

# Avionics

## DT600 ARINC 429/629 DATABUS ANALYZER

**AEROFLEX**  
A passion for performance.



A powerful tool that can be used on the ramp or on the bench

The DT600 is a combination ARINC 429/629 databus analyzer with dual, independent ports for each bus standard. Nearly identical functions are provided for each bus type. These include basic receive and transmit functions along with a general record mode and a powerful breakpoint mode. The standard RS-232 port is used for downloading real time or recorded data and for uploading new label/word definitions. The standard DAC port can be used to provide a trigger pulse or to drive recorders or instruments. An optional GPIB port permits remote control of all functions. PC software is available to aid the user in defining customized data definition table(s). The large graphical display and integrated keyboard provide an informative and intuitive user interface.

### FEATURES

- Two ARINC TX/RX ports and two ARINC 629 transceiver ports
- Operates six to eight hours on the internal battery or power from external 28 VDC or 105-250 VAC
- Easy menu-driven setup allows intuitive control of unit
- Multi-window display of data in ENGINEERING (B777 default for 629), HEX, BINARY, USER DEFINED, and GRAPHICAL formats
- Powerful record and fault analyzer modes
- Williamsburg Protocol software extension available for ARINC 429 file transfer functions
- RS-232C and DAC interface ports standard; GPIB optional
- Software available for RS-232 port (download/upload and word definitions)

### GENERAL SPECIFICATIONS

#### ARINC 429 RECEIVER OPERATION

##### Ports

2

##### Bus Frequency

12-14.5 kHz or 100 kHz (selectable)

##### Input Levels

+ 6.5 VDC to + 13.5 VDC (A to B)

##### Input Impedance

12.0 K ohms

##### Word Update

1 ms to 10 sec, update rate displayed as instantaneous, min or max value

##### Display Format

Pre-stored engineering units, hex, binary, user, ASCII, & graphic plots

##### Maximum Words

256 per SDI per channel

##### Bus Activity Monitor

Monitors loss of individual words; sensitivity selectable

##### Real-time Download/Conversion

RS-232C or 12-bit DAC port

#### ARINC 429 TRANSMITTER OPERATION

##### Ports

2

##### Bus Frequency

12.0 kHz, 12.5 kHz, 14.5 kHz, or 100 kHz (selectable)

For the very latest specifications visit [www.aeroflex.com](http://www.aeroflex.com)

## Output Levels

+ 10.0 VDC (A to B)

## Output Impedance

75 ohms

## Word Update

1 ms to 10 sec, (selectable)

## Burst Mode

01 to 99 burst outputs at a selectable rate

## Display Format

Pre-stored engineering units, full or data field hex and binary, user, and ASCII

## Maximum Words

128 per channel

## Transmit Word Gap

2, 3, 4, 5, 6, 8, 12 bits (selectable)

## Dynamic Transmit

Repeat pattern of ramps and flat segments. Levels programmable between + full scale and segment times of 0 to 999.999 sec

## Additional Transmit Options

Recorded data, pre-stored tables

## ARINC 429 BREAKPOINT OPERATION

---

### Label Sequence

A, B, A or B, A then B, A immediate B

### Data Conditions

EQ, NEQ, OR, GT, LT, /GT/, /LT/

### Event Count

1 to 99 before break

### History

Up to 24,576 words in a programmable window;  
optional time stamp

### Trigger Pulse

5V, 20  $\mu$ S

## ARINC 429 BITE OPERATION

---

### BITE Formats

Compatible with distributed and centralized BITE concept used on 747-400, 737-300, MD-11, A320, A330, and A340 aircraft

### Menu Display

Standard 14-line x 24-character format, with selectable menu choices

### Maintenance Words

Displays 350/351 label maintenance bits. Bit status along with pre-stored text presented

### Recording Feature

Save up to 240 BITE screens for later viewing or downloading

## ARINC 629 RECEIVER OPERATION

---

### Ports

1 standard, 2nd optional

### Bus Frequency

2 MHz

### Input Electrical Characteristics

Doublet as specified for SIM input in the Boeing D227W201 Universal Data Sheet

### Word Update

1 ms to 10 sec, update rate displayed instantaneous, min or max value

### Display Format

Pre-stored engineering units, hex, binary, user, ASCII, & graphic plots

### Word Strings Receivable

4096

### Words Selectable

255 words per word string, 32 word strings

### Bus Activity Monitor

Monitors loss of individual words; monitor sensitivity selectable

### Real-time Download/Conversion

RS-232C or 12-bit DAC port

## ARINC 629 TRANSMITTER OPERATION

---

### Ports

1 standard, 2nd optional

### Bus Frequency

2 MHz

### Output Electrical Characteristics

Doublet as specified for SIM output in the Boeing D227W201 Universal Data Sheet

### Transmit Interval

0.5 to 64 ms (selectable)

