansion phase. Control units with display (Audio Control Unit ACU6500) and the existing panels from the DVCS6100 (ACU6100 and ACU6101) will be available as control panels for selection and application.



ACU6101



ACU6100



ACU6500

As a further stage of development, a remote, decentralized audio management unit (without control panel) is under development.



*ARU6500*

The ARU6500 (Audio Remote Unit) will be available in various form factors and cascading, so that a scalable and comprehensive communication architecture concept can be implemented in any flying platform. Important factors such as weight -, wiring - and not least cost optimization can be realized from this universally applicable system architecture. All component enhancements serve a purpose to optimally adapt the system architecture of the ICS to the aircraft and the individual customer needs.

## **About Becker Avionics GmbH**

Becker Avionics is a privately held German high-tech company that develops, manufactures and distributes the latest communications, navigation, surveillance and search & rescue equipment for airborne and ground operations. The company is a leader in digital avionics technology and has a long standing history of over 60 years in providing equipment to general and corporate aviation, air traffic control, law enforcement and military organizations around the world.

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