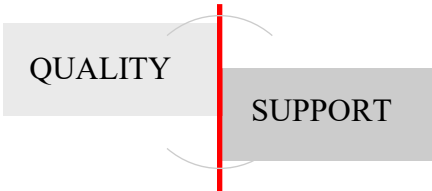# KIMDU
## T E C H N O L O G I E S

## General Description

The Kimdu Portable Test Unit (PTU-100) is a rugged, hand-held device that can operate in the Test, Analyzer, and Monitor modes for the most widely used avionics data buses including ARINC-429, ARINC-825 (Aero CAN), MIL-STD-1553, CAN, RS-422/232, and Ethernet 10/100. In addition, customized hardware can be installed to allow for the addition of special functions such as Discrete I/O, A/D, D/A, Relays, and customer-defined interfaces. The customized hardware is accompanied by customized GUI interface software. Contact Kimdu sales for details.

### Display
The unit comes with a 7-inch Resistive, Touch Screen Display with a protective layer. The display resolution is 800 x 480.

### Software
In addition to the many data buses supported along with standard software packages, Kimdu can offer customized GUI software to fit your specific needs.

QUALITY

SUPPORT

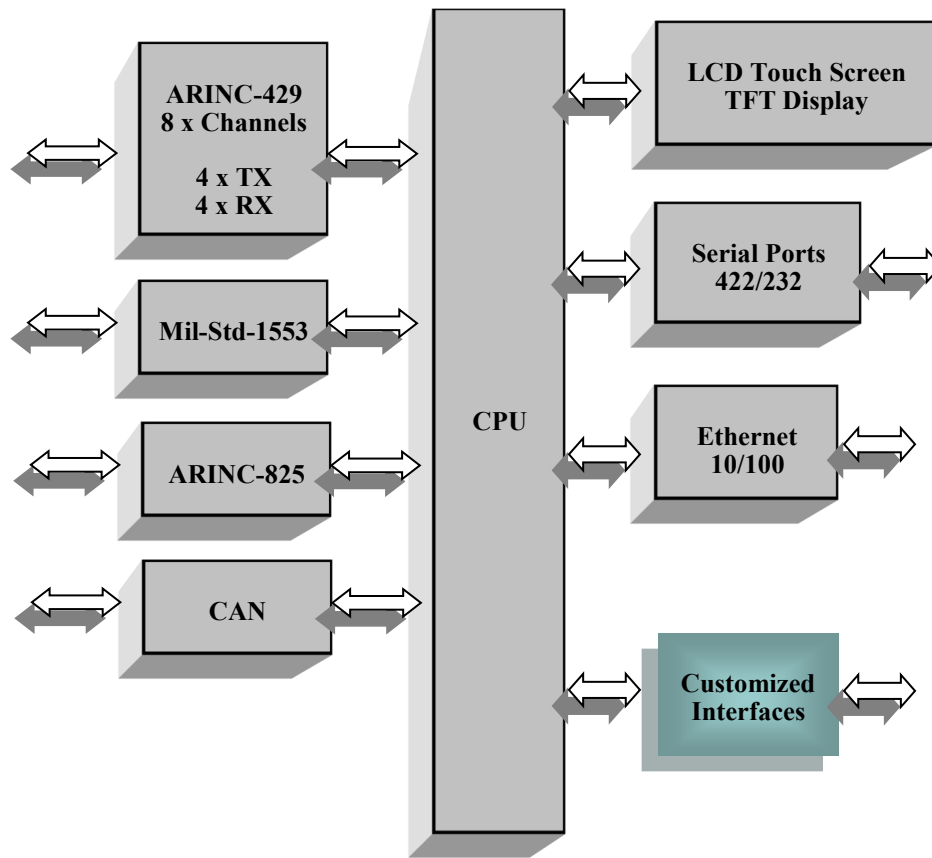**AS9100D CERTIFIED**

**FEATURES:**

- ◆ **Hand-Held Rugged Device**

- ◆ **Use as Tester & Monitor/Analyzer**

- ◆ **Supports the following Buses**
  - ◆ **ARINC-429**
  - ◆ **ARINC-825 (Aero CAN)**
  - ◆ **Mil-Std-1553**
  - ◆ **RS-422/232**
  - ◆ **CAN**
  - ◆ **Ethernet**
  - ◆ **Custom Interfaces**

- ◆ **Easy to Use GUI Software**

- ◆ **Custom Hardware & Software Available**

- ◆ **Rechargeable Battery w/Charger**

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Rev F

ARINC-429
8 x Channels

4 x TX
4 x RX

Mil-Std-1553

ARINC-825

CAN

CPU

LCD Touch Screen
TFT Display

Serial Ports
422/232

Ethernet
10/100

Customized
Interfaces

PTU BLOCK DIAGRAM SHOWING OPTIONAL INTERFACES

## General:

- Unit is completely stand-alone (definitions are defined using the GUI interface)

- All interfaces are stand-alone and does not convert between the different interfaces.

