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Friday 29 January 2021

GATES Configuration

GATES (level 1)

subsystems

- ARINC (arinc429) Avionics data bus signals from Engine
- Calculated (calculated) Calculated and simulated signals
- DTS (dts) Temperature measurements from DTS4050
  - DTS1124
  - DTS1125
  - DTS1126
  - DTS1127
- FCS1 (modbus-ethernet) Facility Control System
  - Input Float Bool - Output Float
- FCS2 (modbus-ethernet) Facility Control System
  - Output Bool
- IDDS (iDDS) Mandatory for iDDS to work
- IDDSnode (IDDSnode) iDDS devices
  - MDS
    - nxCollector
      - **18:1-10000:r**
        19:10001-10500:r
        20:10501-11000:r
        21:11001-11500:r
      - CL_Enable
  - UEI
    - IOM-225593 (standard)
    - IOM-225763 (rugged)
    - IOM-226128 (rugged)
- PBS (pbs) Pressure measurements from Model 9216
  - PBS21270
  - PBS21271
- Throttle (modbus-ethernet) Throttle Mark3 signals
- Vibration (mvib) Vibration and balancing signals from PBS-4100R+

channels

- Calculated:
  - DAS and RTE mandatory channels
    - Alarms Buzz Ack
    - Fullset Status
    - CL
    - Num Fullset Log
    - Flip Clock
    - PBS DTS Triggers
    - PBS Purge
    - DAS runtime
    - Fullset Log CR SW
  - GID 6001 - 6200
- FCS
  - To be moved from level 5 to level 1
    - Testing in progress
- IDDSnode
  - (3) Fuel Flow
  - Fuel In Pressure
  - Starter Air Pressure
  - PAMB
  - Rel Hum
  - (9) Inlet Temperature
  - Fuel Temperature

transient-logs

- Demo_Log

bpts

- (36) RTD thermocouple conversion tables

polynomials

GID convention V3

PBS	1	1000
DTS	1001	2000
FCS	2001	3000
Arinc	3001	6000
Calculated	6001	10000
iDDS Cube1	10001	10500
iDDS Cube2	10501	11000
iDDS Cube3	11001	11500

eus

- Cleanup Merge Aleks to V12 => V13
- Tested V13 Ok R4R

tests

- ATP_Calibration_01
  - Cannot create new test - BUG reported to M.Sk

ATP_Calibration (level 2)

subsystems

channels

- All Math_ Channels

transient-logs

- Demo_Log_001Hz to _200Hz
  - all log from 1Hz to 200Hz

bpts

- Demo BPT for demo calculations
- Demo BPT for RTD Overlays

polynomials

- Demo BPT for demo calculations
- Demo BPT for RTD Overlays

CFM56-5B (level 2) — Variant (level 3) — Variant (level 4) — Test (level 5)

CFM56-7B (level 2) — Variant (level 3) — Variant (level 4) — Test (level 5)

CF6-80C2 (level 2) — Variant (level 3) — Variant (level 4) — Test (level 5)

Nick Scope | Not Started | Bug/Issue | In progress | Up to date but Incomplete | Ready

MDS (level 3)

On-Site (level 4)

Test (level 5)

In-House (level 4)

All (level 5)

subsystems

channels

- All Arinc
- All Cubes
- All FCS
- All PBS

transient-logs

bpts

polynomials

Demo_Calculations (level 5)

subsystems

channels

- Demo Sim Jet Engine
- GID: 6201-6800
  - domain: 18
  - logical: RTE
- **Tested:**
  - Works as expected

transient-logs

bpts

polynomials

Cubes (level 5)

subsystems

channels

- **Cube 1 Standard - Prototype**
  - Installed in Rack - Prod Shop
  - Defined all Channels
    - Cube1_Dev1_RTD_Ch01 -12
    - Cube1_Dev2_AVI_Ch01 -08
    - Cube1_Dev3_ACI_Ch01 -08
  - GID: 10001-10028
    - domain: 19
    - logical: devCube1
  - **Tested:**
    - Comm OK
- **Cube 2 Ruaged - Prototype**
  - **Located in MSIL - Unavailable**
  - import config RobS from MSIL
  - do not match project 1000
    - missing channels
  - GID: 10501-100xx
    - domain: 20
    - logical: ???Cube2
- **Cube 3 Ruaged - Prototype**
  - **Located in MSIL - Unavailable**
  - import config RobS from MSIL
  - do not match project 1000
    - missing channels
  - GID: 11001-110xx
    - domain: 21
    - logical: ???Cube3

- **Cube 1 Standard - Project GATES**
  - **Not installed - Unavailable**
- **Cube 2 Ruaged - Project GATES**
  - **Not installed - Unavailable**
- **Cube 3 Ruaged - Project GATES**
  - **Not installed - Unavailable**

transient-logs

bpts

polynomials

DTS (level 5)

subsystems

channels

- All channels/ports/pinout defined
- DTS1124_01 to _16
- DTS1125_01 to _16
- DTS1126_01 to _16
- DTS1127_01 to _16
- GID: 1001-1064
  - domain: 18
  - logical: RTE
- **Tested:**
  - Comm DTS1124 OK
  - Scan Rate 40Hz OK
  - Open thermocouple test OK
  - AD Cal OK
- **Not Tested:**
  - Comm DTS1125
  - Comm DTS1126
  - Comm DTS1127

transient-logs

- DTS_Log @40Hz

bpts

polynomials

PBS (level 5)

subsystems

channels

- Defined All channels/ports/pinout
  - PBS21270_01 to _16
  - PBS21271_01 to _16
- GID: 1-32
  - domain: 18
  - logical: RTE
- **Tested:**
  - Comm OK
  - Scan Rate 100Hz OK
  - Purge command OK

transient-logs

- PBS_Log @100Hz

bpts

polynomials

ARINC_Simulator (level 5)

subsystems

channels

- Imported Arinc loopback sim channels
  - Installed loopback blue cable
- **Tested:**
  - Comm OK

transient-logs

bpts

polynomials

FCS (level 5)

subsystems

channels

- ~~Created 900 dummy~~
  - ~~In Out Bool Float~~
- Created all I/O FCS channels from Alex R (see ICL)
- GID: 2001-2900
  - domain: 18
  - logical: RTE
- **Tested:**
  - Input Bool - Comm OK
  - Input Float - Comm OK
  - Output Float - Comm OK
  - Output Bool - Comm FAIL
    - Channel to be moved to FCS 2
- **Not Tested:**
  - Scan Rate 10Hz?

transient-logs

bpts

polynomials

Throttle (level 5)

subsystems

channels

- None

transient-logs

bpts

polynomials

Vibration (level 5)

subsystems

channels

- None

transient-logs

bpts

polynomials