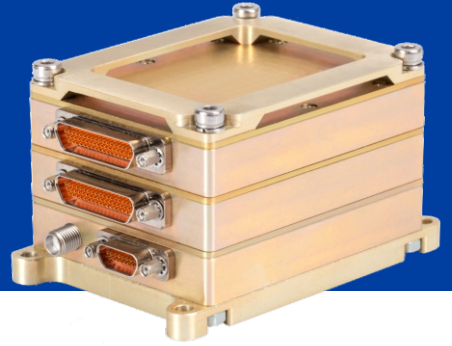


STACKABLE DATA ACQUISITION and TELEMETRY SUITE



GENERAL DESCRIPTION

TUALCOM offers its well-known telemetry and data acquisition product line as stackable configuration. In Stackable Suite each product is configured as identical and compact form factor which can either be stacked or installed individually to platform. Stackable Suite provides flexibility and scalability to meet changing data acquisition requirements.

Following data acquisition modules are available in TUALCOM Stackable Suite:

- ICP (16x ICP)
- Differential (16x Differential ADC, 8 of them has digital gain and excitation voltage)
- Temperature (16x PT100/TC)
- Customised Solutions
- Digital (18x RS 485, 2x Ethernet, 10x TTL, 2x RS 232)

Digital module can also be provided with 32 GB data recorder optionally. Each module also features UART output to monitor the collected data online. Each unit can provide IRIG 106 compatible (Chapter 4 and Chapter 7) data format. Also, each unit can be used standalone, i.e. can be connected Transmitter without Master module, if only one module will be used.

Telemetry transmitter module can be configured with 2W, 5W or 10W RF output with PCM/FM, CPM and SOQPSK modulation.

GPS receiver module provides GPS data and GPS time synchronization for data acquisition.

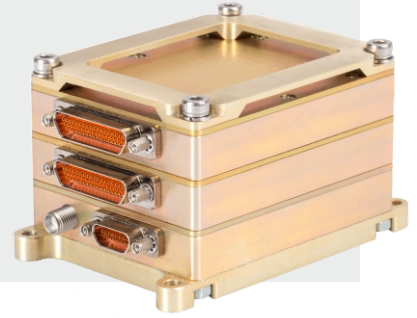
Configuration software is provided with Stackable Suite which enables user to modify settings for each module.

Modules are inter-connected with a proprietary high-speed data bus which provides low latency and error resistant data communication.

APPLICATION AREAS

- Fixed/Rotary Wing Aircraft Development
- Space Launch Vehicles
- Guided Munition Development and Tests
- Flight Test and Instrumentation
- Unmanned Autonomous System Test and Development

STACKABLE DATA ACQUISITION and TELEMETRY SUITE



Data Rate

Up to 20 Mbps

Digital Inputs

Ethernet, RS 485, TTL, RS 232

Analog Inputs

PT 100/TC, ICP, Differential

Modulation

PCM/FM, CPM, SOQPSK

FEC Optional

Reed Solomon (RS) and Convolutional, LDPC

Data Encryption

AES 256 (Optional)

Operating Temperature

-40 °C to +85 °C

Module Dimensions (cm)

6.0 x 7.5 x 13

Environmental Condition

MIL-STD-810G

KEY SPECIFICATIONS

- Flexible
- Scalable
- Easy Configuration
- Excellent SWaP
- IRIG 106 Compatible
- AES 256 Option
- Adjustable Cut-off Frequency
- 32 GB Storage
- MIL STD 704F Compliant

	Channels	Resolution	Sample Rate
ICP Stack	16 x ICP/IEPE	16-bit	200 kHz
PRS Stack	16 x differential (8 of them has separate excitation voltage)	16-bit	200 kHz
TMP Stack	16 x PT100/TC	16-bit	50 Hz
MIX Stacks	4 x PT100/TC, 3 x ICP, 2 x Differential ADC, 3x Voltage Input	16-bit	50 Hz for PT100/TC, 200 kHz for others

	Power Consumption (Nominal)	Operating Voltage	Dimensions (cm)	Weight (g)
MAS Stack	4.3 W	+16 to +35 Vdc	7.5 x 6.0 x 1.3	96
TX Stack (5 W)	22 W	+24 to +32 Vdc	7.5 x 6.0 x 2.15	169
TX Stack (10 W)	30 W	+24 to +32 Vdc	7.5 x 6.0 x 2.15	169
PWR Stack	0.55 W + load	+24 to +32 Vdc	7.5 x 6.0 x 1.3	150-200
ICP Stack	1.68 W	+18 to +35 Vdc	7.5 x 6.0 x 1.3	95
PRS Stack	1.45 W	+12 to +35 Vdc	7.5 x 6.0 x 1.3	94
TMP Stack	1.44 W	+12 to +35 Vdc	7.5 x 6.0 x 1.3	93
MIX Stack	1.44 W	+18 to +35 Vdc	7.5 x 6.0 x 1.3	95

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