### Synchronization Gap

16, 32, 64, and 127  $\mu$ S (selectable)

### Terminal Gap

1 to 128  $\mu$ S (selectable)

### Synchronization

C Mode communication provisions with external terminals

### Display Format

Pre-stored engineering units, hex, binary, user, and ASCII

### Maximum Words per Word String

256

### Maximum Word Strings

31 x 31

### Dynamic Transmit

Repeat pattern of ramps and flat segments. Levels programmable between + full scale and segment times of 0 to 999.999 sec

## **ARINC 629 BREAKPOINT OPERATION**

---

### **Label Sequence**

A, B, A or B, A then B

### **Data Conditions**

EQ, NEQ, OR, GT, LT, /GT/, /LT/

### **Event Count**

1 to 99 before break

### **History**

Up to 40,960 words in a programmable window; optional time stamp

### **Trigger Pulse**

5V, 20  $\mu$ S

## **ARINC 429/629 RECORD OPERATION**

---

### **Channels**

429: Up to 16 labels from any combination of receive ports

629: Up to 32 data words from any combination of receive ports

### **Sample Interval**

1 ms to 10 sec (selectable)

### **Record Capacity**

120 Kbytes

### **Playback Options**

Graphic plots, data lists, DAC download, RS-232C download

## **PHYSICAL CHARACTERISTICS**

---

### **Weight**

24 lbs. (10.9 kg)

### **Size**

5.7"H x 14.25"W x 12"D (14.5 cm x 36.2 cm x 30.5 cm)

---

## **VERSIONS, OPTIONS AND ACCESSORIES**

---

When ordering please quote the full ordering number information.

### **Ordering Numbers**

|              |  |
|--------------|--|
| DT600-00-110 | DT600 Databus Analyzer (110V)                                      |
| DT600-00-220 | DT600 Databus Analyzer (220V)                                      |
| DT600-02-110 | DT600 Databus Analyzer (110V)<br>w/ Williamsburg Protocol Analyzer |
| DT600-02-220 | DT600 Databus Analyzer (220V)<br>w/ Williamsburg Protocol Analyzer |

### **Standard Accessories**

RSRead Software PC program for accepting RS-232 download of real-time receive, record, breakpoint history, or BITE data.

### **Optional Accessories**

|             |  |
|-------------|--|
| ACPCMGR-600 | Software support for<br>DT600/650/650H |
|-------------|--|

### **Extended Warranty**

|            |  |
|------------|--|
| WDTRC/203C | Extended Standard warranty 36<br>months with scheduled calibration |
| WDTRC/205C | Extended Standard warranty 60<br>months with scheduled calibration |

**CHINA Beijing**

Tel: [+86] (10) 6467 2761 2716  
Fax: [+86] (10) 6467 2821

**CHINA Shanghai**

Tel: [+86] (21) 6282 8001  
Fax: [+86] (21) 62828 8002

**FINLAND**

Tel: [+358] (9) 2709 5541  
Fax: [+358] (9) 804 2441

**FRANCE**

Tel: [+33] 1 60 79 96 00  
Fax: [+33] 1 60 77 69 22

**GERMANY**

Tel: [+49] 8131 2926-0  
Fax: [+49] 8131 2926-130

**HONG KONG**

Tel: [+852] 2832 7988  
Fax: [+852] 2834 5364

**INDIA**

Tel: [+91] 80 5115 4501  
Fax: [+91] 80 5115 4502

**KOREA**

Tel: [+82] (2) 3424 2719  
Fax: [+82] (2) 3424 8620

**SCANDINAVIA**

Tel: [+45] 9614 0045  
Fax: [+45] 9614 0047

**SPAIN**

Tel: [+34] (91) 640 11 34  
Fax: [+34] (91) 640 06 40

**UK Burnham**

Tel: [+44] (0) 1628 604455  
Fax: [+44] (0) 1628 662017

**UK Stevenage**

Tel: [+44] (0) 1438 742200  
Fax: [+44] (0) 1438 727601  
Freephone: 0800 282388

**USA Wichita**

Tel: [+1] (316) 522 4981  
Fax: [+1] (316) 522 1360  
Toll Free: 800 835 2352

**USA JcAIR Test Systems**

Tel: [+1] (913) 764 2452  
Fax: [+1] (913) 782 5104



As we are always seeking to improve our products, the information in this document gives only a general indication of the product capacity, performance and suitability, none of which shall form part of any contract. We reserve the right to make design changes without notice. All trademarks are acknowledged. Parent company Aeroflex, Inc. ©Aeroflex 2005.

[www.aeroflex.com](http://www.aeroflex.com)  
[info-test@eroflex.com](mailto:info-test@eroflex.com)



Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.