



SIU36 Application

Data Concentrator Unit



Invictus 360

Bell Textron Inc., a Textron Inc. company, selected SIU36 as their new Data Concentrator Unit (DCU) for the Bell 360 Invictus as part of the U.S. Army Future Attack Reconnaissance Aircraft (FARA) competition. The SIU36 is a Modular Open System Approach (MOSA) based sensor interface unit, supporting DDC-I's Deos FACE™ Conformant RTOS, 3U OpenVPX T2080 QorIQ PowerPC processing, I/O, communications and power supply.

The SIU36 supports hundreds of digital and analog I/O, including programmable Discrete, A/D, D/A, Strain Gauge, Thermocouple, RTD, Variable Reluctance/Monopole, Chip-detect and LVDT with AC Reference measurement signals along with several communications interfaces including MIL-STD-1553, RS-422, ARINC-429 and Ethernet. The DCU manages, monitors and controls signals to and from the Vehicle Management System (VMS) and Health Usage Monitoring System (HUMS).

The Bell 360 Invictus relies on proven systems and innovative processes to mitigate technical risk and improve lethality at an affordable cost for the FARA program competition that is part of the US Army's Future Vertical Lift (FVL) program. The Bell 360 Invictus was one of two prototypes selected by the U.S. Army to complete a detailed design, build and test for a government flight test in 2023.

SIU36 - Configure with up to 18 I/O and Communication Function Modules



Features

- 2 x [MIL-STD-1553](#) & 8 x [ARINC-429](#) Tx/Rx (CM5)
- 8 x [CANBus](#) A/B 2.0/CAN-FD/ARINC-825 (CB8)
- 8 x [RS-232/422/485 Serial Channels](#) (SC3)
- 2 x [AC Excitation References](#) (AC2)
- 4 x [LVDT Measurement](#) Channels (LD2)
- 8 x ± 40 VDC 100 mA [Digital to Analog](#) Channels (DA3)
- 8 x [Variable Reluctance](#)/Pulse Counter Measurement Channels (VR1)
- 6 x [Chip Detect and Fuzz Burn Channels](#) (CD1)
- 4 x [Strain Gage Measurement](#) (SG1)
- 12 x ± 10 VDC or ± 25 mA [D/A Outputs](#) (DA1)
- 16 x Enhanced Differential [Discrete I/O Channels](#) (DF2)
- 16 x ± 100 VDC [A/D Channels](#) (ADF)
- 16 x Programmable [RTD or Thermocouple measurement](#) (2 x TR1)
- 12 x ± 10 VDC or ± 25 mA [D/A Outputs](#) (DA1)
- [48 x Discrete Input Channels and 48 Programmable Discrete I/O Channels](#) (68DT1)
- 28 [VDC Input PSU per VITA 62 \(VPX68\)](#) with at least 50 ms holdup
- MIL-STD-810G, MIL-STD-461F and DO-160 environmental and EMI/EMC qualifications.

For more information contact ティー・ピー・ティー株式会社 (TPT K.K.)

www.tptech.co.jp

Telephone: 81-3-5832-7350

TPT KK: [Contact](#)

Rev. A