- Interface selection is done via Tabs in the GUI display

- Display: 7" Resistive Touchscreen. Glove compatible

- Battery: Rechargeable Lithium Ion

- Hours of Use on Battery: 4 (this is an estimate and may differ depending on the display brightness and interfaces active)

- Battery Charger Power Supply (included): Input: 110v/220v.

- Connectors, panels, and display are sealed with gaskets

- Wrist strap for easy handling

- Connector Types:
    - ◊ Power: Miniature Circular
    - ◊ I/O: Sealed D-Type
    - ◊ Ethernet: RJ45

## Interfaces

**Mil-Std-1553 Features**

- Select Mode via GUI interface (BC or RT or Bus Monitor)
- All data and settings are entered via the virtual keyboard
- All information is displayed on the LCD.

**BC:**
Enter BC Message(s)
Define Intermessage Gap Times, Bus A/B select
Display: Messages, Data, Status

**RT:**
Define: RT Address, Data Blocks per Subaddress
Display: Data, Time-Tag, Status

**Bus Monitor:**
Define: Filter by RT Address/Subaddress/All.
   Selection mode: Store to memory mode and/or Display messages when selected via GUI

**Output:**
Display: Messages, Status, Time-Tag

**ARINC-429 Features**

Define: Speed Options: 12.5kbps, 50kbps, 100kbps.
Define: Label (in Octal) and Data (in HEX)

Output:
Display: Label (by Filter) in Octal and Data (in Hex)
Display: Time Tag

**RS-422 Features**

Define: Baud Rate (up to 961Kbaud), Start/Stop Bits, Parity (Odd/Even/None).
Define Data Strings;
        Data (in Hex)
        Number of Bytes in String
        Time between Strings
Output:
Display: Received Data (in Hex)
Display: Time Tag

**Ethernet Features**

Speed: 10/100
Define: TCP definitions;
Define: Baud Rate (up to 961Kbaud), Start/Stop Bits, Parity (Odd/Even/None).
Define Data Strings;
      Data (in Hex)
      Number of Bytes in String
      Time between Strings
Output:
Display: Received Data (in Hex)

**CAN Features**

Define: CAN Speed
Define: Frame type; "Standard" or "Extended" frame
Define: DATA
Define: DATA BYTE Count

Output:
Display: Received Data
Display: Time Tag

## Environmental Information

### Temperature:
**Operating:** -10°c to +60°c (Ambient)
**Storage:** -20°c to +70°c

### Humidity:

**Operating:** 0 °C to 10 °C, noncondensing
10 °C to 30 °C, up to 95% relative humidity

**Non-operating:** −20 °C to 60 °C, relative humidity, noncondensing

### Altitude:

**Operating:** Up to 3,000 m (9,843 ft.)
**Non-operating:** Up to 12,000 m (39,370 ft.)

### Vibration/Shock

**Operating:**

Vibration (Sinusoidal): 3 g max, according to MIL-PRF-28800F, class 2
Shock: 30 g max, according to MIL-PRF-28800F, class 2

**Non-operating:**
Vibration (Random): 0.03 g2/Hz, according to MIL-PRF-28800F, class 2

### Regulatory:

**Electromagnetic compatibility:** EN 61326-1:2006, EN 61326-2-1:2006 for emission and immunity

### Weight:
1100 gms

### Dimensions:
8.2" x 6.10" x 1.5"
(21.0cm x 15.5cm x 3.8cm)

Notes:
1. The dimensions do not include wrist strap.
2. The length dimension shown is for D-type I/O connectors. This dimension is dependent upon connector types used. Contact Kimdu for details.

## Ordering Information:

| Part Number | Configuration |
|---|---|
| PTU-100-0013 | PTU-100 with MIL-STD-1553 |
| PTU-100-0014 | PTU-100 with MIL-STD-1553 + ARINC-429 |
| PTU-100-0015 | PTU-100 with MIL-STD-1553 + RS-422 |
| PTU-100-0016 | PTU-100 with MIL-STD-1553 + ARINC-429 + RS-422 |
| PTU-100-0017 | PTU-100 with MIL-STD-1553 + RS-422 + CAN |
| PTU-100-0018 | PTU-100 with MIL-STD-1553 + RS-422 + CAN + ETHERNET 10/100 |
| PTU-100-0019 | PTU-100 with ARINC-429 + RS-422 + CAN + ETHERNET 10/100 |
| PTU-100-0020 | PTU-100 with ARINC-429 + RS-422 |

**Notes:**
1. MIL-STD-1553 option includes 1 x Dual Redundant Channel operating as BC *or* (1) RT *or* Bus Monitor
2. RS-422 option includes 2 x TX/RX Channels
3. ARINC-429 option includes 1 x TX/RX Channel
4. Ethernet option includes 1 x 10/100 Ethernet Channel
5. Contact Kimdu regarding Custom configurations